

*South Australian Year Book*



1966



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*South  
Australian  
Year Book*

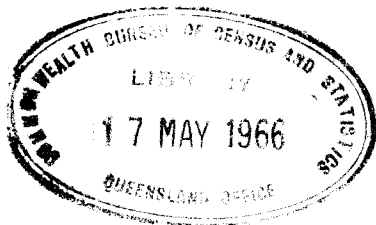
*No. 1 : 1966*

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COMMONWEALTH BUREAU OF CENSUS AND STATISTICS  
SOUTH AUSTRALIAN OFFICE



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## PREFACE

Official statistics of South Australia are published in different media each chosen as the most appropriate to meet a particular need. Mimeographed issues include bulletins or press releases which give as soon as available figures and some comment concerning a particular subject and a Monthly Summary of Statistics which supplies the latest information on a selected range of subjects. Printed publications embrace a Quarterly Abstract of South Australian Statistics which presents an up to date and reasonably comprehensive range of data on economic and social conditions in this State, a Statesman's Pocket Year Book which contains a wide range of statistical information in a compact form and a Statistical Register of South Australia (issued both in Parts and in one volume) in which is provided, without comment, detailed historical and current statistics in many fields.

This volume, the first Official Year Book of South Australia, is designed to complete the set of authoritative statistical publications. Its aim is to portray South Australia both in figures and in text. Thus it ranges from an historical, geographical and climatological description of the State through a study of its constitutional, social, physical and financial development to a picture of South Australia as it is today. Being the first issue it contains more historical information than is intended in future issues; subsequent issues will, however, include more detailed articles on specific subjects.

I gratefully acknowledge the valuable assistance given by contributors of special articles and by those, including senior members of my staff, who have so willingly collaborated in the preparation and review of the text. Especially would I thank Mr. P. W. Hodgkinson, B.Ec., Acting Assistant Statistician, for his outstanding effort in directing this exacting project and editing the whole of the text in addition to carrying out the normal duties of his position. Much credit is also due to the South Australian Tourist Bureau for assistance in the design of the cover and provision of colour plates, and to the Government Printer and his staff for their enthusiasm and co-operation in producing this volume to a very tight timetable.

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January, 1966.



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## **PART 1**

# **NATURAL ENVIRONMENT**

## **1.1. DESCRIPTION**

### **Size and Location**

The State of South Australia has the ocean to the south and is flanked on the other sides by land. It lies south of the 26th parallel of latitude and has as a western boundary the 129th meridian of east longitude. The eastern boundary, north of the River Murray, corresponds with the 141st meridian, and lies approximately 2 miles to the west of this meridian between the River Murray and the sea.

The State is approximately 746 miles from east to west at the northern boundary and 710 miles at the head of the Great Australian Bight. From north to south it varies from 391 miles near the western extremity to approximately 823 miles near the eastern boundary. South Australia covers a total area of 380,070 square miles (one eighth of the area of the Australian continent); however, approximately one third of this area has no significant use and over one half is devoted to extensive pastoral pursuits. Approximately 99% of the population live south of the 32nd parallel.

South Australia uses what is known as Central Standard Time, this being 9½ hours ahead of Greenwich Mean Time, and half an hour behind Eastern Standard Time used by States on the east coast of Australia.

### **Physical Features**

South Australia is a land of generally low relief, the inland area being largely covered by featureless plains, or sand and gibber deserts. Approximately 50% of the State is less than 500 feet above sea level and over 80% less than 1,000 feet. Even the dominant mountains, the Mount Lofty-Flinders system, nowhere exceed 4,000 feet and nowadays at no point prove really difficult barriers to communication.

On the other hand the pattern of communication and development has been greatly influenced by the nature of the coastline, the south-easterly trend of which

is interrupted by two major indentations, Spencer Gulf and Gulf St. Vincent. These two relatively shallow depressions cut into the settled areas a distance of approximately 200 and 100 miles respectively. The resultant natural divisions earlier tended to develop their own centres and many ports were constructed along the coast in spite of the fact that, with the exception of the area between Port Lincoln and Fowlers Bay, the nature of the coastline is not particularly accommodating to port development.

Kangaroo Island, covering 1,680 square miles, is by far the predominant island of the South Australian coastline. There are, however, approximately 100 islands in all, relatively few of which are utilized.

The vast ocean area to the south results in a more temperate climate than would be suggested by the latitude, while the trend of the coastline exposes the coastal areas to the westerly rainbearing air streams.

The most important mountains are the Mount Lofty-Flinders Ranges system. Kangaroo Island structurally belongs to these ranges which, together with parallel subsidiary ranges, extend north from Cape Jervis some 500 miles to the northern end of Lake Torrens. In the south the rounded hills of the Mount Lofty Ranges are of comparatively low altitude with Mount Lofty itself 2,334 feet. The western side of these ranges presents steep scarps to the Adelaide plains while on the eastern side more gentle slopes merge into the Murray basin.

To the north the Flinders Ranges are of greater height and sharper outline than their southern counterpart. St. Mary's Peak of 3,900 feet is the highest point. North of Peterborough there is a divergence from the main range which stretches *via* the Olary Ridges to the Barrier Range and Broken Hill. In the far north the ranges again diverge; one spur circling the northern end of Lake Torrens and the other ending north of Lake Frome. The Flinders Ranges contain some unusual basins of which Wilpena Pound is perhaps the best known.

The Mount Lofty-Flinders chain has an important climatic influence: higher rainfall on the plains to the west of the ranges, and in the ranges themselves, with relatively dry conditions in the Murray basin.

The western half of the State is largely occupied by a low plateau over which an intermittent series of low ranges, including the Warburton, Stuart, Denison, Peake and Everard Ranges, stretch from the Flinders to the somewhat higher Musgrave Ranges in the far north-west. Mount Woodroffe (4,970 feet) the highest point in the State, is located in the Musgrave Ranges.

The comparatively low hills of the Gawler Ranges form the northern side of the Eyre Peninsula triangle, and to the west of Whyalla lie the economically important Middleback Ranges. Isolated peaks of volcanic origin are found in the extreme south-east of the State.

The River Murray, which drains approximately one seventh of Australia, enters the sea in South Australia and is the State's only major river. The fall of the Murray is very slight, dropping less than 70 feet over the 399 miles between the border and the sea. For the 134 miles to Overland Corner the river occupies a wide valley and then passes through a narrow steep-sided valley to Lakes Alexandrina and Albert at its heavily silted mouth.

Surrounding the northern Flinders Ranges is a series of vast lakes which are in reality lakes only after particularly heavy rainfall, normally appearing as shallow depressions with a salt or clay encrusted surface. Lake Eyre, the largest of these, is 39 feet below sea level and is fed by a series of intermittently flowing rivers, including the Finke, the Diamantina and Cooper Creek, which traverse the plains of the north-east, constituting one of the largest areas of internal



drainage in the world. To the south of Lake Eyre are Lakes Gairdner, Frome and Torrens, the last named being 150 miles in length.

### **General Geological Background**

The physiography of the State very accurately outlines the geological features, the areas of higher relief being the basement rocks protruding as cores or ridges through the flat lying younger sediments of the basin areas.

The main physiographic feature is the Kangaroo Island-Mount Lofty-Flinders Ranges arc of hills, which, although of no great elevation, extend over a distance of 500 miles. The rocks of this arc, which are predominantly ancient sediments, have been folded and faulted in a spectacular manner providing many classic examples of textbook tectonics; they owe their present prominence to repeated fold and uplift movements throughout geological time. The hills of the chain rise from the coastal plains of Gulf St. Vincent to the west, the plains of the Murray River to the east, and the Lake Frome and Lake Eyre plains in the north-east and north. The basement rocks are also exposed to the west of Spencer Gulf, but here they are more completely levelled off, and constitute a geological shield of greater antiquity than the Mount Lofty arc.

In the far north-west of the State, the ancient basement is again exposed in the east-west trending hills of the Musgrave and Everard Ranges. These ranges form the northern boundary of the Great Victoria Desert, which with the great coastal Nullarbor plain, covers the western half of the State.

There is thus a broad geological picture of ancient crystalline or partly crystalline folded rocks forming highland chains and provinces, surrounded by relatively young and soft flat-lying sediments which have accumulated in deep troughs and basins during periodic transgressions and regressions of the sea throughout most of geological time.

It is in the hard rock provinces that are found the deposits of minerals and rocks which are playing such an important role in the present high rate of industrial development of the State. The basin areas are important as sources of artesian water and are currently the areas in which vigorous petroleum exploration is proceeding and in which important natural gas discoveries have already been made.

In general, the younger sediments of the basin areas do not provide good agricultural soils except in the higher rainfall areas of the south and south-east of the State, while the best agricultural lands lie in the hard rock provinces of the Gawler-Barossa-Clare regions of the central ranges where relatively good rainfall is associated with more mature soil conditions.

## **1.2. CLIMATE AND METEOROLOGY**

In the Southern Hemisphere, because of the extensive ocean areas and the absence of a broad land mass connecting the Antarctic with the tropical regions, the southern continents are not subject to the same range of weather extremes experienced in northern countries at similar latitudes. The ameliorating effect of this land-sea distribution is particularly noticeable in southern South Australia.

Briefly, the basic features of the South Australian climate are hot, dry summers with relatively mild nights, and cool but not severe winters with most rainfall occurring during the months of May, June, July and August.

## METEOROLOGICAL OBSERVATIONS

Meteorological services throughout Australia are administered by the Commonwealth Bureau of Meteorology and the Regional Office of the Bureau in Adelaide directs operations throughout South Australia. Daily weather reporting stations are established at over 60 representative localities and there are over 750 rainfall recording stations.

Station weather observations telegraphed several times a day provide the basic information for the weather forecasting and warning services provided by the Regional Office. These observations are also collated in bulletins, maps and reports issued for public information. The reports include climatic surveys which are studies of climatic variations over defined regions of the State.

## RAINFALL

## Average Annual Rainfall

South Australia is by far the driest of the Australian States and Territories with just over four fifths of the State receiving an average of less than 10 inches of rain annually. An indication of the shortage of rain in the State is given in the following table which compares the relative distribution of rainfall in South Australia and in Australia as a whole.

## Distribution of Rainfall: South Australia and Australia

| Average Annual Rainfall      | Proportion of Total Area |           |
|------------------------------|--------------------------|-----------|
|                              | South Australia          | Australia |
|                              | %                        | %         |
| Under 10 inches.....         | 82.8                     | 39.0      |
| 10 and under 15 inches ..... | 9.4                      | 20.6      |
| 15 and under 20 inches ..... | 4.5                      | 11.2      |
| 20 and under 25 inches ..... | 2.2                      | 9.0       |
| 25 and under 30 inches ..... | 0.8                      | 7.2       |
| 30 and under 40 inches ..... | 0.3                      | 6.1       |
| 40 inches and over .....     | (a)                      | 6.9       |
| Total .....                  | 100.0                    | 100.0     |

(a) Less than 0.05 per cent—an area of the order of 75 square miles in the Mount Lofty Ranges.

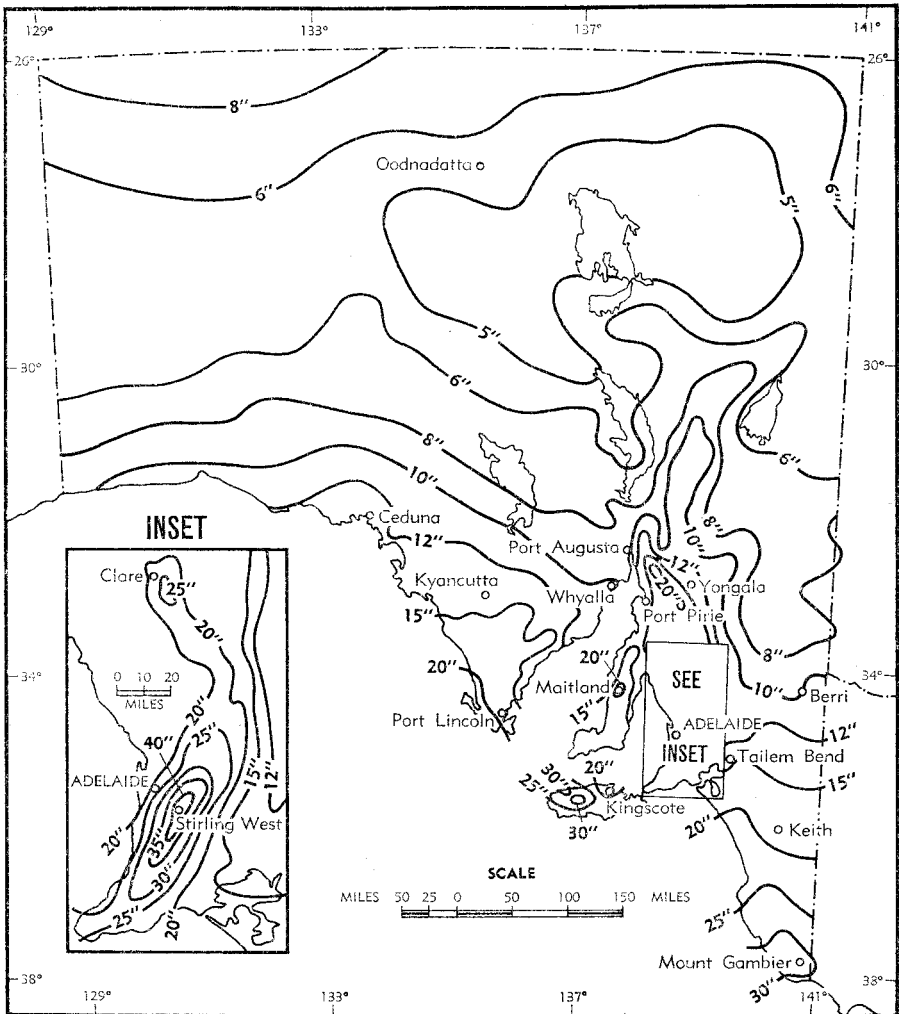
Over the southern half of South Australia the main source of rain comes from showers associated with unstable moist westerly airstreams occurring fairly regularly during winter. The wettest part of the State is in the Mount Lofty Ranges, immediately east of Adelaide where the average annual rainfall, in the vicinity of Stirling West, is about 47 inches. The Flinders Ranges have the effect of extending a strip area of higher rainfall well to the north.

As can be seen from Map 1 the isohyets generally show highest annual averages along the ranges and southern parts of the coast. Averages fall off rapidly to less than 10 inches within 100 to 150 miles inland, and then decrease more gradually to a minimum of below 5 inches in the vicinity of Lake Eyre. This area is the driest part of Australia, and there have been protracted periods when the average there has even been less than 3 inches.

**Seasonal Distribution of Rainfall**

Those areas of the State with the higher average annual totals also show a marked winter maximum of rainfall. From November to March the fall is slight, but is rarely completely absent. However, a high rate of evaporation during the summer means that in general these summer rains are not significant from the agricultural point of view.

**SOUTH AUSTRALIA**  
**AVERAGE ANNUAL RAINFALL**  
 Standard 30 year period 1931-60  
 Isohyets in inches



MAP 1

The first significant falls generally arrive during April or May, and while June, July and August are usually the wettest months, rains tend to show a marked decrease during September and October.

By contrast the occurrence of rain over interior districts is quite erratic, but southern parts of the interior still exhibit a discernible trend for winter maxima. Records collected over the years from this northern half of the State show that heavy rains of up to 3 inches may occur in any month of the year, but on the other hand at least two or three months without any significant rain at all are experienced practically every year.

Average monthly rainfalls at 15 selected recording stations are shown in the following table. The average number of rain days (*i.e.* days receiving one point or more of rain) are also shown.

### Average Rainfall and Days of Rain: Selected Stations

For period 1931-1960

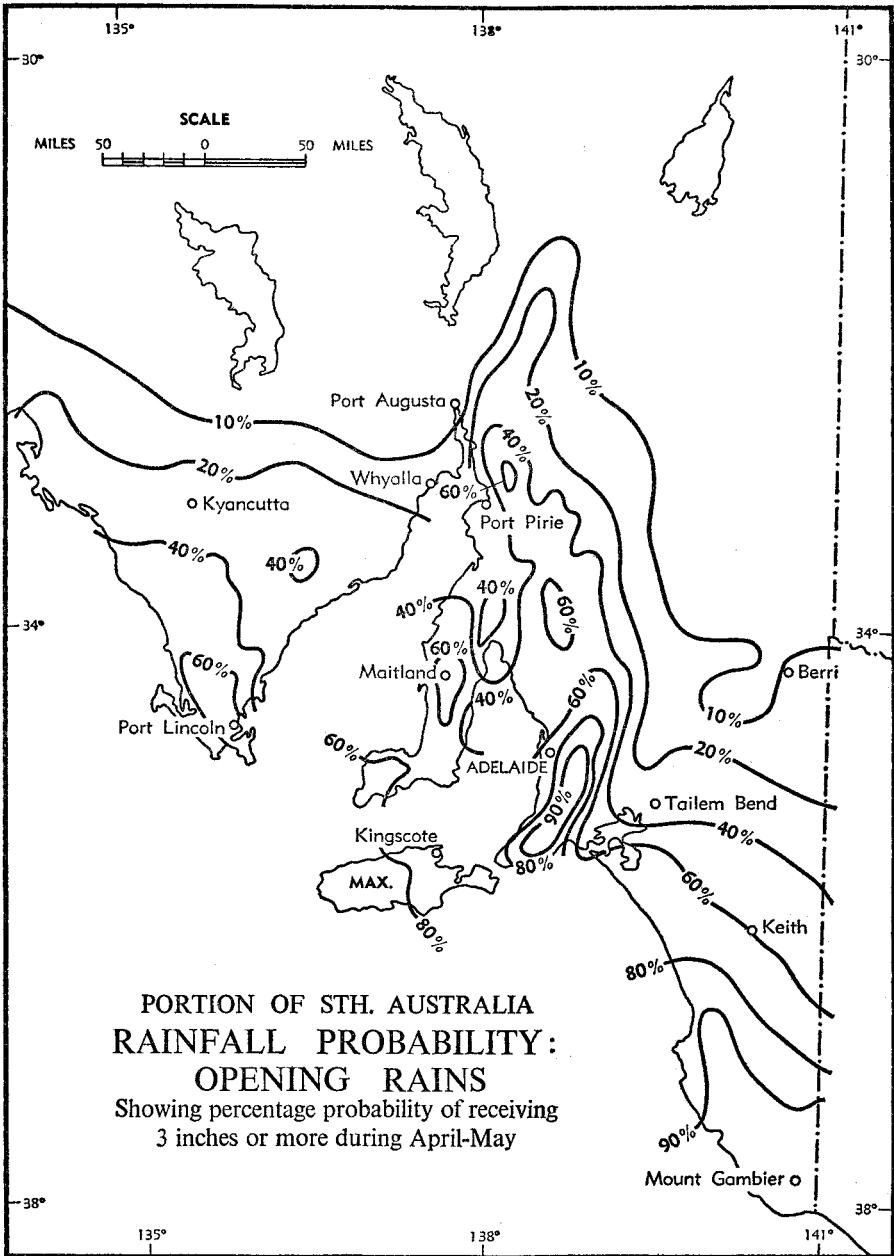
| Station                        | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Year  |
|--------------------------------|------|------|------|------|-----|------|------|------|-------|------|------|------|-------|
| AVERAGE RAINFALL (Points)      |      |      |      |      |     |      |      |      |       |      |      |      |       |
| Adelaide .....                 | 90   | 92   | 81   | 198  | 260 | 241  | 240  | 233  | 194   | 183  | 140  | 108  | 2,060 |
| Berri .....                    | 81   | 87   | 53   | 73   | 99  | 100  | 102  | 95   | 84    | 98   | 83   | 57   | 1,012 |
| Ceduna .....                   | 36   | 73   | 66   | 95   | 144 | 171  | 175  | 155  | 95    | 106  | 91   | 79   | 1,286 |
| Clare .....                    | 113  | 131  | 87   | 181  | 277 | 292  | 309  | 308  | 261   | 238  | 160  | 108  | 2,465 |
| Keith .....                    | 89   | 86   | 93   | 157  | 210 | 189  | 205  | 225  | 185   | 186  | 126  | 103  | 1,854 |
| Kingscote .....                | 86   | 88   | 58   | 147  | 217 | 290  | 304  | 252  | 187   | 165  | 103  | 70   | 1,967 |
| Kyancutta .....                | 50   | 75   | 57   | 85   | 138 | 159  | 168  | 161  | 120   | 113  | 100  | 86   | 1,312 |
| Maitland .....                 | 86   | 115  | 72   | 177  | 243 | 242  | 252  | 230  | 194   | 182  | 128  | 91   | 2,012 |
| Mount Gambier .....            | 120  | 136  | 155  | 293  | 321 | 349  | 425  | 408  | 299   | 268  | 203  | 153  | 3,130 |
| Oodnadatta .....               | 68   | 117  | 60   | 22   | 48  | 44   | 35   | 35   | 22    | 44   | 27   | 42   | 564   |
| Port Augusta .....             | 73   | 109  | 55   | 73   | 83  | 93   | 89   | 94   | 73    | 108  | 74   | 63   | 987   |
| Port Lincoln .....             | 53   | 75   | 58   | 137  | 213 | 255  | 294  | 249  | 186   | 146  | 106  | 70   | 1,842 |
| Port Pirie .....               | 89   | 110  | 62   | 114  | 143 | 152  | 128  | 138  | 123   | 128  | 102  | 79   | 1,368 |
| Stirling West .....            | 151  | 189  | 170  | 413  | 587 | 602  | 649  | 599  | 492   | 403  | 290  | 195  | 4,740 |
| Tallem Bend .....              | 92   | 88   | 78   | 138  | 161 | 158  | 164  | 159  | 142   | 151  | 122  | 117  | 1,570 |
| Whyalla .....                  | 84   | 109  | 59   | 77   | 85  | 91   | 81   | 87   | 84    | 99   | 84   | 68   | 1,008 |
| Yongala .....                  | 99   | 100  | 59   | 101  | 137 | 136  | 164  | 182  | 135   | 135  | 123  | 73   | 1,444 |
| AVERAGE NUMBER OF DAYS OF RAIN |      |      |      |      |     |      |      |      |       |      |      |      |       |
| Adelaide .....                 | 5    | 5    | 5    | 11   | 13  | 14   | 16   | 16   | 13    | 12   | 9    | 7    | 126   |
| Berri .....                    | 3    | 4    | 3    | 6    | 8   | 9    | 11   | 10   | 7     | 7    | 5    | 4    | 77    |
| Ceduna .....                   | 3    | 3    | 3    | 6    | 10  | 12   | 12   | 11   | 8     | 7    | 6    | 4    | 85    |
| Clare .....                    | 5    | 5    | 5    | 10   | 12  | 15   | 16   | 16   | 12    | 11   | 8    | 7    | 122   |
| Keith .....                    | 4    | 4    | 4    | 9    | 12  | 13   | 15   | 15   | 12    | 11   | 8    | 6    | 113   |
| Kingscote .....                | 4    | 4    | 5    | 10   | 14  | 16   | 19   | 18   | 13    | 11   | 8    | 7    | 129   |
| Kyancutta .....                | 4    | 4    | 4    | 7    | 12  | 12   | 14   | 14   | 10    | 9    | 7    | 5    | 102   |
| Maitland .....                 | 4    | 5    | 5    | 10   | 13  | 15   | 17   | 16   | 12    | 11   | 8    | 6    | 122   |
| Mount Gambier .....            | 7    | 8    | 9    | 14   | 17  | 18   | 21   | 20   | 17    | 16   | 13   | 10   | 170   |
| Oodnadatta .....               | 3    | 2    | 2    | 2    | 3   | 3    | 2    | 2    | 2     | 3    | 3    | 3    | 30    |
| Port Augusta .....             | 3    | 3    | 3    | 5    | 7   | 7    | 10   | 9    | 6     | 6    | 6    | 4    | 69    |
| Port Lincoln .....             | 4    | 5    | 5    | 11   | 15  | 17   | 19   | 19   | 13    | 12   | 8    | 6    | 134   |
| Port Pirie .....               | 3    | 3    | 3    | 6    | 8   | 10   | 11   | 10   | 8     | 7    | 6    | 4    | 79    |
| Stirling West .....            | 6    | 7    | 7    | 13   | 15  | 17   | 18   | 18   | 15    | 14   | 11   | 9    | 150   |
| Tallem Bend .....              | 4    | 5    | 4    | 9    | 12  | 13   | 13   | 13   | 11    | 10   | 8    | 6    | 108   |
| Whyalla .....                  | 3    | 3    | 3    | 5    | 6   | 7    | 9    | 8    | 6     | 6    | 5    | 4    | 65    |
| Yongala .....                  | 4    | 4    | 4    | 7    | 10  | 14   | 13   | 13   | 9     | 8    | 7    | 5    | 97    |

### Rainfall Probability

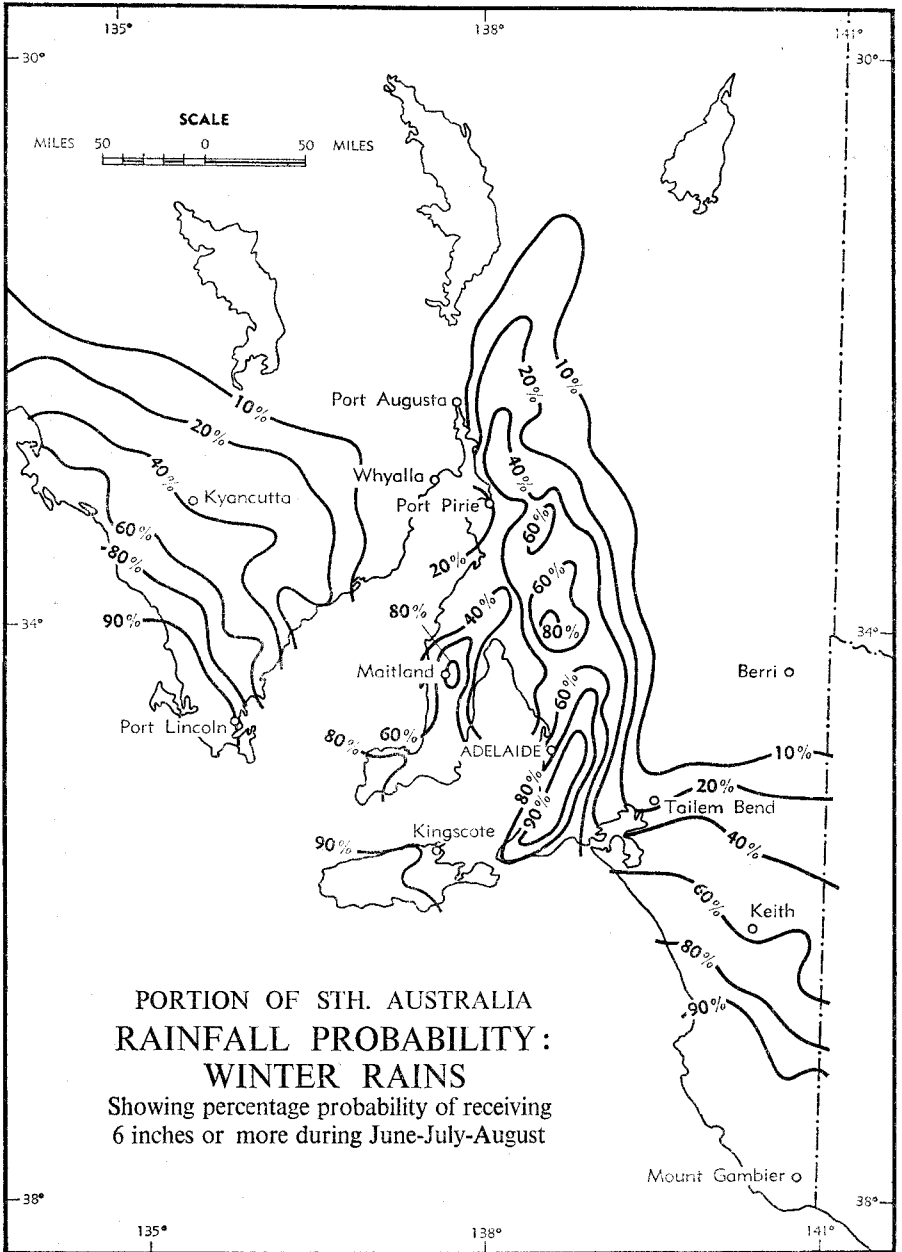
Cereal crops are sown following opening rains, which are normally expected in April or May. The growing season varies between districts, but it is generally considered to be the eight months from April to November. Figures of average rainfall in agricultural areas during the growing season are set out in Part 9.1, pages 306-307.

Opening Rains (April-May): Good opening rains are important since they ensure the preparation of a firm, weed-free seed bed and enable even germination and rapid early growth whilst the soil is still warm. Permanent pastures likewise benefit in that growth made during this period lays the foundation for a





MAP 2



PORTION OF STH. AUSTRALIA  
RAINFALL PROBABILITY:  
WINTER RAINS

Showing percentage probability of receiving  
6 inches or more during June-July-August

MAP 3

strong flush with the rising temperatures during spring. While much of the success of the opening depends of course on the distribution of the rain days during the two months, 3 inches of rain has been chosen as an amount which would give a very satisfactory opening. In Map 2 isopleths have been drawn to show the percentage chance of obtaining 3 inches or more in the period April-May. The map shows that less reliable opening rainfalls are experienced in the Murray Mallee, the greater part of Eyre Peninsula and areas adjacent to the ranges in the northern agricultural areas. In these areas the chances of receiving 3 inches of rain are less than 40%, i.e. 6 years in 10 on the average would receive less than 3 inches. The presence of the Flinders and Mount Lofty Ranges increases the probabilities in this area by virtue of their higher rainfalls compared with the adjacent plains area. In particular, virtually the whole of the Fleurieu Peninsula (to the south of Adelaide) can expect that in 4 years out of 5 on the average the rainfall will exceed 3 inches during April-May. This situation deteriorates markedly to the north where interior and north-east pastoral areas have less than a 10% chance of receiving 3 inches.

**Winter Rains (June-August):** With lower temperatures during these months growth of plants is at a minimum and water demand is low. Good winter rains are essential, however, to replenish the subsoil moisture reserves to enable crops to finish off without check and allow permanent pasture to carry on as far as possible into the summer without irrigation. Six inches or more of rain would be considered a very satisfactory winter rainfall and consequently Map 3 shows the percentage chance of receiving 6 inches or more in the June-July-August period. As with the opening rains it can be seen that the more reliable areas are southern parts of the coasts and ranges, with reliability rapidly decreasing over north-eastern Eyre Peninsula and over the eastern side of the ranges.

**Closing Rains (September-October):** During September and October temperatures are rising again and plant growth is rapid. Provided the earlier rains have been satisfactory, with the plants well established before the cold weather commenced, good rains at this time ensure good hay yields and well-filled grain. The percentage chance of obtaining 3 inches or more in the period September-October is shown in Map 4. Here the pattern of reliability is much the same as for the two preceding periods.

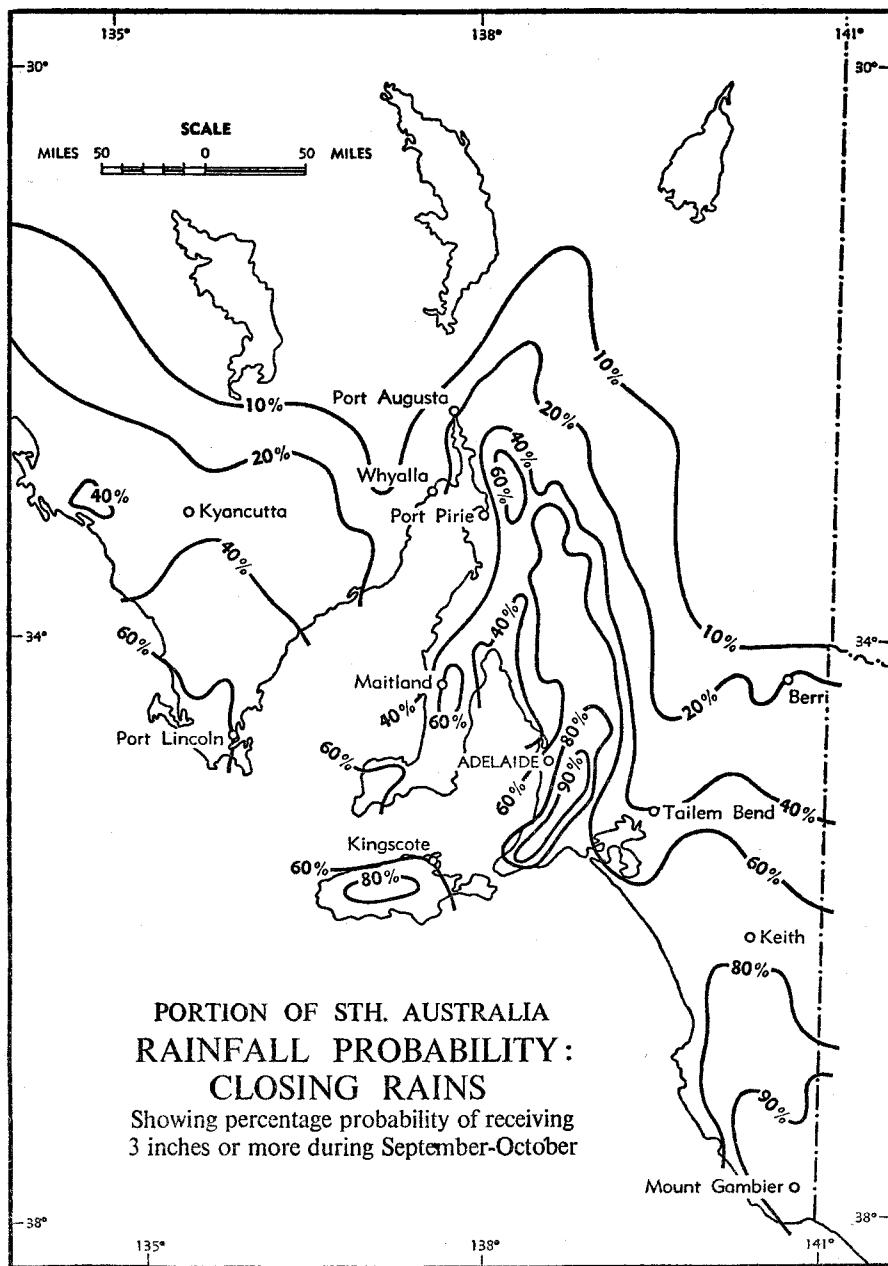
**Summer Rainfall (November to March):** Summer thunderstorms occasionally bring scattered heavy falls but normally the rainfall in these months is too low to be of any value. In southern areas useful rains have occasionally continued into November, and even December, but in general they are too unreliable to be taken into account for planning.

### Rainfall Intensity

Long sustained periods of intense rainfall are rare in South Australia. However, occasionally there are very intense falls lasting only a few minutes—for example in Adelaide several falls at a rate of more than 400 points per hour over a 5-minute period have been recorded. These would be thunderstorm rains, and can cause considerable damage to crops and to light or freshly worked soils.

The most notable falls of rain which have occurred within a period of twenty-four hours ending at 9 a.m. were at—

|  |         |
|--|---------|
| Ardrossan (18th February 1946) . . . . . | 8.10in. |
| Carpa (18th February 1946) . . . . .     | 7.83in. |
| Hesso (18th February 1946) . . . . .     | 7.36in. |
| Wilmington (1st March 1921) . . . . .    | 7.12in. |
| Wynbring (28th February 1921) . . . . .  | 7.00in. |



**PORTION OF STH. AUSTRALIA  
RAINFALL PROBABILITY:  
CLOSING RAINS**

Showing percentage probability of receiving  
3 inches or more during September-October

MAP 4



Other Yorke Peninsula towns besides Ardrossan also recorded over 7 inches on 18th February 1946. These, however, are very much below the 24-hour falls which have been recorded in tropical parts of Queensland and Western Australia. Crohamhurst in Queensland once recorded 35.71 inches in one day, and at least 20 other centres have had daily readings exceeding 24 inches.

### **Snow and Hail**

The occurrence of snow in South Australia is infrequent and is mainly confined to the Mount Lofty Ranges and southern Flinders Ranges. Most falls are very light and do not persist long due to the relative warmth of the ground. Collated reports of snow in the Mount Lofty Ranges show a total of 116 days of snow experienced over a period of 124 years. While most falls have occurred during the months June to September, snow has been experienced as early as 25th April (1916) and as late as 3rd December (1955).

Hail falls most frequently about the southern coasts and ranges during the winter. Further to the north, hail can be experienced with summer thunderstorms and some of the largest hailstones have been reported from northerly parts of the State. Tornadoes and tornadic squalls are, in almost all cases, accompanied by hail.

### **Floods**

Various localized areas of South Australia are prone to flooding. However, most local flooding is associated with intense falls and consequently is of comparatively short duration. Exceptions have occurred in parts of the south-east of the State where due to topography and other soil factors, stretches of water can persist for days and even weeks.

Extensive rises in the River Murray levels have at times caused damage to levees and installations along the banks. During 1956, following an excessive snow melt in the Australian Alps, prolonged flooding was experienced in many areas adjacent to the main course.

### **Droughts**

When dry conditions persist over wide areas for long periods of time, drought, the worst of all Australian climatic hazards, is experienced. The really bad years in South Australia were 1863-67, 1896-98, 1901-03, 1913-16, 1926-30, 1939-40, 1943-45, 1959-62 and 1965 in the interior, and 1859-60, 1884-86, 1895-98, 1911-15, 1928-29, 1943-45 and 1959 in the settled areas.

The driest year in terms of actual rainfall was 1959, when an all-time low figure for the year of 11.32 inches was recorded in Adelaide. However, the 1914 drought is generally recognized as being the most severe experienced, and in that year districts where drought was almost unknown were seriously affected. The average wheat yield fell to only 1.41 bushels per acre, little more than one tenth of the yield in previous seasons. In places the River Murray was just a series of waterholes.

The northern areas suffer more frequent droughts than areas near the coast. In 1896 the track north-west of Port Augusta was closed to all traffic because of the drought stricken nature of the country. At about this time the drought was particularly severe in the north-east of the State, and this pastoral country was entering its eighth consecutive year of drought before relief rains fell in March 1902.

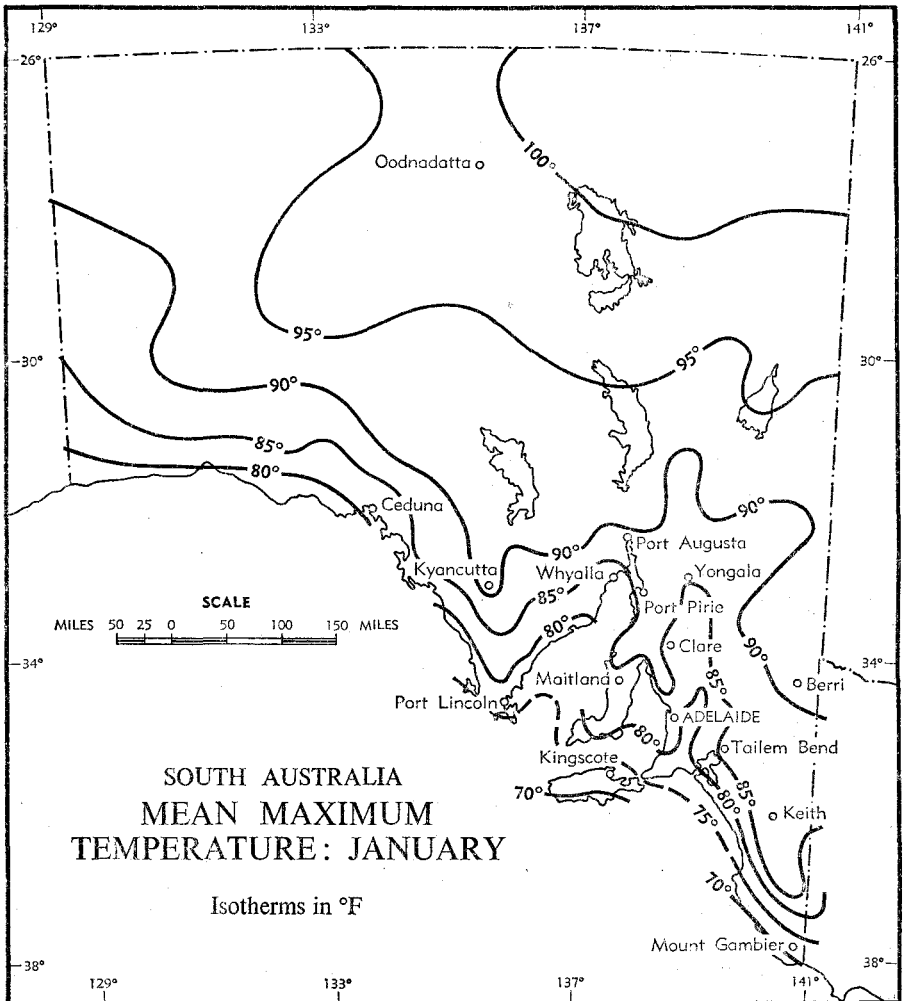
Further details of droughts appear in the Bureau of Meteorology publication "Droughts in Australia" by J. C. Foley (Bulletin No. 43).

TEMPERATURE

Seasonal Temperature Conditions

Temperature is normally recorded under standard conditions in a Stevenson screen. Isotherms of the average maximum temperatures in a mid-summer month (January) and of the average minimum temperatures in a mid-winter month (July) are shown on Maps 5 and 6 respectively. The isotherms are more or less parallel to the coastline but the cooling effect associated with higher altitudes of the Mount Lofty and Flinders Ranges is clearly shown.

From December to February it is generally warm to hot throughout the State but sea breezes frequently bring some relief to the coastal districts. In locations more than 50 miles inland maximum daily temperatures usually exceed 90°F and are quite often over 100°F. In general, areas to the north of the 90°F isotherm on the January map average more than 20 days annually during which the

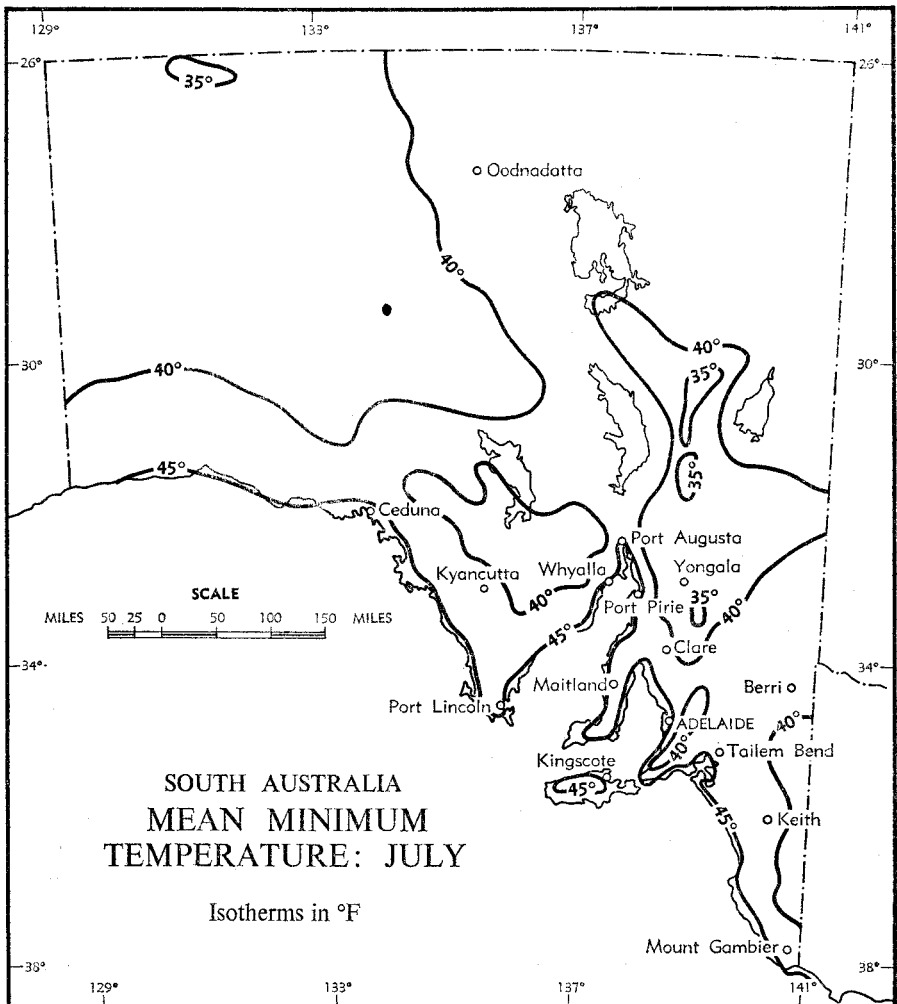


MAP 5

maximum temperature exceeds 100°F; while only on the extreme south-east coastal fringe and on Kangaroo Island does the average number of such "century days" fall below five per year. Air masses prevalent at this time of the year are relatively dry and hence cooling during the night is marked—a fall of 20°F to 30°F from day to night is usual, making the nights reasonably pleasant.

During March temperatures begin to fall and continue to do so during April and May, the first frosts of the year often being experienced during this period. The three coldest months are June, July and August, with the coldest areas along the highlands. In those parts of the State east and south-east of the ranges, the mean temperature for the latter months is near or just below 50°F, and these low temperatures cause vegetative growth to become very slow, although it does not cease altogether.

In the spring months, September to November, with gradually rising temperatures and longer hours of sunshine, crops and pastures grow rapidly. In this



MAP 6

period severe frosts are sometimes experienced and these can cause considerable damage to fruit crops during the bud, flower, and small fruit stages.

When a pressure distribution causes very dry and warm air from the rapidly heating interior to flow over the State for two or three consecutive days, developing crops can be seriously affected by the desiccating effect of this air mass.

Mean maximum and minimum temperatures for each month at 17 selected recording stations throughout the State are shown below. These are based on records ranging from 6 years at Maitland to 62 years at Port Augusta.

### Mean Maximum and Minimum Temperatures: Selected Stations

| Recording Station   | Jan. | Feb. | Mar. | Apr. | May  | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Year |
|---------------------|------|------|------|------|------|------|------|------|-------|------|------|------|------|
| MEAN MAXIMUM (°F)   |      |      |      |      |      |      |      |      |       |      |      |      |      |
| Adelaide .....      | 84.8 | 85.7 | 81.3 | 73.0 | 66.8 | 61.0 | 59.9 | 62.3 | 66.8  | 72.5 | 78.1 | 82.6 | 72.9 |
| Berri .....         | 87.7 | 86.3 | 82.3 | 72.5 | 66.3 | 60.4 | 59.9 | 63.4 | 69.5  | 74.5 | 80.7 | 85.8 | 74.1 |
| Ceduna .....        | 81.5 | 79.1 | 79.9 | 73.5 | 67.9 | 64.1 | 62.6 | 65.5 | 69.7  | 72.9 | 76.1 | 80.2 | 72.7 |
| Clare .....         | 84.4 | 84.9 | 80.2 | 70.4 | 63.0 | 56.8 | 55.7 | 58.6 | 63.9  | 70.6 | 77.0 | 82.0 | 70.6 |
| Keith .....         | 87.0 | 82.3 | 80.9 | 70.7 | 64.1 | 59.3 | 58.6 | 61.0 | 66.7  | 70.2 | 76.3 | 82.1 | 71.6 |
| Kingscote .....     | 72.5 | 73.0 | 70.8 | 66.5 | 62.7 | 58.8 | 57.6 | 58.2 | 60.8  | 64.3 | 67.6 | 70.7 | 65.3 |
| Kyancutta .....     | 90.7 | 88.9 | 86.4 | 76.8 | 70.7 | 63.8 | 62.9 | 65.9 | 72.0  | 77.2 | 83.0 | 88.4 | 77.2 |
| Maitland .....      | 84.5 | 85.0 | 79.0 | 72.0 | 65.0 | 60.0 | 58.5 | 61.5 | 66.0  | 71.5 | 77.5 | 82.0 | 71.9 |
| Mount Gambier ..... | 74.2 | 75.9 | 72.7 | 66.5 | 61.4 | 57.0 | 56.2 | 58.1 | 61.1  | 65.0 | 68.3 | 71.9 | 65.7 |
| Oodnadatta .....    | 98.5 | 96.4 | 91.4 | 81.9 | 73.3 | 67.1 | 66.3 | 70.6 | 78.8  | 84.9 | 91.6 | 96.9 | 83.1 |
| Port Augusta .....  | 89.5 | 89.5 | 85.2 | 77.4 | 70.3 | 63.6 | 62.8 | 66.5 | 72.4  | 78.3 | 83.8 | 87.7 | 77.3 |
| Port Lincoln .....  | 77.4 | 77.7 | 74.8 | 70.3 | 65.8 | 61.3 | 60.2 | 61.6 | 64.6  | 68.2 | 71.8 | 75.2 | 69.1 |
| Port Pirie .....    | 89.2 | 88.8 | 85.6 | 76.6 | 69.2 | 62.8 | 61.7 | 65.0 | 71.3  | 76.6 | 82.6 | 86.8 | 76.3 |
| Stirling West ..... | 75.6 | 77.1 | 73.1 | 64.3 | 58.3 | 52.5 | 51.3 | 53.8 | 58.0  | 63.1 | 68.2 | 72.8 | 64.0 |
| Tallem Bend .....   | 84.5 | 82.5 | 79.7 | 72.0 | 66.0 | 56.0 | 59.8 | 61.8 | 68.9  | 71.0 | 76.2 | 81.0 | 71.9 |
| Whyalla .....       | 83.6 | 84.1 | 80.6 | 74.1 | 68.9 | 62.9 | 62.3 | 64.7 | 68.9  | 74.6 | 78.9 | 82.8 | 73.9 |
| Yongala .....       | 85.9 | 85.8 | 80.7 | 70.5 | 62.4 | 55.5 | 54.5 | 57.6 | 63.8  | 71.2 | 78.3 | 83.5 | 70.8 |
| MEAN MINIMUM (°F)   |      |      |      |      |      |      |      |      |       |      |      |      |      |
| Adelaide .....      | 61.0 | 61.8 | 59.1 | 54.4 | 50.8 | 46.6 | 45.4 | 46.2 | 48.3  | 51.7 | 55.4 | 58.9 | 53.3 |
| Berri .....         | 59.1 | 58.9 | 56.0 | 50.0 | 46.0 | 42.7 | 41.5 | 42.6 | 45.7  | 49.8 | 54.0 | 57.6 | 50.3 |
| Ceduna .....        | 58.8 | 59.3 | 56.4 | 51.0 | 46.9 | 43.5 | 43.8 | 44.2 | 47.0  | 50.0 | 53.8 | 57.7 | 51.0 |
| Clare .....         | 56.1 | 56.7 | 52.8 | 46.8 | 42.6 | 39.6 | 38.1 | 38.9 | 41.2  | 45.2 | 49.9 | 54.1 | 46.8 |
| Keith .....         | 53.7 | 52.7 | 50.2 | 47.5 | 44.3 | 42.5 | 40.2 | 41.1 | 43.3  | 46.0 | 48.6 | 51.9 | 46.8 |
| Kingscote .....     | 58.3 | 59.5 | 58.0 | 54.5 | 51.9 | 49.1 | 47.6 | 47.3 | 48.7  | 50.8 | 53.7 | 56.7 | 53.0 |
| Kyancutta .....     | 57.4 | 56.7 | 53.7 | 48.4 | 44.4 | 41.2 | 40.6 | 41.1 | 43.3  | 46.7 | 51.4 | 55.3 | 48.4 |
| Maitland .....      | 58.0 | 58.5 | 56.5 | 51.5 | 47.5 | 45.0 | 43.5 | 44.0 | 45.0  | 47.5 | 51.0 | 54.5 | 50.2 |
| Mount Gambier ..... | 53.5 | 54.8 | 52.4 | 49.5 | 46.4 | 43.5 | 42.4 | 43.1 | 45.1  | 46.9 | 49.6 | 52.0 | 48.3 |
| Oodnadatta .....    | 71.6 | 71.0 | 66.0 | 57.3 | 49.9 | 44.3 | 42.6 | 44.8 | 51.3  | 58.3 | 64.3 | 69.7 | 57.6 |
| Port Augusta .....  | 65.3 | 66.0 | 62.1 | 55.7 | 50.0 | 45.9 | 43.9 | 45.8 | 49.5  | 54.8 | 59.7 | 63.5 | 55.2 |
| Port Lincoln .....  | 58.5 | 59.4 | 57.5 | 54.1 | 50.9 | 48.1 | 46.4 | 46.4 | 47.7  | 50.1 | 53.4 | 56.6 | 52.4 |
| Port Pirie .....    | 62.6 | 63.1 | 60.3 | 54.7 | 50.6 | 46.4 | 45.4 | 46.3 | 49.0  | 52.9 | 57.5 | 60.9 | 54.1 |
| Stirling West ..... | 52.0 | 53.2 | 50.9 | 47.2 | 44.7 | 41.7 | 40.7 | 41.2 | 43.0  | 45.1 | 47.7 | 50.5 | 46.5 |
| Tallem Bend .....   | 56.2 | 56.8 | 53.4 | 49.2 | 46.8 | 42.9 | 41.5 | 42.7 | 44.6  | 48.0 | 51.2 | 54.5 | 49.0 |
| Whyalla .....       | 63.8 | 65.0 | 62.0 | 55.7 | 50.5 | 47.0 | 43.9 | 45.8 | 49.5  | 53.9 | 58.6 | 62.1 | 54.8 |
| Yongala .....       | 55.8 | 56.3 | 51.7 | 45.1 | 40.9 | 37.6 | 36.1 | 36.9 | 39.4  | 43.4 | 49.0 | 53.7 | 45.5 |

The highest temperature ever recorded in South Australia was 123.2° at Oodnadatta on 2nd January 1960, and the lowest 17.4° at Yongala on 16th June 1959.

### HUMIDITY

"Relative humidity" at a particular temperature is the ratio of the actual vapour pressure to the saturated vapour pressure (at that temperature) expressed as a percentage. Since relative humidity depends not only on the actual water vapour content of the air, but also on air temperature, there is a tendency for highest relative humidities to be associated with low temperatures during the early morning hours, and conversely, the lowest relative humidity values tend to occur during the warmest part of the afternoons when measurements of under 20 per cent are not uncommon.

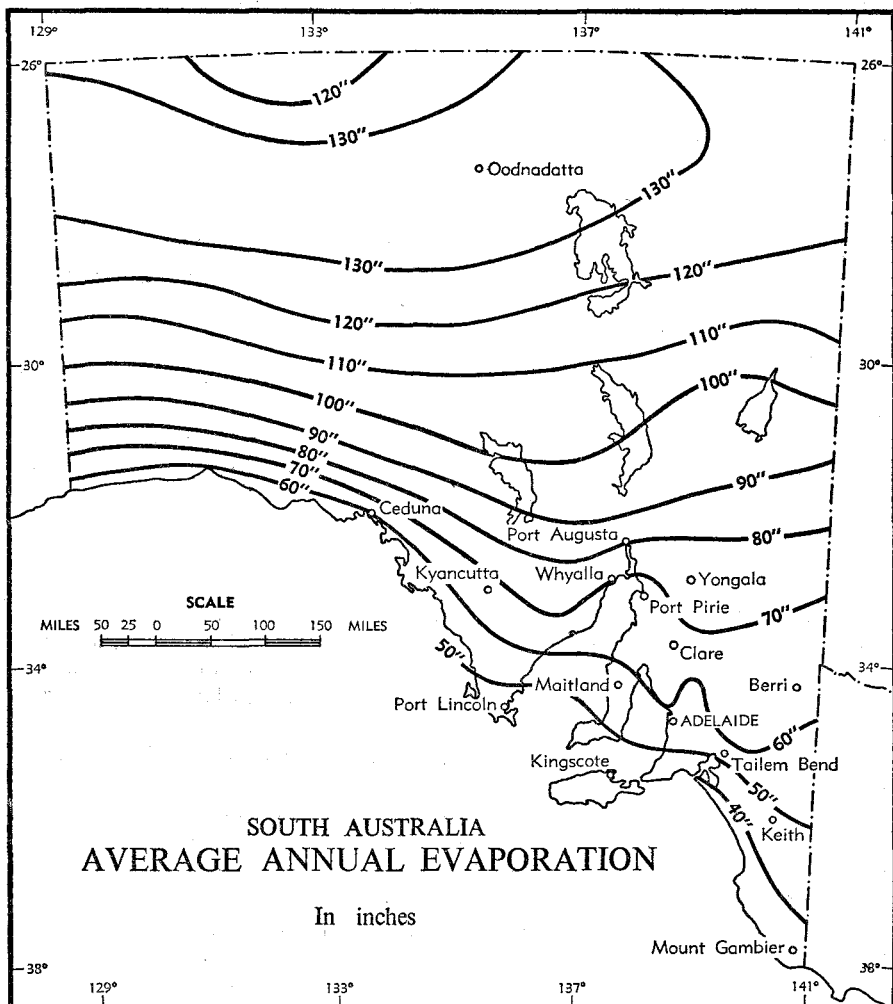
The average index of mean relative humidity has been derived from the ratio of the average 9 a.m. vapour pressure to the saturation vapour pressure at the average mean temperature. Being thus related to the mean temperature this value of relative humidity is a good approximation of the daily mean.

With an average index of mean relative humidity of under 35% in summer increasing to about 50% in winter, the far northern parts of the State experience the lowest values of relative humidity in South Australia. By comparison, most southern parts of the State have an average index of mean relative humidity of about 45% to 55% in summer, increasing to about 70% to 80% in winter.

EVAPORATION

In South Australia most measurements of evaporation have been made with tanks, each 3 feet internal diameter and 3 feet deep, sunk into the soil so that the rim is only an inch or so above the surface.

The annual average evaporation using this standard tank varies from under 40 inches along the south-east coastal fringe to more than 130 inches over a large area around and to the west of Oodnadatta in the far north (see Map 7). About half the area of the State has an evaporation rate exceeding 100 inches



MAP 7



per annum, and this high rate is all the more significant when it is considered that the average annual rainfall over most of the northern half is less than 6 inches. A critical survey of the evaporation network and methods of observation, together with tabulations of the results of Australian observations appears in the Bureau of Meteorology publication "Evaporation in Australia" (Bulletin No. 44).

### SUNSHINE AND CLOUD

The annual average sunshine total (as determined from records of sunshine and average cloudiness) ranges from about 2,000 hours along parts of the southern coastal fringe to 3,500 hours near the northern border of the State. Adelaide has an average of 2,508 hours a year.

December and January tend to be the sunniest months with daily averages reaching a maximum of about 10½ hours over interior districts. During the June and July winter months daily averages are still as high as 7 hours in the far north interior, but over the southern coastal fringe the daily average of just over 8 hours for summer is reduced to about 3 hours during winter.

### WIND

During the summer months winds from the southern quadrants are the most prevalent and a well defined sea breeze is common along the whole of the coastal fringe from October right through to about April and May. During the winter months the north-westerly predominates, but the proportion of west to south-west winds is also relatively high.

South Australia is not subject to the type of sustained wind storms associated with tropical cyclones as in Queensland and tropical Western Australia. However, gales do occur from time to time along the coast during the winter and cause minor damage to buildings and foreshore works. Probably the most noteworthy storm was on 11th April 1948, when the wind averaged over 40 m.p.h. for six hours in central and south-eastern districts, and the naval frigate *Barcoo* was grounded at Glenelg.

Most violent wind squalls are associated with thunderstorms and usually last only a few minutes. It was during such squalls that the highest wind gusts were recorded in South Australia—92 m.p.h. at Leigh Creek on 3rd December 1953, and also at Adelaide on 13th July, 1964.

### CLIMATE OF ADELAIDE

The longest continuous series of weather observations in the Southern Hemisphere started in Adelaide in November 1836, when Sir George Kingston commenced rain gauge readings at his property on the corner of Grote Street and West Terrace. Unfortunately, the earliest figures were mislaid and records are available only from the beginning of 1839.

No other regular observations were made until Sir Charles Todd arrived to fill the post of Superintendent of Telegraphs and Government Astronomer in 1856. During the first year or two observations were made at his private residence in Adelaide, and for some months, in Government House grounds. In May 1860, the Observatory on West Terrace was completed and the instruments were moved to that site.

Temperature records at Adelaide date back to 1858 when readings were first taken from a thermometer placed in a screen known as a Greenwich Stand which failed to protect the thermometer fully from reflected radiation. In 1887 a new series of readings using a standard Stevenson Screen was introduced

and this showed maximum temperatures during the warmer months to be slightly lower on average, although most readings were not significantly affected. Both screens were in continuous operation until 1948 when use of the Greenwich Stand was discontinued.

For over 100 years the observational site at Adelaide has remained practically unchanged. Minor shifts occurred in 1940 and 1962 but these were within 100 yards of the original observatory site.

Adelaide is the driest of Australia's capital cities, having less rainfall and a lower relative humidity than any other capital. Summer maximum temperatures are high and the record of 117.7°F in the Greenwich Stand on 12th January 1939 is the highest recorded in any of the capital cities.

### Temperature

In the summer months, maximum temperatures frequently exceed 90°F and from time to time "heat waves", with readings at or near 100°F for several consecutive days, are experienced. The outstanding heat wave was in January 1939 when the record temperature of 117.7°F. was recorded and 14 days out of 15 exceeded 90°F.

July is the coldest month, when the mean maximum is only 59°F with the extreme lowest minimum being 32.0°F on 24th July 1908. August is only slightly warmer than July, but after August steadily rising temperatures are experienced during the spring months.

### Rainfall

Adelaide's summer rainfall is light and unreliable. The average fall in each month from January to March is under 1 inch and completely rainless months in this period are not uncommon. In fact, each of the 5 months December to April has at some time been recorded as completely dry, and in the period January to March 1893, there were 69 consecutive rainless days. On the other hand, heavy rain is occasionally experienced at this time of the year and on 7th February 1925, rainfall was 5.57 inches—a record for one day. Each month from May to September averages over 2 inches and in this period the rain is fairly reliable. June is the wettest month, but the average is still under 3 inches for the month. The 127-year annual rainfall average is 20.86 inches, and over the period annual totals have ranged from a low of 11.32 inches in 1959 to a high of 30.95 inches in 1851.

### Other Conditions

Relative humidity in Adelaide is the lowest of all capital cities in Australia and is at its lowest in January, when the average 9 a.m. reading (which approximates the average for the whole 24 hours) is 39%. This low value of the relative humidity explains why the summer in Adelaide, even during a heat wave, is not unduly severe for personal comfort. In fact, the relative humidity is very low for most months of the year, only becoming higher in winter, with the average at 9 a.m. reaching as high as 75% in June and July.

Adelaide is not subject to violent sustained wind storms. The prevailing wind during the day in summer is a south-westerly sea breeze which is well defined throughout the months October to April. Another common wind during summer, known locally as the "gully wind", blows from the east or south-east out of the Adelaide hills (more particularly at night) and becomes very strong and gusty at times. In winter the prevailing wind during the day is north-westerly with a high proportion of south-westerlies.

## NATURAL ENVIRONMENT

## Climatological Data: Adelaide

(1) Temperature and Relative Humidity

| Month           | Temperature |                  |         |                 |        | Relative Humidity (9 a.m.) |                      |                     |
|-----------------|-------------|------------------|---------|-----------------|--------|----------------------------|----------------------|---------------------|
|                 | Maximum     |                  | Minimum |                 | Mean   | Mean                       | Highest Monthly Mean | Lowest Monthly Mean |
|                 | Mean        | Highest Recorded | Mean    | Lowest Recorded |        |                            |                      |                     |
| Years of Record | 30 (a)      | 108              | 30 (a)  | 108             | 30 (a) | 30 (a)                     | 97                   | 97                  |
|                 | °F          | °F               | °F      | °F              | °F     | %                          | %                    | %                   |
| January ..      | 84.8        | 117.7            | 61.0    | 45.1            | 72.9   | 39                         | 59                   | 29                  |
| February ..     | 85.7        | 113.6            | 61.8    | 45.5            | 73.7   | 41                         | 57                   | 30                  |
| March ....      | 81.3        | 110.5            | 59.1    | 43.9            | 70.2   | 44                         | 58                   | 29                  |
| April .....     | 73.0        | 98.6             | 54.4    | 39.6            | 63.7   | 55                         | 72                   | 37                  |
| May .....       | 66.8        | 89.5             | 50.8    | 36.9            | 58.8   | 64                         | 76                   | 49                  |
| June .....      | 61.0        | 78.1             | 46.6    | 32.5            | 53.8   | 75                         | 84                   | 63                  |
| July .....      | 59.9        | 74.0             | 45.4    | 32.0            | 52.7   | 75                         | 87                   | 66                  |
| August ....     | 62.3        | 85.0             | 46.2    | 32.3            | 54.3   | 68                         | 78                   | 54                  |
| September ..    | 66.8        | 95.1             | 48.3    | 32.7            | 57.5   | 59                         | 72                   | 44                  |
| October ....    | 72.5        | 102.9            | 51.7    | 36.1            | 62.1   | 48                         | 67                   | 29                  |
| November ..     | 78.1        | 113.5            | 55.4    | 40.8            | 66.7   | 41                         | 58                   | 31                  |
| December ..     | 82.6        | 114.6            | 58.9    | 43.0            | 70.7   | 40                         | 56                   | 31                  |
| Year ..         | 72.9        | 117.7            | 53.3    | 32.0            | 63.1   | 54                         | 87                   | 29                  |

(2) Rainfall and Wind

| Month           | Rainfall |                       |                    |                   | Wind          |              |                      |        |
|-----------------|----------|-----------------------|--------------------|-------------------|---------------|--------------|----------------------|--------|
|                 | Mean     | Highest During Period | Highest in One Day | Mean Days of Rain | Average Speed | Highest Gust | Prevailing Direction |        |
|                 |          |                       |                    |                   |               |              | 9 a.m.               | 3 p.m. |
| Years of Record | 30 (b)   | 126                   | 126                | 30 (b)            | 13            | 48           | 30 (a)               | 30 (a) |
|                 | In.      | In.                   | In.                | No.               | M.P.H.        | M.P.H.       |                      |        |
| January ..      | 0.90     | 3.31                  | 2.30               | 5                 | 7.8           | 72           | SW                   | SW     |
| February ..     | 0.92     | 6.09                  | 5.57               | 5                 | 7.5           | 66           | NE                   | SW     |
| March ....      | 0.81     | 4.59                  | 3.50               | 5                 | 6.9           | 78           | S                    | SW     |
| April .....     | 1.98     | 5.81                  | 3.15               | 11                | 6.9           | 81           | NE                   | SW     |
| May .....       | 2.60     | 7.75                  | 2.75               | 13                | 7.0           | 70           | NE                   | NW     |
| June .....      | 2.41     | 8.58                  | 2.11               | 14                | 7.4           | 67           | NE                   | N      |
| July .....      | 2.40     | 5.44                  | 1.75               | 16                | 7.3           | 92           | NE                   | NW     |
| August ....     | 2.33     | 6.20                  | 2.23               | 16                | 7.9           | 75           | NE                   | SW     |
| September ..    | 1.94     | 5.83                  | 1.59               | 13                | 8.0           | 69           | NNE                  | SW     |
| October ....    | 1.83     | 5.24                  | 2.24               | 12                | 8.4           | 75           | NNE                  | SW     |
| November ..     | 1.40     | 4.45                  | 2.96               | 9                 | 8.4           | 81           | SW                   | SW     |
| December ..     | 1.08     | 3.98                  | 2.42               | 7                 | 8.2           | 75           | SW                   | SW     |
| Year ..         | 20.60    | 30.95                 | 5.57               | 126               | 7.6           | 92           | NE                   | SW     |

(3) Other Conditions

| Month           | Mean Daily Sunshine | Clear Days (c) | Mean Amount of Cloud (d) | Days of Fog | Days of Lighting | Amount of Evaporation | Vapor Pressure 9 a.m. | Mean Barometric Pressure (e) |
|-----------------|---------------------|----------------|--------------------------|-------------|------------------|-----------------------|-----------------------|------------------------------|
| Years of Record | 30 (a)              | 30 (a)         | 30 (a)                   | 30 (a)      | 30 (a)           | 30 (a)                | 30 (a)                | 30 (a)                       |
|                 | Hours               | No.            |                          | No.         | No.              | In.                   | In.                   | In.                          |
| January ..      | 10.0                | 12.9           | 3.6                      | 0.0         | 2.3              | 9.27                  | 0.327                 | 29.92                        |
| February ..     | 9.3                 | 11.2           | 3.7                      | 0.0         | 2.0              | 7.56                  | 0.352                 | 29.95                        |
| March ....      | 7.9                 | 10.6           | 4.0                      | 0.0         | 1.8              | 6.39                  | 0.332                 | 30.04                        |
| April .....     | 6.0                 | 7.2            | 5.2                      | 0.0         | 1.5              | 3.78                  | 0.329                 | 30.12                        |
| May .....       | 4.8                 | 4.9            | 5.8                      | 0.6         | 1.3              | 2.27                  | 0.313                 | 30.13                        |
| June .....      | 4.2                 | 4.1            | 6.1                      | 1.1         | 1.3              | 1.37                  | 0.294                 | 30.12                        |
| July .....      | 4.3                 | 4.3            | 6.0                      | 1.4         | 1.5              | 1.34                  | 0.282                 | 30.11                        |
| August ....     | 5.4                 | 5.6            | 5.5                      | 0.4         | 2.0              | 1.99                  | 0.282                 | 30.08                        |
| September ..    | 6.3                 | 5.8            | 5.3                      | 0.2         | 2.0              | 3.05                  | 0.289                 | 30.05                        |
| October ....    | 7.3                 | 5.7            | 5.3                      | 0.0         | 2.8              | 5.03                  | 0.287                 | 30.01                        |
| November ..     | 8.6                 | 7.2            | 4.9                      | 0.0         | 3.3              | 6.89                  | 0.292                 | 29.99                        |
| December ..     | 9.5                 | 9.5            | 4.2                      | 0.0         | 2.2              | 8.74                  | 0.322                 | 29.92                        |
| Year ..         | 7.0                 | 89.0           | 5.0                      | 3.7         | 24.0             | 57.68                 | 0.308                 | 30.04                        |

(a) Standard 30-year normal, 1911-40.

(b) Average for 30-year period 1931-60.

(c) With less than two-tenths cloud.

(d) Scale 0 (clear) to 10 (overcast) at 9 a.m., 3 p.m. and 9 p.m. daily

(e) Mean of 9 a.m. and 3 p.m. readings corrected to sea-level.

## WEATHER CONDITIONS IN SOUTH AUSTRALIA—1964 AND 1965

Several weather records were established in this period, particularly in the winter of 1964 and the summer of 1964-65. General comments on the weather in each season are as follows:—

*Summer 1963-64*

Temperatures were generally below normal for the season in the southern half of the State, but near normal in the interior. Rainfall was also fairly generally below normal with greatest deficits in the far north of the State where totals were about one tenth of normal.

In conjunction with hot northerly winds several grass fires were experienced on 29th and 30th January. In particular a large fire on Kangaroo Island burnt out thousands of acres of valuable pasture land during 30th January. Large fires at Tumby Bay and Cleve on 19th March destroyed several hundred sheep.

*Autumn 1964*

Average day temperatures were slightly above normal in most areas. Towards the end of autumn frosts became more frequent than usual.

Rainfall in settled areas for the season ranged from about 75% of normal (north) to 90% of normal (south). While southern parts of the interior experienced up to 70% of average autumn rainfall, totals in the drought-stricken northern fringe were only a quarter of normal.

Heavy hail chiefly in the vicinity of Adelaide on 20th April was associated with fierce thunderstorms.

*Winter 1964*

Despite widespread June frosts, average winter temperatures were close to normal.

Associated with frequent shower activity, most settled areas received near normal falls. Winter totals in the south, however, were about 50% above normal. Record heavy July rains at a number of places in the south-east included a total of 829 points for the month at Kingston. By contrast, no rain of any significance was experienced in the extreme north of the State.

Moderate structural damage and electric power failures were experienced in the path of strong to gale force winds which lashed southern areas during June and July. Tornadoic squalls caused damage on 10th July; and associated with a severe cold front, the highest wind gust ever recorded in Adelaide, 92 m.p.h., was recorded at 1.45 a.m. on 13th July. On 12th July the corrected mean sea-level pressure fell to the all-time record low figure of 29.09 inches (985 millibars.)

*Spring 1964*

Associated with frequent showery situations throughout the spring, day temperatures were generally below normal. A spate of September frosts was felt more particularly in south-eastern districts.

Rainfall in settled areas ranged from one and a half to three times normal spring totals and by the end of the year, total rainfall in practically every section exceeded annual averages.

Good rains were recorded in all northern pastoral districts. Most parts experienced about twice their normal spring totals and in the far north interior some of the best-ever spring rains were gauged. By the end of the year, most northern pastoral annual aggregates were only slightly below normal.

#### *Summer 1964-65*

Average temperatures for December were among the lowest on record in many areas. This was particularly so in Adelaide, where the mean maximum for the month was an all-time low of 70.5°F (12°F below normal), and not one day had a maximum as high as 90°F. The month was exceptionally cloudy and in Adelaide the sunshine total of 187.5 hours (104.9 hours below normal) was the lowest in all 83 years of record. However progressively warmer conditions were experienced during January and February, and a serious fire broke out in the Clare-Mintaro area on 21st February.

Not a single station in the State received above-normal rains during the three summer months. In fact, during January and February no rain was recorded at all at many places. The Adelaide January to March rainfall total of 46 points was not only typical of the dry start to the year, but was also the lowest first-quarter total in the 127 years of Adelaide record.

#### *Autumn 1965*

Average autumn temperatures were generally close to normal.

Rainfall was well below normal for March and April. However, most gaugings for May were above average in the cereal-growing areas, thereby enabling the major seeding operations to commence. No rain of any significance was recorded in the drought-affected northern pastoral areas during the autumn.

#### *Winter 1965*

Day temperatures were well below normal throughout most of the winter. Cold, frosty nights were also common during June and July, but the frost incidence decreased very markedly during the August period.

Winter rains were experienced over the whole State. In the drought-affected northern pastoral areas, rainfall was generally above average with best falls occurring during August. In the agricultural districts, aggregate winter rains were generally just below normal.

Snow was reported along parts of the Mount Lofty and Flinders Ranges on 22nd June.

#### *Spring 1965*

Temperatures were generally about normal except during October when several record high temperatures were experienced, particularly near the end of the month when many centres reported century readings.

The major portion of the settled areas had poor rains. Parts of the north-west interior received near normal falls, but rainfall in the remainder of this area and also in the north-east corner of the State was far below normal, and these areas were badly drought-affected at the end of the year.

The year 1965 was characterized by frequent intense dust storms over northern parts of the State. Annual rainfall was below average in all areas and the Adelaide total of 1,334 points was the third lowest ever recorded.

### 1.3. NATURAL RESOURCES

#### MINERALS

Iron ore, South Australia's most important mineral, is found in the Middleback Ranges of upper Eyre Peninsula. These ranges which lie to the west of the port of Whyalla and extend discontinuously with broad erosion gaps, from Iron Knob in the north to Iron Duke in the south, a distance of nearly 40 miles, are composed primarily of iron-rich rocks and contain the only known deposits of high grade ore in the State. Several deposits of low grade ore have been located on lower Eyre Peninsula.

Barite (barytes) occurs throughout the Adelaide System rocks, in the Mount Lofty and Flinders Ranges, in the Olary district and elsewhere.

By far the largest part of Australian reserves of gypsum are located in South Australia. The deposits have in general been formed in coastal basins, the largest of these occurring at Lake MacDonnell, Stenhouse Bay and on Kangaroo Island. Other deposits, mainly of seed gypsum, are found inland at Moonabie, Lake Fowler, Cookes Plains and along the River Murray.

Conditions in South Australia are ideal for the production of salt from the gulf waters by solar evaporation. Salt is also obtained from certain shallow lakes, in particular from Lake Bumbunga and Lake Fowler.

Proven opal deposits exist at Andamooka and Coober Pedy; however, the extent of opal fields is not known as there has been no systematic exploration.

Although of little economic significance until recently, there has long been known to exist in the vicinity of Nairne an enormous body of iron pyrite.

South Australia supplies the bulk of Australia's talc requirements, the principal occurrences being at Mount Fitton, in the northern Flinders Ranges, and in the Gumeracha district. Other deposits occur at Tumby Bay and in the Barossa Valley near Lyndoch and Williamstown.

Sub-bituminous coal is found at Leigh Creek in the far north and several lignite deposits are known at Moorlands and in the Inkerman-Balaklava area.

Limestone and dolomite together form one of the State's most abundant natural resources. The principal deposits are:—limestone at Rapid Bay, Penrice, Angaston and Klein Point, lime sand at Wardang Island and Coffin Bay, and dolomite at Ardrossan.

South Australia possesses a wide variety of clays including a number of special varieties, the most noteworthy being ball clay at Woocalla, china clay at Mount Crawford and fire clay at Birdwood, Littlehampton, Tea Tree Gully, Booleroo Centre and Lincoln Gap.

In the past, deposits of other minerals have been discovered and exploited until the fields were worked out. Easily the most important of these minerals was copper ore, found initially at Kapunda and at Burra in the 1840's and later (and more extensively) in the Moonta-Wallaroo area. These fields played an important part in the development of the colony in the 19th century. Uranium deposits were worked extensively at Radium Hill in the 1950's, while less important deposits of gold, silver-lead ores and manganese ore have been exploited over past years.

The finding of natural gas at Gidgealpa is probably the most exciting of the State's recent mineral discoveries, while elsewhere the presence of molybdenite, nickel and further lead ore deposits has been recorded.

Locations of mineral deposits referred to above are shown on Map 8 on page 22.

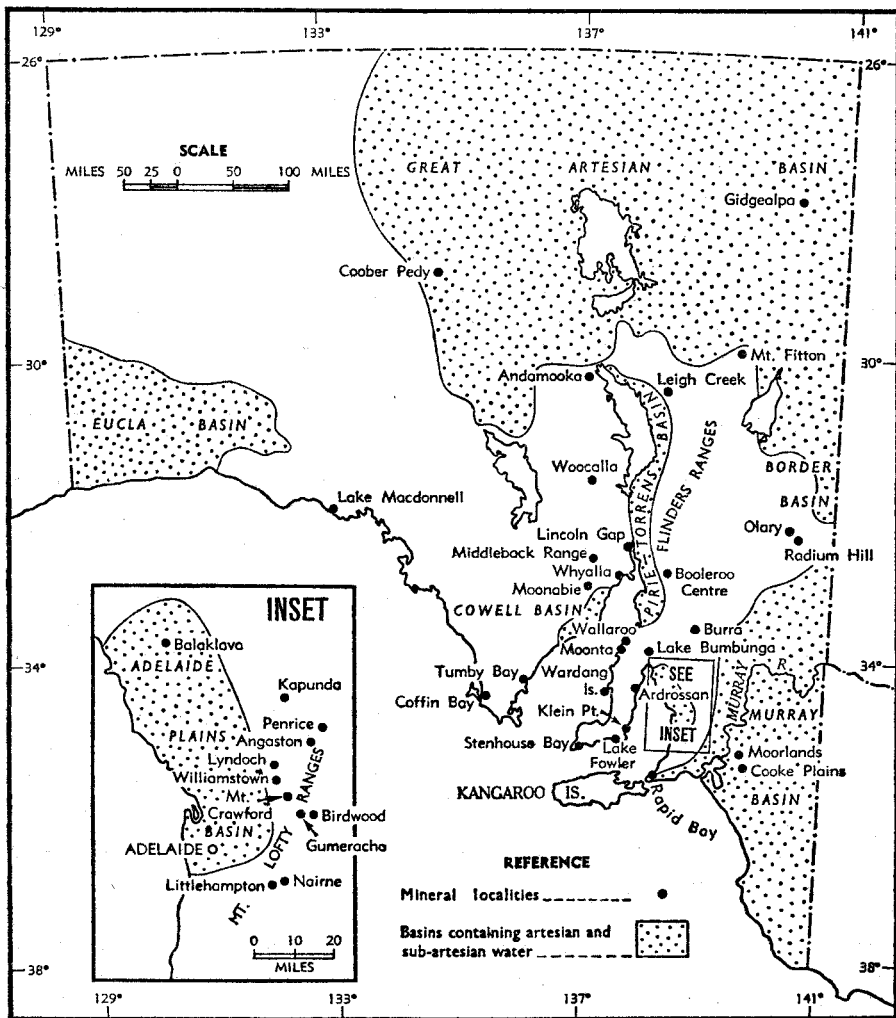


UNDERGROUND WATER

With no permanently flowing rivers other than the Murray, South Australia is forced to conserve as much of the somewhat meagre rainfall as possible. A considerable area is served by pipeline reticulation from reservoirs and the River Murray but many country towns, farms and pastoral areas depend upon underground water.

Artesian water is available in many areas. In the north-west a portion of the Great Artesian Basin occupies one quarter of the State, and settlement in this

SOUTH AUSTRALIA  
MINERAL RESOURCES AND  
ARTESIAN WATER



MAP 8

area is very largely dependent on the presence of underground water. On the New South Wales border, north-west of Broken Hill, is a sub-artesian basin (i.e. where the assistance of pumping is required) much of which overlies the Great Artesian Basin. Artesian water of variable quality is found in a basin extending from Port Pirie to the northern end of Lake Torrens. Water in the southern part of the Pirie-Torrens Basin is suitable for domestic use, as is that of the Adelaide Plains Basin which lies further south on the eastern coast of Gulf St Vincent. Most of the latter basin is sub-artesian, although flowing supplies are obtained in areas adjacent to Adelaide. Artesian water suitable for domestic use is obtainable in many areas between the River Murray and the south-east corner of the State. In other areas of the Murray Basin, which extends east to the Mount Lofty Ranges and almost as far north as Broken Hill, good stock water is obtainable by pumping. Approximately 20,000 square miles of the Eucla Basin of the Nullarbor plain lie in South Australia. The water of this basin is highly saline but much can be used for stock. Extreme salinity renders all but limited areas of the Cowell Basin, on the west coast of Spencer Gulf, unsuitable for economic use.

In addition to these artesian areas, supplies of groundwater are known and utilized in many parts of the State. Much of the extensive reticulation of Eyre Peninsula is dependent on such supplies.

It is estimated that the usage of underground water in South Australia exceeds 100 million gallons per day for all purposes. The exploration and development of underground water resources is a continuing responsibility of the Department of Mines which provides the services of geologists and an extensive drilling organization.

## SOILS

### General

There are many kinds of soils in South Australia ranging from free-flowing sands such as the coastal dunes, to the shrinking and swelling clays of which good examples are found near Bordertown and Tanunda, whilst some show a marked texture contrast with depth, such as the sand over clay soils of the South-East. Not only do these soils differ in their visible attributes, such as their colour, texture, stoniness and degree of slope, but also in the properties, largely unseen, of their chemistry, their relations to air and water, and to the micro-organisms which form the soil flora and fauna.

Undoubtedly the most widespread deficiency is phosphorus. Low phosphorus contents are typical of South Australian soils. The gravelly ironstone soils of Kangaroo Island and parts of the Adelaide Hills are among the most impoverished in the world, containing only between 5 and 40 parts per million of phosphorus in their surface soils, whereas the red-brown earths in their natural state contained 200 to 300 parts per million. These figures do not compare favourably with those for the soils of Great Britain, in which 600 parts per million of phosphorus is common. However, soils are changed by the treatment they get, and the phosphorus contents of some areas of some soils have been so built up over the years that their residual effect is now sufficient to produce a good cereal crop without the further addition of superphosphate.

On the other hand, prolonged clean cultivation in vineyards and frequent cropping in wheatland areas causes deterioration of the structure of surface

soils and depletion of nitrogen. The latter deficiency can be remedied by the proper use of legumes, such as medics and clovers, during the pasture phase of the crop rotation in wheatlands. Nitrogen is one of the most mobile of the nutrient elements in soil and is highly susceptible to differences in management.

Some soils which seem to be unique to Australia, such as the mallee soils or calcareous earths are well represented in this State. The irrigated horticultural settlements established on them along the River Murray have been notably successful, but they are susceptible to wind erosion where dry land arable farming is practised.

It is not possible in this limited space to discuss or describe many important features that effect plant growth, such as acidity and alkalinity, supply of trace elements and so on. Information about these and their importance in different localities can be obtained from the South Australian Department of Agriculture. The Department has recently published a bulletin entitled "Soils of South Australia's Farm Lands." The extent of country covered by the different soil groups is illustrated by the Atlas of Australian Soils which is being compiled by the Division of Soils, C.S.I.R.O. The first sheet of this atlas, published in 1960, includes the areas of higher rainfall country in South Australia, and refers to the many soil surveys made in this State.

### **Building Soils**

The building soils of Adelaide and environs are of varying qualities as to stability and bearing capacity. In certain locations shrinking and swelling soils have resulted in considerable foundation failures. These soils, commonly known as Bay of Biscay soils, occur at their worst in areas adjacent to the Mount Lofty Ranges. The best building soils are found in areas along the coast and in a small area to the east of the city.

## **1.4. FLORA AND FAUNA**

### **FLORA**

A broad division of vegetation types is formed by Goyder's Line which represents approximately the 10 inch annual isohyet (see page 5). To the north of the Line, in the Eremaean Province, lies about 80% of the State, experiencing arid to desert conditions where short, erratic growing seasons prevail. Areas to the south, in the temperate region, have climates geared to an equable seasonal cycle of winter rainfall and summer drought.

### **Eremaean Areas**

These vast areas of inland South Australia are not well known botanically. Vegetation there ranges structurally from low forest and woodland, through sparse woodland and shrublands, to exceedingly sparse vegetation of very low stature. As in arid situations elsewhere about the world, therophytes are well represented and after rain these may transform the scene with prolific but transient herbage. The perennial vegetation is naturally of genera adapted to the dry conditions; the cactus genus is, however, not present. Predominant trees are frequently species of *acacia* (mulga, myall, ironwood) but other genera

(*hakea*, *myoporum casuarina*, *eucalyptus*) are often involved. Some species such as the desert oak achieve a stature comparable with large temperate zone trees. Chenopod shrubs are often prominent in the shrub stratum, and spinifex in the herbaceous cover, but there is considerable diversity in the Eremaean flora. The development of cattle and sheep grazing industries and the tendency for overstocking in drought periods has led to the depletion of much of the vegetation of this area.

### Temperate Areas

In general, vegetation characteristics of the temperate zone of South Australia succeed each other in a fairly predictable sequence from the highest to the lowest rainfalls. Under the high and intermediate rainfalls (about 30" to 40") dry sclerophyll forest is well developed, particularly in the Mount Lofty Ranges, where it constitutes a western outlier of the dry sclerophyll forest system occurring in eastern Australia. *Eucalyptus obliqua* and *Eucalyptus baxteri* predominate, but other species such as *rubida* (the candlebark) are sometimes prominent. Such forest is replete with lesser trees (blackwood) at a lower canopy level and a rich array of sclerophyllous shrubs and sub-shrubs beneath. Most species have generic analogues in equivalent dry sclerophyll forests of both eastern and western Australia. Sclerophyll forest in South Australia has been cut over extensively and is invaded by aliens. Lower rainfall areas down to about 15" per annum supported mainly savannah woodlands and layered woodlands with bluegum (*Eucalyptus leucoxylon*) and peppermint gum (*Eucalyptus odorata*) as predominant trees. Associated trees included river redgum, sheoak, and manna gum. In these vegetations the grass stratum is expressed and the shrub stratum rather suppressed. These vegetations are now almost entirely replaced by agricultural areas.

In some places on the lower rainfall extreme of the temperate zone, variant vegetations occurred. These included substantial conifer and conifer-eucalypt forests and woodlands (particularly in the Flinders Ranges), and areas of pure savannah, as once occurred about Burra.

The simple division of the State into Eremaean and temperate areas needs qualifying on two counts:—

(i) *Heath*. Certain higher rainfall temperate areas do not support the expected vegetation as a consequence of limiting soil fertility. The Coonalpyn Downs area is an example. Here low nutrient dune fields are superimposed on the landscape and support only a heath vegetation where the rainfall regime is suitable for woodland. Such "light land" is the scene of contemporary agricultural expansion.

(ii) *Mallee*. Intercalated between the Eremaean and temperate systems proper, there is developed in South Australia extensive mallee vegetation, dominated by eucalypts, the various stems of which all arise from underground lignotubers. The term "mallee" refers both to eucalypt species exhibiting this growth habit, and to vegetation dominated by such species. Mallee vegetation is associated in its temperate reaches with heath, and in its Eremaean extensions with various vegetation types.

### FAUNA

South Australia is poorly endowed with mammals and birds, this being largely attributable to the dry conditions which prevail over much of the State. Highly developed agriculture in the limited favourable areas and widespread pastoral occupation beyond have seriously depleted the larger fauna by diminishing the native habitats. Introduced predators are established throughout all occupied territory and range beyond it.

Determined efforts are being made, however, to establish a series of national parks and reserves which will preserve samples of the various habitat types, and, it is hoped, their indigenous fauna. The Commissioners for National Parks and Wildlife Reserves control over 400,000 acres (see Part 6.4), while the Flora and Fauna Board administers the Flinders Chase Reserve on Kangaroo Island which is free from the introduced fox.

The relatively well-watered south-eastern region originally supported a variety of mammals, especially the larger marsupials, but these are reduced to remnant populations by extensive land development and by heavy shooting pressure. The brush-tailed possum (*Trichosurus vulpecula*) is still common, as is the grey kangaroo (*Macropus major*). In the dry interior the red kangaroo (*Macropus rufus*) at times greatly increases in numbers, probably due to changes caused by grazing and extra water supply. Emus and wombats are still to be found in numerous localities.

Bird life is more abundant and many species can be observed close to Adelaide, in the Mount Lofty Ranges, and on Kangaroo Island. Mallee areas with their lower rainfall are moderately rich in bird life although the removal of native flora has led to the disappearance of many species in certain districts. Many mallee birds may be found in areas of greater aridity and these areas also have their true desert forms.

South Australia is rich in reptiles, and numerous interesting species can be observed in the arid regions. As there are few permanent streams or swamps in the State some insects and other invertebrates common elsewhere are scarce or lacking. On the other hand many interesting desert adapted forms are to be observed.

Apart from the fishes, which include edible species of considerable economic importance, the marine fauna has been little explored.

## PART 2

# EXPLORATION AND COLONIZATION

There are many paradoxes in the story of the discovery and exploration of South Australia, these mainly being explained in terms of the nature of the State. In 1833 Charles Sturt was able to write that "a spot has been found on the South Coast of New Holland to which the colonist might venture with every prospect of success. All who have ever landed on the eastern shores of Gulf St. Vincent agree as to the richness of its soil and the abundance of its pasture." However, in 1792 the French admiral D'Entrecasteaux was so far from being in agreement with this as to describe the coast of South Australia as "so uniform that the most fruitful imagination could find nothing to say of it". It is against a background of such contradictions that the picture of South Australian exploration unfolds: the Dutch reached South Australian waters in 1627, but it was not till after 1801 that British explorers discovered the valuable central southern coastline; Sydney was settled in 1788, but it was not until after 1836 that British settlers came to grips with the South Australian environment. The geographical characteristics of the country had a lot to do with this slow development and were also to hinder subsequent exploration.

### EXPLORATION BEFORE COLONIZATION

The Dutch made the first recorded discovery of Australia in 1606 on the Gulf of Carpentaria, and Dutch ships were sighting Western Australia from 1616 onwards. It was in 1627 that the first part of the South Australian coast was discovered when the *Gulden Seepaart* under the command of Francois Thyssen examined the coastline from Cape Leeuwin to the islands of St. Francis and St. Peter in the far west of South Australia. On board the *Gulden Seepaart* was Pieter Nuyts, "Councillor Extraordinary of India", after whom this area was named "A Landt Van P. Nuyts".

The Dutch, however, were a trading nation and the South Australian coast impressed them very little, for it presented no evidence of the existence of

trading wealth at all. Indeed, so little interest was displayed in this section of the Australian coastline that it was 165 years before the next recorded sighting of South Australia was made, and this was by a French explorer.

Rear Admiral D'Entrecasteaux, who had been searching all around Australia for the lost French explorer La Perouse, sighted land south of Cape Leeuwin in December 1792 and examined the cliffs of the Australian Bight. He sailed to the head of the Bight, but then abandoned hope of finding anything other than desolate country after so many miles of barren coast, and sailed south for Van Diemen's Land. The early impressions of the South Australian coast were therefore most unfavourable and tended to discourage further investigation.

The British who followed were far more interested in the possibility of colonization to help ease their population problem at home, and consequently, once the effects of early discouragement had worn off, they began to take an interest in South Australia as a possible site for a new colony. Lieutenant James Grant was the first British explorer to sail along the South Australian coast, sighting the extreme easterly shores of South Australia in about 1801. While in Cape Town he had been informed of the discovery of Bass Strait and was instructed to sail through it in the *Lady Nelson* on his way to Port Jackson. Sailing along the extreme south-east coast he named Cape Banks, Cape Northumberland, Mount Schank and Mount Gambier.

The first notable British contribution to the exploration of the South Australian coast came, however, with the voyages of Matthew Flinders in the *Investigator*. With the support of the President of the Royal Society, Sir Joseph Banks, Flinders sailed from England in July 1801. On his voyage of circumnavigation of the Australian continent he thoroughly explored the coast of South Australia, between January and April 1802. In addition he discovered the Gulfs and Central Highlands, thus solving the question of whether a north-south strait divided the Australian continent in two. More important was the fact that Flinders reported very promising country for settlement. Many places along the coast carry the names given by Flinders: several of these were named after places in his home county of Lincolnshire, e.g. Port Lincoln, Sleaford, the Althorpes and Boston Bay, while others include unusual but attractive names such as Backstairs Passage, The Pages, and Antechamber Bay. Flinders was in fact the first man to explore South Australian waters between Nuyts Archipelago and Encounter Bay. It was at Encounter Bay on 8th April 1802 that he met Captain Nicolas Baudin, the French explorer, heading along the coast from the east in *Le Geographe*.

Baudin, in command of *Le Geographe* and accompanied by *Le Naturaliste*, left Havre in October 1800 with instructions to explore several specified regions, including the then unknown portion of the southern coastline of Australia. After being delayed in the East Indies and Van Diemen's Land, Baudin sailed westward and charted the mainland coast from Western Port to Encounter Bay, where he met Flinders. The object of Baudin's expedition was to make scientific discoveries on behalf of Napoleon, but he had wasted considerable time en route. Thus most of the South Australian mainland coast was discovered before him by Grant and Flinders, and he was the original explorer of only a small section between Cape Banks and Encounter Bay. Some French names still remain, for example Lacepede Bay, Guichen Bay and Rivoli Bay. After the meeting at Encounter Bay, Baudin sailed further westward and along the northern shore of Kangaroo Island to Murat Bay, before being forced to abandon further exploration and to return to Port Jackson in June 1802. However, after re-equipping his expedition and with the addition of another ship (*Casuarina*), for charting work in shallow

waters, Baudin returned to the South Australian coast by way of King Island in Bass Strait. Leaving King Island on the 27th December, Baudin in *Le Geographe* and Freycinet in command of *Casuarina* headed direct for Kangaroo Island, where they circumnavigated the whole island and charted its coast, being the first to chart its southern and western shores. This was to be the last major contribution made by an official French expedition to exploration of the South Australian coast.

Although these discoveries on the South Australian coast did not lead to any immediate colonization, there began an increasing series of visits by sealing vessels to Kangaroo Island. A group of American sealers built a schooner on the island in 1804, while wild gangs of sealers and runaway convicts were forming settlements from 1806 onwards. In addition, French exploration in the area had led to a fear on the part of the British authorities that it might result in French colonization, and, although not greatly valuing the area for itself, the British would have found it an embarrassment to have the French settled on the Australian continent. As a result, in 1804 the British sent a government surveyor by the name of Grimes to Kangaroo Island to report on it as a possible site for colonization. The Grimes Report was most unfavourable, stating that the soil was poor and that the island lacked fresh water. On the other hand, in 1819 a Captain Sutherland visited the island and wrote an over-optimistic report on its future. It was this report which later led the South Australian Company into planting their first station there in 1836.

In the period between 1804 and 1836 a number of further discoveries took place at various parts of the South Australian coastline by Captains Dillon (1815-16), Gould (1827-28), Hart (1831-33) and Jones (1833-34), together with the discovery of Lake Alexandrina by a group of sealers in 1828. Reports of this period were marked by contradictions regarding the suitability of South Australia for settlement. However, contradictory as were these accounts reaching England, they managed to convince the founders of South Australia even before 1830 that there was "a sufficient, indeed a superabundance, of fertile soil for the purpose of the colony".

The most significant explorations of the period immediately prior to colonization were those of Captain Charles Sturt, who explored the Murray River from New South Wales down to its mouth, traversed Lake Alexandrina and located the Goolwa channel, reaching the western shore of the Murray mouth on 12th February 1830. Captain Sturt's journey has become something of an epic in Australian history: with a small party of soldiers and convicts he rowed 1,700 miles on the Rivers Murrumbidgee, Darling and Murray. They suffered from desperate weariness, endured a distressing lack of provisions, and were periodically attacked by bands of Aborigines. However, the main object of Sturt's journey was accomplished—the settling of the long-insoluble "problem of the rivers" of south-eastern Australia. But the real significance to South Australia was more than the mere settling of what was little more than an academic question, for his discoveries opened up 2,000 miles of navigable inland waterway and gave to Gulf St Vincent, which lay so near the mouth of the Murray, an importance and significance previously undreamt of. It was the age of canal building in Europe and of the development of the Mississippi in America, so that navigable water was considered of prime importance. The exuberance felt by everyone interested in South Australia at such a discovery is typified by the Wakefield theorists: "The whole produce of eastern Australia will eventually be shipped from this place". In fact the Murray became "the grand attraction of the scheme". However, Sturt's own fervour at this stage was somewhat cooler than that of interested persons in England for there was one great disappointment which



marred his discovery—the Murray lacked a sufficiently safe navigable mouth. Sturt found that the Murray flowed into a series of shallow lakes and a sand-blocked mouth. So little did Sturt's contemporaries understand the earth movements and land formations of the area, that their only conclusion was that there must somewhere be another channel emptying the waters of the Murray into the sea. So, the "problem of the rivers" was replaced by the "mystery of the Murray mouth"—and official action was to be taken promptly to solve this mystery.

Governor Darling of New South Wales sent Captain Collet Barker to the southern coast to try to solve the problem of the Murray. Barker, landing at Noarlunga on 17th April 1831, ascended Mount Lofty and then returned to his ship, the *Isabella*, and examined Port Adelaide. After landing again at Rapid Bay, he crossed the hills to the Murray, thus proving that the river had no westerly outlet. Barker's expedition came to a tragic end when, under mysterious circumstances, he was apparently murdered at the Murray mouth by the usually peaceable Narrinyeri natives. This was the first of a long series of tragic deaths, mainly due to navigational difficulties, in the area of the Murray mouth which tended to cast a hoodoo on its navigation later on. Barker's party, however, reported fertile country in the region and the existence of a pass from the Murray mouth to Rapid Bay on Gulf St. Vincent. While Barker's expedition proved without doubt that there was no really navigable connection between the Murray and the sea, it added to the rapidly growing volume of favourable accounts of the fertility of the region around Gulf St. Vincent. Interested people in England were so obsessed with the geographical fact of the great Murray waterway opening up the centre of Australia that they barely registered the unfavourable accounts of its egress to the sea.

Probably the greatest encouragement for the settlement of South Australia came from Charles Sturt himself, who after his return to Sydney in May 1830 wrote *Two Expeditions into the Interior of Southern Australia* (published in 1833), in which he said: "My eye never fell on a country of more promising aspect, or more favourable position, than that which occupies the country between the lake and the ranges of St. Vincent's Gulf, and continuing northward from Mount Barker, stretches away without visible boundary". This glowing report, together with that of Barker's expedition, was welcomed by those in England seeking a suitable site to establish a colony where the principles of the "Wakefield Plan" could be applied without restriction. Sturt spared no efforts in converting opinion to the potentialities of South Australia and, as well as his *Two Expeditions*, he wrote a private letter to the Colonial Office on 17th February 1834. Sturt actually marked the present position of the Outer Harbor at Port Adelaide as the proper and natural site for the capital. "It is in the angle formed by the creek with the coastline that I would recommend the formation of a township, . . . because it appears to me that when the distant interior shall be occupied and communication established with the lake and valley of the Murray, the banks of this creek will be the proper and natural site for the capital . . . The level country to the north would be overspread, the valley of the Murray would be peopled, every available spot would be located, and its numerous ramifications would afford pasture for thousands of cattle". In his reasons for this opinion he showed more foresight than he was to do later when, in disagreement with Colonel Light, he supported those who wished to move the capital to Encounter Bay.

Colonel William Light, who had been appointed Surveyor-General of the new colony, sailed from England in the *Rapid* on 4th May 1836 with instructions to select a site for the capital of the colony. After a brief visit to Encounter Bay,

during which he unhesitatingly rejected that area as being unsuitable, he landed at Nepean Bay on Kangaroo Island where some South Australian Company ships had already established a settlement. From here Light explored the east coast of Gulf St Vincent. Then, pressed for time by the unexpected arrival of the new settlers, he was able to make only a quick trip to Port Lincoln and a brief inspection of part of the west coast of Gulf St Vincent before, in concurrence with Sturt's earlier opinion, he decided that the most suitable site for Adelaide was on the banks of the small, but centrally situated, River Torrens.

### COLONIZATION

The colonization of South Australia was in itself an experiment involving certain entirely new principles and was to represent a turning point in British colonial policy.

The period was conducive to colonization as in Britain there was widespread unemployment and poverty, the popular remedy for which was emigration. Nevertheless the somewhat revolutionary nature of the plans was to result in seven years of negotiation and considerable modification of early ideas before the colonization of South Australia was finally approved.

The theoretician was Edward Gibbon Wakefield, and his ideas were contained in a number of writings including the now famous "A letter from Sydney" series, written in 1829 while he was imprisoned in Newgate Gaol. Wakefield's plans involved three broad principles: the sale of land, the use of the receipts for sponsoring emigrants, and the granting of some measure of self-government. Drawing on developments in New South Wales Wakefield argued that the then current system of giving away vast tracts of land to settlers resulted in an imbalance between land and labour. It was therefore desirable to restrict land distribution and increase the labour supply, and this could be done by selling land at a suitably high price to prevent all labourers becoming landowners and by devoting the proceeds to free passage for a carefully selected labour force.

At the same time, following conflicting observations by early explorers, encouraging reports of the South Australian coastline filtering in from traders and seamen gave rise to moves for the practical application of Wakefield's ideas for the founding of a colony in South Australia.

The first attempt to form a colony was made by Robert Gouger, who, having met Wakefield in Newgate Gaol in 1829, was so impressed with his ideas as to approach certain interested parties with a view to purchasing a tract of land in South Australia. He was unable, however, to gain sufficient support to interest the Colonial Office in his plans.

In 1830 the National Colonization Society was formed with Gouger as its secretary. The Society served to further disseminate Wakefield's principles, but was not directly associated with plans for a colony in South Australia.

Renewed interest in colonization followed the first of Captain Sturt's enthusiastic reports of the land of the lower Murray and in 1831 a group of intending settlers, still enthused with the ideas of Wakefield, formed the South Australian Land Company. A committee headed by Colonel Robert Torrens approached the British Government for a charter and then made preparation for the first voyage. The Government was not prepared to grant the necessary territory, and negotiation continued until 1833 when the Company finally conceded that the Government was unlikely to approve any plans involving a chartered colony.

From the same core of enthusiasts who had supported this and earlier ventures there emerged in 1834, the South Australian Association. This group

was prepared to abandon hopes for a chartered colony, conceding the issue of self-government, provided that the enabling legislation accommodated Wakefield's other principles for land sales and migration. The passage of the legislation was by no means smooth; the scheme was new and involved untried principles, and knowledge of the territory was still extremely limited. In addition the association of many persons of liberal outlook with the plans probably reinforced official caution, and these people were to gain few if any concessions.

Doubts on the suitability of the site were to be largely dispelled by the writings and personal representations of Sturt and the confirmatory expedition by Barker, and finally in July 1834 legislation for a colony in South Australia was put before Parliament. This legislation represented a considerable compromise on early plans.

The South Australian Colonization Act (4 & 5 William IV. Cap. 95) was assented to on the 15th August 1834; the persistent efforts of Gouger, Torrens, and many others for a settlement in South Australia had finally born fruit, and at least some of the ideas of Wakefield were to be tried. The territory allotted under the Act embraced 309,850 square miles, with the western boundary the 132nd meridian of east longitude and the other boundaries virtually as they are today. The colony was to be opened to settlement by British subjects, but under no condition were convicts to be admitted, making South Australia the only State to be settled entirely by free persons. Authority was to be divided, with the Colonial Office through the Governor controlling all affairs of government except land sales and immigration, these fields being reserved to a Board of Commissioners. Provision was made for self-government upon the population reaching 50,000. All land alienated by the Crown was to be sold at a price of not less than 12 shillings per acre and the whole of the proceeds used in "conducting the emigration of poor persons from Great Britain and Ireland".

Although Parliament was prepared to authorize the experiment it was not prepared to finance it; the colony was to be self-supporting. The Commissioners were accordingly authorized to borrow £200,000 against future general revenue to finance the founding of the colony and the establishment of government, and £50,000 against the sale of land to start the migration programme. Finally, the Act contained two conditional clauses which were to harass the whole venture and served to delay colonization another twelve months. The first of these conditions, which were to be satisfied before the Commissioners could exercise their general powers, required that government securities to the value of £20,000 be lodged as a guarantee for the venture. Secondly land to the value of £35,000 was to be sold prior to settlement.

A Board of Commissioners with Torrens as chairman was appointed early in 1835. The Board immediately offered land in the new colony at £1 per acre including rights to a city acre with every 80 acres of rural land. In spite of considerable publicity, unsurveyed land in an unknown colony proved difficult to sell, and with less than half the land sold the price was reduced to the permitted minimum of 12 shillings per acre. Finally, George Fife Angas, a member of the Board, together with two others took up the balance of the land on behalf of the South Australian Company, which was then in the process of being formed.

In December 1835 with sufficient land sold and with the £20,000 guarantee lodged with the Treasury, the Commissioners were free to begin the business of colonization. The South Australian Company was formed in January 1836, and in February two ships of the Company sailed for Kangaroo Island to establish a settlement.

May 1836 saw the first official departure, that of the Surveyor-General, Colonel William Light, whose tasks included choosing a site for the first settlement. Details of Light's early movements are given on pages 30-31. The first Company vessels reached Kangaroo Island in July, and colonists arrived at Adelaide from early November. The first Governor of the colony, Captain John Hindmarsh R.N., arrived at Holdfast Bay on the 28th December 1836 and the new colony was officially proclaimed on the same day. By this time some 300 colonists were already in residence. Hindmarsh was to remain in the colony for 18 months, a period marked by political feuding and very little progress.

The one outstanding feature of the first two years was the work of Light. Expected to carry out impossible tasks with an inadequate staff Light first had to contend with opposition to his choice of a site for Adelaide. Fortunately his views prevailed and the city was surveyed to the plan which has since won so much acclaim, and the land allotted by March 1837. The survey of country land for the preliminary purchasers proceeded very slowly and it was not until May 1838 that the first ballot for country sections was held. At the same time the survey staff were becoming increasingly disgruntled with the unrealistic demands of the Commissioners and in June almost the entire staff resigned. Thoroughly exhausted by his constant struggle with misguided officialdom Light died in October 1839.

While the preliminary survey was in progress the settlers remained in Adelaide where their energies and resources were largely devoted to speculation in town lands and in land orders, and where supplies had to be imported with a corresponding outflow of capital. Superimposed on this situation was the continual arrival of new immigrants who served only to increase the volume of the unemployed.

Much of the inactivity of the colony was due to constant clashes between Hindmarsh and the Resident Commissioner, J. H. Fisher, which finally led to the dismissal of Fisher and the recall of Hindmarsh in July 1838. It was realized that the divided authority as incorporated in the Colonization Act was impracticable, and the next Governor, Colonel George Gawler, was authorized to represent both the Crown and the Commissioners.

Appalled at the stagnation of the colony, Gawler immediately undertook a liberal spending programme. Surveying was considerably increased with the result that half a million acres had been surveyed by mid 1841. At the same time an extensive public building and works programme provided relief for the unemployed. Generally Gawler created a renewed state of optimism which remained until 1840 when land values were depreciated and sales declined. Immigrants continued to arrive throughout this period.

Most of Gawler's expenditure was met by bills drawn on the Commissioners in London. In 1841 a situation was reached where the Commissioners could no longer honour these bills and Gawler was summarily replaced by Captain George Grey. The Imperial Parliament met the bulk of the debts, and in 1842 the Board of Commissioners was abolished. Thus the small measure of independence which the Board represented disappeared and South Australia became an ordinary Crown Colony.

The term of office of Grey was in contrast to that of Gawler, with Grey imposing rigid economies. Public expenditure was cut and considerable unemployment with its accompanying hardships followed. Speculation ceased and the unemployed gradually left Adelaide to be absorbed on the lands which Gawler had opened up. By this time the flow of immigrants had been stopped by the suspension of the assisted migration scheme.

By 1844 the colony was producing wheat in excess of its needs and when Major Robe succeeded Grey as Lieutenant-Governor in 1845 South Australia was finally self-supporting. Moreover prosperity was on the doorstep: copper had been located at Kapunda in 1843 and a major find was made at Burra in 1845. Heavy immigration followed these discoveries and continued until the Victorian gold rush. Copper soon became the principal export, with wool providing a complementary cargo. In addition, the repeal of the Imperial Corn Laws in 1846 and the Navigation Acts in 1849 strengthened the export trade in grain.

The discovery of gold in Victoria in 1851 greatly influenced the development of South Australia. In the first place it drained off a large proportion of the skilled artisans and forced the closing of the copper mines. On the other hand it gave great impetus to agriculture when the price of wheat rose sharply, and the feeding of the miners became as attractive a proposition as was the actual mining. A temporary shortage of money was relieved when considerable quantities of gold were attracted to the colony by enabling legislation and the provision of armed escorts. Four years later when the miners returned many of the more fortunate purchased land with their winnings.

At the same time political changes were taking place and in 1856 South Australia attained self government. Further details are given in Part 3—Constitution and Government.

### EXPLORATION AFTER COLONIZATION

Only a minor portion of the area proclaimed as South Australia was to prove economically viable, but extensive exploration with its accompanying hardships was necessary to establish this fact. Post-colonization exploration was of two forms—the first being the continuous process of discovery as settlers sought grazing and crop lands and sometimes mineral resources, and the second the more deliberate activities of the professional explorers as they sought to cover vast distances through unknown terrain.

The earliest exploratory moves of the colonists were directed towards establishing an overland route between Adelaide and Encounter Bay, and in discovering a north-easterly passage to the River Murray that would by-pass the Mount Lofty Ranges. Contact was first made with Encounter Bay in about July 1837 by Colonel Light and J. H. Fisher, and in December of the same year an expedition by Strangways and Hutchinson played a further important part in making contact with the River Murray by driving a bullock cart across the ranges to Encounter Bay, and then exploring the Murray mouth, the Goolwa channel and the southern part of Lake Alexandrina. The north-easterly route to the Murray was first traversed successfully early in 1838. Penetration of the Mount Lofty Ranges began in 1837, and by the end of the year parties had crossed the ranges and descended to Lake Alexandrina.

From the beginning of 1838, attempts were made to open up stock routes from the eastern States. Joseph Hawdon and Charles Bonney were the first to make an overland cattle drive to Adelaide. Leaving Hawdon's station near Albury on 13th January 1838 with a party of seven men, they took a route which followed the Murray for much of the way, and reached Adelaide in 11 weeks with the cattle in good condition and only 4 head out of 300 lost *en route*. At the same time, Edward John Eyre was making a similar cattle drive, but after unsuccessfully trying to find a suitable trail south of the Murray, he was forced to make his way back to the Loddon River and then follow the trail taken by Hawdon. In another journey starting in 1838, Eyre became the first to bring sheep overland to Adelaide, driving 1,000 sheep and 600 cattle along the Hawdon

trail. Charles Sturt was another to make an early stock drive to Adelaide, while Bonney in 1839 pioneered an alternative route which followed the south-east coast of the State and crossed the Murray above Lake Alexandrina.

Other parts of the State were also attracting attention. A section of Yorke Peninsula was visited in 1838, and in the following year a number of expeditions were made into the hinterland of Port Lincoln. Thus by 1840 the area within a 50 mile radius of Adelaide had been explored for pastoral, farming and mineral lands. Settlers had also ventured by boat along the Murray, by boat to Port Lincoln and thence inland, and by boat and overland to Yorke Peninsula. Reports by drovers who came down the Murray suggested that the land on the other side of the Murray was of little immediate value. It was soon to be realized, however, that very different conditions prevailed in the lower South East, and by the mid 1840's this area was supporting a considerable sheep population.

Knowledge of the arid interior and of the far west coast was to be obtained from a number of major expeditions, the first such venture being led by the afore-mentioned Edward John Eyre. In 1839, Eyre journeyed north to Mount Arden, at the head of Spencer Gulf, where he established a base camp. From Mount Arden he made the first sighting of the dry bed of Lake Torrens. Crossing to Port Lincoln, Eyre proceeded up the west coast of the peninsula which was to bear his name, passed through Streaky Bay, and came to within 50 miles of the Western Australian border. The return journey to Mount Arden camp was made across the top of Eyre Peninsula.

The interest of the colonists was now divided between the country to the northward, including Eyre's new-found lake, and the possibility of establishing an overland stock route to Western Australia. Eyre having just returned from the desolate country of the Great Australian Bight showed little enthusiasm for the latter idea, and in June 1840 set out for the north. From Mount Arden he made three attempts to penetrate beyond the lakes, but after following the Flinders Ranges to Mount Hopeless and making a number of observations, he concluded that Lake Torrens was a gaint horseshoe-shaped salt lake forming an impassable barrier. This erroneous belief was to persist for 18 years.

Thwarted in his efforts to go north Eyre decided to attempt the western crossing. Leaving Mount Arden the party separated, one group going direct to Streaky Bay while Eyre went down to Port Lincoln. The party reformed at Streaky Bay and moved to Fowler's Bay, where a camp was established in November 1840. After a number of preliminary explorations around the Bight, Eyre and a small party set out from King George's Sound (Albany) in February 1841, having sent the remainder of the party back to Adelaide. Eyre arrived at King George's Sound in July after an extremely tortuous crossing which, although an example of human endeavour, contributed little to geographic knowledge.

In 1842 and 1843 the Surveyor-General, Colonel Frome, made two trips to the Lake Torrens region in an attempt to determine the nature of the area. However, after reaching a "desert-like" Lake Frome (which he believed to be part of Lake Torrens) he turned back, making two short thrusts to the east on the return journey. Frome had seen enough to be able to report that "there is no country . . . as far as the meridian 141° (and probably much beyond it) available for either agricultural or pastoral purposes".

Captain Charles Sturt, whose earlier journey down the Murray had helped precipitate the colonization of South Australia was again to contribute to South Australian exploration. Considerable mystique had developed concerning Central

Australia, including the rumoured presence of an inland sea, and in August 1844 Sturt set out from Adelaide in an effort to unveil this area. Hoping to avoid the supposed horseshoe lake, Sturt followed the Murray and Darling Rivers to Menindee. After passing through Broken Hill and seeing Eyre's Mount Hopeless from the other side of the lakes, the party moved to Mount Poole some 200 miles north of Menindee. Here they rested for six months while waiting for rain to fall. In July 1845 Sturt set off in a north-westerly direction crossing Sturt's Stony Desert and the north-east corner of the State. Although temporary relief was provided by Eyre Creek, whose course they followed for some considerable distance, the desert nature of the subsequent terrain forced the party to turn back when very close to their central goal, and only 500 miles from the Gulf of Carpentaria. A second assault on the desert also failed, although Sturt explored along Cooper's Creek for almost 100 miles before returning to the base camp and thence to Adelaide in January 1846.

In 1846 John Horrocks led a small party north from his station, Penwortham, through the Flinders Ranges via Horrocks Pass (so named by the party) and on to a camp site at Depot Creek. The party had brought with them the only camel then in the colony, the first time one had been used for exploration work in Australia. From Depot Creek Horrocks made two trips, the first of about twenty miles and the second about sixty miles to Lake Dutton where, jostled by his camel, he accidentally shot himself, thus bringing the expedition to an early end, but not before he had formed the opinion that there was no suitable pastoral land in that direction. Horrocks died of his wounds about three weeks later.

Further to the west a small expedition led by John Darke explored country to the north and east of the Gawler Ranges, and concluded that there was no useful land for settlers in this region. On his way home to Port Lincoln Darke was mortally wounded by natives near what is now known as Darke Peak. In 1857 Stephen Hack explored the country west of Lake Gairdner and found useful pastoral country at the south-western end of the Gawler Ranges.

At about this time the northern lakes again became a centre of interest. In 1856 there had been considerable rainfall in the area, and when the Deputy Surveyor-General, G. W. Goyder, visited Lake Torrens he found an inland sea surrounded by excellent vegetation. Goyder's glowing report was, however, discounted by a return journey the following year. Indeed the extremely fickle seasons experienced in the north were to lead to many conflicting reports as the explorers and settlers moved northwards. Between 1857 and 1859 several exploratory expeditions visited the region of Lake Torrens and it was during this period that the myth of the horseshoe lake was destroyed. Knowledge of the lakes district was extended by B. H. Babbage, who discovered Lake Eyre in 1858, and Major P. E. Warburton, who located the first stock crossing. A. C. Gregory, coming south from Queensland in search of Leichhardt, passed between the lakes *en route* to Adelaide in 1858.

At the same time parties were searching for pastoral country in the north, with the most extensive search being made by John McDouall Stuart in 1858. Stuart, who had been in Sturt's party in 1844, set out from Mount Arden, passed to the west of Lake Torrens, and circled north of Coober Pedy, returning to Mount Arden via Fowler's Bay. In the meantime the South Australian Government was offering a reward for the first successful north-south crossing of the continent, and after making two exploratory journeys to the north in 1859, Stuart set out in March 1860 to attempt such a crossing.

Stuart had an advantage over Sturt in that the intervening years had revealed the lakes to be passable and he was thus virtually able to begin his expedition at

Chambers Creek at the southern tip of Lake Eyre, and to pass through known country as far as The Neales watercourse. Stuart reached the MacDonnell Ranges in the Northern Territory in April, and later the same month estimated that he had reached the centre of the continent. His attempt to reach the northern coastline, however, was thwarted and in June he turned back. In a second attempt in 1861 he followed the same route and this time reached Newcastle Waters before being forced to return. At his third attempt Stuart was successful, reaching the sea on the 24th July 1862 and establishing a route which was to be followed by the Overland Telegraph 10 years later.

While Stuart was making his second attempt to reach the north, the ill-fated Burke and Wills expedition was crossing the continent further to the east. Their journey took them across the north-east corner of the State along much the same path as that followed by Sturt some 17 years earlier. In 1861 and 1862 parties led by Alfred Howitt, who left from Melbourne, and John McKinlay from Adelaide were to pass through the same area in search of Burke and Wills. After finding traces of the expedition on Cooper's Creek, McKinlay pushed east and then north, to reach the Gulf of Carpentaria.

The construction of the Overland Telegraph between 1870-1872, and the subsequent maintenance of this link between Adelaide and Darwin, naturally led to minor exploration of the adjacent country. At this stage attention turned to the land between the telegraph line and the settlements of Western Australia. Foremost among the explorers of this region, and whose paths brought them within South Australia, were John Forrest and William Ernest Giles. In March 1870 Forrest left Perth for Adelaide, covering much the same path as Eyre had taken 30 years earlier. Forrest crossed South Australian territory again in 1874 when he travelled from Geraldton in Western Australia across the centre of the continent, coming down the Alberga watercourse to Peake telegraph station.

Giles had set out from the Overland Telegraph in 1873 at a point north of Oodnadatta, but was forced to return after covering approximately half the distance to the western seaboard. He tried again in May 1875, this time going south from Beltana to Port Augusta and then to Ooldea on a route which 40 years later was to be closely followed by the east-west railway. From Ooldea the party went north for over 100 miles before again striking out to the west. Giles reached Perth in November, and three months later left Geraldton to return to South Australia on a route similar to that taken by Forrest two years earlier, arriving at Peake telegraph station in August 1876.

In 1873 W. C. Gosse, returning from an unsuccessful attempt to reach Perth from Alice Springs, had discovered and named the Musgrave Ranges.

A number of persons other than those mentioned contributed to the exploration of the State, both in the period discussed and subsequently. The inhospitable nature of the country meant that many areas had to await the coming of the aeroplane before an accurate physical description could be recorded. One such expedition was that led by Donald Mackay in 1935 when the western half of the State north of the east-west railway line was aerially surveyed.



## **PART 3**

# **CONSTITUTION AND GOVERNMENT**

### **3.1. SYSTEM OF GOVERNMENT**

South Australia is one of the six Australian States (originally constituted by Acts of the Imperial Parliament) which at Federation in 1901 ceded many of their powers on matters of national importance (*e.g.* international affairs including defence) to the Commonwealth of Australia. From time to time other powers on matters of local importance have been delegated to local governing bodies. As a result the people of South Australia are subject to the laws of a three-tier system of government. In addition statutory powers within specified fields are exercised by certain semi-governmental authorities such as Municipal Tramways Trust, Electricity Trust of South Australia, South Australian Housing Trust, and Metropolitan and Export Abattoirs Board.

Both the Commonwealth and the South Australian Parliaments are bicameral: in each the leader of the Government (the Prime Minister of the Commonwealth and the Premier of South Australia) is seated in the Lower House; in each the Upper House has restricted powers concerning money Bills.

#### **Electorates**

For elections for the Commonwealth Upper House (Senate) each State is a single multi-member electorate. South Australia is divided into five multi-member electorates for elections for the State Upper House (Legislative Council) and into eleven and thirty-nine single-member electorates respectively for the Lower House of the Commonwealth (House of Representatives) and the State (House of Assembly).

Although in both the Commonwealth and South Australia it is Parliament alone which has the power to make changes in the number, size, and distribution

of electorates, it is customary to appoint Electoral Commissions to recommend in these matters.

The terms of the Commonwealth Constitution provide for changes in House of Representatives electorates in certain eventualities, but in the South Australian Parliament changes in electorates for either House can be effected only by amendment to the Constitution.

Because of a prescribed relationship between population and the distribution of House of Representatives electorates Commonwealth Electoral Commissions are usually appointed after each Census to consider the effect of changes in the distribution of population and, if necessary, to suggest alterations to the boundaries and distribution amongst the States of Lower House electorates. In South Australia the boundaries of electorates are defined in a schedule to the State Constitution; there is no prescribed relationship between population and electorates, and Electoral Commissions are appointed at irregular intervals.

### **Party System**

Most members of both the Commonwealth and the South Australian Parliaments are elected by the voters from candidates pre-selected and endorsed by one or other of the major parties. Once policy has been determined at a party meeting, members usually observe party solidarity, speaking, voting, and acting in accordance with that policy both in and out of Parliament whether the party be in government or in opposition.

### **Responsible Cabinet Government**

The system known as "responsible Cabinet government" operates throughout Australia; the Sovereign (or the Governor-General of the Commonwealth or Governor of the State as the representative of the Sovereign) performs acts of government on the advice in Executive Council of Ministers who are accountable for those acts to Parliament and, through Parliament, to the electorate. An essential feature of the system is that the Government will resign or seek a new mandate from the electors if it ceases to command a majority on the floor of the Lower House.

### **Ministers, Cabinet, and Executive**

When a Ministry is to be formed, usually after a general election or when a Government has been defeated in the Lower House, the representative of the Sovereign "sends for" that Member of the Lower House who he thinks will be supported by a majority in the House; when assured of that Member's ability to command the necessary majority the Sovereign's representative commissions that Member, as Prime Minister or Premier, to form a Ministry. Persons to be appointed to the rank of Minister are usually selected either by the Prime Minister or Premier personally or by ballot by Government party members from Members of Parliament belonging to that party or coalition of parties constituting a majority in the popular (lower) House. Irrespective of the method of selecting personnel it is customary for the Prime Minister or Premier to allocate ministerial portfolios, after which the Sovereign's representative formally approves the appointment of each Minister.

A Minister generally holds one or more portfolios and may administer one or more departments. Although each Minister is answerable to Parliament for

the administration of his department it is customary for him to be supported by all other Ministers, provided he acts and speaks within the broad framework of established policy.

The Cabinet is a ministerial body which may comprise all Ministers, as in South Australia, or senior Ministers only, as in the Commonwealth. It does not form part of the legal machinery of government and details of its proceedings are not normally made public.

In each State and in the Commonwealth, there is an Executive Council which is a constitutional body formed to advise the Sovereign's representative in the exercising of executive power. Traditionally attendance is limited to the Sovereign's representative and Ministers of the day, although actual membership may be wider. Meetings of Executive Council are formal and official in character, and a record of proceedings is kept by the Secretary or Clerk: decisions of Cabinet are, where appropriate, given legal form, appointments are made and resignations accepted, proclamations are issued, and regulations are approved.

### Committees

At one stage in the consideration of every Bill each House resolves itself into Committee for freer discussion of proposed legislation than would be possible under the rules of formal debate usually applied in Parliament.

In addition to this normal Parliamentary procedure there operates in the Commonwealth and in this State, a Committee system whereby a limited number of Members enquire deeply into particular matters thus enabling a greater volume of work to be handled more effectively. There are Joint Committees, consisting of members of both Houses, and each House has committees to attend to its own functions. Standing Committees (*e.g.* the South Australian Public Works Standing Committee) consider matters of a continuing or recurring nature, and *ad hoc* committees are formed to enquire into and report on specific matters as they arise.

Party representation on Joint and House Committees is usually proportionate to representation in Parliament or the appropriate House respectively.

### Administration

The pattern of public administration in South Australia is determined by the division and delegation of statutory authority already mentioned. Various aspects and areas of administration are attended to by Commonwealth and State Government departments, by local government authorities, and by semi-government instrumentalities deriving authority and responsibility from either Commonwealth or State legislation. Within this framework numerous Boards and Committees exercise administrative and, in some cases, judicial powers.

These various levels of administration are largely interdependent and complementary.<sup>(1)</sup> Some items of Commonwealth legislation are completely, or almost

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(1) "Examples of administrative interdependence are legion. Indeed, growing interdependence of this kind has accelerated the establishment of organs of Commonwealth and State co-operation in recent years. To the great credit of public administrators in Australia formal and informal co-operation take place at almost every point of common interest." G. S. Reid "*Commonwealth-State Relations—Administrative Trends and Problems*" in *Public Administration (Aust.)*, Vol. XXI, No. 2, p. 113.

completely administered by State authorities, often in matters in which (the Commonwealth and the State having concurrent powers) Commonwealth legislation either supplements or supersedes State legislation, *e.g.* the South Australian Supreme Court applies the Commonwealth Matrimonial Causes Act in this State. Performance of State functions by Commonwealth authorities is neither as frequent nor as extensive, but there are instances of the provision of services or facilities, *e.g.* the Commonwealth Electoral Office maintains the House of Assembly electoral roll; State Land Tax may be paid at Post Offices.

### Judicature

The degree to which South Australians are subject to the jurisdiction of Commonwealth and State courts respectively varies with the type of action. Most criminal and civil actions are heard, at least originally, in State courts, but many individuals are subject exclusively to Commonwealth jurisdiction in Industrial matters.

Generally speaking, the decisions of the lower courts (*e.g.*, the South Australian Magistrates and Local Courts) may be the subject of appeal to the State Supreme Courts, and the decisions of these higher courts, acting in either their original or appellate jurisdictions, may be the subject of appeal to the High Court of Australia. An ultimate appeal may, with the consent of the High Court, be made to the Privy Council.

Included in the jurisdiction of the High Court of Australia is the review of legislation to test its constitutional validity.

## 3.2. COMMONWEALTH GOVERNMENT<sup>(1)</sup>

### Federation

The Commonwealth of Australia was proclaimed as from 1st January 1901 in "An Act to constitute the Commonwealth of Australia", a statute of the Imperial Parliament, which received Royal assent in July 1900. The draft constitution, which was enacted with only minor amendment, had been prepared at inter-colonial conferences during 1897, 1898, and 1899, and was accepted at referenda during 1899 by South Australia, New South Wales, Victoria, Queensland, and Tasmania, and in 1900 by Western Australia.

### Separation of Powers

The Commonwealth Constitution provides, in sections 52, 69, 86, 90, and 115, for certain powers to be vested exclusively in the Commonwealth Government and, in section 51, for certain specified fields of interest to be common to both Commonwealth and State Governments; in cases of conflicting legislation, that of the Commonwealth prevails to the extent of the inconsistency. All other

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(1) A copy of the Commonwealth Constitution and a more detailed description of Commonwealth government appear in the *Year Book of the Commonwealth of Australia*.

fields of interest remain the exclusive province of the State Governments until amendment is made to the Commonwealth Constitution Act or until the State Parliaments cede particular powers to the Commonwealth Parliament, as was the case in 1921 when the States transferred to the Commonwealth full control over air navigation.

### **Financial Resources**

Since Federation the distribution of financial resources between the Commonwealth and the States has been an almost constant problem. Under the original terms of the Constitution the Commonwealth, for ten years, returned to the States three quarters of the net revenues from the duties of customs and excise; provision also existed for general and particular grants to the States. Significant changes have been made in the distribution of financial resources since 1910. These are reviewed in some detail in Part 12—Public Finance on pages 463 to 466.

## **COMMONWEALTH LEGISLATURE**

The Commonwealth Constitution provides that “the legislative power of the Commonwealth shall be vested in a Federal Parliament, which shall consist of the Queen, a Senate, and a House of Representatives”. Provision for constitutional amendment includes a requirement that a proposed amendment must be submitted to a referendum.

### **Franchise**

Elections for both Houses of Parliament are conducted by secret ballot. There is universal adult suffrage of British subjects who have resided in Australia for at least six months and who are not of unsound mind, convicted and under sentence for any offence punishable by imprisonment for one year or longer, attainted of treason, or holders of temporary entry permits under the Migration Act.

Compulsory voting was introduced in 1924.

In 1962 special provision was made for the enfranchisement of Australian Aborigines in all States, subject to residence for one month in the subdivision for which enrolment is sought. They are not compelled to enrol as electors, but once enrolled they must vote. Aborigines in South Australia already held this entitlement for Federal elections by virtue of their enfranchisement under similar conditions for State House of Assembly elections.

## **EXECUTIVE GOVERNMENT**

### **Governor-General**

On 22nd September 1965 His Excellency the Rt. Hon. Lord Casey, P.C., G.C.M.G., C.H., D.S.O., M.C., was sworn in as the seventeenth Governor-General of the Commonwealth. His authority as the Queen’s representative is derived from Letters Patent, Instructions under the Royal Sign Manual and Signet, and the relevant sections of the Commonwealth Constitution.

### **Executive Council**

Members of the Federal Executive Council are chosen, summoned and sworn by the Governor-General and hold office during his pleasure. All Ministers are

members. Councillors usually retain membership for life but it is customary for attendance at meetings to be limited to Ministers of the day.

### Ministry

Members of the 33rd Ministry (the 8th Menzies Ministry) are listed below; the State in which each Minister's electorate is situated is shown in parenthesis.

#### Menzies Ministry from 13th August 1965

##### *Prime Minister*

The Rt. Hon. Sir Robert G. Menzies, K.T.,  
C.H., Q.C., M.P. (Vic.)

##### *Minister for Trade and Industry*

The Rt. Hon. J. McEwen, M.P. (Vic.)

##### *Treasurer*

The Rt. Hon. H. E. Holt, M.P. (Vic.)

##### *Minister for External Affairs*

The Hon. P. M. C. Hasluck, M.P. (W.A.)

##### *Vice-President of the Executive Council; and Minister for Labour and National Service*

The Hon. W. McMahan, M.P. (N.S.W.)

##### *Minister for Primary Industry*

The Hon. C. F. Adermann, M.P. (Qld.)

##### *Minister for Defence*

Senator the Hon. S. D. Paltridge (W.A.)

##### *Minister for Supply*

The Hon. A. Fairhall, M.P. (N.S.W.)

##### *Minister for Civil Aviation*

Senator the Hon. N. H. D. Henty (Tas.)

##### *Postmaster-General*

The Hon. A. S. Hulme, M.P. (Qld.)

##### *Minister for National Development*

The Hon. D. E. Fairbairn, D.F.C., M.P. (N.S.W.)

##### *Minister for Territories*

The Hon. C. E. Barnes, M.P. (Qld.)

(The above Ministers constitute the Cabinet.)

##### *Minister for Works; and under the Prime Minister, Minister in Charge. Commonwealth Activities in Education and Research*

Senator the Hon. J. G. Gorton (Vic.)

##### *Minister for Shipping and Transport*

The Hon. G. Freeth, M.P. (W.A.)

*Minister for Immigration*

The Hon. H. F. Opperman, O.B.E., M.P. (Vic.)

*Minister for Health*

The Hon. R. W. C. Swartz, M.B.E., E.D., M.P. (Qld.)

*Attorney-General*

The Hon. B. M. Snedden, Q.C., M.P. (Vic.)

*Minister for Housing*

The Hon. L. H. E. Bury, M.P. (N.S.W.)

*Minister for the Army, and Minister assisting the Treasurer*

The Hon. A. J. Forbes, M.C., M.P. (S.A.)

*Minister for the Interior*

The Hon. J. D. Anthony, M.P. (N.S.W.)

*Minister for the Navy*

The Hon. F. C. Chaney, A.F.C., M.P. (W.A.)

*Minister for Air*

The Hon. P. Howson, M.P. (Vic.)

*Minister for Customs and Excise*

Senator the Hon. K. M. Anderson (N.S.W.)

*Minister for Repatriation*

Senator the Hon. G. C. McKellar, (N.S.W.)

*Minister for Social Services*

The Hon. I. M. Sinclair, M.P. (N.S.W.)

## THE SENATE

The Senate is the Upper House. Originally it was intended that this House should protect the rights and interests of the States, but with the growth of the parliamentary system of party-line voting, its role has become mainly that of a house of review.

### Representation

At present the Senate consists of sixty members—ten from each State. The original provision was that each State, voting as a single electorate, should elect six senators but by the Representation Act of 1948, which was effective for the 1949 elections, the number was raised to ten. Except in extraordinary circumstances each Senator is elected for a term of six years, five from each State retiring every three years.

Parliament has the power to vary the number of Senators above a minimum of six for each State. Under the terms of the Constitution any variation in the number of Senators necessitates a change in the number of Members of the House of Representatives.

The party representation in the Senate at 1st July 1965 was—

| State                     | To Retire 30th June 1968 |      |        |        | To Retire 30th June 1971 |      |        |        |
|---------------------------|--------------------------|------|--------|--------|--------------------------|------|--------|--------|
|                           | L.P.                     | C.P. | A.L.P. | Others | L.P.                     | C.P. | A.L.P. | Others |
| New South Wales . . . .   | 1                        | 1    | 3      | —      | 2                        | 1    | 2      | —      |
| Victoria . . . . .        | 2                        | 1    | 2      | —      | 2                        | —    | 2      | (a)    |
| Queensland . . . . .      | 3                        | 1    | 1      | —      | 1                        | 1    | 2      | (a)    |
| South Australia . . . .   | 2                        | —    | 3      | —      | 2                        | —    | 3      | —      |
| Western Australia . . . . | 2                        | 1    | 2      | —      | 2                        | 1    | 2      | —      |
| Tasmania . . . . .        | 2                        | —    | 2      | (b)    | 2                        | —    | 3      | —      |

L.P.—Liberal Party of Australia (including Liberal and Country League of South Australia and Liberal Country Party of Victoria).

C.P.—Country Party.

A.L.P.—Australian Labor Party.

(a) One member—Australian Democratic Labor Party.

(b) One member—Independent.

### Elections for the Senate—Voting in South Australia

| Date of Election          | Electors Enrolled | Votes Recorded |                                 | Informal Votes |                              |
|---------------------------|-------------------|----------------|---------------------------------|----------------|------------------------------|
|                           |                   | Number         | Percentage of Electors Enrolled | Number         | Percentage of Votes Recorded |
| 21st August 1943 . . . .  | 398,467           | 386,160        | 96.91                           | 28,564         | 7.40                         |
| 28th September 1946 . .   | 420,361           | 399,301        | 94.99                           | 36,371         | 9.11                         |
| 10th December 1949 . .    | 434,224           | 420,437        | 96.82                           | 48,838         | 11.62                        |
| 28th April 1951 . . . . . | 440,454           | 427,593        | 97.08                           | 24,792         | 5.80                         |
| 9th May 1953 . . . . .    | 453,496           | 437,583        | 96.49                           | 21,297         | 4.87                         |
| 10th December 1955 . .    | 462,747           | 444,827        | 96.13                           | 39,802         | 8.95                         |
| 22nd December 1958 . .    | 490,930           | 473,832        | 96.52                           | 36,677         | 7.74                         |
| 9th December 1961 . . .   | 521,396           | 501,312        | 96.15                           | 28,284         | 5.64                         |
| 5th December 1964 . .     | 551,341           | 528,464        | 95.85                           | 39,421         | 7.46                         |

Prior to the election in 1949 the system of preferential voting was used for Senate elections, but for the 1949 and subsequent elections a system of proportional representation has been used.

## THE HOUSE OF REPRESENTATIVES

### Representation

The Members of the House of Representatives (the Lower House) are elected in single-member electorates. The number of electorates into which a State is divided is determined by the proportion that the population of the State bears to the population of the Commonwealth as a whole. Section 24 of the Commonwealth Constitution provides that the number of members in the House of Representatives shall be as nearly as possible twice the number of Senators and prescribes the formula to be used, "until the Parliament otherwise provides", for allocating to each State its share of the available seats, but stipulates that no original State shall have less than five members in the House. In addition, two members with limited voting rights are elected, one from the Australian Capital Territory and one from the Northern Territory.

In the redistribution of seats on the basis of the Census of 30th June 1954 South Australia gained a seat. Eleven members from South Australia were elected for a term of three years on 30th November 1963.

Preferential voting is used for elections for the House of Representatives.



## House of Representatives—1963 Elections

## Voting and Party Representation in South Australian Electorates

| Electorate          | Electors Enrolled | Number Who Voted | Informal | Successful Candidates  |        |
|---------------------|-------------------|------------------|----------|------------------------|--------|
|                     |                   |                  |          | First Preference Votes | Party  |
| Adelaide .....      | 34,631            | 33,215           | 797      | 18,194                 | A.L.P. |
| Angas (a) .....     | 43,270            | 42,125           | 665      | 25,676                 | L.C.L. |
| Barker .....        | 48,563            | 47,354           | 596      | 26,547                 | L.C.L. |
| Bonython .....      | 70,367            | 67,831           | 3,572    | 45,537                 | A.L.P. |
| Boothby .....       | 44,906            | 42,964           | 647      | 23,309                 | L.C.L. |
| Grey .....          | 46,713            | 45,195           | 492      | 24,236                 | A.L.P. |
| Hindmarsh .....     | 52,003            | 49,843           | 2,587    | 33,975                 | A.L.P. |
| Kingston .....      | 63,402            | 61,567           | 752      | 32,582                 | A.L.P. |
| Port Adelaide ..... | 44,510            | 42,906           | 2,230    | 30,994                 | A.L.P. |
| Sturt .....         | 50,239            | 48,255           | 971      | 26,469                 | L.C.L. |
| Wakefield .....     | 42,932            | 41,880           | 654      | 25,177                 | L.C.L. |

(a) By-election held 20th June 1964 did not alter Party representation.

At present each State is represented in this House as follows—

| Party    | N.S.W. | Vic. | Qld. | S.A. | W.A. | Tas. | N.T. | A.C.T. | Total |
|----------|--------|------|------|------|------|------|------|--------|-------|
| L.P. ... | 17     | 18   | 6    | 5    | 4    | 2    | —    | —      | 52    |
| C.P. ... | 9      | 5    | 4    | —    | 2    | —    | —    | —      | 20    |
| A.L.P. . | 20     | 10   | 8    | 6    | 3    | 3    | 1    | 1      | 52    |

L.P.—Liberal Party of Australia (including Liberal and Country League of South Australia and Liberal Country Party of Victoria).

C.P.—Country Party.

A.L.P.—Australian Labor Party.

## Elections for The House of Representatives—Voting in South Australia

| Date of Election      | Electors Enrolled | Votes Recorded |                                 | Informal Votes |                              |
|-----------------------|-------------------|----------------|---------------------------------|----------------|------------------------------|
|                       |                   | Number         | Percentage of Electors Enrolled | Number         | Percentage of Votes Recorded |
| 21st August 1943 ...  | 398,467           | 386,160        | 96.91                           | 11,519         | 2.98                         |
| 28th September 1946 . | 420,361           | 399,301        | 94.99                           | 12,300         | 3.08                         |
| 10th December 1949 .  | 434,224           | 420,437        | 96.82                           | 9,380          | 2.23                         |
| 28th April 1951 ..... | 440,454           | (a)384,082     | (a)97.09                        | 7,910          | 2.06                         |
| 29th May 1954 .....   | 455,872           | (a)357,854     | (a)96.77                        | 8,812          | 2.46                         |
| 10th December 1955 .  | 462,747           | 444,827        | 96.13                           | 18,050         | 4.06                         |
| 22nd December 1958 .  | 490,930           | 473,832        | 96.52                           | 15,619         | 3.30                         |
| 9th December 1961 ..  | 521,396           | 501,312        | 96.15                           | 15,629         | 3.12                         |
| 30th November 1963 .  | 541,536           | 523,135        | 96.60                           | 13,963         | 2.67                         |

(a) Contested electorates only.

## REFERENDA

Alteration to the Commonwealth Constitution must be initiated in the Commonwealth Parliament and requires the approval of a majority of electors voting in a majority of the States as well as a majority of all the electors voting in the Commonwealth as a whole.

Of the twenty-four proposals so far submitted to the people of Australia only four have been approved (one in each of 1906, 1910, 1927, and 1946).

The most recent referendum (1951) proposed an alteration to section 51 of the Constitution in order to give power to the Government to act against communists and communism. Although three States voted in favour of the proposal three States (including South Australia) and an overall majority of the voters in the Commonwealth rejected it.

### 3.3. GOVERNMENT OF SOUTH AUSTRALIA

#### EARLY CONSTITUTIONAL HISTORY

As has been described in Part 2 the Foundation Act for South Australia provided for the powers of government in the new colony to be shared by a Governor and a Board of Colonization Commissioners. The Board, which was to be represented in the Colony by a Resident Commissioner, was given power to dispose of Crown Lands in the Colony at a fixed price and to apply the funds derived therefrom to the provision of passages for specially chosen immigrants from the United Kingdom. The other executive and legislative powers in the Colony were entrusted either to the Governor alone or to the Governor associated with a Council of Government, which consisted of certain government officials presided over by the Governor.

Many problems were associated with the division of authority thus created, and during the first few years of its existence the Colony experienced very considerable administrative and financial difficulties. The Colonization Commissioners, in their Fourth Annual Report to the Secretary of State for the Colonies, complained that "the boundary line between the power of the local government and that of the commissioners was not distinctly drawn". The Foundation Act was amended in 1838 and Lt. Col. Gawler was appointed both Governor and Resident Commissioner. By this amendment the office of Resident Commissioner was abolished, and the functions of that officer were vested in the Governor. Although this change brought about unity of action between the two authorities within South Australia it failed to provide a satisfactory solution for the Colony's financial problems. Consequently in 1842 the Imperial Parliament passed legislation repealing the original 1834 Foundation Act and the amending 1838 Act; with the repeal of those Acts the authority ceased under which the Board of South Australian Commissioners and the Resident Commissioner exercised their functions. Thus all power was vested in the Colonial Office, and South Australia was placed on the same footing as other Crown colonies.

The new Act provided authority for Her Majesty to set up within the province one of three alternative Councils of Legislature: a Legislative Council consisting of the Governor and seven other persons; a General Assembly elected by the freeholders and other inhabitants of the colony and a Legislative Council appointed by the Crown; or a single House of Assembly composed of both

nominated and elected members. The provision prohibiting the transport of convicts to the colony was re-enacted.

It was the first of these three forms that was brought into operation, and under Royal Instructions issued at Windsor on 29th August 1842 the Legislative Council was constituted to consist of the Governor and three official and four non-official Members (persons not holding offices under the Crown) nominated by the Crown.

From time to time the colonists persisted with petitions for popularly elected representation. By 1849 the colony was in a position to carry the costs of local self-government, and in England in the same year a Committee of the Privy Council styled "The Committee for the consideration of all matters relating to Trade and Foreign Plantations" presented a long and able report, in which it recommended that more extensive powers of self-government should be granted to the Australian colonies.

An Act "for the better government of Her Majesty's Australian Colonies", which closely followed the recommendations of this Committee, was passed by the Imperial Parliament in 1850. This Act authorized the existing nominee Council in South Australia to set up a new form of Legislative Council, to consist of such members not exceeding 24 as should be thought fit, one-third of whom were to be appointed by Her Majesty and two-thirds of whom were to be elected; the Governor, with the advice and consent of the Legislative Council so to be established, was authorized to make laws for the peace, welfare, and good government of the colony. The Enabling Act further provided that it should be lawful for the Governor and the partly nominated and partly elected Legislative Council, after its constitution in due course, to establish in lieu of such Legislative Council "a Council and a House of Representatives or other separate Legislative Houses, to consist respectively of such members, to be appointed or elected respectively by such persons and in such manner as by such Act or Acts shall be determined and to vest in such Council and House of Representatives or other separate Legislative Houses the powers and functions of the Legislative Council for which the same may be substituted." Any Act passed for this purpose had to be reserved for signification of Her Majesty's pleasure thereon and laid before both Houses of the Imperial Parliament for at least 30 days before such consent was given.

The new Legislative Council was elected in July of 1851. In 1853 it exercised the authority given to it by the Imperial Act and passed a Bill for an Act to establish a Parliament in South Australia. Under the terms of this Bill the Parliament of South Australia was to consist of a Legislative Council and a House of Assembly. The Members of the Legislative Council were to be nominated by Her Majesty and were to hold office for life. The House of Assembly was to consist initially of thirty-six Members who were to be elected by adult male inhabitants who held a freehold estate of the clear value of £20, or were householders occupying a dwellinghouse of the clear annual value of £5, or were rated by any municipality or district council within the district for which they voted, or had a leasehold estate in possession of the value of £10 per annum, with not less than one year to run.

As was required by the Imperial Act the Bill was forwarded to London to be laid before both Houses of the Imperial Parliament and to be submitted for Her Majesty's Assent.

A considerable body of the colonists opposed the principle of a nominated Legislative Council and favoured an elective Upper House. During the substantial period that elapsed between the despatch of the Parliament Bill to London and the receipt of the decision of the Imperial Authorities this group prepared

a Memorial for transmission to Her Majesty. In this Memorial, which was subsequently signed by 5,000 persons, the protagonists of an elective Upper House expressed their strong opposition to certain of the provisions of the Parliament Bill and associated legislation. As a result the Queen in Council refused assent to the Bill, and it was returned to the South Australian Legislative Council for re-consideration.

### RESPONSIBLE GOVERNMENT

On 15th August 1855 the Legislative Council was dissolved, and elections for a new Council were held in September and October of the same year. A new Constitution Bill, making provision for an elective Upper House, was prepared by the Government and submitted in November to the newly elected Legislative Council. The Bill was debated at length and a number of amendments were adopted. The Bill as amended was passed on the 2nd January 1856 and was referred for Her Majesty's Assent. It was submitted to the Queen in Council on 24th June and received Royal Assent. The "Act to establish a Constitution for South Australia and to grant a Civil List to Her Majesty" came into force on 24th October 1856.

The principal provisions of the Act were as follows—

1. Parliament was to consist of two Houses—a Legislative Council and a House of Assembly.
2. The Legislative Council was to have 18 members, to be elected by adult males possessing certain property qualifications.
3. The House of Assembly was to have 36 members, to be elected on the basis of manhood suffrage.
4. The life of the House of Assembly was to be three years.
5. All Bills for appropriating revenue or for imposing new taxes were to originate in the House of Assembly.
6. Power to appoint to all public offices was to be vested in the Governor acting with the advice and consent of the Executive Council.
7. Any Bill for an Act to alter the constitution of the Legislative Council or the House of Assembly had to have its second and third readings passed by an absolute majority of the total membership of each House.

The Constitution Act of 1855-56 which inaugurated the system of Responsible Government in South Australia remains the basis of the State's present day Constitution Act, 1934-1961.

### VICE-REGAL REPRESENTATION

Since 4th April 1961 Lieutenant-General Sir Edric M. Bastyan, K.C.M.G., K.C.V.O., K.B.E., C.B., has been the Queen's representative in South Australia.

The title of the vice-regal representative has been varied from time to time. The first three holders of the office were styled "Governor and Commander-in-Chief", the next two, "Lieutenant-Governor", and the following two, "Captain-General and Governor-in-Chief". The title then reverted to its original form until Federation in 1901. Since then, because of the appointment of a "Governor-General and Commander-in-Chief in and over the Commonwealth", the holder of the State office has been described simply as "Governor", and this title is used in the following table, which lists occupants of the office since the foundation of South Australia.

## Governors of South Australia

| Name  | From               | To                 |
|---|--------------------|--------------------|
| Captain John Hindmarsh, R.N., K.H. ....   | 28th December 1836 | 16th July 1838     |
| Lt.-Col. George Gawler, K.H. ....   | 17th October 1838  | 15th May 1841      |
| George Grey, Esq. ....  | 15th May 1841      | 25th October 1845  |
| Lt.-Col. Frederick Holt Robe ....   | 25th October 1845  | 2nd August 1848    |
| Sir Henry E. F. Young ....  | 2nd August 1848    | 20th December 1854 |
| Sir Richard G. MacDonnell, C.B. ....  | 8th June 1855      | 4th March 1862     |
| Sir Dominic Daly ....   | 4th March 1862     | 19th February 1868 |
| Rt. Hon. Sir James Fergusson, P.C., BART. ...   | 16th February 1869 | 18th April 1873    |
| Sir Anthony Musgrave, K.C.M.G. ....   | 9th June 1873      | 29th January 1877  |
| Lt.-Gen. Sir Wm. F. D. Jervois, G.C.M.G., C.B.  | 2nd October 1877   | 9th January 1883   |
| Sir Wm. C. F. Robinson, G.C.M.G. ....   | 19th February 1883 | 5th March 1889     |
| Rt. Hon. Earl of Kintore, P.C., G.C.M.G. ....   | 11th April 1889    | 10th April 1895    |
| Sir Thomas F. Buxton, BART., G.C.M.G. ....  | 29th October 1895  | 29th March 1899    |
| Rt. Hon. Hallam, Baron Tennyson, K.C.M.G. .   | 10th April 1899    | 17th July 1902     |
| Sir George R. Le Hunte, K.C.M.G. ....   | 1st July 1903      | 18th February 1909 |
| Admiral Sir Day Hort Bosanquet, G.C.V.O., K.C.B.                                      | 18th February 1909 | 22nd March 1914    |
| Lt.-Col. Sir Henry L. Galway, K.C.M.G., D.S.O..                                       | 18th April 1914    | 30th April 1920    |
| Lt.-Col. Sir Wm. E. G. Archibald Weigall,<br>K.C.M.G. ....                            | 9th June 1920      | 30th May 1922      |
| Lt.-Col. Sir George T. M. Bridges, K.C.B.,<br>K.C.M.G., D.S.O. ....                   | 4th December 1922  | 4th December 1927  |
| Brig.-Gen. the Hon. Sir A. G. A. Hore-Ruthven,<br>V.C., K.C.M.G., C.B., D.S.O. ....   | 14th May 1928      | 26th April 1934    |
| Maj.-Gen. Sir W. J. Dugan, K.C.M.G., C.B., D.S.O.                                     | 28th July 1934     | 23rd February 1939 |
| Sir Charles M. Barclay-Harvey, K.C.M.G. ....  | 12th August 1939   | 26th April 1944    |
| Lt.-Gen. Sir C. W. M. Norrie, K.C.M.G., C.B.,<br>D.S.O., M.C. ....                    | 19th December 1944 | 19th June 1952     |
| Air Vice-Marshal Sir Robert A. George, K.C.M.G.,<br>K.C.V.O., K.B.E., C.B., M.C. .... | 23rd February 1953 | 7th March 1960     |
| Lt.-Gen. Sir Edric M. Bastyan, K.C.M.G.,<br>K.C.V.O., K.B.E., C.B. ....               | 4th April 1961     |                    |

As titular head of the Government of South Australia the Governor exercises powers, duties, and functions, similar to those of a constitutional sovereign. On the one hand he is indirectly responsible to the Imperial Parliament through the Secretary of State for Commonwealth Relations, and on the other hand he usually acts on the advice of his Ministers, who take the responsibility for their advice. Nevertheless, the Governor retains important spheres of discretionary action and is thus enabled to maintain something of a safeguard against malpractice and injustice, particularly in extreme circumstances. To ensure continuity of services, the Governor has power to appropriate up to £600,000 per annum for public service without specific Parliamentary authority.

The Governor's normal term of office is 5 years, but he can be appointed for one or more subsequent terms. At present he is granted a salary of £7,500 per annum, an expense allowance based on an amount of £7,000 per annum and altered in accordance with the Consumer Price Index number for Adelaide as the occasion arises, plus an allowance for payment of the salaries of his staff.

In the absence or prolonged illness of the Governor other persons have been appointed to administer the government of the State. These persons have been variously styled "Lieutenant-Governor", "Deputy-Governor", "Deputy Lieutenant-Governor", and "Administrator", and several of them have held office more than once. The 15 persons so appointed have been—

| Name   | Occupancy of Office |             | Occasions<br>in Office | Total Period |      |
|--|---------------------|-------------|------------------------|--------------|------|
|  | First               | Most Recent |                        | Years        | Days |
| George Milner Stephen, Esq. ....                                     | 16/7/1838           | 17/10/1838  | 1                      | —            | 93   |
| Boyle Travers Finnis, Esq. ....                                      | 20/12/1854          | 8/6/1855    | 1                      | —            | 170  |
| Lt.-Col. Francis G. Hamley ....                                      | 20/2/1868           | 15/2/1869   | 1                      | —            | 362  |
| Maj. James Harwood Roche ....  | 6/4/1870            | 5/5/1870    | 1                      | —            | 29   |
| Hon. Sir Richard D. Manson, Chief<br>Justice .....                   | 7/12/1872           | 9/6/1873    | 1                      | —            | 184  |
| Rt. Hon. Sir Samuel J. Way, BART.,<br>P.C., Chief Justice .....      | 29/1/1877           | 17/11/1915  | 64                     | 6            | 117  |
| Sir William W. Cairns, K.C.M.G. ....                                 | 24/3/1877           | 17/5/1877   | 1                      | —            | 54   |
| Hon. James P. Boucaut, Judge ....                                    | 26/10/1885          | 16/9/1897   | 9                      | —            | 263  |
| Hon. William H. Bunday, Judge ....                                   | 30/7/1888           | 9/8/1888    | 1                      | —            | 10   |
| Hon. Sir G. J. R. Murray, K.C.M.G.,<br>LL.M., Chief Justice .....    | 25/9/1916           | 9/2/1942    | 103                    | 6            | 47   |
| Hon. Thomas Slaney Poole, M.A., LL.B.,<br>Acting Chief Justice ..... | 20/3/1925           | 22/11/1925  | 2                      | —            | 240  |
| Hon. Sir H. A. Parsons, LL.B., Acting<br>Chief Justice .....         | 11/6/1935           | 19/2/1942   | 6                      | —            | 54   |
| Hon. Sir J. Mellis Napier, K.C.M.G.,<br>LL.D., Chief Justice .....   | 21/4/1942           | 7/10/1964   | 121                    | 6            | 352  |
| Hon. Sir Herbert Mayo, LL.B., Judge                                  | 15/10/1946          | 9/1/1965    | 26                     | —            | 183  |
| Hon. Sir C. S. Reed, LL.B., Judge....                                | 24/7/1951           | 4/11/1957   | 5                      | —            | 31   |

### CABINET AND EXECUTIVE GOVERNMENT

In South Australia all Ministers are members of the Cabinet and all Ministers are *ex officio* members of the Executive Council. Although the Governor may, subject to any law enacted by the Legislature, appoint other persons to the Executive Council, membership is in practice limited to Ministers of the day.

The Constitution Act of 1855-56 provided that every Minister must be a Member of either the Legislative Council or the House of Assembly or become a Member within three months of appointment. However, in 1873 an amendment was made to the Act authorizing the Governor to appoint an Attorney-General from outside Parliament; this provision was retained until 1953, and four Attorneys-General were so appointed.

The maximum number of Ministers has been varied from time to time. In 1856 the number was 5; in 1873—6; 1901—4; 1908—6; 1953—8; 1965—9. This is the lowest number of Ministers in any Parliament in the Commonwealth. In 1908 it was specified that no more than four Ministers were to be in the House of Assembly, but in 1953 this limit was increased to 5 and in 1965 to 6.

The Constitution of 1856 provided for salary payments to Ministers but not to other Members. Salary payments to ordinary Members commenced in 1887. The present annual appropriation for salaries and allowances for nine Ministers is £19,950, paid in addition to salaries and allowances received by Ministers as Members.

Cabinet, as such, has no legal powers. Some Cabinet decisions result in the initiation and subsequent enactment of legislation; other decisions become legally binding through ratification by Executive Council or through powers vested in individual Ministers for the administration and control of their respective departments of government. Not only Government Departments are subject to Ministerial control; statutory authorities also come under some degree of Ministerial or Parliamentary oversight.

**Premiers**

Since the introduction of responsible government in South Australia the following 34 persons have held the office of Premier—

**Premiers of South Australia**

| Name   | Dates of Office   | Total Period in Office |      |
|--|---|------------------------|------|
|  |   | Years                  | Days |
| Hon. Boyle T. Finniss .....                  | 24/10/1856- 21/8/1857   | —                      | 301  |
| John Baker .....                             | 21/8/1857- 1/9/1857   | —                      | 11   |
| Sir Robt. R. Torrens, G.C.M.G. ....          | 1/9/1857- 30/9/1857   | —                      | 29   |
| Hon. Sir Richard D. Hanson .....             | 30/9/1857- 9/5/1860   | 2                      | 222  |
| Hon. Thos. Reynolds .....                    | 9/5/1860- 8/10/1861   | 1                      | 152  |
| Hon. G. M. Waterhouse .....                  | 8/10/1861- 4/7/1863   | 1                      | 269  |
| Francis S. Dutton, C.M.G. ....               | 4/7/1863- 15/7/1863;<br>22/3/1865- 20/9/1865                            | —                      | 193  |
| Hon. Sir Henry Ayers, G.C.M.G. ....          | 15/7/1863- 4/8/1864;<br>20/9/1865-23/10/1865;<br>3/5/1867- 24/9/1868;   |                        |      |
|  | 13/10/1868- 3/11/1868;<br>22/1/1872- 22/7/1873                          | 4                      | 35   |
| Hon. Sir Arthur Blyth, K.C.M.G., C.B. ....   | 4/8/1864- 22/3/1865;<br>10/11/1871- 22/1/1872;<br>22/7/1873- 3/6/1875   | 2                      | 254  |
| Hon. John Hart, C.M.G. ....                  | 23/10/1865- 28/3/1866;<br>24/9/1868-13/10/1868;<br>30/5/1870-10/11/1871 | 1                      | 339  |
| Hon. Sir James P. Boucaut, K.C.M.G., Q.C. .. | 28/3/1866- 3/5/1867;<br>3/6/1875- 6/6/1876;<br>26/10/1877- 27/9/1878    | 3                      | 11   |
| Hon. H. B. Strangways .....                  | 3/11/1868- 30/5/1870  | 1                      | 208  |
| Hon. Sir John Colton, K.C.M.G. ....          | 6/6/1876-26/10/1877;<br>16/6/1884- 16/6/1885                            | 2                      | 142  |
| Hon. Sir William Morgan, K.C.M.G. ....       | 27/9/1878- 24/6/1881  | 2                      | 270  |
| Hon. Sir John Bray, K.C.M.G. ....            | 24/6/1881- 16/6/1884  | 2                      | 358  |
| Hon. Sir J. W. Downer, K.C.M.G., Q.C. ....   | 16/6/1885- 11/6/1887;<br>15/10/1892- 16/6/1893                          | 2                      | 239  |
| Hon. Thomas Playford .....                   | 11/6/1887- 27/6/1889;<br>19/8/1890- 21/6/1892                           | 3                      | 323  |
| Hon. Sir J. A. Cockburn, K.C.M.G., M.D. .... | 27/6/1889- 19/8/1890  | 1                      | 53   |
| Hon. Sir F. W. Holder, K.C.M.G. ....         | 21/6/1892-15/10/1892;<br>8/12/1899- 15/5/1901                           | 1                      | 274  |
| Rt. Hon. C. C. Kingston, Q.C., D.C.L. ....   | 16/6/1893- 1/12/1899  | 6                      | 168  |
| Hon. V. L. Solomon .....                     | 1/12/1899- 8/12/1899  | —                      | 7    |
| Hon. J. G. Jenkins .....                     | 15/5/1901- 1/3/1905   | 3                      | 290  |
| Hon. Sir Richard Butler .....                | 1/3/1905- 26/7/1905   | —                      | 147  |
| Thomas Price .....                           | 26/7/1905- 5/6/1909   | 3                      | 314  |
| Hon. A. H. Peake .....                       | 5/6/1909- 3/6/1910;<br>17/2/1912- 3/4/1915;<br>14/7/1917- 8/4/1920      | 6                      | 312  |
| Hon. John Verran .....                       | 3/6/1910- 17/2/1912   | 1                      | 259  |
| Hon. Crawford Vaughan .....                  | 3/4/1915- 14/7/1917   | 2                      | 102  |
| Hon. Sir H. N. Barwell, K.C.M.G. ....        | 8/4/1920- 16/4/1924   | 4                      | 8    |
| Hon. John Gunn .....                         | 16/4/1924- 28/8/1926  | 2                      | 134  |
| Hon. Lionel L. Hill .....                    | 28/8/1926- 8/4/1927;<br>17/4/1930- 13/2/1933                            | 3                      | 160  |
| Hon. Sir R. L. Butler, K.C.M.G. ....         | 8/4/1927- 17/4/1930;<br>18/4/1933- 5/11/1938                            | 8                      | 210  |
| Hon. R. S. Richards .....                    | 13/2/1933- 18/4/1933  | —                      | 64   |
| Hon. Sir Thomas Playford, G.C.M.G. ....      | 5/11/1938- 10/3/1965  | 26                     | 125  |
| Hon. F. H. Walsh .....                       | 10/3/1965-  |                        |      |

**Ministry**

The Ministry which was sworn in on 10th March 1965 is the 60th to hold office. The members are—

*Premier, Treasurer, Minister of Immigration and Minister of Housing*

Hon. Francis Henry Walsh, M.P.

*Chief Secretary and Minister of Health*

Hon. Albert James Shard, M.L.C.

*Minister of Works and Minister of Marine*

Hon. Cyril Douglas Hutchens, M.P.

*Attorney-General, Minister of Aboriginal Affairs and Minister of Social Welfare*

Hon. Donald Allan Dunstan, Q.C., M.P.

*Minister of Education*

Hon. Ronald Redvers Loveday, M.P.

*Minister of Local Government, Minister of Roads and Minister of Mines*

Hon. Stanley Charles Bevan, M.L.C.

*Minister of Labour and Industry and Minister of Transport*

Hon. Alfred Francis Kneebone, M.L.C.

*Minister of Agriculture and Minister of Forests*

Hon. Gabriel Alexander Bywaters, M.P.

*Minister of Lands, Minister of Repatriation and Minister of Irrigation*

Hon. James Desmond Corcoran, M.P. (a)

The leader of the previous Ministry, Sir Thomas Playford, G.C.M.G., M.P., was Premier for a period of over 26 years which is a record for any Premier in the British Commonwealth.

**PARLIAMENT**

Parliament is summoned, prorogued, or dissolved, by proclamation issued by the Governor. The two Houses of Parliament are the Legislative Council (Upper House) and the House of Assembly (Lower House).

**Members, Qualifications, and Privileges**

Certain requirements must be met before a person qualifies for membership of the South Australian Parliament. The following persons are not eligible for membership of either House: Judges, Ministers of Religion, persons under the age of 21, aliens, members of the Commonwealth Parliament, persons who are not residents of South Australia, holders of contracts for the Public Service, occupants of offices of profit under the Crown, persons of unsound mind, persons attainted of treason, undischarged bankrupts and insolvent persons, and, amongst others, persons under sentence for any offence punishable by imprisonment for at least a year. Other requirements are different for each House; these are mentioned on pages 56 and 57.

Members for both Houses are elected by secret ballot; the preferential system of voting is used. Each member is required to take an oath or make an affirmation of allegiance to the Crown before being permitted to sit or vote in Parliament. All Members of the Parliament are entitled to such privileges, immunities, and

(a) Appointed to the Ministry on 11th November 1965 following the increase in the Ministry from eight to nine members.



powers as were held by Members of the House of Commons on 24th October 1856, the date on which the Constitution Act came into force.

### **Franchise**

Details of the franchise for the separate Houses are shown on pages 56 and 57.

South Australia was the first of the Australian States to give voting rights to women, and the existence of this provision in this State contributed to the decision to include full adult franchise in proposals for Federation.

Although a resolution favouring the extension of the franchise to women was passed as early as 1885 by the House of Assembly, a number of Bills designed to give effect to this resolution failed to be passed by the required absolute majority of the total number of Members of each of the two Houses of Parliament. In the year 1894, however, a Bill embodying the principle of Female Suffrage was approved by the required majority in each House and received Her Majesty's Assent on the 21st March 1895. Under the terms of this Act the right to vote at elections for the Legislative Council and the House of Assembly was granted to women subject to the same qualification requirements that applied to men. The franchise thus extended to women was exercised by them for the first time at the general election of 25th April 1896. For the first eighty-five years of responsible government voting for both Houses of Parliament was voluntary. By the Electoral Act Amendment Act of 1942 voting for the House of Assembly was made compulsory.

### **Functions of Parliament**

The function of Parliament is to legislate for the peace, order, and good government, of the State. Principal among the tasks of Parliament is the raising of revenue and the appropriation of funds for the development and maintenance of the State through its public services.

Legislation may be initiated by any Member in either House except that money bills must be initiated by Ministers of the Crown in the House of Assembly; the Legislative Council may suggest amendments to money bills although it may not effect such amendments itself.

Most bills are initiated by the Government as a result of the deliberations of Cabinet. The Opposition and Independent Members usually confine their activities to examination, criticism, and amendment, of Government measures.

Legislation other than to amend the Constitution of either House may be passed by a simple majority of the votes of the Members present.

### **Constitutional Amendment**

Alteration to the Constitution Act is in the hands of Parliament itself. An alteration to the Constitution of either House requires at the second and third readings of the bill acceptance by a majority of all the Members (not only those present or voting) of each House voting separately.

### **Deadlocks**

A deadlock results from the refusal by the Upper House to pass the same (or substantially the same) Bill during two consecutive Parliaments, provided that a general election for the Lower House has been held between the refusals and that on the second occasion an absolute majority of all the Members of the Lower House voted in favour of the Bill at its second and third readings. In the event of a deadlock between the Houses, provision is made for the dissolution of both Houses or alternatively for the election of two additional Members for each Legislative Council district.

**Life of Parliament**

The term of office of each Parliament since the establishment of responsible government has been three years except in the case of the twenty-eighth Parliament. By legislation introduced in 1933 the life of the twenty-eighth Parliament was extended to five years. In 1937 the Constitution Act was amended to provide for each subsequent Parliament to have a life of five years. However, the twenty-ninth Parliament repealed this provision and reintroduced three-year Parliaments.

**Number of Members and Electorates**

Alterations made to the number of Members and number of electorates for each of the two Houses are shown in the following table—

| Date         | Legislative Council |             | House of Assembly |             |
|--------------|---------------------|-------------|-------------------|-------------|
|              | Members             | Electorates | Members           | Electorates |
| 1856.....    | 18                  | 1           | 36                | 17          |
| 1863.....    | 18                  | 1           | 36                | 18          |
| 1875.....    | 18                  | 1           | 46                | 22          |
| 1882.....    | 24                  | 4           | 46                | 22          |
| 1884(a)..... | 24                  | 4           | 52                | 26          |
| 1890.....    | 24                  | 4           | 54                | 27          |
| 1902.....    | 18                  | 4           | 42                | 13          |
| 1912(b)..... | 18                  | 4           | 40                | 12          |
| 1915.....    | 20                  | 5           | 46                | 19          |
| 1938.....    | 20                  | 5           | 39                | 39          |

(a) Separate representation for Northern Territory.

(b) Cession of Northern Territory to Commonwealth control.

The present allocation of 26 country and 13 metropolitan electorates for the House of Assembly was introduced in 1938. In 1956 alterations were made to the boundaries of electorates, but the number was unaltered. Under the Electoral Districts (Redivision) Act, 1962, a Commission was appointed to investigate and report on the possibility of dividing the State into 20 rural and from 20 to 22 urban electorates. Subsequently the Bill to incorporate the recommendations of the Commission failed to gain an absolute majority in the House of Assembly.

**Salaries and Allowances**

The annual salary from 1st July 1963 is £2,500 per member with allowances of £600, £800, or £950 depending on the distance of the Member's electorate from the City of Adelaide. The following additional payments are also made—

President of Legislative Council and Speaker of House of Assembly—each £1,050.

Chairman of Committees, House of Assembly—£525.

Leader of the Opposition—£1,050, plus Expense Allowance of £300.

Deputy Leader of the Opposition—£400.

Government Whip—£300.

Opposition Whip—£300.

Leader of the Opposition in the Legislative Council—Expense Allowance of £300.

### Superannuation

All Members are required to contribute to a superannuation fund. Contributions to this fund can vary between £58 10s. and £228 per annum, and, according to the annual contribution and the length of service the pension payable varies between £240 and £1,820 per annum. No Member can qualify for a pension until he has served a minimum of 8 years either in one term or as an aggregate of terms.

## LEGISLATIVE COUNCIL

### Members and Electorates

Each Member of the Legislative Council, in addition to fulfilling the general requirements mentioned on page 53, must have attained the age of 30 years, be a British subject or "legal denizen of the State", and have resided in the State for at least three years. For the purpose of electing Members to the Council the State is divided into five electorates each having four Members. Each electorate elects two Members every three years, and each Member occupies his seat for six years. A casual vacancy may occur when a Member dies, or resigns, or ceases to satisfy any qualification for membership. Such a casual vacancy is filled, at a by-election in the particular electorate, for the unexpired portion of the previous Member's term.

It is not unusual for many of the candidates for this House to be returned unopposed at an election.

### Franchise

The franchise for the Legislative Council has been varied from time to time since the commencement of responsible government. Under the Constitution Act of 1855-56 the franchise for the Legislative Council was extended to adult males possessing one of the following property qualifications—

- (a) A freehold of the value of £50,
- (b) A leasehold of the annual value of £20, and having three years to run or including a right of pre-emption.
- (c) Occupation of a dwelling house of the annual value of £25.

The Constitution Act Amendment Act, 1894, which extended the franchise of the Lower House to women, gave them the right to vote also at elections for the Legislative Council, subject to the existing property qualifications applicable to men.

By an Act of 1907 the franchise for the Legislative Council was extended to a number of additional categories of persons. These included occupiers of dwelling houses of an annual rental value of at least £17, certain holders of Crown leases who were not enfranchised by previous legislation, certain ministers of religion, head teachers of schools, postmasters, railway station masters, and police officers. These persons lost their special franchise when the qualifications of voters for the Legislative Council were again revised in 1913.

The 1913 legislation, which in its essentials remains in force today, provided that the right to vote for the Legislative Council should be granted to "any person who is an inhabitant occupier as owner or tenant of any dwelling house; provided that no person shall be entitled to vote by reason of being a joint occupier of any dwelling house".

The franchise is also extended to certain past and present defence personnel who would not otherwise qualify.

### President and Chairman of Committees

At the first meeting of the Council in each Parliament the Members choose one from among their number to fill the position of President and Chairman of Committees. The person so elected is then entitled to a casting vote only.

## HOUSE OF ASSEMBLY

### Seat of Government

The House of Assembly can be regarded as the more important Chamber in that the Government of the day holds its position as such only so long as it controls a majority in this House. When it no longer controls such a majority in vital issues, particularly "money bills", the Government must resign or go to the polls. Once defeated in the Lower House on a "money bill" the Government is unable to finance the administration of the State.

### Franchise and Membership

Members of this House are elected for a maximum period of three years, for single-member districts, on a system of universal adult suffrage of British subjects resident in the State for at least 6 months. Certain present and past defence personnel are enfranchised by a special provision if they would not otherwise be entitled to vote. Subject to the exclusions mentioned on page 53 election to this House is open to those eligible to vote in an election for the House. The seat of a Member becomes vacant in cases similar to those stated for Legislative Councillors and may be filled at a by-election.

The first woman Member of the Parliament of South Australia was elected to this House in 1959.

### Officers and their Functions

A Speaker presides over the House, and his election is the first business when a Parliament first meets. He presides over debate, maintains order, represents the House officially, communicates its wishes and resolutions, defends its privileges when necessary, and applies its procedure. The Speaker may exercise a casting vote only. There is also a Chairman of Committees elected by the House at the beginning of each Parliament; he presides over the deliberations of the House in Committee and acts as Deputy Speaker when required.

## ELECTIONS AND PARTY REPRESENTATION

It appears from the following table that compulsory voting for the Lower House introduced by the Electoral Act Amendment Act of 1942 caused a considerable increase in voting for the Legislative Council.

### Voting—South Australian Parliament, 1933 to 1965

| Date                          | Legislative Council |                       |                 |          | House of Assembly |                       |                 |          |
|-------------------------------|---------------------|-----------------------|-----------------|----------|-------------------|-----------------------|-----------------|----------|
|                               | Electors on Roll    | Contested Electorates |                 |          | Electors on Roll  | Contested Electorates |                 |          |
|                               |                     | Electors Enrolled     | Electors Voting | Per Cent |                   | Electors Enrolled     | Electors Voting | Per Cent |
| 8th April 1933 . . . . .      | 133,152             | 39,415                | 25,309          | 64.21    | 338,576           | 307,285               | 182,693         | 59.45    |
| 19th March 1938 . . . . .     | 129,135             | 129,135               | 91,165          | 70.60    | 364,884           | 352,423               | 223,136         | 63.31    |
| 29th March 1941 . . . . .     | 133,358             | 115,952               | 70,660          | 60.94    | 378,265           | 339,263               | 171,978         | 50.69    |
| 29th April 1944 (a) . . . . . | 142,314             | 98,482                | 81,791          | 83.05    | 401,747           | 289,032               | 255,883         | 88.53    |
| 8th March 1947 . . . . .      | 155,847             | 155,847               | 124,826         | 80.10    | 418,308           | 306,059               | 285,765         | 93.37    |
| 4th March 1950 . . . . .      | 161,917             | 68,347                | 52,954          | 77.48    | 437,832           | 311,658               | 290,306         | 93.15    |
| 7th March 1953 . . . . .      | 168,758             | 97,968                | 79,373          | 81.02    | 449,630           | 354,273               | 336,592         | 95.01    |
| 3rd March 1956 . . . . .      | 174,241             | 22,963                | 16,002          | 69.69    | 468,303           | 299,048               | 280,811         | 93.90    |
| 7th March 1959 . . . . .      | 187,248             | 86,278                | 70,007          | 81.14    | 497,456           | 426,340               | 400,531         | 93.95    |
| 3rd March 1962 . . . . .      | 201,517             | 118,218               | 98,786          | 83.56    | 531,228           | 444,197               | 417,462         | 93.98    |
| 6th March 1965 . . . . .      | 213,377             | 186,899               | 149,910         | 80.21    | 562,824           | 542,436               | 513,064         | 94.59    |

(a) First election under compulsory voting for the House of Assembly.

Of the thirty-nine electorates for the House of Assembly thirteen are metropolitan and twenty-six are country. The table below shows the electoral returns for the general election held on 6th March 1965.

### House of Assembly—Party Representation, 1965

| Electorate            | Electors on Roll | Electors Voting | Informal Votes | Successful Candidate   |        |
|-----------------------|------------------|-----------------|----------------|------------------------|--------|
|                       |                  |                 |                | First Preference Votes | Party  |
| <i>Metropolitan—</i>  |                  |                 |                |                        |        |
| Adelaide .....        | 16,805           | 15,436          | 1,100          | 10,444                 | A.L.P. |
| Burnside .....        | 33,660           | 31,703          | 821            | 18,394                 | L.C.L. |
| Edwardstown .....     | 31,908           | 30,285          | 599            | 17,917                 | A.L.P. |
| Enfield .....         | 39,091           | 37,167          | 1,301          | 21,951                 | A.L.P. |
| Glenelg .....         | 34,947           | 33,206          | 457            | 16,869                 | A.L.P. |
| Hindmarsh .....       | 22,713           | 21,401          | 1,136          | 16,241                 | A.L.P. |
| Mitcham .....         | 24,868           | 23,337          | 441            | 15,015                 | L.C.L. |
| Norwood .....         | 20,063           | 18,741          | 610            | 10,452                 | A.L.P. |
| Port Adelaide .....   | 22,533           | 21,348          | 1,216          | 15,460                 | A.L.P. |
| Semaphore .....       | 23,158           | 22,114          | 1,116          | 16,430                 | A.L.P. |
| Torrens .....         | 20,013           | 18,843          | 397            | 8,937                  | L.C.L. |
| Unley .....           | 19,498           | 18,336          | 455            | 9,062                  | A.L.P. |
| West Torrens .....    | 35,580           | 33,463          | 899            | 18,496                 | A.L.P. |
| <i>Country—</i>       |                  |                 |                |                        |        |
| Albert .....          | 7,778            | *               | *              | *                      | L.C.L. |
| Alexandra .....       | 10,244           | 9,810           | 185            | 5,557                  | L.C.L. |
| Angas .....           | 6,651            | *               | *              | *                      | L.C.L. |
| Barossa .....         | 12,399           | 11,859          | 170            | 6,015                  | A.L.P. |
| Burra .....           | 5,889            | 5,646           | 78             | 3,467                  | L.C.L. |
| Chaffey .....         | 7,599            | 7,287           | 189            | 7,098                  | A.L.P. |
| Eyre .....            | 7,285            | 6,965           | 110            | 3,206                  | L.C.L. |
| Flinders .....        | 7,231            | 6,963           | 97             | 3,678                  | L.C.L. |
| Frome .....           | 5,061            | 4,675           | 68             | 2,666                  | A.L.P. |
| Gawler .....          | 27,634           | 25,967          | 651            | 16,413                 | A.L.P. |
| Gouger .....          | 9,120            | 8,701           | 223            | 5,384                  | L.C.L. |
| Gumeracha .....       | 7,159            | 6,882           | 143            | 4,365                  | L.C.L. |
| Light .....           | 5,959            | *               | *              | *                      | L.C.L. |
| Millicent .....       | 7,168            | 6,807           | 78             | 4,160                  | A.L.P. |
| Mount Gambier .....   | 9,602            | 9,072           | 166            | 5,399                  | A.L.P. |
| Murray .....          | 8,119            | 7,818           | 152            | 5,144                  | A.L.P. |
| Onkaparinga .....     | 7,147            | 6,844           | 122            | 3,836                  | L.C.L. |
| Port Pirie .....      | 6,573            | 6,321           | 204            | 5,468                  | A.L.P. |
| Ridley .....          | 6,943            | 6,804           | 106            | 4,483                  | Ind.   |
| Rocky River .....     | 5,783            | 5,580           | 96             | 3,652                  | L.C.L. |
| Stirling .....        | 7,245            | 6,989           | 72             | 4,906                  | L.C.L. |
| Stuart .....          | 8,462            | 7,880           | 336            | 6,618                  | A.L.P. |
| Victoria .....        | 7,278            | 6,925           | 59             | 3,511                  | L.C.L. |
| Wailaroo .....        | 5,979            | 5,771           | 112            | 3,346                  | A.L.P. |
| Whyalla .....         | 11,253           | 9,856           | 350            | 7,589                  | A.L.P. |
| Yorke Peninsula ..... | 6,426            | 6,262           | 111            | 4,276                  | L.C.L. |

Note : A.L.P.—Australian Labor Party ; L.C.L.—Liberal and Country League ; Ind.—Independent.

\* Uncontested.

The following table shows the Party representation in both Houses of the South Australian Parliament resulting from each general election from 1933 and changes since the last general election.

## Party Representation—South Australian Parliament, 1933 to 1965

| Date              | Legislative Council |        |             |       | House of Assembly |        |             |                        |
|-------------------|---------------------|--------|-------------|-------|-------------------|--------|-------------|------------------------|
|                   | L.C.L.              | A.L.P. | Independent | Other | L.C.L.            | A.L.P. | Independent | Other                  |
| 8th April 1933 .. | 16                  | 2      | 1           | 1(a)  | 29                | 6      | 4           | { 4(a)<br>3(b)<br>2(c) |
| 19th March 1938.  | 15                  | 2      | 1           | 2(c)  | 15                | 9      | 13          |                        |
| 29th March 1941.  | 14                  | 4      | 1           | 1(c)  | 21                | 11     | 5           |                        |
| 29th April 1944.. | 15                  | 5      | —           | —     | 20                | 16     | 3           | —                      |
| 8th March 1947..  | 16                  | 4      | —           | —     | 23                | 13     | 3           | —                      |
| 4th March 1950..  | 16                  | 4      | —           | —     | 23                | 12     | 4           | —                      |
| 7th March 1953..  | 16                  | 4      | —           | —     | 21                | 14     | 4           | —                      |
| 3rd March 1956..  | 16                  | 4      | —           | —     | 21                | 15     | 3           | —                      |
| 7th March 1959..  | 16                  | 4      | —           | —     | 20                | 17     | 2           | —                      |
| 3rd March 1962..  | 16                  | 4      | —           | —     | 18                | 19     | 2           | —                      |
| 6th March 1965..  | 16                  | 4      | —           | —     | 17                | 21     | 1           | —                      |

Note : L.C.L.—Liberal and Country League ; A.L.P.—Australian Labor Party.

(a) Parliamentary Labor.

(b) Lang Labor.

(c) Independent Labor.

The four Australian Labor Party Members currently sitting in the Legislative Council represent Central No. 1 electorate.

### ADMINISTRATION

The South Australian Public Service consists of fifty-five departments, many of which are very small and have only a narrow range of functions. The principal functions of each department are shown in the following list, in which the departments have been grouped according to Ministerial control.

#### PREMIER, TREASURER, MINISTER OF IMMIGRATION AND MINISTER OF HOUSING

Hon. Francis Henry Walsh, M.P.

#### Premier's Department

Provides secretarial and clerical assistance to the Head of Government.

#### Treasury Department

Controls and co-ordinates receipt and expenditure of governmental moneys, prepares estimates of expenditure; administers Workmen's Compensation Act.

#### Superannuation Department

Administers the Superannuation Act; collects contributions, pays pensions and other benefits, and invests accumulated funds.

#### Motor Vehicles Department

Registers and records ownership of motor and horse drawn vehicles, issues licences to drivers, and collects appropriate fees.

#### Agent-General in England Department

Represents the State's interests in England and in contact with other European countries; by publicity and advice facilitates trade between oversea countries and

South Australia; inspects certain goods purchased from Europe by the South Australian Government.

#### **Land Tax Department**

Determines the unimproved value of all taxable land and assesses and collects taxes in respect of such land.

#### **Stamp and Succession Duties Department**

Collects stamp and succession duties and revenue from betting tickets, totalizator tax, and from the licensing of insurance companies.

#### **Immigration, Publicity and Tourist Bureau Department**

Plans to attract tourists and settlers to South Australia, provides facilities for tours and travel in South Australia in particular. Maintains branch offices in Melbourne and Sydney. Controls a number of pleasure resorts in the State and subsidizes the development of tourist resorts.

### **CHIEF SECRETARY AND MINISTER OF HEALTH**

Hon. Albert James Shard, M.L.C.

#### **Chief Secretary's Department**

Provides secretarial and clerical assistance to the Chief Secretary, facilitates liaison between Parliament and both the Governor and the Executive generally. Cabinet and Executive Council meetings are held in the Chief Secretary's office.

#### **Government Reporting Department**

Reports the debates and proceedings of the State Parliament and the evidence taken by various Royal Commissions and Government and Parliamentary committees.

#### **Statistical Department**

Registers births, deaths, and marriages, and issues copies of registrations; makes actuarial calculations; registers Friendly and Building Societies. (Under a 1957 agreement between the Commonwealth and State Governments the Commonwealth Bureau of Census and Statistics provides an integrated statistical service.)

#### **Audit Department**

Audits books and accounts of Public Service departments and other Government and semi-government authorities in accordance with the Audit Act and conducts special investigations.

#### **Printing and Stationery Department**

Supplies all printing and stationery and some office equipment for Parliament, State Government departments, and for some State Government instrumentalities.

#### **Police Department**

Responsible for the maintenance of law and order; takes appropriate action for the prevention of crime and for the detection and apprehension of offenders.

Organizes Emergency Fire Services in country districts.

#### **Prisons Department**

Responsible for the management and care of gaols and prisons and for the safe custody, discipline and useful employment of prisoners at those institutions.

**Hospitals Department**

Administers directly the Government hospitals in the country and metropolitan area, including the Royal Adelaide Hospital, mental hospitals, tuberculosis hospitals, the Queen Elizabeth Hospital, and "Mareeba" Babies Hospital; exercises supervision over 50 subsidized hospitals throughout the State.

**Department of Public Health**

Administers laws concerning public health, food and drugs, dangerous drugs, poisons, bakehouses, noxious trades, vaccination and venereal diseases. The work includes operation of the school medical and dental services, X-ray health survey, tuberculosis services (apart from hospitalization), and the supervision and assistance of Local Boards of Health, which operate in local government areas.

**Public Service Commissioner's Department**

Recruits, determines conditions of service for, and recommends promotion of, public servants; maintains efficiency within the Service and determines industrial matters concerning government employees.

**MINISTER OF WORKS AND MINISTER OF MARINE**

Hon. Cyril Douglas Hutchens, M.P.

**Public Works Department**

Provides secretarial and clerical assistance to the Minister of Works and of Marine.

**Engineering and Water Supply Department**

Constructs, maintains, and administers, all South Australian water supply and sewerage schemes; maintains River Murray locks and weirs downstream from Wentworth in New South Wales and the barrages at the river mouth; carries out engineering work on irrigation and reclamation works along the River Murray and controls the pumping stations serving them. Carries out engineering work or drainage work in the South East of South Australia; undertakes road work outside district council areas and maintains the Metropolitan Floodwater Scheme.

**Public Buildings Department**

Is responsible, either departmentally or through contractors, for the design, construction, equipment and maintenance of public buildings, mainly Government offices, schools, hospitals, police stations and gaols.

**Public Stores Department**

The Supply and Tender Board controls the purchase and care of stores, materials and equipment required by all Government departments; it also controls the disposal of surplus stores.

The Public Stores Department carries out the Board's decisions by arranging contracts for the purchase of stores, buying stores and materials not covered by contracts, inspecting the stores of various departments, and advising on methods of storing and stocktaking and selling stores declared to be surplus.

**Harbors Board Department**

Responsible for construction and maintenance of harbors and harbor installations (including navigation aids) and for the control of harbor navigation; operates coal gantries and installations for the bulk loading of grain and other products.



**ATTORNEY-GENERAL, MINISTER OF ABORIGINAL AFFAIRS AND  
MINISTER OF SOCIAL WELFARE**

Hon. Donald Allan Dunstan, Q.C., M.P.

**Attorney-General's Department**

Provides secretarial and clerical assistance to the Attorney-General and the Coroner; maintains register of land agents and land salesmen licensed by the Lands Agents' Board. The Companies Office, which administers the Companies and other Acts, operates as a branch of this department; the work includes registration of companies (and their articles of association, shareholdings, etc.), partnerships and trade names. The Licensing Branch of this department provides court services in the determination of applications for licences for billiard rooms and for the sale of intoxicating beverages; registers and inspects premises in respect of which licences have been issued.

**Parliamentary Draftsman's Department**

Acts as legal adviser to the Government and departments on proposals for new laws and alterations to existing laws; drafts Acts of Parliament, regulations, rules, etc.

**Crown Solicitor's Department.**

Provides legal advice to the South Australian Government and to Government departments. The Crown Solicitor and his legal officers appear in the courts in many cases, particularly major cases in which the Crown is involved.

**Public Trustee Department**

Acts as required as executor under will, trustee, administrator of estates (of deceased persons, mental defectives, aged and infirm persons and prisoners), and as guardian of infants.

**Supreme Court Department**

Is the superior court of the State. Civil jurisdiction extends to all kinds of claims regardless of the amount involved, and criminal jurisdiction extends over all offences against the law punishable on indictment. As a court of appeal it reviews decisions of single judges and of lower courts. The Probate Registry grants probate of wills and administration of estates.

**Adelaide Local Court Department**

Adjudicates in all Common Law claims where the amount of the claim does not exceed £1,250 and on claims under the Workmen's Compensation, Landlord and Tenant, Land Agents, and other Acts; applies the law of equity within prescribed limits.

**Adelaide Police Court Department**

Adjudicates upon any offences against the law within the powers of Magistrates' Courts and hears the preliminary examination of persons charged with offences which must go on for trial or sentence in the Supreme Court. The Juvenile Court is presided over by a Special Magistrate who hears and determines all charges (other than homicide) against children and hears adoption applications under the Adoption of Children Act.

**Country and Suburban Courts Department**

Conducts Local Courts at Port Adelaide and in the country and Courts of Summary Jurisdiction in the country and suburban areas. Local Courts deal

with actions concerning claims up to £1,250. Courts of Summary Jurisdiction are mainly concerned with the trial and punishment of persons charged with offences against Statutes where the penalty prescribed does not exceed two years' imprisonment and with the determination of whether persons charged with more serious offences are to be committed for trial in the Supreme Court.

#### **Registrar-General of Deeds Department**

Accepts and registers transactions involving land, including land grants, ordinary transfers, and mortgages; registers appointment of trustees; registers bills of sale, stock mortgages, wool liens, workmen's liens, fruit liens.

#### **Electoral Department**

Administers the Electoral Act and relevant parts of the Constitution, Licensing, and other Acts. This includes organization and conduct of elections of members to the Parliament of South Australia, taking local option polls, checking petitions under the Early Closing Act and the Licensing Act.

#### **Coroner's Department**

Conducts coronial enquiries where necessary by law or policy on deaths occurring within a 10 mile radius of the G.P.O. Adelaide.

#### **Department of Aboriginal Affairs**

Provides for the welfare of Aborigines in South Australia, including their protection from injustice, imposition, and fraud, the provision of food, clothing, and medical attention, the management of lands reserved for them, the provision of training in farming, dairying, sheep husbandry and shearing, and the custody, maintenance, and education, of children.

#### **Department of Social Welfare**

Maintains institutions providing accommodation, control and training for children committed to the care of the State; supervises children in foster homes, illegitimate children up to seven years and immigrant children under 21 years, and watches the welfare of children generally; issues licences to maternity homes; issues public relief; maintains aged and destitute persons; gives legal and monetary assistance to deserted wives and other women; provides court assistance for the adoption of children; runs an emergency housekeeper service.

### MINISTER OF EDUCATION

Hon. Ronald Redvers Loveday, M.P.

#### **Department of the Minister of Education**

Provides secretarial and clerical assistance to the Minister of Education.

#### **Education Department**

Controls all State primary and secondary schools, adult education in country technical schools, and training of apprentices in trade schools, inspects private schools to check the standard of education afforded. On behalf of the Commonwealth Government administers the Commonwealth Scholarship Scheme, Reconstruction Training Scheme, education of adult migrants and distribution of milk in schools and acts as agent for the Commonwealth Government in respect of schools in the Northern Territory.

**Libraries Department**

Provides books, periodicals and newspapers for free public use. Conducts a Reference Library, a Children's Library, and an Archives Branch, and provides two lending services (for metropolitan and country borrowers respectively) and a research service.

**Museum Department**

Collects, preserves, and displays, objects representative of Australian fauna, geology, and ethnology, and conducts field and other research in these matters.

**Art Gallery Department**

Cares for the State art collection, fosters the understanding and appreciation of art by arranging lectures and exhibitions of Australian and overseas art.

**MINISTER OF LOCAL GOVERNMENT, MINISTER OF ROADS, AND  
MINISTER OF MINES**

Hon. Stanley Charles Bevan, M.L.C.

**Department of the Minister of Local Government and Roads**

Provides secretarial and clerical assistance to the Minister of Local Government and Roads.

**Highways and Local Government Department**

Constructs and maintains all the principal roads, bridges, and ferries, within the State; supplies financial assistance by way of Government Grants to councils for other roads and provides technical advice and supervision. Finance for these functions is derived from Commonwealth Aid Roads Grants as well as from State funds.

Gives advice and direction to councils on the Local Government Act and on other matters affecting local government administration.

**Department of Mines**

Fosters the development of the State's mineral resources. This function includes: the geological survey, and exploration and development by drilling, of mineral deposits and underground water resources; administration of mining legislation, provision of technical assistance to the mining industry, the testing and development of metallurgical and chemical treatment processes, and operation of mineral treatment plants.

**MINISTER OF LABOR AND INDUSTRY AND MINISTER OF  
TRANSPORT<sup>(1)</sup>**

Hon. Alfred Francis Kneebone, M.L.C.

**Department of the Minister of Transport**

Provides a secretarial service to the Minister of Transport and a liaison with departments and authorities under the control of the Minister, viz., Railways Department, Transport Control Board, Tramways Trust and Metropolitan Taxi Cab Board.

**Department of Labor and Industry**

Registers and inspects factories, shops, lifts, steam boilers, unfired pressure vessels, and scaffolding; issues licences for storage of inflammable oil; administers the Early Closing Act; polices industrial awards and determinations made by

(1) The South Australian Railways Department is not a department under the Public Services Act but is subject to ministerial supervision.

State Industrial Court and wages boards; investigates and reports on prospects for proposed new industries.

## MINISTER OF AGRICULTURE AND MINISTER OF FORESTS

Hon. Gabriel Alexander Bywaters, M.P.

### Minister of Agriculture Department

Provides secretarial and clerical assistance to the Minister of Agriculture and of Forests.

### Agriculture Department

Assists in increasing quality and quantity of rural production and the efficiency of producers by providing expert advice; undertakes research and experimental work, much of which serves to test the application of new scientific knowledge to local conditions; exercises control over the health of livestock and the quality of meat, dairy produce, fruit and vegetables. (The main branches of this department are agricultural, horticultural, dairying, soil conservation, livestock and poultry.)

### Agricultural College Department

Roseworthy Agricultural College trains young men in the theory and practice of agriculture and related sciences and carries out experimental work on related problems.

### Produce Department

Controls the slaughtering of stock and the marketing of meat for export and the export of apples and pears; inspects and certifies quality of grain and flour sent interstate and overseas; investigates and reports on conditions of overseas markets for primary products; supplies meat to Government institutions; manages meat export works and local abattoirs at Port Lincoln.

### Woods and Forests Department

Manages the State Forest Reserves; maintains existing plantations; prepares and plants new forests; operates several large sawmills; carries out experimental work in afforestation.

### Fisheries and Fauna Conservation Department

Fosters the development of the fishing industry in this State; enforces regulations governing sizes of fish marketed and types of nets used; polices regulations regarding protected birds and animals.

### Chemistry Department

Carries out a very wide range of chemical analyses, investigations and research in pursuance of various Acts of Parliament, and as otherwise required for Government departments and local government and semi-government authorities.

## MINISTER OF LANDS, MINISTER OF REPATRIATION, AND MINISTER OF IRRIGATION

Hon. James Desmond Corcoran, M.P.

### Lands Department

Controls the survey of all Crown lands, their allocation for pastoral, agricultural and other purposes and the collection of appropriate fees and lease payments; controls irrigation areas and the development of land for the settlement of

ex-servicemen; administers Acts relating to the drainage of land in the South-East, the destruction of vermin throughout the State and the use of accurate weights and measures; prints official survey plans of the State.

#### **Botanic Garden Department**

Grows, cultivates and carries out experiments on both introduced and indigenous vegetation. An advisory service assists Government and semi-government authorities, private organizations, and individuals.

### **OVERSEA AND INTERSTATE REPRESENTATION**

South Australia maintains an Agent-General's Office at South Australia House, 50 The Strand, London, W.C.2. As official representative of the State it is the function of the Agent-General to work in close co-operation with the High Commissioner for Australia, to keep the Government informed of political and economic developments overseas, to promote trade with the United Kingdom and other countries, and to act as agent for the State in the United Kingdom. Mr. M. A. F. Pearce, C.V.O., C.B.E., is the Agent-General until 21 March 1966 when the appointment of Mr. K. L. Milne, F.C.A.(Aust.), becomes effective.

The South Australian Tourist Bureau maintains offices at 390 George Street, Sydney, N.S.W., and at 8 Royal Arcade, Melbourne, Victoria, to foster and facilitate tourist travel to South Australia.

### **3.4. SEMI-GOVERNMENTAL AUTHORITIES**

A semi-governmental authority may be defined as a "body (other than a local government authority or body whose receipts and payments are included in the public accounts of the Commonwealth, of a State, or of a Territory) created by or under legislation to carry out an activity or activities on behalf of a Government, or a body in which a Government has a controlling interest".

Some authorities such as marketing boards, which are set up by Acts of Parliament, are not regarded as semi-governmental because their activities are carried out on behalf of industries rather than on behalf of any Government.

Most semi-governmental authorities have independent powers for the recruitment of staff. All possess greater administrative and financial autonomy than Government departments but there is a wide variation in the degree of autonomy accorded, in various aspects, to different authorities.

Activities carried out by semi-governmental authorities include tertiary education, power supply, public transport, banking services, fire control, irrigation and drainage in rural areas, control and regulation of milk supply, slaughtering of animals for human consumption, housing development, and investigation of problems relating to the development of mineral resources.

In appropriate parts of this Year Book some reference is made to the activities of most of the semi-governmental authorities which operate in South Australia.

### 3.5. LOCAL GOVERNMENT

#### Early History

On 19th August 1840, less than four years after the colony was founded, the first Colonial Municipal Act was passed by Governor Gawler and his Executive Council to provide elective municipal institutions for towns of at least 2,000 inhabitants. The franchise was granted to adult males who at the time of enrolment had resided in the province for at least six months and who owned or occupied any land, house, warehouse, counting house, or shop within the area, provided that the property was valued at not less than £20 per annum and the voter lived within seven miles of the property. At the first elections for Adelaide, held on 31st October 1840, four aldermen and fifteen councillors were elected, forming the first elected local government body in Australia.

This first attempt at local government proved unsuccessful, and in September 1843 the Adelaide Corporation became legally defunct. The Government controlled the affairs of the city for the next six years until 1849, when the Governor appointed five City Commissioners to take over the City Administration.

In October 1851 five hundred ratepayers petitioned for restoration of the Council; in June 1852 the Municipal Corporation of Adelaide was reformed under the Municipal Corporations Act, 1849.

#### Local Government Areas—Number, Size, and Status

At present there are 142 local government areas in South Australia, each controlled by a council consisting of members elected by local ratepayers and exercising powers conferred by the Parliament of the State in the Local Government Act, 1934-1964.

The total area incorporated in local government areas is 57,767 square miles; this is only slightly above 15 per cent of the total area of the State but contains more than 98 per cent of the State population.

There are two major types of local government areas—district council areas and municipalities. Usually district council areas consist predominantly of rural land but contain one or more towns (described for census purposes as non-municipal towns if the town population is 1,000 or more persons). Generally speaking, to qualify for proclamation as a municipality an area must be used predominantly for either residential, business, industrial, or manufacturing purposes (or a combination of those purposes), and be able to support itself financially. Some municipalities are constituted as cities, the qualification being a population of 15,000 persons for a municipality in the metropolitan area as prescribed for census purposes and 10,000 persons in other ("country") areas.

There are 21 metropolitan municipalities of which 14 are cities, 22 other municipalities of which 6 are cities, and 99 district council areas.

The Governor may create, abolish, or vary the size, status, or organization of, any local government area or portion thereof, provided certain requirements are satisfied. Such alterations usually stem from petition by ratepayers or a council.

#### Functions of Local Government

The Local Government Act, 1934-1964, prescribes most of the "powers and authorities" which each council shall or may exercise "for the good government" and "the management of the affairs" of its area, but some functions devolve from other Acts. To enable it to sue and be sued and to participate in transactions involving the purchase and sale of land and other property each council is constituted as a corporate body.

The functions performed by councils vary somewhat with the area concerned, but there are general functions which are common to them all. Many of these functions receive more detailed attention in the parts of this book dealing with the appropriate subjects, *e.g.* road construction and maintenance in Part 8 Physical Development (page 256), health services and Local Boards of Health in Part 6 Social Environment (page 173), and libraries in Part 6 Social Environment (page 159). Among the many other functions of local governing authorities are the provision of street lighting, the licensing and inspection of slaughter-houses, the maintenance of cemeteries, the maintenance of foreshores and jetties, the control of the location of industries (especially noisy trades), the prevention of fires within certain areas, and the policing of provisions relating to vermin and weeds.

### Organization and Representation

Whereas a municipality must be divided into at least two areas known as wards a district council need not have wards. No council may comprise less than five members, and wards in municipalities must be represented by two councillors. No district council area may be divided into more than 10 wards, and the number of councillors for each ward is established by proclamation.

A candidate for election as a councillor must be an adult British citizen owning or occupying ratable property within the area for which he seeks election, must not be a special magistrate, an undischarged bankrupt, a person holding contract or employment under the council, under sentence for a crime, overdue with his rates and any associated fines, or of unsound mind, and must have consented, in writing, to his nomination.

Each year half the number of councillors retire. In councils with wards one councillor from each ward, the one who has been "the longest in office without re-election", retires; in other councils the councillors who did not retire one year do so the next. In all cases a retiring councillor is eligible for re-election.

Any municipality may apply to add no less than three and no more than six aldermen to its council. The qualifications for councillors apply to aldermen, except that aldermen are not bound by the limits of wards, and an alderman must have served at least one year as a member of a council. Although the functions of aldermen are not specifically defined the concept is that they should impartially consider the interests of the area as a whole and so resolve any conflict which may arise between sectional interests represented by councillors.

The mayor of a municipality is elected annually on the same basis as an alderman. The chairman of a district council is chosen annually by councillors from among their number.

### Franchise

Adult British subjects who either own or occupy ratable property within an area are eligible to be enrolled for, and to vote at, elections for that area provided that they are not in arrears with their rates. Companies or corporations owning or occupying ratable property within the area are entitled to nominate up to three persons to vote on their behalf at the elections for that area, depending on the method of valuation; the entitlement is for the nomination of one vote for each £150 of annual (improved) value or £1,000 of unimproved (land) value or part of either, up to three voters for any one property. Special provision is also made to allow certain defence personnel to vote.

### Officers and their Functions

Each council may appoint any officers it considers necessary to carry out its duties, including special constables to facilitate the maintenance of law and order within its area.

Each council must appoint a town clerk (in a municipality) or a district clerk (in a district council) and an auditor. The town clerk is recognized as the chief administrative officer.

Employment in local government administration is now regarded as a career; most town and district clerks are full-time employees, and councils are required to employ in those positions only those persons who have passed examinations qualifying them for the work. The town or district clerk maintains the voters' roll and in many cases is appointed returning officer for elections. The characteristics of particular areas determine to some extent the nature of the duties performed by town and district clerks; they often undertake a very wide variety of functions, especially in smaller areas, where even the part-time employment of specialist officers for particular tasks is not warranted.

The auditor for each council is appointed for a term of two years. He is not eligible for appointment unless he holds a Local Government Auditor's Certificate of competence issued by the Local Government Auditors Examining Committee.

Whenever a council itself undertakes a new assessment of property values within its area it is required under the Local Government Act to appoint a valuator who recommends to the council a valuation of each property for rating purposes. A ratepayer may appeal against a council's valuation of his own property or that of another ratepayer. Instead of undertaking its own assessment of property values it is now not uncommon for a council to adopt the valuations of the Engineering and Water Supply Department (annual or "improved" values) or the State Land Tax Department (unimproved or "land" values). When this is done a council avoids the necessity for employing a valuator but a fee for each valuation is payable to the appropriate department. There is no right of appeal to the council against valuations so based, the right of appeal lying against the departments concerned when they make their valuations.

### Finance

Local government authorities derive their revenue from many different sources, including sundry licences and fines, but the principal sources are rates, loans raised against the security of future rates, and Government grants. The relative importance of these sources of revenue varies between areas and through time within areas, *e.g.*, in closely settled well developed areas rate revenue is usually predominant; in large sparsely settled areas Government grants, mainly for road works, may at times be the chief item of revenue; in areas being rapidly and extensively developed for housing or industrial purposes both Government grants and loan funds may be prominent.

Commonwealth Government grants are not made direct to local government authorities but are administered by appropriate State Government departments. The most important example of this is the distribution of portion of Commonwealth aid roads grants to local government authorities by the Highways and Local Government Department in conjunction with the State Treasury.

A large proportion of local government expenditure from both loan funds and other revenue is for the construction and maintenance of roads, footpaths, and stormwater drains.

More detailed attention is given to local government finance in Part 12.5, on pages 483-487.



## **PART 4**

# **LAND SETTLEMENT**

### **4.1 LAND TENURE**

#### **IDENTIFICATION OF LAND AND REGISTRATION OF TITLE**

To facilitate the identification of land, the southern portion of the State encompassing all the arable land and certain pastoral areas has been subdivided into counties, these in turn being generally subdivided into smaller units known as hundreds.

The first Surveyor-General, Colonel Light, had been instructed by the Colonization Commissioners to divide the colony into towns and counties, and in 1842 the first nine counties were proclaimed. At the same time the administration was having considerable difficulty in regulating the leasing of unsold lands for pastorage. To assist it was proposed in 1846 that boundaries of areas smaller than counties be created and the system of hundreds in use in some counties in England was adopted.

The boundaries of early counties and hundreds followed natural features. As further counties and hundreds were declared, natural features suitable for boundary delineation were not always available and in most cases the boundaries were set parallel to lines of longitude and latitude.

In 1887 an area of 250,000 acres was declared to provide for the town and irrigation area of Renmark on the River Murray. Similar areas were subsequently surveyed and proclaimed adjacent to other sections of the river.

There are currently 49 counties covering 23% of the State, the last of these being declared in 1933. The counties have an average size of 1,143,000 acres, varying from County Light, north of Adelaide, with 536,960 acres to County Jervois on Eyre Peninsula with 2,368,000 acres.

Counties are generally subdivided into hundreds, although 4 northern counties remain undivided and a number of others are only partly subdivided. There is considerable variation in the size of hundreds, while the number of hundreds in a

completely subdivided county varies from 8 in Counties Alfred and Kintore to 34 in County Jervois. New hundreds are created from time to time, the present total being 531.

Hundreds are further subdivided into sections which in turn may be divided into allotments or occasionally blocks.

Land is therefore, for the purposes of title generally identified by the county, hundred, and section, and where appropriate block or allotment within which it falls. Land in towns and in proclaimed irrigation areas may further be identified as falling within that town or area.

**Torrens System of Land Registration**

Land transactions in South Australia are conducted under the Torrens System of land registration as provided by the Real Property Act, 1886-1963. This system, first introduced by the Real Property Act, 1858, was named after its author, Sir Robert Torrens, who was at that time Registrar-General of the colony.

All land transactions to this date had been conducted by the conveyancing of the general law titles, a procedure which was cumbersome, costly and uncertain, and particularly unsuited to a fledgling colony with a large number of landowners and where land transactions were frequent.

Torrens had previously been Collector of Customs and in this role had been impressed by the relatively simple principles involved in the transfer of shipping property, principles which he argued could be applied to land transactions. His proposals were to lead to similar legislation in the other Australian States, and have subsequently been adopted in other parts of the world.

The Torrens System provides that the matter of title to land shall be a government responsibility. Each piece of land is represented by a certificate of title which, with very few (and in practice unimportant) exceptions, is guaranteed by the State. Retrospective examination which is necessary with general law title is eliminated and the costs and time involved in conveyancing can thus be kept to a minimum.

The Real Property (Registration of Titles) Act, 1945, provided for the small proportion of land then remaining under the general law of conveyancy to be converted to the Torrens System. This transition is still in progress in certain areas.

Details of sales of real estate as recorded at the Land Titles Registration Office during the 4 years to 1964 are shown below.

**Sales of Real Estate, South Australia**

| Year      | Number of Sales | Consideration |
|-----------|-----------------|---------------|
|           |                 | £'000         |
| 1961..... | 22,904          | 65,263        |
| 1962..... | 27,613          | 86,641        |
| 1963..... | 30,170          | 102,574       |
| 1964..... | 34,066          | 130,705       |

## SYSTEMS OF TENURE

## HISTORICAL

The sale of Crown land played an important role in the establishment of South Australia. At the time of the first settlement the "Wakefield System" of colonization was held in favour and it was thus planned that the new colony be largely self-supporting with revenue coming from the sale of land. This proposal was agreed to, with the proviso that land to the value of £35,000 be sold in England prior to settlement. After considerable difficulty 60,595 acres were disposed of for £36,357.

Early applications for land were made by tendering at a fixed price and 323,000 acres of land had been thus disposed of by 1843 when sales by auction were introduced. By 1857, 1,756,000 acres had been alienated at an average price of 25s. 3d. per acre.

In 1846, under the Waste Lands Act, land outside the hundreds was leased for pastoral purposes for periods up to 14 years, and leases within the hundreds date from 1850. The term of these leases was extended to 21 years in 1864 and to 42 years in 1890.

Land sales prior to 1869, involving 3,790,185 acres at a total purchase price of £4,481,806, were conducted on a cash basis. However, in that year sales on credit were introduced, with payments initially spread over 4 years and later extended to 20 years. Land not sold at auctions was offered on 21 year leases, and in the late 1880's leases with a right to purchase and leases in perpetuity were introduced.

From 1886 gold, and from 1888 other metals and minerals, in lands sold by the Government were reserved to the Crown.

Perpetual leases were first introduced in 1888. Early leases provided for a revaluation of rents every 14 years, but in 1893 provision was made for rents to be fixed in perpetuity.

The introduction of the current system of allotting lands in preference to sales by auction led to the appointment of the Land Board in 1886 and the Pastoral Board in 1893.

The principles of closer settlement whereby the Crown repurchases and subdivides suitable lands, were introduced in 1897.

With the introduction in 1903 of agreements to purchase, a form of tenure leading to freehold, the present day pattern of tenure was completed. Subsequent legislation has been devoted to variations in the basic concepts of freehold, agreement to purchase, perpetual lease, pastoral lease and miscellaneous lease.

## LAND ADMINISTRATION

Approximately 90% of the occupied area of South Australia comprises Crown land held under lease and as such is controlled by the Department of Lands. This department is charged with the general administration of Crown lands, and with making available under appropriate tenure newly developed lands and such lands as come into the hands of the Crown by resumption, expiry, surrender or forfeiture of existing tenure. The consent of the Minister of Lands (or the Minister of Irrigation in the case of irrigated lands) is required prior to the transfer, mortgage or sublease of any of the forms of tenure administered by the department.

Land available for leasing is allotted by the Land Board and, in the case of pastoral lands, by the Pastoral Board, who interview applicants and make allotments on merit. The boards also advise the Minister on matters connected with land settlement.

Leases and licences under the various mining Acts are issued and supervised by the Department of Mines, while the Woods and Forests Department and the Engineering and Water Supply Department are responsible for the issuing of leases over reserves and areas under their control.

CURRENT TENURE

In the table below, occupied land in South Australia is classified according to its present form of tenure. Thus "Alienated lands held in fee simple" does not represent the accumulated total of all alienated lands, as certain alienated lands repurchased by the Crown are currently held under leases or agreements to purchase.

At 30th June 1964 land in South Australia was occupied as follows—

|   | Area<br>Acres | Proportion<br>% |
|---|---------------|-----------------|
| Alienated lands held in fee simple:                           |               |                 |
| Sold . . . . .  | 14,760,111    | 6.07            |
| Free grants . . . . .   | 916,629       | 0.37            |
| Dedicated . . . . .   | 284,022       | 0.12            |
| Total . . . . .   | 15,960,762    | 6.56            |
| In process of alienation:                                     |               |                 |
| Held under agreements to purchase . . . . .                   | 434,390       | 0.18            |
| Area under lease:   |               |                 |
| Perpetual . . . . .   | 20,652,053    | 8.49            |
| Pastoral . . . . .  | 122,718,007   | 50.45           |
| Other . . . . .   | 3,011,525     | 1.24            |
| Total . . . . .   | 146,381,585   | 60.18           |
| Total sold, granted and leased . . . . .                      | 162,776,737   | 66.92           |
| Salt water lakes and lagoons, and fresh water lakes . . . . . | 7,904,800     | 3.25            |
| Open for allotment or selection . . . . .                     | 109,036       | 0.04            |
| Other vacant land . . . . .                                   | 72,454,227    | 29.79           |
| Total area of State . . . . .                                 | 243,244,800   | 100.00          |

In 1901 the area sold, granted and leased, *i.e.* the area occupied, was 93,666,052 acres, increasing to 141,907,525 in 1924, but falling to 129,411,612 in 1931 due to decreased areas under pastoral lease. Since 1931 there has been a fairly steady increase to the present figure of 162,776,737 acres.

METHODS OF ALIENATING LAND

Sales under Agreement to Purchase

There is provision for Crown lands to be alienated through an agreement to purchase although normally town allotments are not dealt with in this way.

The purchase money is repayable over varying terms from 30 to 64 years and the purchaser must comply with certain special conditions concerning the improvement and the development of the land, including the fencing of the property within the first five years. It is not necessary for an agreement to run the full term, as,



In certain circumstances, such as where land has not been surveyed or its potential is uncertain, or where permanent alienation is not desirable, miscellaneous leases are issued for periods up to 21 years. Certain business and industrial sites may also be held under miscellaneous lease. Annual licences may be granted over Crown lands for certain industrial sites, grazing areas, fishermen's residences, holiday shack sites and other approved purposes.

Land reserved for the Woods and Forests Department may be leased by the department for cultivation or grazing purposes for a period not exceeding 42 years. At 30th June 1964, 7,004 acres of forest land were under lease.

### **Perpetual Leases**

Leases in perpetuity may be offered over Crown lands which have been surveyed. The lessee is required to provide boundary fencing and to clear and render available for cultivation a certain proportion of the land within a specified period. Where considered desirable it is conditional that the lessee reside on the property.

No lease may be allotted which would bring the unimproved value of total holdings in excess of £5,000 except where the land is suitable for pastoral purposes only. Existing leases may, however, be transferred to a landowner up to an accumulated holding of £12,000 unimproved value.

In certain cases special perpetual leases are available under which no rent is payable for the first four years, and with less than full rent over the next six years.

Sections in government controlled irrigation areas are offered on perpetual lease and, if the land has not been cultivated before, rents and water rates are payable on a sliding scale for the first three years. Certain improvements are to be made and the lessee may be required to reside on the land for nine months of the year. Town allotments in irrigation areas may be offered under perpetual lease either at auction, by calling applications, or may be let on annual licence. Allotments not sold at auction may be sold by private contract.

During 1963-64, 211 acres in irrigation areas were allotted under perpetual leases.

## **MINING CLAIMS, LEASES AND LICENCES**

### **Mineral Lands**

Mineral lands are lands in which the mineral rights are reserved to the Crown and include Crown lands, lands under Crown lease and lands alienated from the Crown after 1886.

Mineral lands which are used as a site for buildings, dams, etc., or which are cultivated, are exempt from mining as are also certain areas which may be exempted either permanently—as with Aboriginal reserves—or temporarily, e.g. to facilitate a Department of Mines survey. Public reserves, streets and highways are subject to regulations protecting the public user.

The holder of a miner's right, a document which must be obtained prior to participating in any mining activity (except the search for petroleum) may enter any mineral lands, other than those exempted above, and prospect thereon. Before removing any minerals, however, he must obtain one of three forms of mining tenure—a claim, a lease or a licence. A claim is a form of tenure designed to enable the holder to prove the deposit before applying for a long-term lease.

Application must be made for a lease, however, once the profitability of the mine is established, or in the case of salt and gypsum within 21 days of acquiring a claim. A lease is normally for a period of 21 years, but special mining leases

for a maximum term of 2 years may be issued by the Minister, with the conditions of the lease being at his discretion. An annual rent and a royalty on gross profits are paid by the lessee to the Crown. The maximum size of claims and leases and the working conditions imposed thereunder vary with the nature of the mineral.

The use of licences is virtually restricted to oil exploration. All oil and natural gas, whether on mineral lands or not, is the property of the Crown, and separate licences are issued for the phases of exploration, prospecting and mining. These licences have maximum terms of 5, 5 and 21 years respectively and impose certain conditions to be followed in the search for, and the development of, oil and gas resources. Under an oil mining licence a royalty of 10% of output is payable to the Crown.

#### Lands with Mineral Rights Alienated

The mineral rights of lands sold by the Crown prior to 1886 were alienated with the land.

The prospecting and mining of such land may be carried out either under a private agreement with the owner or under authorization of a warden of the Department of Mines. Where a lease is issued by the department, the bulk of any rents and royalties collected is paid to the owner.

At the discretion of the Government certain lands may be reserved from mining operations, and other lands are exempted by the nature of their use.

#### Areas Held under Mining Acts, South Australia

At 30th June

| Particulars        | 1960               | 1961               | 1962               | 1963               | 1964               |
|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
|                    |                    |                    | Acres              |                    |                    |
| Claims .....       | 14,519             | 11,900             | 12,148             | 13,562             | 12,483             |
| Leases .....       | 1,837,894          | 1,163,875          | 5,351,703          | 5,739,722          | (a) 7,881,612      |
| Oil licences ..... | 207,216,640        | 201,520,640        | 199,408,640        | 197,744,640        | 228,234,240        |
| <b>Total .....</b> | <b>209,069,053</b> | <b>202,696,415</b> | <b>204,772,491</b> | <b>203,497,924</b> | <b>236,128,335</b> |

(a) Lands held under special mining leases accounted for 7,807,165 acres of land occupied under lease at 30th June, 1964.

## 4.2. LAND SETTLEMENT SCHEMES

### CLOSER SETTLEMENT

The Minister of Lands may acquire, either by agreement or compulsorily, land for subdivision in the interests of closer settlement. Such land is divided into blocks not exceeding £7,000 in unimproved value, and offered under conditional agreements to purchase with payment over 35 and 64 year periods.

No land has been purchased for closer settlement since 1952-53, by which time 948,885 acres had been purchased at a cost of £2,865,200, including 51,872 acres set apart for returned service personnel from the 1914-18 war, 3,214 acres for forest and water conservation purposes and 26,563 acres purchased in connection with the reclamation of River Murray swamp lands.

At the 30th June 1964 a total of 223,923 acres of closer settlement lands were held under agreements to purchase or leases.

## ASSISTANCE FOR RETURNED SERVICE PERSONNEL

### 1914-18 War

Following the 1914-18 War the State Minister for Repatriation was authorized to acquire land for the purpose of re-settling discharged servicemen. Such land could be purchased by agreement or acquired compulsorily, whether held in fee simple or under Crown lease. Crown lands could also be set apart for this purpose. The land acquired was subdivided where appropriate and offered under agreement to purchase, perpetual lease or a term lease. Provision was also made for the discharging of existing mortgages on freehold properties already held by ex-servicemen, with fresh mortgages in favour of the Minister of Repatriation.

In all 3,768 ex-servicemen were settled under this Act with 3,008 settling in "dry lands" and 760 in irrigation areas.

### 1939-45 War and Korea-Malaya Operations

#### *War Service Land Settlement*

Under the War Service Land Settlement Scheme, provision was made for the settlement on rural holdings of certain ex-servicemen from the 1939-45 War and Korea and Malaya operations.

Suitable Crown land was made available and other land was acquired. This land was subdivided and developed to a stage where it could be brought into production by the individual settler within a reasonable time and basic structural improvements were provided. It was then offered to eligible settlers on perpetual lease. Credit facilities are available to these settlers for working capital, the purchase of stock and equipment, and the effecting of further improvements.

During the first year after allotment in the case of "dry lands" settlers, and the first year after an irrigation holding became self-supporting the settler was granted a living allowance and was exempted from the payment of rent or interest in respect of the holding, and of payments on account of principal or interest in respect of advances, other than advances for working capital. Provisions exist for a settler on "dry lands" to convert property to freehold after a period of 10 years by the payment of a fixed purchase price and the repayment of all advances. There is no provision for freeholding in government irrigation areas.

The State Department of Lands administers the War Service Land Settlement Scheme on behalf of the Commonwealth Government. The Commonwealth provides the funds and meets the costs of the scheme with the exception of administration costs and two-fifths of any losses, which sums are met by the State Government.

All large scale development operations under the scheme have now been completed. The principal areas settled are in the South East, on Kangaroo Island, Eyre Peninsula, and in irrigation areas along the River Murray.



**War Service Land Settlement, South Australia**  
*Farms Allotted and Total Expenditure to 30th June*

| Particulars                               | 1947        | 1950        | 1953        | 1956        | 1959   | 1962   |
|---|-------------|-------------|-------------|-------------|--------|--------|
| <b>Farms allotted—</b>                    |             |             |             |             |        |        |
| Number .....                              | —           | 286         | 517         | 718         | 984    | 1,015  |
| Area ('000 acres) .....                   | —           | 84          | 219         | 343         | 623    | 671    |
|   | £'000       | £'000       | £'000       | £'000       | £'000  | £'000  |
| <b>Expenditure—</b>                       |             |             |             |             |        |        |
| State .....                               | <i>n.a.</i> | <i>n.a.</i> | <i>n.a.</i> | <i>n.a.</i> | 1,655  | 2,371  |
| <b>Commonwealth—</b>                      |             |             |             |             |        |        |
| Acquisition of land .....                 | 888         | 1,513       | 1,967       | 2,384       | 3,179  | 3,457  |
| Development and improvement of land ..... | 269         | 3,192       | 6,756       | 9,936       | 12,707 | 14,107 |
| Provision of credit facilities            | 11          | 385         | 1,310       | 2,491       | 4,345  | 9,426  |
| Other .....                               | 2           | 97          | 320         | 834         | 1,817  | 3,236  |
| Total expenditure by Commonwealth         | 1,170       | 5,187       | 10,353      | 15,645      | 22,048 | 30,226 |
| Total expenditure ....                    | <i>n.a.</i> | <i>n.a.</i> | <i>n.a.</i> | <i>n.a.</i> | 23,703 | 32,597 |

*n.a.*—Not available.

*Loans and Allowances (Agricultural Occupations) Scheme*

The Commonwealth Government through the State Bank of South Australia provided financial assistance for the establishment or re-establishment of ex-servicemen in agricultural occupations. Loans were made for a variety of purposes and non-repayable allowances were made where income during the course of re-establishment proved to be inadequate. The payment of allowances and the advancing of new loans ceased in 1956-57 by which date loans totalling £1,004,548 had been made to 1,288 ex-servicemen, and allowances totalling £324,609 had been granted to 2,264 ex-servicemen.

**CROWN LANDS DEVELOPMENT**

The Crown Lands Development Act, 1943, administered by the Department of Lands, provides for the development of Crown lands, or lands which the department may purchase, and for the allotment of such lands to suitable settlers.

A substantial proportion of the land under the Act was developed with the object of inclusion in the War Service Land Settlement Scheme. Properties not accepted for the scheme were subsequently allotted under the Act, and since then a number of individual properties have been surrendered to the Crown for development and re-allotment to the former holders.

**MARGINAL LANDS SCHEME**

The opening up of the drier marginal lands for wheat growing to too great an extent resulted in many settlers in these areas being forced to leave their holdings, particularly in the 1930's.

Investigations showed that if the settlers were to succeed, cereal growing would need to be replaced by grazing, and in 1939 the Commonwealth Government established a trust fund to assist development in this direction. The money was used to purchase properties from certain settlers with a view to enlarging the holdings of others, to provide fencing and water supplies and to pay small grants to settlers vacating holdings in which there was no equity. Commonwealth grants totalled £713,000, all of which has been expended.

An additional Marginal Lands Improvement Fund was established in 1943 from which expenditure of £208,190 had been made by 30th June 1964.

#### PRIVATE LAND DEVELOPMENT SCHEMES

The most important private scheme in South Australia has been a project begun in 1949 by the Australian Mutual Provident Society; this has involved the development of a considerable area of land in the south-east of the State in what was previously known as the Ninety Mile Desert. The developing of this area was made possible by the discovery that the retarded nature of the country was due to certain soil deficiencies, and that this deficiency could be overcome by the addition of trace elements (mainly copper sulphate and zinc sulphate) to the soil.

Large tracts of unimproved land were obtained either by purchasing existing leases or by Crown allotment. Intending settlers were employed by the society in the development work, covering a period of approximately five years, and were then allotted a holding over which they had a perpetual lease title. The society provided finance for the purchase and for stock, plant and working expenses. In all 96,000 acres were taken up by employees of the society.

In addition to the development of land for employees a large area has been handled to various stages of development and sold to the public, sales to the 30th April 1965 amounting to 327,000 acres.

#### ADVANCES TO THE RURAL SECTOR

##### Government Advances

In addition to advances made under schemes mentioned above, the State Bank administers certain funds provided by the State for rural development.

Under the Advances to Settlers Act, 1930-1958 the bank makes advances to settlers for a variety of purposes including general improvements, the purchase of livestock and the discharging of existing mortgages. The Loans to Producers Act, 1927-1962 empowers the bank to make advances for certain developmental projects and the purchase of certain capital equipment. The bank also administers acts providing loans for the construction of vermin-proof fencing, general fencing and the laying of water piping.

Advances outstanding at the 30th June 1964 included—

|  | £         |
|--|-----------|
| Closer settlement . . . . .                        | 483,321   |
| Soldier settlers (1914-18 War) . . . . .           | 354,078   |
| Returned service personnel (1939-45 War) . . . . . | 6,076,700 |
| Crown lands development . . . . .                  | 354,443   |
| Advances to settlers . . . . .                     | 499,786   |
| Loans to producers . . . . .                       | 3,002,014 |
| Vermin and fencing advances . . . . .              | 41,801    |

##### Private Institutional Advances

Many financial institutions advance funds for rural development.

In July 1964 the major trading banks (including the Commonwealth Bank) had advances outstanding to residents of South Australia and the Northern Territory, employed in agriculture, dairying and grazing, of £20.2 million. A further £18.2 million was outstanding at December 1963 to South Australian offices and branches of major pastoral finance companies.

PART 5

POPULATION

5.1. POPULATION GROWTH AND DISTRIBUTION

The population of South Australia had reached 17,366 persons at the first Census on 26th February, 1844. In 1861, 25 years after the first settlers arrived, the population was 126,830 and this figure had more than doubled by the Census in 1881. By 1921 the population was almost 500,000 persons and it is estimated to have reached 1,000,000 persons in January 1963. The estimated population at 30th June 1965 was 1,054,237 persons.

Population, South Australia, Censuses 1844 to 1961  
(Excludes Full-blood Aboriginals)

| Census Date          | Population |         |         | Increase since Previous Census |         |         |
|----------------------|------------|---------|---------|--------------------------------|---------|---------|
|                      | Males      | Females | Persons | Males                          | Females | Persons |
| 1844 26th February . | 9,686      | 7,680   | 17,366  | ..                             | ..      | ..      |
| 1846 26th February . | 12,670     | 9,720   | 22,390  | 2,984                          | 2,040   | 5,024   |
| 1851 1st January ... | 35,302     | 28,398  | 63,700  | 22,632                         | 18,678  | 41,310  |
| 1855 31st March .... | 43,720     | 42,101  | 85,821  | 8,418                          | 13,703  | 13,703  |
| 1861 8th April. .... | 65,048     | 61,782  | 126,830 | 21,328                         | 19,681  | 41,009  |
| 1866 26th March ...  | 85,334     | 78,118  | 163,452 | 20,286                         | 16,336  | 36,622  |
| 1871 2nd April ....  | 95,236     | 90,189  | 185,425 | 9,902                          | 12,071  | 21,973  |
| 1876 26th March ...  | 109,841    | 102,687 | 212,528 | 14,605                         | 12,498  | 27,103  |
| 1881 3rd April ....  | 145,113    | 130,231 | 275,344 | 35,272                         | 27,544  | 62,816  |
| 1891 5th April. .... | 161,920    | 153,292 | 315,212 | 16,807                         | 23,061  | 39,868  |
| 1901 31st March .... | 180,485    | 177,861 | 358,346 | 18,565                         | 24,569  | 43,134  |
| 1911 3rd April ....  | 207,358    | 201,200 | 408,558 | 26,873                         | 23,339  | 50,212  |
| 1921 4th April. .... | 248,267    | 246,893 | 495,160 | 40,909                         | 45,693  | 86,602  |
| 1933 30th June ....  | 290,962    | 289,987 | 580,949 | 42,695                         | 43,094  | 85,789  |
| 1947 30th June ..... | 320,031    | 326,042 | 646,073 | 29,069                         | 36,055  | 65,124  |
| 1954 30th June ..... | 403,903    | 393,191 | 797,094 | 83,872                         | 67,149  | 151,021 |
| 1961 30th June ..... | 490,225    | 479,115 | 969,340 | 86,322                         | 85,924  | 172,246 |

In the next table, increases in the population have been classified as either *natural increase* (the excess of births over deaths) or *net migration* (the excess of arrivals over departures, either from overseas or from interstate). Annual average increases which are given for each ten-year period since 1861-70 show some important aspects of the development of the State, viz.:

The net migration, especially of males, away from South Australia following the mineral discoveries in other States in the 1880's and early 1890's.

The slow growth during the economic depression of the 1930's when natural increase fell to a particularly low level.

The high rate of migration in recent years; the net gain from migration in the period 1951-60 being almost three times as great as any other ten-year period.

### Increases in the Population, South Australia

| Period          | Natural Increase |          |          | Net Migration |          |          | Total Increase |         |         |
|-----------------|------------------|----------|----------|---------------|----------|----------|----------------|---------|---------|
|                 | Males            | Females  | Persons  | Males         | Females  | Persons  | Males          | Females | Persons |
| Annual Average— |                  |          |          |               |          |          |                |         |         |
| 1861-1870 ..... | 2,052            | 2,121    | 4,173    | 1,003         | 720      | 1,723    | 3,055          | 2,841   | 5,896   |
| 1871-1880 ..... | 2,366            | 2,555    | 4,921    | 2,889         | 1,375    | 4,264    | 5,255          | 3,930   | 9,185   |
| 1881-1890 ..... | 3,349            | 3,535    | 6,884    | (-)1,488      | (-)1,141 | (-)2,629 | 1,861          | 2,394   | 4,255   |
| 1891-1900 ..... | 2,832            | 3,024    | 5,856    | (-) 973       | (-) 567  | (-)1,540 | 1,859          | 2,457   | 4,316   |
| 1901-1910 ..... | 2,665            | 2,745    | 5,410    | (-) 44        | (-) 404  | (-) 448  | 2,621          | 2,341   | 4,962   |
| 1911-1920 ..... | 3,508            | 3,614    | 7,122    | 366           | 925      | 1,292    | 3,874          | 4,540   | 8,414   |
| 1921-1930 ..... | 3,131            | 3,300    | 6,431    | 1,201         | 714      | 1,915    | 4,332          | 4,014   | 8,346   |
| 1931-1940 ..... | (a)1,787         | (a)1,929 | (a)3,716 | (-) 860       | (-) 397  | (-)1,257 | 927            | 1,532   | 2,459   |
| 1941-1950 ..... | (a)3,977         | (a)4,026 | (a)8,003 | 2,705         | 1,671    | 4,376    | 6,682          | 5,697   | 12,379  |
| 1951-1960 ..... | 5,631            | 5,923    | 11,554   | 6,279         | 5,585    | 11,864   | 11,910         | 11,508  | 23,418  |

(a) Deaths of defence personnel (except those registered on civil registers during 1940 and 1941) not deducted in calculating natural increase.

The rate of growth of the population, *i.e.*, the increase during the period expressed as a percentage of the population at the beginning of the period, fluctuated widely prior to 1921 then settled at about 2% per annum. From 1928 to 1940 the rate was less than 1% but since 1947 it has been above 2% in almost every year and it exceeded 3% per annum in the mid 1950's.

The State's rate of growth was slower than the Australian rate in every decade from 1881-90 to 1931-40, but subsequently the steep rise in the rate of net migration has enabled an above-average growth rate to be achieved.

### Rate of Increase of Population<sup>(a)</sup>, South Australia and Australia

| Period         | South Australia  |               |                | Australia        |               |                |
|----------------|------------------|---------------|----------------|------------------|---------------|----------------|
|                | Natural Increase | Net Migration | Total Increase | Natural Increase | Net Migration | Total Increase |
| Annual Average |                  |               |                |                  |               |                |
| 1861-1870 ..   | 26.46            | 10.92         | 37.38          | 24.31            | 12.06         | 36.37          |
| 1871-1880 ..   | 22.34            | 19.36         | 41.70          | 20.45            | 10.01         | 30.46          |
| 1881-1890 ..   | 22.67            | (-) 8.66      | 14.01          | 19.96            | 14.23         | 34.19          |
| 1891-1900 ..   | 16.90            | (-) 4.44      | 12.46          | 16.91            | 0.71          | 17.62          |
| 1901-1910 ..   | 14.70            | (-) 1.22      | 13.48          | 15.29            | 1.00          | 16.29          |
| 1911-1920 ..   | 15.99            | 2.90          | 18.89          | 15.77            | 4.20          | 19.97          |
| 1921-1930 ..   | 11.87            | 3.53          | 15.40          | 12.97            | 5.23          | 18.20          |
| 1931-1940 ..   | (b) 6.33         | (-) 2.14      | 4.19           | (b) 7.92         | 0.60          | 8.52           |
| 1941-1950 ..   | (b) 12.50        | 6.83          | 19.33          | (b) 12.04        | 4.34          | 16.38          |
| 1951-1960 ..   | 13.81            | 14.18         | 27.99          | 13.71            | 8.73          | 22.34          |

(a) Rate per 1,000 of mean population. (b) See note to previous table.

Estimates of the population for the State and metropolitan area for the last 10 years are given in the following table. The total increase for each year and the rate of growth are also shown.

**Estimated Population, South Australia and Adelaide Metropolitan Area**  
*At 31st December*

| Year     | Population<br>Metropolitan<br>Area | State Population |         |           |        | Total<br>Increase<br>for Year | Rate of<br>Growth |
|----------|------------------------------------|------------------|---------|-----------|--------|-------------------------------|-------------------|
|          |                                    | Males            | Females | Persons   |        |                               |                   |
| 1955.... | 508,900                            | 423,042          | 411,619 | 834,661   | 26,411 | 3.27                          |                   |
| 1956.... | 526,400                            | 436,807          | 425,145 | 861,952   | 27,291 | 3.27                          |                   |
| 1957.... | 541,300                            | 448,411          | 437,841 | 886,252   | 24,300 | 2.82                          |                   |
| 1958.... | 554,300                            | 458,401          | 449,652 | 908,053   | 21,801 | 2.46                          |                   |
| 1959.... | 570,300                            | 471,868          | 462,629 | 934,497   | 26,444 | 2.91                          |                   |
| 1960.... | 582,100                            | 483,802          | 473,220 | 957,022   | 22,525 | 2.41                          |                   |
| 1961.... | 591,700                            | 495,778          | 484,977 | 980,755   | 23,733 | 2.48                          |                   |
| 1962.... | 596,800                            | 504,571          | 495,122 | 999,693   | 18,938 | 1.93                          |                   |
| 1963.... | 603,900                            | 514,458          | 505,716 | 1,020,174 | 20,481 | 2.05                          |                   |
| 1964.... | 612,200                            | 526,847          | 517,815 | 1,044,662 | 24,488 | 2.40                          |                   |

These estimates show the annual increase in population as having been maintained at over 20,000 persons except for the year 1962. As the total population has risen the rate of growth has fallen, *e.g.*, the increase in population in both 1957 and 1964 was over 24,000; the rate of growth 2.82% and 2.40% respectively.

The estimated mean population for South Australia is calculated for the years ended 30th June and 31st December. Estimates for the last 10 years are shown in the next table.

**Estimated Mean Population, South Australia**

| Year     | Year Ended 30th June |         |           | Year Ended 31st December |         |           |
|----------|----------------------|---------|-----------|--------------------------|---------|-----------|
|          | Males                | Females | Persons   | Males                    | Females | Persons   |
| 1955.... | 409,376              | 398,134 | 807,510   | 415,868                  | 404,293 | 820,161   |
| 1956.... | 423,173              | 411,316 | 834,489   | 430,501                  | 418,062 | 848,563   |
| 1957.... | 437,080              | 424,330 | 861,410   | 443,313                  | 430,888 | 874,201   |
| 1958.... | 448,723              | 437,298 | 886,021   | 453,681                  | 443,306 | 896,987   |
| 1959.... | 458,876              | 449,478 | 908,354   | 465,119                  | 455,987 | 921,106   |
| 1960.... | 471,548              | 462,071 | 933,619   | 477,432                  | 467,429 | 944,861   |
| 1961.... | 484,055              | 473,081 | 957,136   | 490,446                  | 479,184 | 969,630   |
| 1962.... | 495,500              | 484,608 | 980,108   | 499,824                  | 489,561 | 989,385   |
| 1963.... | 504,322              | 494,649 | 998,971   | 509,085                  | 499,777 | 1,008,862 |
| 1964.... | 514,618              | 505,480 | 1,020,098 | 520,605                  | 511,416 | 1,032,021 |

**EARLY HISTORY OF SETTLEMENT**

The census of the population of the colony of South Australia in 1844 revealed that over 10,000 of the total population of 17,366 persons were located in or near the present metropolitan area. In 1846 there was a total population of 22,390 persons and approximately 13,000 of these were located in or near

Adelaide. Most of the population outside the Adelaide area had settled to the north as far as Port Wakefield, including a settlement at Gawler Town, and to the south to Encounter Bay. By 1846 over 500 persons had settled further south in an area near Rivoli Bay. Population at Port Lincoln in 1844 was 96 persons and increased to 132 persons in 1846. Kangaroo Island had a population of 70 persons in 1846.

The division of some portions of South Australia into counties was made in 1842 and the census in 1851 was recorded on that basis. Nearly all of the counties at that time were in the present Central Division; exceptions were Counties Stanley (Lower North), Russell (Murray Mallee), Robe (South Eastern) and Flinders (Western).

**Population, South Australia  
Census 1851**

| County, District, Etc.     | Number of<br>Persons |
|----------------------------|----------------------|
| City of Adelaide . . . . . | 14,577               |
| County Adelaide . . . . .  | 29,447               |
| County Hindmarsh . . . . . | 3,121                |
| County Sturt . . . . .     | 1,833                |
| County Eyre . . . . .      | 361                  |
| County Gawler . . . . .    | 1,011                |
| County Light . . . . .     | 4,396                |
| County Stanley . . . . .   | 1,283                |
| County Russell . . . . .   | 174                  |
| County Robe . . . . .      | 1,209                |
| County Flinders . . . . .  | 520                  |
| Kangaroo Island . . . . .  | 87                   |
| Yorke Peninsula . . . . .  | 122                  |
| Other areas . . . . .      | 5,559                |
| Total . . . . .            | 63,700               |

Most of the population in "other areas" was in the Burra mining towns of Koorlinga, Redruth and Aberdeen and in the vicinity of Burra Creek.

The discovery of copper near Kapunda (County Light) in 1843 and near Burra in 1845 was one of the first causes of a sudden movement of people to new areas. The construction of the railway to Kapunda also helped to open up the land in the Lower North for agriculture.

In 1861 the main country centres of population included Mount Gambier and Port Lincoln, both of which served as agricultural and commercial centres for their respective regions; Kapunda, Burra and Wallaroo, important copper mining centres; Gawler, a manufacturing and distributing centre at the entrance to the rich Barossa Valley; Goolwa, Port Elliot, Robe, Port Augusta and Port Wakefield, small ports; and Strathalbyn and Mount Barker, agricultural centres.

The concentration of people in the metropolitan area led to the need for various community services. Water was laid on in 1861 and gas in 1863. Thus began the introduction of factors which assisted in an increasing concentration of the population in and around Adelaide; there were increased comforts and amenities as well as greater opportunities for employment.

At this time the two peninsulas and the northern districts had not been exploited and there were very few settlers in the Murray Valley, the Murray Mallee or on Kangaroo Island. Apart from the pull of the mineral fields the chief population movement was towards the South East and along the rich alluvial inter-ridge plains of the Lower North.

Subsequently the movement of settlers into Eyre Peninsula caused the population to rise from 2,600 persons in 1881 to over 6,000 in 1901 and more than 13,000 by 1911.

In the Murray Mallee, farm settlement similar to that in Eyre Peninsula, together with irrigation settlements at Renmark and other areas in the 1880's and 1890's increased the population to 4,700 persons by 1901 and over 13,000 by 1911. Further settlement, including schemes for settlement of ex-servicemen on irrigation areas, resulted in a population of approximately 23,700 persons by 1921.

The pattern of settlement in South Australia from 1861 had been changed by the opening of the northern wheat lands, the drainage of the South Eastern swamps, the increase in the number of farmers in both Yorke and Eyre Peninsulas and in the Murray Mallee, and the development of irrigation in the Murray Valley, especially in the Renmark-Berri area and along the Lower Murray flats. Port Lincoln and Mount Gambier had increased their importance as distributing centres and Port Pirie, Iron Knob and Whyalla had developed as mining and industrial centres. With improved roads and expansion of railway facilities people were able to move about more rapidly. Settlement had become concentrated more into cities and larger towns. By the 1933 Census the population of South Australia had reached 580,949 persons and of these 312,619 were living in the present metropolitan area. Port Pirie with a population of 11,680 persons had the highest population of any town outside the metropolitan area; Mount Gambier had 5,539 and Gawler 4,138 persons.

#### DISTRIBUTION OF POPULATION

The population of South Australia numbered 969,340 persons at the Census in June 1961 and of this number a large proportion was located in and near the capital city of Adelaide; approximately 60% of the population resided in the Adelaide metropolitan area. At the 1954 Census there were 67% living within a 25 mile radius of the City of Adelaide and this percentage had increased to 69.9% by 1961 and to an estimated 70.6% at 30th June 1963. Most of the remainder of the population lived in other cities and country towns, or rural properties; small numbers lived in mining centres, forest reserves, small fishing ports or in construction and maintenance camps in rural areas.

#### Urban and Rural Population, South Australia

*Censuses 1921 to 1961*

| Census    | Urban        |          |           |          | Rural   |          | Total<br>(including<br>Migratory) |          |
|-----------|--------------|----------|-----------|----------|---------|----------|-----------------------------------|----------|
|           | Metropolitan |          | Other (a) |          | Number  | Per Cent | Number                            | Per Cent |
|           | Number       | Per Cent | Number    | Per Cent |         |          |                                   |          |
| 1921..... | 255,375      | 51.57    | 41,637    | 8.41     | 195,054 | 39.39    | 495,160                           | 100.00   |
| 1933..... | 312,619      | 53.81    | 51,456    | 8.86     | 214,762 | 36.97    | 580,949                           | 100.00   |
| 1947..... | 382,454      | 59.20    | 65,911    | 10.20    | 196,007 | 30.34    | 646,073                           | 100.00   |
| 1954..... | 483,508      | 60.66    | 110,107   | 13.82    | 201,133 | 25.23    | 797,094                           | 100.00   |
| 1961..... | 587,957      | 60.66    | 177,380   | 18.30    | 200,065 | 20.64    | 969,340                           | 100.00   |

(a) 'Other Urban' up to the 1947 Census comprised all municipalities outside the metropolitan area. For the 1954 and 1961 Censuses non-municipal towns of 1,000 persons or more were also included but in 1961 municipalities of less than 1,000 persons were excluded.

In 1921 the rural population was 195,054 and at that time represented 39.4% of the total population (42.1% of males and 36.7% of females). There were 214,762 persons classified as living in rural areas at the 1933 Census, but the total number had fallen slightly to 200,065 in 1961, and the proportion of total population was down to 20.6% (21.7% of males and 19.6% of females).

For statistical purposes the settled southern portion of the State is divided into seven statistical divisions as shown on the map inside the back cover of this volume. The population of each division at the last three censuses and the estimated population at June 1964 are shown in the following table.

**Population of Statistical Divisions, South Australia**  
*Censuses 1947 to 1961 and Estimate at 30th June 1964*

| Statistical Division     | Population at 30th June |         |         |           | Proportion of State Population |          |          |          |
|--------------------------|-------------------------|---------|---------|-----------|--------------------------------|----------|----------|----------|
|                          | 1947                    | 1954    | 1961    | 1964      | 1947                           | 1954     | 1961     | 1964     |
|                          |                         |         |         |           | Per Cent                       | Per Cent | Per Cent | Per Cent |
| Metropolitan .....       | 382,454                 | 483,508 | 587,957 | 607,800   | 59.20                          | 60.66    | 60.66    | 58.92    |
| Central .....            | 93,488                  | 108,012 | 146,489 | 183,500   | 14.47                          | 13.55    | 15.11    | 17.79    |
| Lower North .....        | 45,688                  | 50,009  | 49,898  | 48,800    | 7.07                           | 6.27     | 5.15     | 4.73     |
| Upper North .....        | 18,390                  | 20,946  | 22,944  | 23,100    | 2.85                           | 2.63     | 2.37     | 2.24     |
| South Eastern .....      | 31,556                  | 42,614  | 52,241  | 53,600    | 4.89                           | 5.35     | 5.39     | 5.19     |
| Western .....            | 29,174                  | 34,043  | 42,394  | 46,800    | 4.51                           | 4.27     | 4.37     | 4.53     |
| Murray Mallee .....      | 39,058                  | 47,168  | 52,048  | 52,700    | 6.04                           | 5.92     | 5.37     | 5.11     |
| Remainder of State ..... | 4,564                   | 8,448   | 11,431  | 11,300    | 0.71                           | 1.06     | 1.18     | 1.10     |
| Migratory .....          | 1,701                   | 2,346   | 3,938   | 4,019     | 0.26                           | 0.29     | 0.40     | 0.39     |
| Total .....              | 646,073                 | 797,094 | 969,340 | 1,031,619 | 100.00                         | 100.00   | 100.00   | 100.00   |

Over 80% of the increase in the State's population between 1947 and 1964 has occurred in Metropolitan and Central Divisions, and the proportion of the population in these divisions has increased from 73.7% in 1947 to 76.7% in 1964. Some gain in population was recorded in all Statistical Divisions during this period, but there has been a marked fall in the proportion of the population in Lower North, Upper North and Murray Mallee Divisions.

Population in the north of the State is very scattered; the area outside the seven statistical divisions, which covers 78.7% of the total area of the State, contained only 11,431 persons or 1.18% of the population at the last census in 1961. Approximately two thirds of these persons were in either the weapons research centre of Woomera-Maralinga or the four mining towns of Radium Hill (since closed), Leigh Creek, Andamooka and Coober Pedy.

#### Population In and Near Adelaide

The Adelaide metropolitan area covers an area of 161 square miles and comprises 21 municipalities, of which 14 have been proclaimed as cities. Qualification for city status within the metropolitan area is dependent on the population reaching 15,000 persons, but a subsequent fall in population below this level (as has occurred in the City of Kensington and Norwood) does not involve loss of city status.

Since the 1947 Census there has been a considerable fall in the population of the City of Adelaide, and lesser falls in all of the older municipalities close to the city, viz., Prospect, Hindmarsh, Thebarton, Unley, Kensington and Norwood, St. Peters and Walkerville.

The greatest proportionate increases in population have occurred in the local government areas of Enfield (generally north of the city), Campbelltown (north-east), Marion (south-west) and Brighton (south-west).



## Population of Municipalities, Adelaide Metropolitan Area

| Municipality                     | Census    |           |           | Estimate<br>December<br>1964 |
|----------------------------------|-----------|-----------|-----------|------------------------------|
|                                  | June 1947 | June 1954 | June 1961 |                              |
| Adelaide (City) .....            | 34,990    | 30,102    | 23,051    | 20,300                       |
| Brighton (City) .....            | 7,507     | 13,018    | 20,337    | 21,600                       |
| Burnside (City) .....            | 27,942    | 30,847    | 36,266    | 38,000                       |
| Campbelltown (City) .....        | 5,233     | 10,586    | 20,945    | 28,200                       |
| Colonel Light Gardens .....      | 4,724     | 4,087     | 3,671     | 3,500                        |
| Enfield (City) .....             | 13,744    | 50,412    | 72,427    | 77,400                       |
| Glenelg .....                    | 13,867    | 12,966    | 14,492    | 14,900                       |
| Henley and Grange .....          | 6,347     | 7,012     | 11,680    | 13,300                       |
| Hindmarsh .....                  | 14,537    | 13,561    | 12,914    | 12,300                       |
| Kensington and Norwood (City) .. | 15,709    | 14,159    | 13,476    | 13,100                       |
| Marion (City) .....              | 10,967    | 31,442    | 58,464    | 63,100                       |
| Mitcham (City) .....             | 23,573    | 33,785    | 43,122    | 45,900                       |
| Payneham (City) .....            | 9,636     | 10,993    | 14,930    | 15,900                       |
| Port Adelaide (City) .....       | 33,382    | 38,377    | 38,923    | 40,000                       |
| Prospect (City) .....            | 22,875    | 22,312    | 22,184    | 21,700                       |
| St. Peters .....                 | 12,522    | 11,510    | 11,727    | 11,300                       |
| Thebarton .....                  | 14,585    | 13,105    | 12,884    | 12,300                       |
| Unley (City) .....               | 44,164    | 40,077    | 40,280    | 39,500                       |
| Walkerville .....                | 4,988     | 4,691     | 4,464     | 4,300                        |
| West Torrens (City) .....        | 22,570    | 32,928    | 40,681    | 43,300                       |
| Woodville (City) .....           | 38,592    | 57,538    | 71,039    | 72,300                       |
| Metropolitan area .....          | 382,454   | 483,508   | 587,957   | 612,200                      |

The population of the metropolitan area at the Census in June 1947 represented 59.2% of the State total and in June 1954 was 60.7%. Although the population has continued to increase it is estimated that the proportion has fallen from a peak of 61.1% at December 1959 to 58.6% at December 1964. However, this is not a true reflection of the pattern of development in the Adelaide area, because urban development has extended beyond the metropolitan boundaries into the local government areas of Salisbury and Elizabeth, Munno Para, Tea Tree Gully, Meadows and Noarlunga. Details of population growth in the metropolitan area and in these fringe areas are given in the following table. At 30th June 1964 total population in these areas was estimated to be 699,350 persons, or 67.8% of State population, and this proportion was showing a continued upward trend.

## Population in Adelaide and Surrounding Areas

| Area                    | Census       |              |              | Estimate     |              |              |
|-------------------------|--------------|--------------|--------------|--------------|--------------|--------------|
|                         | June<br>1947 | June<br>1954 | June<br>1961 | June<br>1962 | June<br>1963 | June<br>1964 |
| Metropolitan area ..... | 382,454      | 483,508      | 587,957      | 593,500      | 600,200      | 607,800      |
| Local government area—  |              |              |              |              |              |              |
| Salisbury and Elizabeth | 4,159        | 7,730        | 35,715       | 42,350       | 47,050       | 53,100       |
| Munno Para .....        | 1,140        | 1,313        | 3,154        | 3,500        | 6,050        | 9,350        |
| Tea Tree Gully .....    | 1,043        | 2,561        | 5,887        | 8,200        | 10,850       | 13,250       |
| Meadows .....           | 4,461        | 4,700        | 5,085        | 5,150        | 5,250        | 5,400        |
| Noarlunga .....         | 3,005        | 3,587        | 5,492        | 6,600        | 8,750        | 10,450       |

On 16th November 1955 the new satellite town of Elizabeth was formally inaugurated. It was planned that it would not be a suburban development or the extension of an existing centre but the creation of a completely new town with dwellings, industrial establishments, shops, schools, churches, car parks, playing fields and a civic centre of modern design where before were open paddocks. The new town was situated in the Salisbury District Council and was approximately 18 miles north of Adelaide. The first 78 houses to be completed were occupied on 17th November 1955. At the 1961 Census the town of Elizabeth contained 23,326 persons. Since that date further developments at Elizabeth and in the Salisbury area, including Para Hills, and development in the local government area of Tea Tree Gully have virtually linked the satellite town with the metropolitan area. On 1st July 1964 Elizabeth and Salisbury were proclaimed as two separate local government areas, and subsequently each was granted city status.

Urban development to the south of Adelaide beyond the metropolitan boundary extends to Port Noarlunga and Christies Beach. The population of the District Council of Noarlunga increased from 3,005 persons in 1947 to 5,492 in 1961 and to an estimated 10,450 at June 1964. This includes persons located at Reynella and Morphett Vale.

#### **Population Beyond the Adelaide Region**

Whereas in each of the eastern States there are at least three centres outside the capital city with a population of more than 40,000 persons, and in Tasmania one such centre, in South Australia no town outside the 25 mile radius has a population of 20,000 persons. There were only three towns outside of this radius with a population of over 10,000 at the 1961 Census. Mount Gambier had a population of 15,388 persons; it is the centre of the rich and fertile south-eastern portion of the State. The seaports of Port Pirie and Whyalla on the arid northern shores of Spencer Gulf had populations of 14,003 and 13,711 persons respectively; these centres depend to a large extent on their proximity to mineral deposits for their relatively large size. Whyalla obtained its early expansion by being the nearest port to the iron ore deposits at Iron Knob, Iron Baron and Iron Monarch. Port Pirie grew rapidly because it was the most convenient port for shipping the rich silver-lead-zinc production of Broken Hill (N.S.W.). Latest estimates at June 1964 show the population of Mount Gambier as 16,450, Port Pirie 13,750, and Whyalla 17,650 persons. Port Augusta with a census population of 9,711 is now estimated to have 10,150 persons. Situated at the head of Spencer Gulf it has increased in size since the completion of a large power station for the Electricity Trust of South Australia. The site was chosen because it provides the nearest plentiful water supply to the Leigh Creek coalfield.

These four towns have all been proclaimed as cities, as the population of each is above 10,000—the qualifying level for extra-metropolitan towns.

Although there are no other towns of city size (Port Lincoln being the next largest with a population of about 8,000) there are a number of centres of about 3,000 to 6,000 persons spread through the settled areas. Growth of these larger towns since 1947 is shown in the next table.

## Population Growth of Larger Towns, South Australia

| Municipality        | Division            | Census    |           |           | Estimate  |           |           |
|---------------------|---------------------|-----------|-----------|-----------|-----------|-----------|-----------|
|                     |                     | June 1947 | June 1954 | June 1961 | June 1962 | June 1963 | June 1964 |
| Gawler .....        | Central .....       | 4,436     | 5,117     | 5,639     | 5,700     | 5,700     | 5,700     |
| Mount Gambier ..... | South Eastern ..... | 6,771     | 10,331    | 15,388    | 15,950    | 16,200    | 16,450    |
| Murray Bridge ..... | Murray Mallee ..... | 3,690     | 4,362     | 5,404     | 5,500     | 5,500     | 5,550     |
| Peterborough .....  | Upper North .....   | 2,890     | 3,473     | 3,430     | 3,400     | 3,300     | 3,250     |
| Port Augusta .....  | Upper North .....   | 4,351     | 6,704     | 9,711     | 9,850     | 10,100    | 10,150    |
| Port Lincoln .....  | Western .....       | 3,972     | 5,871     | 7,508     | 7,600     | 7,700     | 7,800     |
| Port Pirie .....    | Lower North .....   | 12,019    | 14,223    | 14,003    | 14,000    | 13,900    | 13,750    |
| Naracoorte .....    | South Eastern ..... | 2,202     | 3,329     | 4,410     | 4,400     | 4,400     | 4,350     |
| Renmark .....       | Murray Mallee ..... | 1,914     | 1,979     | (a) 6,070 | (a) 6,100 | (a) 6,150 | (a) 6,150 |
| Whyalla .....       | Western .....       | 7,845     | 8,598     | 13,711    | 15,650    | 16,800    | 17,650    |

(a) Includes rural portion; 3,216 persons at Census 1961.

Populations of country towns in South Australia at 30th June 1961 are shown below. Generally, these are municipalities and "non-municipal" towns as defined for the 1961 Census, with 1,000 or more residents.

## Population of Towns, South Australia

Census 1961

| Town                             | Population | Town                                 | Population |
|----------------------------------|------------|--------------------------------------|------------|
| Angaston .....                   | 1,913      | Mount Gambier .....                  | 15,388     |
| Balaklava .....                  | 1,301      | Murray Bridge .....                  | 5,404      |
| Barmera .....                    | 1,179      | Nangwarry .....                      | 1,156      |
| Berri .....                      | 1,680      | Naracoorte .....                     | 4,410      |
| Bordertown .....                 | 1,546      | Nuriootpa .....                      | 1,761      |
| Burra .....                      | 1,382      | Penola .....                         | 1,355      |
| Ceduna .....                     | 1,292      | Peterborough .....                   | 3,430      |
| Clare .....                      | 1,622      | Port Augusta .....                   | 9,711      |
| Crystal Brook .....              | 1,144      | Port Lincoln .....                   | 7,508      |
| Gawler .....                     | 5,639      | Port Noarlunga-Christies Beach ..... | 2,509      |
| Gladstone .....                  | 1,063      | Port Pirie (and environs) .....      | 15,609     |
| Hope Valley-Tea Tree Gully ..... | 4,755      | Renmark .....                        | 6,070      |
| Jamestown .....                  | 1,304      | Salisbury-Elizabeth .....            | 32,675     |
| Kadina (and environs) .....      | 3,102      | Stirling-Bridgewater .....           | 4,084      |
| Kapunda .....                    | 1,164      | Strathalbyn .....                    | 1,465      |
| Leigh Creek .....                | 1,020      | Tailem Bend .....                    | 2,049      |
| Lobethal .....                   | 1,085      | Tanunda .....                        | 1,863      |
| Loxton and Loxton North .....    | 3,246      | Victor Harbor .....                  | 2,036      |
| Mannum .....                     | 1,841      | Walleroo .....                       | 2,237      |
| Millicent .....                  | 3,401      | Whyalla .....                        | 13,711     |
| Moonta .....                     | 1,151      | Woomera-Maralinga .....              | 4,808      |
| Mount Barker .....               | 1,872      |                                      |            |

## 5.2. BIRTHS AND DEATHS

Compulsory registration of births and deaths was first provided in South Australia in 1842 when an Act "for registering Births, Deaths and Marriages in the Province of South Australia" was passed. Current legislation is contained in the Births and Deaths Registration Act, 1936-1962 and the administration of the Act is the responsibility of the Principal Registrar of Births, Deaths and Marriages. For registration purposes the State is divided into 22 registration districts each of which has a registry office in the charge of a District Registrar.

The Principal Registrar maintains a register of all births and of all deaths registered in the State and each District Registrar maintains in a register duplicate copies of the registrations of births and deaths which occurred in the district under his jurisdiction. Separate registers are kept of still births, which are not included in the registrations or statistics of either births or deaths. A still-born child is defined by the Act as any child which has issued forth from its mother after the twenty-eighth week of pregnancy and which did not at any time after being completely expelled from its mother, breathe or show any signs of life. Compulsory registration of still births was introduced in South Australia in 1937.

The birth of each child whether live-born or still-born is required to be registered by a parent within 42 days of the date of birth. Penalties are provided for failure to register, and the registration of a live birth after the expiration of 42 days after the date of birth requires also the payment of a fee and a declaration in a form prescribed by the Act.

A death is required to be registered within 10 days of the date of death by the occupier of the building or place in which the death occurred. Special provisions and penalties exist for the late registration of a death. A body may not be buried unless the undertaker is in possession of a certificate of registration of death, of a medical certificate of cause of death signed by a medical practitioner or of an order by a coroner for burial, and the undertaker is required within seven days of the disposal of the body to notify the Principal Registrar of such disposal.

Births and deaths of Aborigines when registered are incorporated in registers, but are excluded from statistics where there is definite indication that they were of full-blood Aborigines.

In accordance with international practice, statistics for a period are on the basis of the births and deaths which were registered during that period. However, numbers registered in a period usually differ from the number of occurrences in the same period and, mainly because of the greater allowable period for registration, such variations generally are more apparent in birth than in death figures.

**BIRTHS**

In the following table, which shows the live birth rate, the masculinity of live births and the totals and rates of still births, a comparison between the births which actually occurred and those which were registered for the last 10 years is also shown.

**Live Births and Still Births, South Australia**

| Year       | Total Live Births Occurred (a) | Births Registered |          |        |         |                 |       |          |  |
|------------|--------------------------------|-------------------|----------|--------|---------|-----------------|-------|----------|--|
|            |                                | Live-born         |          |        |         | Still-born      |       |          |  |
|            |                                | Total             | Rate (b) | Males  | Females | Masculinity (c) | Total | Rate (d) |  |
| 1955 . . . | 18,409                         | 18,494            | 22.55    | 9,524  | 8,970   | 106.18          | 271   | 14.44    |  |
| 1956 . . . | 19,388                         | 18,964            | 22.35    | 9,708  | 9,256   | 104.88          | 274   | 14.24    |  |
| 1957 . . . | 19,753                         | 19,536            | 22.35    | 10,025 | 9,511   | 105.40          | 297   | 14.98    |  |
| 1958 . . . | 19,877                         | 20,047            | 22.35    | 10,181 | 9,866   | 103.19          | 240   | 11.83    |  |
| 1959 . . . | 20,858                         | 20,372            | 22.12    | 10,325 | 10,047  | 102.77          | 281   | 13.61    |  |
| 1960 . . . | 21,119                         | 20,966            | 22.19    | 10,760 | 10,206  | 105.43          | 280   | 13.18    |  |
| 1961 . . . | 21,346                         | 22,399            | 23.10    | 11,402 | 10,997  | 103.68          | 272   | 12.00    |  |
| 1962 . . . | 21,305                         | 21,361            | 21.59    | 11,003 | 10,358  | 106.23          | 278   | 12.85    |  |
| 1963 . . . | 21,061                         | 21,367            | 21.18    | 11,006 | 10,361  | 106.23          | 262   | 12.11    |  |
| 1964 . . . | 20,771                         | 20,866            | 20.22    | 10,849 | 10,017  | 108.31          | 252   | 11.93    |  |

(a) Figures for recent years are subject to the addition of a few very late registrations.  
 (b) Per 1,000 of mean population.  
 (c) Number of male births per 100 female births.  
 (d) Per 1,000 of all births (live and still).

The birth rate per thousand of the mean population was above 45 in the late 1850's then declined generally to 23.84 in 1903 before improving gradually to reach 28.97 in 1914. The subsequent war years brought about a further decline and except for a temporary revival in 1920 and 1921 the rate continued to fall to 14.13 in 1935, the lowest on record. From then there was a general upward trend to 25.23 in 1947 and since then there has been a falling off which has accelerated in the past 3 years. The rate in 1964 was 20.22, which was somewhat below the Australian rate of 20.58 and lower than the rate in any other State except New South Wales.

#### Ex-nuptial Births and Legitimations

The ex-nuptial birth rates in the last 3 years were successively the highest recorded. The rate had been about 3 per 100 births since the early 1920's and did not vary greatly until the late 1950's but has risen in each year since 1959.

The legitimation of an ex-nuptial child upon the subsequent marriage of his or her parents was first provided for in South Australia by the Legitimation Act, 1898, the provisions of which were later incorporated in the Births and Deaths Registration Act, but was possible only if there was no legal impediment to the marriage of the parents at the time of the birth of the child. The Commonwealth *Marriage Act* 1961, which came into operation on 1st September 1963, enables also, upon the subsequent marriage of the parents, the legitimation of a child whose parents were legally unable to marry at the time of the birth of the child. Legitimations under this Act take place whether or not the child was living at the time of marriage, and the child is considered legitimate from the date of birth or in the case of a child born before 1st September 1963, at that date. The effect of the implementation of this change in legislation is shown in the following table in the increase in legitimations in 1963 and 1964.

Ex-nuptial Live Births and Legitimations, South Australia

| Year | Ex-nuptial Live Births |                     | Legitimations |
|------|------------------------|---------------------|---------------|
|      | Number                 | Rate per 100 Births |               |
| 1955 | 615                    | 3.33                | 28            |
| 1956 | 639                    | 3.37                | 35            |
| 1957 | 651                    | 3.33                | 36            |
| 1958 | 738                    | 3.68                | 49            |
| 1959 | 745                    | 3.66                | 51            |
| 1960 | 841                    | 4.01                | 40            |
| 1961 | 1,026                  | 4.58                | 76            |
| 1962 | 1,017                  | 4.76                | 58            |
| 1963 | 1,059                  | 4.96                | 245           |
| 1964 | 1,239                  | 5.94                | 450           |

#### Confinements and Live Births

The next table shows the number of confinements and live births in 1963 and 1964, classified separately for single births and for multiple births in which at least one issue was live-born.

Multiple births occur at a fairly regular rate of a little over 10 cases per 1,000 confinements, although in 1964 the rate fell below this level for the first time since 1950. There is a marked tendency for multiple births to be of the same sex; in 1964 there were 124 cases of twins of the same sex compared with only 65 cases of one male and one female issue.

Confinements<sup>(a)</sup> and Live Births: Class of Birth, South Australia

| Particulars             | 1963             |               |               |               | 1964             |               |               |               |
|-------------------------|------------------|---------------|---------------|---------------|------------------|---------------|---------------|---------------|
|                         | Confinements (a) | Live Births   |               |               | Confinements (a) | Live Births   |               |               |
|                         |                  | Male          | Female        | Total         |                  | Male          | Female        | Total         |
| <b>Nuptial—</b>         |                  |               |               |               |                  |               |               |               |
| Single births ..        | 19,867           | 10,236        | 9,631         | 19,867        | 19,266           | 10,019        | 9,247         | 19,266        |
| Twins .....             | 223              | 214           | 227           | 441           | 178              | 186           | 169           | 355           |
| Triplets .....          | —                | —             | —             | —             | 2                | 3             | 3             | 6             |
| <b>Total nuptial ..</b> | <b>20,090</b>    | <b>10,450</b> | <b>9,858</b>  | <b>20,308</b> | <b>19,446</b>    | <b>10,208</b> | <b>9,419</b>  | <b>19,627</b> |
| <b>Ex-nuptial—</b>      |                  |               |               |               |                  |               |               |               |
| Single births ..        | 1,047            | 551           | 496           | 1,047         | 1,217            | 630           | 587           | 1,217         |
| Twins .....             | 6                | 5             | 7             | 12            | 11               | 11            | 11            | 22            |
| <b>Total ex-nuptial</b> | <b>1,053</b>     | <b>556</b>    | <b>503</b>    | <b>1,059</b>  | <b>1,228</b>     | <b>641</b>    | <b>598</b>    | <b>1,239</b>  |
| <b>Total ....</b>       | <b>21,143</b>    | <b>11,006</b> | <b>10,361</b> | <b>21,367</b> | <b>20,674</b>    | <b>10,849</b> | <b>10,017</b> | <b>20,866</b> |

(a) Includes only those confinements which resulted in one or more live births.

In the table below confinements and live births in the latest two years have been shown in relation to the age group of the mother.

Confinements<sup>(a)</sup> and Live Births: Age Group of Mother, South Australia

| Age Group of Mother | 1963             |               |               |               | 1964             |               |               |               |
|---------------------|------------------|---------------|---------------|---------------|------------------|---------------|---------------|---------------|
|                     | Confinements (a) | Live Births   |               |               | Confinements (a) | Live Births   |               |               |
|                     |                  | Male          | Female        | Total         |                  | Male          | Female        | Total         |
| 10-14 .....         | 7                | 5             | 2             | 7             | 5                | 3             | 2             | 5             |
| 15-19 .....         | 1,873            | 982           | 898           | 1,880         | 1,982            | 1,051         | 943           | 1,994         |
| 20-24 .....         | 6,843            | 3,575         | 3,336         | 6,911         | 6,645            | 3,520         | 3,171         | 6,691         |
| 25-29 .....         | 6,020            | 3,112         | 2,981         | 6,093         | 6,002            | 3,088         | 2,964         | 6,052         |
| 30-34 .....         | 3,636            | 1,911         | 1,767         | 3,678         | 3,461            | 1,815         | 1,695         | 3,510         |
| 35-39 .....         | 2,077            | 1,069         | 1,033         | 2,102         | 1,941            | 1,038         | 930           | 1,968         |
| 40-44 .....         | 652              | 326           | 335           | 661           | 603              | 318           | 292           | 610           |
| 45-49 .....         | 35               | 26            | 9             | 35            | 32               | 15            | 18            | 33            |
| Not stated .....    | —                | —             | —             | —             | 3                | 1             | 2             | 3             |
| <b>Total ....</b>   | <b>21,143</b>    | <b>11,006</b> | <b>10,361</b> | <b>21,367</b> | <b>20,674</b>    | <b>10,849</b> | <b>10,017</b> | <b>20,866</b> |

(a) Includes only those confinements which resulted in one or more live births.

Nuptial confinements classified according to the relative age groups of the parents, and ex-nuptial confinements classified to the age group of the mother are shown for 1964 in the following table.

Confinements<sup>(a)</sup>: Relative Ages of Parents, South Australia, 1964

| Age Group of Father<br>(Nuptial Births) | Age Group of Mother |              |              |              |              |            |           | Total             |
|---|---------------------|--------------|--------------|--------------|--------------|------------|-----------|-------------------|
|   | Under 20            | 20-24        | 25-29        | 30-34        | 35-39        | 40-44      | 45-49     |                   |
| Under 20 .....                          | 216                 | 57           | 3            | —            | —            | —          | —         | 276               |
| 20-24 .....                             | 1,024               | 2,347        | 242          | 11           | 1            | 1          | —         | 3,626             |
| 25-29 .....                             | 262                 | 2,932        | 2,597        | 246          | 23           | —          | —         | 6,060             |
| 30-34 .....                             | 47                  | 762          | 2,218        | 1,448        | 213          | 12         | 1         | 4,701             |
| 35-39 .....                             | 13                  | 152          | 627          | 1,217        | 860          | 90         | 1         | 2,960             |
| 40-44 .....                             | 3                   | 33           | 97           | 327          | 563          | 276        | 3         | 1,302             |
| 45-49 .....                             | 1                   | 8            | 22           | 62           | 134          | 127        | 10        | 364               |
| 50 and over .....                       | —                   | 1            | 14           | 25           | 41           | 58         | 15        | 154               |
| <b>Married mothers .....</b>            | <b>1,566</b>        | <b>6,292</b> | <b>5,820</b> | <b>3,336</b> | <b>1,835</b> | <b>564</b> | <b>30</b> | <b>(b) 19,466</b> |
| <b>Unmarried mothers .....</b>          | <b>421</b>          | <b>353</b>   | <b>182</b>   | <b>125</b>   | <b>106</b>   | <b>39</b>  | <b>2</b>  | <b>1,228</b>      |
| <b>Total mothers .....</b>              | <b>1,987</b>        | <b>6,645</b> | <b>6,002</b> | <b>3,461</b> | <b>1,941</b> | <b>603</b> | <b>32</b> | <b>(b) 20,674</b> |

(a) Includes only those confinements which resulted in one or more live births.

(b) Includes three for which ages were not stated.

The following table shows the first live births to married mothers in 1964 classified to age group of mother and duration of marriage. Only existing marriages are taken into account, therefore some inclusions in the table relate to the first birth of an existing marriage to a mother who has had also a child or children by a previous marriage.

**Nuptial First Live Births: Age Group of Mother and Duration of Marriage, South Australia, 1964**

| Age Group of Mother | Duration of Existing Marriage |    |    |     |     |     |     |     |     |     |     |       |       |     |     | Total Nuptial First Births (a) |     |            |
|---------------------|-------------------------------|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-------|-------|-----|-----|--------------------------------|-----|------------|
|                     | Months                        |    |    |     |     |     |     |     |     |     |     | Years |       |     |     |                                |     |            |
|                     | 0                             | 1  | 2  | 3   | 4   | 5   | 6   | 7   | 8   | 9   | 10  | 11    | 1     | 2   | 3   |                                | 4   | 5 and Over |
| 15-19.              | 19                            | 26 | 39 | 57  | 133 | 249 | 293 | 90  | 40  | 70  | 37  | 47    | 150   | 29  | 2   | —                              | —   | 1,281      |
| 20-24.              | 9                             | 12 | 22 | 33  | 83  | 175 | 215 | 92  | 111 | 230 | 171 | 176   | 1,071 | 475 | 218 | 83                             | 38  | 3,214      |
| 25-29.              | 2                             | 5  | 6  | 4   | 5   | 22  | 15  | 13  | 28  | 70  | 53  | 40    | 305   | 215 | 184 | 144                            | 266 | 1,377      |
| 30-34.              | 3                             | —  | 2  | 3   | 1   | 4   | 11  | 8   | 10  | 15  | 21  | 10    | 85    | 42  | 31  | 28                             | 153 | 427        |
| 35-39.              | 2                             | —  | 1  | 2   | 1   | 4   | 5   | 3   | 4   | 3   | 6   | 8     | 36    | 19  | 11  | 6                              | 85  | 196        |
| 40-44.              | —                             | —  | 1  | 1   | —   | —   | —   | 1   | —   | 2   | 1   | —     | 8     | 7   | 7   | 1                              | 24  | 53         |
| 45-49.              | —                             | —  | —  | —   | —   | —   | —   | —   | —   | —   | —   | —     | —     | 2   | —   | —                              | 2   | 4          |
| Total.              | 35                            | 43 | 71 | 100 | 223 | 454 | 539 | 207 | 193 | 390 | 289 | 281   | 1,655 | 789 | 453 | 262                            | 568 | 6,552      |

(a) Live-born children only. In cases of multiple births the eldest live-born child is included.

**DEATHS**

The following table shows the number of deaths and death rates per 1,000 of the mean population since 1915.

**Deaths and Death Rates, South Australia**

| Period            | Number of Deaths |         |         | Death Rate (a) |         |         |
|-------------------|------------------|---------|---------|----------------|---------|---------|
|                   | Males            | Females | Persons | Males          | Females | Persons |
| Annual Average—   |                  |         |         |                |         |         |
| 1915-19 .....     | 2,613            | 2,187   | 4,800   | 11.91          | 9.49    | 10.67   |
| 1920-24 .....     | 2,676            | 2,225   | 4,901   | 10.57          | 8.80    | 9.68    |
| 1925-29 .....     | 2,762            | 2,272   | 5,034   | 9.74           | 8.21    | 8.98    |
| 1930-34 .....     | 2,671            | 2,330   | 5,001   | 9.21           | 8.08    | 8.65    |
| 1935-39 (b) ..... | 2,929            | 2,501   | 5,430   | 9.89           | 8.47    | 9.19    |
| 1940-44 (b) ..... | 3,348            | 2,887   | 6,235   | 11.07          | 9.43    | 10.25   |
| 1945-49 (b) ..... | 3,389            | 2,980   | 6,369   | 10.48          | 9.12    | 9.80    |
| 1950-54 .....     | 3,832            | 3,191   | 7,023   | 10.06          | 8.56    | 9.31    |
| 1955-59 .....     | 4,248            | 3,430   | 7,678   | 9.62           | 7.97    | 8.80    |
| 1960-64 .....     | 4,585            | 3,607   | 8,192   | 9.18           | 7.37    | 8.28    |
| Year—             |                  |         |         |                |         |         |
| 1960 .....        | 4,330            | 3,474   | 7,804   | 9.07           | 7.43    | 8.26    |
| 1961 .....        | 4,362            | 3,453   | 7,815   | 8.89           | 7.21    | 8.06    |
| 1962 .....        | 4,546            | 3,686   | 8,232   | 9.10           | 7.53    | 8.32    |
| 1963 .....        | 4,678            | 3,523   | 8,201   | 9.19           | 7.05    | 8.13    |
| 1964 .....        | 5,008            | 3,898   | 8,906   | 9.62           | 7.62    | 8.63    |

(a) Per 1,000 of mean population.

(b) Excludes deaths of defence personnel and of internees and prisoners of war from overseas for the period September 1939 to June 1947.

The death rate declined generally from over 15 in the 1860's to 8.44 in 1934 then rose to 11.02 in 1942 from which point there has been a further general decline. The 1961 rate of 8.06 is the lowest recorded in South Australia.

Male and female deaths in certain age groups for each of the last five years are shown in the following table.

## Deaths in Age Groups, South Australia

| Year     | Age at Death |      |       |       |       |       |       |             | Total Deaths |
|----------|--------------|------|-------|-------|-------|-------|-------|-------------|--------------|
|          | 0-4          | 5-14 | 15-24 | 25-34 | 35-44 | 45-54 | 55-64 | 65 and Over |              |
| Males    |              |      |       |       |       |       |       |             |              |
| 1960.... | 294          | 51   | 91    | 121   | 175   | 400   | 724   | 2,474       | 4,330        |
| 1961.... | 313          | 51   | 79    | 110   | 205   | 403   | 704   | 2,497       | 4,362        |
| 1962.... | 306          | 44   | 84    | 82    | 189   | 446   | 754   | 2,641       | 4,546        |
| 1963.... | 265          | 45   | 85    | 83    | 201   | 473   | 825   | 2,701       | 4,678        |
| 1964.... | 282          | 52   | 113   | 105   | 219   | 409   | 893   | 2,934       | (a) 5,008    |
| Females  |              |      |       |       |       |       |       |             |              |
| 1960.... | 191          | 33   | 32    | 50    | 98    | 196   | 395   | 2,479       | 3,474        |
| 1961.... | 219          | 35   | 33    | 47    | 97    | 226   | 355   | 2,441       | 3,453        |
| 1962.... | 187          | 27   | 25    | 51    | 115   | 234   | 417   | 2,630       | 3,686        |
| 1963.... | 223          | 28   | 36    | 39    | 118   | 206   | 362   | 2,511       | 3,523        |
| 1964.... | 196          | 27   | 46    | 52    | 110   | 230   | 437   | 2,800       | 3,898        |

(a) Includes one death for which age was not stated.

A long established trend of increases in deaths at the higher ages has been offset to some degree by a decrease in those in the younger age groups. The effect of this trend related to the changes in age distribution of the population is illustrated in the next table, which shows age-specific death rates, *i.e.*, deaths in each age group expressed as a rate per 1,000 of the population in that age group. Because age constitution of the population is known accurately only at censuses the periods shown are those with a census date as their approximate centre.

## Age-Specific Death Rates: Males, South Australia

| Age Group         | Death Rate (a) |         |         |         |         |         | Reduction Per Cent 1880-82 to 1960-62 |         |
|-------------------|----------------|---------|---------|---------|---------|---------|---------------------------------------|---------|
|                   | 1880-82        | 1900-02 | 1920-22 | 1932-34 | 1946-48 | 1953-55 |                                       | 1960-62 |
| 0-4 .....         | 51.85          | 32.12   | 19.98   | 9.90    | 8.09    | 6.41    | 5.82                                  | 89      |
| 5-9 .....         | 3.33           | 2.81    | 2.33    | 1.18    | 1.00    | 0.52    | 0.50                                  | 85      |
| 10-14 .....       | 2.59           | 1.85    | 1.55    | 1.08    | 0.68    | 0.65    | 0.46                                  | 82      |
| 15-19 .....       | 4.48           | 2.88    | 2.41    | 1.69    | 1.42    | 1.50    | 1.08                                  | 76      |
| 20-24 .....       | 4.85           | 4.19    | 3.47    | 2.35    | 1.44    | 1.88    | 1.37                                  | 72      |
| 25-29 .....       | 6.32           | 5.16    | 3.67    | 2.51    | 1.59    | 1.70    | 1.59                                  | 75      |
| 30-34 .....       | 7.51           | 5.30    | 3.97    | 2.51    | 1.88    | 1.57    | 1.62                                  | 78      |
| 35-39 .....       | 9.00           | 6.77    | 5.12    | 3.23    | 2.41    | 2.29    | 2.08                                  | 77      |
| 40-44 .....       | 12.25          | 8.50    | 6.10    | 4.73    | 3.63    | 3.56    | 3.43                                  | 72      |
| 45-49 .....       | 16.10          | 10.26   | 8.37    | 6.82    | 6.12    | 5.48    | 5.44                                  | 66      |
| 50-54 .....       | 17.29          | 14.19   | 11.58   | 9.82    | 10.74   | 10.16   | 9.24                                  | 47      |
| 55-59 .....       | 25.28          | 20.74   | 18.99   | 15.11   | 16.28   | 15.71   | 15.75                                 | 38      |
| 60-64 .....       | 31.77          | 30.23   | 26.02   | 24.98   | 26.08   | 24.33   | 24.39                                 | 23      |
| 65-69 .....       | 46.67          | 47.24   | 41.62   | 36.14   | 40.08   | 39.31   | 37.84                                 | 19      |
| 70-74 .....       | 63.52          | 64.27   | 62.49   | 57.07   | 60.79   | 62.59   | 59.47                                 | 6       |
| 75-79 .....       | 92.49          | 89.66   | 105.50  | 92.60   | 97.69   | 94.55   | 88.56                                 | 4       |
| 80-84 .....       | 138.02         | 140.35  | 158.90  | 147.86  | 145.56  | 141.64  | 135.85                                | 2       |
| 85 and over ..... | 247.47         | 246.96  | 269.50  | 257.03  | 248.89  | 235.84  | 227.39                                | 8       |
| All ages .....    | 15.76          | 12.03   | 10.75   | 9.29    | 10.87   | 9.80    | 9.00                                  | 43      |

(a) Average annual number of deaths per 1,000 of population at ages shown.



## Age-Specific Death Rates: Females, South Australia

| Age Group         | Death Rate (a) |         |         |         |         |         | Reduction<br>Per Cent<br>1880-82 to<br>1960-62 |         |
|-------------------|----------------|---------|---------|---------|---------|---------|--|---------|
|                   | 1880-82        | 1900-02 | 1920-22 | 1932-34 | 1946-48 | 1953-55 |  | 1960-62 |
| 0-4 .....         | 45.36          | 27.20   | 16.29   | 8.29    | 7.12    | 5.01    | 3.93   | 91      |
| 5-9 .....         | 3.28           | 2.02    | 2.30    | 1.04    | 0.54    | 0.45    | 0.35   | 89      |
| 10-14 .....       | 2.49           | 1.64    | 1.32    | 0.88    | 0.38    | 0.42    | 0.30   | 88      |
| 15-19 .....       | 4.16           | 3.47    | 2.71    | 1.25    | 0.75    | 0.52    | 0.37   | 91      |
| 20-24 .....       | 5.59           | 4.16    | 2.91    | 2.36    | 1.04    | 0.63    | 0.58   | 90      |
| 25-29 .....       | 8.01           | 5.00    | 3.95    | 2.73    | 1.65    | 0.85    | 0.70   | 91      |
| 30-34 .....       | 7.67           | 5.66    | 4.18    | 2.66    | 1.91    | 0.99    | 0.96   | 87      |
| 35-39 .....       | 10.29          | 6.90    | 5.27    | 3.85    | 2.03    | 1.79    | 1.33   | 87      |
| 40-44 .....       | 9.76           | 7.85    | 4.99    | 4.10    | 3.48    | 2.56    | 1.80   | 82      |
| 45-49 .....       | 11.65          | 8.20    | 6.42    | 5.80    | 4.59    | 3.65    | 3.03   | 74      |
| 50-54 .....       | 13.09          | 10.83   | 9.18    | 8.06    | 7.09    | 5.88    | 5.22   | 60      |
| 55-59 .....       | 14.86          | 14.08   | 10.65   | 11.24   | 10.33   | 9.04    | 7.82   | 47      |
| 60-64 .....       | 24.30          | 20.45   | 18.07   | 17.68   | 14.97   | 14.06   | 12.74  | 48      |
| 65-69 .....       | 36.27          | 35.51   | 33.15   | 27.16   | 25.22   | 23.01   | 21.05  | 42      |
| 70-74 .....       | 53.10          | 53.80   | 46.20   | 42.19   | 42.17   | 40.35   | 35.52  | 33      |
| 75-79 .....       | 93.21          | 87.96   | 83.56   | 75.53   | 72.07   | 72.20   | 58.28  | 37      |
| 80-84 .....       | 94.83          | 126.07  | 131.63  | 121.15  | 121.57  | 109.92  | 108.61   | (b) 15  |
| 85 and over ..... | 161.90         | 222.58  | 232.84  | 233.59  | 214.35  | 215.80  | 199.38   | (b) 23  |
| All ages.....     | 13.97          | 10.25   | 9.00    | 8.23    | 9.19    | 8.31    | 7.38   | 47      |

(a) Average annual number of deaths per 1,000 of population at ages shown.

(b) Increase.

Over the period there was a marked reduction in death rates with greater reduction in female than in male rates in all but the groups aged 80 and over.

## CAUSES OF DEATH

The classification of causes of deaths in Australia since 1907 has been based on International Lists of Causes of Deaths. From time to time revisions to these lists have affected the comparability of the figures. Up to 1949 the effect of these revisions had been negligible but the introduction in 1950 of the Sixth Revision of the International Statistical Classification introduced major changes in the classification which, together with the adoption of more flexible rules for selecting the underlying cause where certificates of cause of death showed more than one cause, affected the comparability of figures for years before 1950 with those for 1950 and later. A complete classification of causes of deaths for each State and Territory of Australia for 1950 according to both the Fifth and Sixth Revisions was published by the Commonwealth Statistician in Demography 1950, Bulletin No. 68.

The Seventh Revision adopted in Australia in 1958 did not affect comparability significantly. International Classification Seventh Revision code numbers have been shown where appropriate in the tables which follow.

In the next table deaths registered in 1964 are shown classified according to the abbreviated list of the Seventh Revision together with the percentage from each cause and the rate per 10,000 of mean population.

## Causes of Deaths, South Australia, 1964

| Abbreviated Classification (a)  | International Classification Code Number | Number of Deaths | Proportion of Total | Rate per 10,000 of Mean Population |
|---|--|------------------|---------------------|------------------------------------|
|   |  |                  | Per Cent            |                                    |
| 1 Tuberculosis of respiratory system...   | 001-008                                  | 10               | 0.11                | 0.10                               |
| 2 Tuberculosis, other forms .....   | 010-019                                  | 1                | 0.01                | 0.01                               |
| 3 Syphilis and its sequela .....  | 020-029                                  | 7                | 0.08                | 0.07                               |
| 9 Whooping cough .....  | 056                                      | 1                | 0.01                | 0.01                               |
| 10 Meningococcal infections .....   | 057                                      | 5                | 0.05                | 0.05                               |
| 14 Measles .....  | 085                                      | 2                | 0.02                | 0.02                               |
| 17 All other diseases classified as infective and parasitic .....                         | (b)                                      | 16               | 0.18                | 0.15                               |
| 18 Malignant neoplasms, including neoplasms of lymphatic and haematopoietic tissues ..... | 140-205                                  | 1,367            | 15.35               | 13.25                              |
| 19 Benign and unspecified neoplasms ..  | 210-239                                  | 17               | 0.19                | 0.16                               |
| 20 Diabetes mellitus .....  | 260                                      | 135              | 1.52                | 1.31                               |
| 21 Anaemias .....   | 290-293                                  | 28               | 0.31                | 0.27                               |
| 22 Vascular lesions affecting central nervous system .....                                | 330-334                                  | 1,197            | 13.44               | 11.60                              |
| 23 Non-meningococcal meningitis .....   | 340                                      | 6                | 0.07                | 0.06                               |
| 24 Rheumatic fever .....  | 400-402                                  | 1                | 0.01                | 0.01                               |
| 25 Chronic rheumatic heart disease .....  | 410-416                                  | 69               | 0.77                | 0.67                               |
| 26 Arteriosclerotic and degenerative heart disease .....                                  | 420-422                                  | 2,920            | 32.79               | 28.29                              |
| 27 Other diseases of heart .....  | 430-434                                  | 261              | 2.93                | 2.53                               |
| 28 Hypertension with heart disease .....  | 440-443                                  | 104              | 1.17                | 1.01                               |
| 29 Hypertension without mention of heart .....  | 444-447                                  | 55               | 0.62                | 0.53                               |
| 30 Influenza .....  | 480-483                                  | 12               | 0.13                | 0.11                               |
| 31 Pneumonia .....  | 490-493                                  | 313              | 3.51                | 3.03                               |
| 32 Bronchitis .....   | 500-502                                  | 175              | 1.96                | 1.70                               |
| 33 Ulcer of stomach and duodenum .....  | 540, 541                                 | 50               | 0.56                | 0.48                               |
| 34 Appendicitis .....   | 550-553                                  | 6                | 0.07                | 0.06                               |
| 35 Intestinal obstruction and hernia .....  | 560, 561, 570                            | 63               | 0.71                | 0.61                               |
| 36 Gastritis, duodenitis, enteritis and colitis, except diarrhoea of the newborn .....    | 543, 571, 572                            | 47               | 0.53                | 0.45                               |
| 37 Cirrhosis of liver .....   | 581                                      | 47               | 0.53                | 0.45                               |
| 38 Nephritis and nephrosis .....  | 590-594                                  | 60               | 0.67                | 0.58                               |
| 39 Hyperplasia of prostate .....  | 610                                      | 30               | 0.34                | 0.29                               |
| 40 Complications of pregnancy, childbirth, and the puerperism .....                       | 640-689                                  | 7                | 0.08                | 0.07                               |
| 41 Congenital malformations .....   | 750-759                                  | 109              | 1.22                | 1.06                               |
| 42 Birth injuries, postnatal asphyxia, and atelectasis .....                              | 760-762                                  | 96               | 1.08                | 0.93                               |
| 43 Infections of the newborn .....  | 763-768                                  | 6                | 0.07                | 0.06                               |
| 44 Other diseases peculiar to early infancy, and immaturity unqualified .....             | 769-776                                  | 123              | 1.38                | 1.19                               |
| 45 Senility without mention of psychosis, ill-defined and unknown causes ..               | 780-795                                  | 70               | 0.79                | 0.68                               |
| 46 All other diseases .....   | Residual                                 | 782              | 8.79                | 7.58                               |
| 47 Motor vehicle accidents .....  | E810-E835                                | 267              | 3.00                | 2.59                               |
| 48 All other accidents .....  | { E800-E802, E840-E962 }                 | 261              | 2.93                | 2.53                               |
| 49 Suicide and self-inflicted injury .....  | { E963, E970-E979 }                      | 166              | 1.86                | 1.61                               |
| 50 Homicide and operations of war .....   | { E964, E965, E980-E999 }                | 14               | 0.16                | 0.14                               |
| Total all causes .....  |  | 8,906            | 100.00              | 86.30                              |

(a) No deaths were recorded in 1964 in the following categories—4 Typhoid fever (040), 5 Cholera (043), 6 Dysentery, all forms (045-048), 7 Scarlet fever and streptococcal sore throat (050, 051), 8 Diphtheria (055), 11 Plague (058), 12 Acute poliomyelitis (080), 13 Smallpox (084), 15 Typhus and other rickettsial diseases (100-108), 16 Malaria (110-117).

(b) No. 030-039, 041, 042, 044, 049, 052-054, 059-074, 081-083, 086-096, 120-138.

The following table shows for 1964 the main causes of deaths in selected age groups.

**Main Causes of Deaths in Age Groups, South Australia, 1964**

| International Classification Number | Age Group and Cause of Death                            | Deaths | Proportion of Total Deaths in Age Groups | Proportion of Total Deaths from the Specified Cause |
|-------------------------------------|---|--------|--|---|
|                                     |   | No.    | %  | %   |
|                                     | <b>0-4 Years</b>  |        |  |   |
| 750-759                             | Congenital malformations .....                          | 84     | 17.6                                     | 77.1  |
| 774-776                             | Immaturity .....  | 82     | 17.2                                     | 100.0   |
| 762                                 | Post-natal asphyxia and atelectasis .....               | 58     | 12.1                                     | 100.0   |
| 480-502, 763                        | Pneumonia, bronchitis and influenza....                 | 54     | 11.3                                     | 10.7  |
| 800-999                             | Accidental and violent deaths.....                      | 50     | 10.5                                     | 7.1   |
| 760, 761                            | Birth injuries .....                                    | 38     | 7.9                                      | 100.0   |
|                                     | Other causes .....                                      | 112    | 23.4                                     |   |
|                                     | <b>5-14 Years</b>                                       |        |  |   |
| 800-999                             | Accidental and violent deaths .....                     | 36     | 45.6                                     | 5.1   |
| 140-205                             | Cancer (all forms) .....                                | 14     | 17.7                                     | 1.0   |
| 750-759                             | Congenital malformations .....                          | 7      | 8.9                                      | 6.4   |
| 480-502                             | Pneumonia, bronchitis and influenza....                 | 3      | 3.8                                      | 0.6   |
|                                     | Other causes .....                                      | 19     | 24.0                                     |   |
|                                     | <b>15-24 Years</b>                                      |        |  |   |
| 800-999                             | Accidental and violent deaths .....                     | 114    | 71.7                                     | 16.1  |
| 140-205                             | Cancer (all forms) .....                                | 13     | 8.2                                      | 1.0   |
| 410-443                             | Diseases of the heart .....                             | 6      | 3.8                                      | 0.2   |
|                                     | Other causes .....                                      | 26     | 16.3                                     |   |
|                                     | <b>25-34 Years</b>                                      |        |  |   |
| 800-999                             | Accidental and violent deaths .....                     | 87     | 55.4                                     | 12.3  |
| 140-205                             | Cancer (all forms) .....                                | 23     | 14.7                                     | 1.7   |
| 410-443                             | Diseases of the heart .....                             | 11     | 7.0                                      | 0.3   |
| 330-334                             | Vascular lesions affecting central nervous system ..... | 9      | 5.7                                      | 0.8   |
|                                     | Other causes .....                                      | 27     | 17.2                                     |   |
|                                     | <b>35-44 Years</b>                                      |        |  |   |
| 800-999                             | Accidental and violent deaths .....                     | 115    | 35.0                                     | 16.2  |
| 410-443                             | Diseases of the heart .....                             | 68     | 20.7                                     | 2.0   |
| 140-205                             | Cancer (all forms) .....                                | 60     | 18.2                                     | 4.4   |
| 330-334                             | Vascular lesions affecting central nervous system ..... | 17     | 5.2                                      | 1.4   |
| 480-502                             | Pneumonia, bronchitis and influenza....                 | 9      | 2.7                                      | 1.8   |
|                                     | Other causes .....                                      | 60     | 18.2                                     |   |
|                                     | <b>45-54 Years</b>                                      |        |  |   |
| 410-443                             | Diseases of the heart .....                             | 212    | 33.2                                     | 6.3   |
| 140-205                             | Cancer (all forms) .....                                | 156    | 24.4                                     | 11.4  |
| 800-999                             | Accidental and violent deaths .....                     | 77     | 12.0                                     | 10.9  |
| 330-334                             | Vascular lesions affecting central nervous system ..... | 55     | 8.6                                      | 4.6   |
| 480-502                             | Pneumonia, bronchitis and influenza....                 | 19     | 3.0                                      | 3.8   |
|                                     | Other causes .....                                      | 120    | 18.8                                     |   |
|                                     | <b>55-64 Years</b>                                      |        |  |   |
| 410-443                             | Diseases of the heart .....                             | 542    | 40.8                                     | 16.2  |
| 140-205                             | Cancer (all forms) .....                                | 302    | 22.7                                     | 22.1  |
| 330-334                             | Vascular lesions affecting central nervous system ..... | 156    | 11.7                                     | 13.0  |
| 800-999                             | Accidental and violent deaths .....                     | 85     | 6.4                                      | 12.0  |
| 480-502                             | Pneumonia, bronchitis and influenza....                 | 53     | 4.0                                      | 10.5  |
|                                     | Other causes .....                                      | 192    | 14.4                                     |   |

| International Classification Number | Age Group and Cause of Death                            | Deaths |      | Proportion of Total Deaths in Age Groups | Proportion of Total Deaths from the Specified Cause |
|-------------------------------------|---|--------|------|--|---|
|                                     |   | No.    | %    | %  | %   |
|                                     | <b>65-74 Years</b>                                      |        |      |  |   |
| 410-443                             | Diseases of the heart .....                             | 985    | 45.4 | 29.4                                     |   |
| 140-205                             | Cancer (all forms) .....                                | 378    | 17.4 | 27.7                                     |   |
| 330-334                             | Vascular lesions affecting central nervous system ..... | 307    | 14.2 | 25.6                                     |   |
| 480-502                             | Pneumonia, bronchitis and influenza ....                | 118    | 5.5  | 23.4                                     |   |
| 450-456                             | Diseases of the arteries .....                          | 63     | 2.9  | 21.2                                     |   |
| 800-999                             | Accidental and violent deaths .....                     | 53     | 2.4  | 7.5                                      |   |
|                                     | Other causes .....                                      | 265    | 12.2 |  |   |
|                                     | <b>75 Years and Over</b>                                |        |      |  |   |
| 410-443                             | Diseases of the heart .....                             | 1,517  | 42.6 | 45.2                                     |   |
| 330-334                             | Vascular lesions affecting central nervous system ..... | 650    | 18.2 | 54.3                                     |   |
| 140-205                             | Cancer (all forms) .....                                | 412    | 11.6 | 30.1                                     |   |
| 480-502                             | Pneumonia, bronchitis and influenza ....                | 247    | 6.9  | 48.9                                     |   |
| 450-456                             | Diseases of the arteries .....                          | 210    | 5.9  | 70.7                                     |   |
| 800-999                             | Accidental and violent deaths .....                     | 91     | 2.5  | 12.9                                     |   |
|                                     | Other causes .....                                      | 438    | 12.3 |  |   |

Mortality in early childhood has been reduced considerably over the years, mainly by improved preventive measures and the use of new drugs. This improvement has increased the number of persons reaching higher ages where the risk from degenerative diseases is greatest; consequently deaths from degenerative diseases now constitute a higher proportion of deaths than formerly.

#### Infective Diseases

Deaths from certain infectious diseases over the period 1915 to 1964 are shown in the following table.

#### Deaths from Certain Infective Diseases, South Australia

| Period          | Respiratory Tuberculosis (001-008) | Typhoid Fever (040) | Scarlet Fever (050) | Diphtheria (055) | Whooping Cough (056) | Acute Poliomyelitis (080) | Measles (085) |
|-----------------|------------------------------------|---------------------|---------------------|------------------|----------------------|---------------------------|---------------|
| Annual Average— |                                    |                     |                     |                  |                      |                           |               |
| 1915-19 .....   | 339                                | 311                 | 4                   | 94               | 21                   | (a)                       | 14            |
| 1920-24 .....   | 330                                | 28                  | 9                   | 70               | 28                   | 9                         | 7             |
| 1925-29 .....   | 313                                | 12                  | 2                   | 25               | 13                   | 3                         | 12            |
| 1930-34 .....   | 261                                | 7                   | 2                   | 12               | 13                   | 3                         | 6             |
| 1935-39 .....   | 211                                | 4                   | 1                   | 27               | 11                   | 6                         | 2             |
| 1940-44 .....   | 190                                | 3                   | 2                   | 30               | 10                   | 2                         | 9             |
| 1945-49 .....   | 161                                | 1                   | 1                   | 7                | 8                    | 9                         | 6             |
| 1950-54 .....   | 81                                 | —                   | —                   | 1                | 2                    | 23                        | 3             |
| 1955-59 .....   | 43                                 | —                   | —                   | 1                | 1                    | 2                         | 3             |
| 1960-64 .....   | 32                                 | —                   | —                   | —                | 1                    | 1                         | 2             |

(a) Not separately recorded.

In 1956 a poliomyelitis immunization programme was begun and since then the incidence of and deaths from this disease have declined (see Part 6.6, page 179).

There has been a long term downward trend in deaths from respiratory tuberculosis. This has been assisted by the introduction in March 1952 of compulsory chest X-ray surveys of the population, enabling early detection and therefore more effective treatment of the disease. There were only 10 deaths from respiratory tuberculosis in 1964.

Various factors have contributed to the decrease in the incidence of and deaths from infectious diseases generally, such as advances in medical science, improved hygiene, and the general acceptance of immunization of infants and young children against such diseases as diphtheria and whooping cough.

### Diseases of the Heart

The following table shows the number of deaths attributed to heart disease and rates per 10,000 of the mean population since 1920.

**Deaths from Diseases of the Heart (410-443), South Australia**

| Period                 | Number of Deaths |         |         | Death Rate (a) |         |         |
|------------------------|------------------|---------|---------|----------------|---------|---------|
|                        | Males            | Females | Persons | Males          | Females | Persons |
| <b>Annual Average—</b> |                  |         |         |                |         |         |
| 1920-24 .....          | 292              | 249     | 541     | 11.52          | 9.87    | 10.70   |
| 1925-29 .....          | 314              | 276     | 590     | 11.08          | 9.95    | 10.52   |
| 1930-34 .....          | 438              | 368     | 806     | 15.10          | 12.78   | 13.94   |
| 1935-39 .....          | 639              | 498     | 1,137   | 21.63          | 16.88   | 19.25   |
| 1940-44 .....          | 886              | 704     | 1,590   | 29.29          | 23.02   | 26.14   |
| 1945-49 .....          | 1,094            | 822     | 1,916   | 33.84          | 25.15   | 29.47   |
| 1950-54 .....          | 1,342            | 996     | 2,338   | 35.22          | 26.70   | 31.01   |
| 1955-59 .....          | 1,519            | 1,111   | 2,630   | 34.38          | 25.81   | 30.15   |
| 1960-64 .....          | 1,776            | 1,245   | 3,021   | 35.56          | 25.44   | 30.55   |
| <b>Year—</b>           |                  |         |         |                |         |         |
| 1960 .....             | 1,681            | 1,210   | 2,891   | 35.21          | 25.89   | 30.60   |
| 1961 .....             | 1,672            | 1,160   | 2,832   | 34.09          | 24.21   | 29.21   |
| 1962 .....             | 1,715            | 1,301   | 3,016   | 34.31          | 26.57   | 30.48   |
| 1963 .....             | 1,848            | 1,166   | 3,014   | 36.30          | 23.33   | 29.88   |
| 1964 .....             | 1,964            | 1,390   | 3,354   | 37.73          | 27.18   | 32.50   |

(a) Number of deaths per 10,000 of mean population.

The percentage of total deaths classified to heart disease has increased from 11.0 in the period 1920-24 to 36.9 during 1960-64 and over the same period the rate has increased from 10.70 to 30.55. However, apart from the effect of the ageing population, there are other difficult-to-measure factors which have influenced this large increase, viz., changes in the mode of certification and classification, and improvement both in diagnosis and certification; therefore a comparison of numbers, rates and percentages of deaths from this cause over the period should be made with caution.

### Malignant Neoplasms

For 1950 and subsequent years, deaths from malignant neoplasms (*i.e.*, cancer) include those deaths classified to neoplasms of lymphatic and haematopoietic tissues (including Hodgkin's disease, leukaemia and aleukaemia)—there were 135 so assigned in 1964.

Deaths from Malignant Neoplasms (140-205), South Australia

| Period                 | Number of Deaths |         |         | Death Rate (a) |         |         |
|------------------------|------------------|---------|---------|----------------|---------|---------|
|                        | Males            | Females | Persons | Males          | Females | Persons |
| <b>Annual Average—</b> |                  |         |         |                |         |         |
| 1920-24 .....          | 244              | 232     | 476     | 9.65           | 9.16    | 9.41    |
| 1925-29 .....          | 291              | 264     | 555     | 10.27          | 9.54    | 9.91    |
| 1930-34 .....          | 325              | 328     | 653     | 11.23          | 11.37   | 11.30   |
| 1935-39 .....          | 348              | 362     | 710     | 11.77          | 12.26   | 12.02   |
| 1940-44 .....          | 363              | 409     | 772     | 12.02          | 13.35   | 12.69   |
| 1945-49 .....          | 416              | 424     | 840     | 12.88          | 12.97   | 12.92   |
| 1950-54 .....          | 462              | 483     | 945     | 12.11          | 12.96   | 12.53   |
| 1955-59 .....          | 565              | 519     | 1,084   | 12.79          | 12.06   | 12.43   |
| 1960-64 .....          | 656              | 617     | 1,273   | 13.14          | 12.60   | 12.87   |
| <b>Year—</b>           |                  |         |         |                |         |         |
| 1960.....              | 567              | 580     | 1,147   | 11.88          | 12.41   | 12.14   |
| 1961.....              | 641              | 581     | 1,222   | 13.07          | 12.12   | 12.60   |
| 1962.....              | 683              | 662     | 1,345   | 13.66          | 13.52   | 13.59   |
| 1963.....              | 668              | 616     | 1,284   | 13.12          | 12.33   | 12.73   |
| 1964.....              | 723              | 644     | 1,367   | 13.89          | 12.59   | 13.25   |

(a) Number of deaths per 10,000 of mean population.

The table indicates a steady increase in deaths from this cause and the table of age-specific death rates which follows shows how the rate increases with age. Therefore, the increase over the period in the rate at all ages is partly due to the increasing proportion of the population in the higher age groups. Periods shown below are those centred around the past six censuses.

Malignant Neoplasms (140-205): Age-Specific Death Rates, South Australia

| Age Group         | Death Rate (a) |         |         |         |         |         |
|-------------------|----------------|---------|---------|---------|---------|---------|
|                   | 1910-12        | 1920-22 | 1932-34 | 1946-48 | 1953-55 | 1960-62 |
| <b>Males</b>      |                |         |         |         |         |         |
| 0-4 .....         | 0.55           | 0.97    | —       | 0.49    | 1.18    | 1.02    |
| 5-14 .....        | 0.17           | 0.39    | 0.12    | 0.51    | 1.05    | 0.82    |
| 15-24 .....       | 0.69           | 0.33    | 0.31    | 0.07    | 1.64    | 0.86    |
| 25-34 .....       | 0.97           | 0.89    | 1.05    | 1.18    | 1.21    | 1.33    |
| 35-44 .....       | 5.45           | 3.48    | 3.36    | 2.57    | 4.63    | 4.29    |
| 45-54 .....       | 10.83          | 13.08   | 8.65    | 12.35   | 10.42   | 11.57   |
| 55-64 .....       | 39.66          | 37.75   | 35.41   | 32.77   | 33.43   | 36.52   |
| 65-74 .....       | 68.58          | 87.18   | 89.18   | 82.62   | 69.54   | 83.67   |
| 75 and over ..... | 84.88          | 109.91  | 147.57  | 148.98  | 149.45  | 142.29  |
| All ages.....     | 7.70           | 9.48    | 11.40   | 13.60   | 12.54   | 12.86   |
| <b>Females</b>    |                |         |         |         |         |         |
| 0-4 .....         | 0.28           | 0.38    | 0.30    | 0.41    | 1.24    | 0.79    |
| 5-14 .....        | 0.17           | 0.39    | 0.13    | 0.23    | 0.34    | 0.79    |
| 15-24 .....       | 0.24           | 0.49    | 0.25    | 0.40    | 0.72    | 0.46    |
| 25-34 .....       | 1.30           | 1.09    | 1.49    | 1.74    | 1.99    | 2.16    |
| 35-44 .....       | 6.68           | 6.04    | 6.32    | 4.42    | 5.95    | 6.66    |
| 45-54 .....       | 16.01          | 17.53   | 16.86   | 15.39   | 12.67   | 16.69   |
| 55-64 .....       | 33.00          | 32.56   | 34.61   | 30.12   | 32.91   | 28.19   |
| 65-74 .....       | 60.72          | 63.69   | 55.98   | 57.21   | 52.26   | 52.24   |
| 75 and over ..... | 87.80          | 104.61  | 115.15  | 108.52  | 98.41   | 99.76   |
| All ages.....     | 7.72           | 9.03    | 11.37   | 13.12   | 12.64   | 12.68   |

(a) Average annual number of deaths per 10,000 of population at ages shown.

Deaths from malignant neoplasms in 1964 according to the site of the disease, sex, and in broad age groups are shown in the following table.

**Malignant Neoplasms: Deaths Classified by Site and Sex in Age Groups  
South Australia, 1964**

| Site of Disease   | Sex | Age Group |       |       |             | All Ages |
|---|-----|-----------|-------|-------|-------------|----------|
|   |     | Under 25  | 25-44 | 45-64 | 65 and Over |          |
| <b>Malignant neoplasm of—</b>                                     |     |           |       |       |             |          |
| Buccal cavity and pharynx (140-148) .....                         | M   | —         | 1     | 6     | 7           | 14       |
|   | F   | —         | —     | 2     | 3           | 5        |
| Digestive organs and peritoneum (150-159).....                    | M   | —         | 12    | 86    | 152         | 250      |
|   | F   | —         | 6     | 52    | 182         | 240      |
| Respiratory system (160-165) ..                                   | M   | —         | 5     | 83    | 83          | 171      |
|   | F   | —         | 1     | 12    | 12          | 25       |
| Breast (170) .....  | F   | —         | 17    | 51    | 53          | 121      |
| Uterus (171-174) .....  | F   | —         | 4     | 20    | 25          | 49       |
| Other female genital organs (175-176) .....                       | F   | 2         | 4     | 29    | 20          | 55       |
| Male genital organs (177-179)..                                   | M   | 1         | 3     | 13    | 80          | 97       |
| Urinary organs (180, 181) ....                                    | M   | 1         | —     | 13    | 33          | 47       |
|   | F   | —         | —     | 8     | 14          | 22       |
| Skin (190, 191) .....   | M   | —         | 3     | 7     | 6           | 16       |
|   | F   | —         | 1     | 3     | 7           | 11       |
| Brain and nervous system (193)                                    | M   | 3         | 4     | 13    | 6           | 26       |
|   | F   | 4         | 1     | 5     | 6           | 16       |
| Other and unspecified sites (192, 194-199) .....                  | M   | 2         | 3     | 9     | 20          | 34       |
|   | F   | 2         | 3     | 10    | 18          | 33       |
| Neoplasms of lymphatic and haematopoietic tissues (200-205) ..... | M   | 12        | 8     | 19    | 29          | 68       |
|   | F   | 9         | 7     | 17    | 34          | 67       |
| <b>Total (140-205) .....</b>                                      | M   | 19        | 39    | 249   | 416         | 723      |
|   | F   | 17        | 44    | 209   | 374         | 644      |

**Vascular Lesions Affecting Central Nervous System**

The increase in both numbers and rates of deaths from vascular lesions of the central nervous system (commonly referred to as a "stroke") is further evidence of the effect of the increased proportion of the population at higher ages. Although the rate generally has fallen since 1954, deaths from this cause still constituted in 1964 over 18% of deaths of persons aged 75 years and over. During the period 1920-24 deaths classified to this cause were only 6.7% of all deaths, but during 1960-64 they were 13.9% of all deaths.

**Deaths from Vascular Lesions Affecting Central Nervous System (330-334),  
South Australia**

| Period                 | Number of Deaths |         |         | Death Rate (a) |         |         |
|------------------------|------------------|---------|---------|----------------|---------|---------|
|                        | Males            | Females | Persons | Males          | Females | Persons |
| <b>Annual Average—</b> |                  |         |         |                |         |         |
| 1920-24 .....          | 166              | 162     | 328     | 6.55           | 6.42    | 6.49    |
| 1925-29 .....          | 171              | 188     | 359     | 6.03           | 6.80    | 6.41    |
| 1930-34 .....          | 201              | 231     | 432     | 6.94           | 8.01    | 7.47    |
| 1935-39 .....          | 231              | 294     | 525     | 7.84           | 9.95    | 8.90    |
| 1940-44 .....          | 271              | 368     | 639     | 8.96           | 12.03   | 10.51   |
| 1945-49 .....          | 321              | 431     | 752     | 9.92           | 13.21   | 11.57   |
| 1950-54 .....          | 404              | 553     | 957     | 10.62          | 14.82   | 12.70   |
| 1955-59 .....          | 481              | 614     | 1,095   | 10.89          | 14.27   | 12.55   |
| 1960-64 .....          | 490              | 645     | 1,135   | 9.81           | 13.18   | 11.48   |
| <b>Year—</b>           |                  |         |         |                |         |         |
| 1960.....              | 484              | 617     | 1,101   | 10.14          | 13.20   | 11.65   |
| 1961.....              | 478              | 638     | 1,116   | 9.75           | 13.31   | 11.51   |
| 1962.....              | 494              | 633     | 1,127   | 9.88           | 12.93   | 11.39   |
| 1963.....              | 490              | 645     | 1,135   | 9.63           | 12.91   | 11.25   |
| 1964.....              | 505              | 692     | 1,197   | 9.70           | 13.53   | 11.60   |

(a) Number of deaths per 10,000 of mean population.

**INFANT MORTALITY**

The infant mortality rate, *i.e.*, the number of deaths of children under 1 year to every 1,000 live births, has shown a marked decline from 148.77 in 1875-79 to 19.17 in 1960-64, and the rate of 18.67 in 1963 was the lowest ever recorded in this State. Many factors have contributed to the remarkable improvement in the infant mortality rate, principally measures taken (both legislative and educative) to control preventable diseases and the provision of facilities by the Mothers' and Babies' Health Association for the promotion of child health.

The rate for male infant deaths is consistently higher than for female infant deaths.

**Infant Deaths, South Australia**

| Year     | Number of Deaths |         |         | Death Rate (a) |         |         |
|----------|------------------|---------|---------|----------------|---------|---------|
|          | Males            | Females | Persons | Males          | Females | Persons |
| 1960.... | 241              | 156     | 397     | 22.40          | 15.28   | 18.94   |
| 1961.... | 263              | 185     | 448     | 23.07          | 16.82   | 20.00   |
| 1962.... | 256              | 153     | 409     | 23.27          | 14.77   | 19.15   |
| 1963.... | 226              | 173     | 399     | 20.53          | 16.70   | 18.67   |
| 1964.... | 232              | 165     | 397     | 21.38          | 16.47   | 19.03   |

(a) Number of infant deaths per 1,000 live births.

The table which follows shows infant mortality rates in age groups since 1905.



## Infant Mortality Rates: Age Groups, South Australia

| Period                 | Number of Deaths per 1,000 Live Births at Ages— |                          |                            |                             |                              | Total Under 12 Months |
|------------------------|---|--------------------------|----------------------------|-----------------------------|------------------------------|-----------------------|
|                        | Under 1 Week                                    | 1 Week and Under 1 Month | 1 Month and Under 3 Months | 3 Months and Under 6 Months | 6 Months and Under 12 Months |                       |
| <b>Annual Average—</b> |   |                          |                            |                             |                              |                       |
| 1905-09 ..             | 27.68   |                          | 11.54                      | 12.40                       | 17.21                        | 68.83                 |
| 1910-14 ..             | 28.55   |                          | 10.81                      | 12.50                       | 15.96                        | 67.82                 |
| 1915-19 ..             | 29.88   |                          | 8.80                       | 9.41                        | 13.76                        | 61.85                 |
| 1920-24 ..             | 19.82   | 8.86                     | 8.26                       | 8.94                        | 12.57                        | 58.45                 |
| 1925-29 ..             | 20.35   | 6.73                     | 5.66                       | 5.93                        | 7.87                         | 46.54                 |
| 1930-34 ..             | 18.69   | 4.89                     | 4.12                       | 4.23                        | 6.12                         | 38.05                 |
| 1935-39 ..             | 17.81   | 3.98                     | 3.65                       | 2.88                        | 4.54                         | 32.86                 |
| 1940-44 ..             | 15.75   | 5.37                     | 4.60                       | 3.83                        | 5.02                         | 34.57                 |
| 1945-49 ..             | 15.50   | 3.52                     | 2.88                       | 2.44                        | 3.01                         | 27.35                 |
| 1950-54 ..             | 13.08   | 2.53                     | 2.25                       | 2.08                        | 2.75                         | 22.69                 |
| 1955-59 ..             | 11.81   | 2.05                     | 2.46                       | 2.41                        | 2.62                         | 21.35                 |
| 1960-64 ..             | 11.26   | 1.92                     | 1.92                       | 2.01                        | 2.06                         | 19.17                 |
| <b>Year—</b>           |   |                          |                            |                             |                              |                       |
| 1960.....              | 10.64   | 2.62                     | 1.62                       | 2.24                        | 1.82                         | 18.94                 |
| 1961.....              | 10.54   | 2.45                     | 2.14                       | 1.88                        | 2.99                         | 20.00                 |
| 1962.....              | 11.89   | 1.55                     | 2.15                       | 1.59                        | 1.97                         | 19.15                 |
| 1963.....              | 11.19   | 1.73                     | 1.63                       | 2.20                        | 1.92                         | 18.67                 |
| 1964.....              | 12.03   | 1.25                     | 2.06                       | 2.06                        | 1.63                         | 19.03                 |

Improvement has been much greater for deaths of infants a week or more old than for those under 1 week. However, to a large extent the factors influencing mortality in these two groups are different. Deaths of infants under 1 week mainly can be related to pre-natal causes which also have a bearing on still births. Combinations of still birth rates and rates of infant mortality at various ages have been shown in the following table which commences at the first five-yearly period after the introduction of compulsory registration of still births in South Australia. These figures give a clearer indication of the improvement which has been effected in the saving of life.

## Infant Mortality and Still Births, South Australia

| Period                 | Still Births Plus Deaths Under 1 Week |          | Still Births Plus Deaths Under 1 Month |          | Still Births Plus Deaths Under 1 Year |          |
|------------------------|---------------------------------------|----------|--|----------|---------------------------------------|----------|
|                        | Number                                | Rate (a) | Number                                 | Rate (a) | Number                                | Rate (a) |
| <b>Annual Average—</b> |                                       |          |  |          |                                       |          |
| 1940-44 ..             | 495                                   | 41.07    | 558                                    | 46.30    | 716                                   | 59.40    |
| 1945-49 ..             | 613                                   | 38.35    | 668                                    | 41.79    | 798                                   | 49.92    |
| 1950-54 ..             | 533                                   | 29.44    | 578                                    | 31.92    | 704                                   | 38.88    |
| 1955-59 ..             | 503                                   | 25.46    | 543                                    | 27.49    | 689                                   | 34.88    |
| 1960-64 ..             | 510                                   | 23.54    | 551                                    | 25.44    | 679                                   | 31.35    |
| <b>Year—</b>           |                                       |          |  |          |                                       |          |
| 1960.....              | 503                                   | 23.68    | 558                                    | 26.26    | 677                                   | 31.87    |
| 1961.....              | 508                                   | 22.41    | 563                                    | 24.83    | 720                                   | 31.76    |
| 1962.....              | 532                                   | 24.59    | 565                                    | 26.11    | 687                                   | 31.75    |
| 1963.....              | 501                                   | 23.16    | 538                                    | 24.87    | 661                                   | 30.56    |
| 1964.....              | 503                                   | 23.82    | 529                                    | 25.05    | 649                                   | 30.73    |

(a) Per 1,000 of all births (live and still).

The principal causes of infant deaths in 1964 classified according to age group are shown in the following table.

**Infant Mortality, Principal Causes in Age Groups, South Australia, 1964**

| Cause of Death   | Age Group    |                          |                            |                             |                              | Total Under 12 Months |
|--|--------------|--------------------------|----------------------------|-----------------------------|------------------------------|-----------------------|
|  | Under 1 Week | 1 Week and Under 1 Month | 1 Month and Under 3 Months | 3 Months and Under 6 Months | 6 Months and Under 12 Months |                       |
| Infective and parasitic diseases (001-138)   | —            | —                        | 1                          | 2                           | 4                            | 7                     |
| Diseases of the nervous system and sense organs (330-398)                          | —            | —                        | 3                          | 2                           | 4                            | 9                     |
| Diseases of the respiratory system (including pneumonia of newborn) (470-527, 763) | 1            | 4                        | 13                         | 14                          | 9                            | 41                    |
| Intestinal obstruction and hernia (560, 561, 570)                                  | 5            | 1                        | —                          | —                           | —                            | 6                     |
| Gastro-enteritis and colitis (including diarrhoea of newborn) (571, 764)           | —            | 1                        | 5                          | 1                           | 2                            | 9                     |
| Congenital malformations (750-759)   | 39           | 14                       | 13                         | 8                           | 5                            | 79                    |
| Birth injuries (760, 761)  | 37           | 1                        | —                          | —                           | —                            | 38                    |
| Post-natal asphyxia and atelectasis (762)  | 58           | —                        | —                          | —                           | —                            | 58                    |
| Immaturity (774-776) (a)   | 78           | 4                        | —                          | —                           | —                            | 82                    |
| Other diseases peculiar to early infancy (765-773)                                 | 32           | 1                        | 2                          | 5                           | 1                            | 41                    |
| All other diseases   | 1            | —                        | 2                          | 4                           | 6                            | 13                    |
| Accidents, poisonings, violence (E800-E999)  | —            | —                        | 4                          | 7                           | 3                            | 14                    |
| <b>Total all causes</b>  | <b>251</b>   | <b>26</b>                | <b>43</b>                  | <b>43</b>                   | <b>34</b>                    | <b>397</b>            |

(a) Immaturity unqualified or with mention of any other subsidiary condition not classified as peculiar to early infancy.

**EXPECTATION OF LIFE**

The table which follows shows the average expectation of life in Australia at specified ages based on mortality experience during each of the three decades to 1910 and for the three years spanning each of the Censuses of 1921, 1933, 1947 and 1954.

**Expectation of Life, Australia**

| Age     | 1881-90 | 1891-1900 | 1901-10 | 1920-22 | 1932-34 | 1946-48 | 1953-55 |
|---------|---------|-----------|---------|---------|---------|---------|---------|
| Males   |         |           |         |         |         |         |         |
| 0       | 47.2    | 51.1      | 55.2    | 59.2    | 63.5    | 66.1    | 67.1    |
| 10      | 48.9    | 51.4      | 53.5    | 56.0    | 58.0    | 59.0    | 59.5    |
| 20      | 40.6    | 42.8      | 44.7    | 47.0    | 48.8    | 49.6    | 50.1    |
| 30      | 33.6    | 35.1      | 36.5    | 38.4    | 39.9    | 40.4    | 40.9    |
| 40      | 26.5    | 27.7      | 28.6    | 30.1    | 31.1    | 31.2    | 31.7    |
| 50      | 19.7    | 20.5      | 21.2    | 22.2    | 22.8    | 22.7    | 22.9    |
| 60      | 13.8    | 14.0      | 14.3    | 15.1    | 15.6    | 15.4    | 15.5    |
| 70      | 8.8     | 8.9       | 8.7     | 9.3     | 9.6     | 9.6     | 9.6     |
| 80      | 5.1     | 5.0       | 5.0     | 5.0     | 5.2     | 5.4     | 5.5     |
| Females |         |           |         |         |         |         |         |
| 0       | 50.8    | 54.8      | 58.8    | 63.3    | 67.1    | 70.6    | 72.8    |
| 10      | 52.0    | 54.5      | 56.4    | 59.2    | 61.0    | 63.1    | 64.8    |
| 20      | 43.4    | 45.7      | 47.5    | 50.0    | 51.7    | 53.5    | 55.1    |
| 30      | 36.1    | 37.9      | 39.3    | 41.5    | 42.8    | 44.1    | 45.4    |
| 40      | 29.1    | 30.5      | 31.5    | 33.1    | 34.0    | 34.9    | 36.0    |
| 50      | 22.1    | 22.9      | 23.7    | 24.9    | 25.6    | 26.1    | 27.0    |
| 60      | 15.4    | 15.9      | 16.2    | 17.2    | 17.7    | 18.1    | 18.8    |
| 70      | 9.7     | 9.9       | 10.0    | 10.4    | 11.0    | 11.1    | 11.6    |
| 80      | 5.3     | 5.5       | 5.7     | 5.6     | 6.0     | 6.0     | 6.3     |

### 5.3. MIGRATION

#### History of Migration

Since the early settlement of the colony of South Australia, increases in the population from migration have occurred in times of increased economic activity whilst loss of population has occurred in times of depression in this State and/or increased economic activity elsewhere.

The discovery of minerals in other States attracted many South Australians to move interstate. The first major exodus came with the discovery of gold in Victoria in 1851. The Broken Hill silver-lead mines were opened in 1884 and there was a dramatic move to this new mining centre across the border into New South Wales. The third exodus of people from the State was due to the discovery of gold in Kalgoorlie in Western Australia in the 1890's.

In the period from 1901 onwards persons entered Australia in four distinct phases of its encouraged migration plan. It is estimated that during the period 1901 to 1952, after making allowances for war losses and those assisted migrants who did not, in the end, remain in Australia, the net number of "assisted" migrants was about twice the number of "unassisted".

As the depression years with which the century opened gave way to a period of more stable economic conditions, assisted migration was resumed about 1906. Immigration gained impetus during the years 1910 to 1912 but the movement was interrupted by war in 1914. After the war, the resumption of assisted migration was accompanied by a flow of unassisted migrants greater than for many decades. This movement was halted by depression and when encouraged migration was reintroduced in 1939, it was almost immediately stopped by the outbreak of war in September. In the immediate post-war years, encouraged migration was again resumed and the numbers brought to Australia by such means were far greater than for any other comparable period. South Australia shared in these four distinct migration phases.

South Australia suffered a substantial loss of population through migration in the period from 1928 to the mid 1930's.

#### Regulation of Immigration Into Australia

Under the Commonwealth Constitution, the Parliament of the Commonwealth is empowered to make laws with respect to immigration, emigration, aliens and the influx of criminals.

Immigration into Australia is regulated by the *Migration Act 1958* which came into force on 1st June 1959, and repealed the *Immigration Act 1901-1949* and the *Aliens Deportation Act 1948*.

The *Aliens Act 1947-1959* provides that a register of aliens shall be maintained for every State or mainland Territory of the Commonwealth. Unless exempted, aliens 16 years of age and over are required to register with the Department of Immigration. There were 59,150 aliens registered in South Australia in 1964.

Legislation and conditions of immigration into Australia are discussed in detail in the Year Book of the Commonwealth of Australia.

#### Overseas Arrivals and Departures

Since 1924 overseas travellers have been classified according to declared intention regarding residence into two main categories, which distinguish movements for short terms from movements for longer periods (including permanent).

For short term movements, overseas visitors and Australian residents have been identified separately.

The principal categories of travellers according to stated purpose of travel are as follows—

*Permanent movement*—consisting of persons arriving with stated intent to settle permanently in Australia, and Australian residents departing with stated intent to reside permanently abroad.

*Long term movement*—consisting of the arrival of visitors and the departure of residents with stated intent to stay (in Australia or in a country abroad respectively) for 12 months or more.

*Short term movement*—consisting of all other movements, including the movement of Australian troops irrespective of period of stay.

Separate figures for permanent and long term movements are not available on a State basis; hence these movements are combined in the table below showing overseas arrivals at, and departures from, South Australia. This table does not include persons who disembarked in other ports in Australia and subsequently settled in South Australia or South Australians who embarked from other ports for overseas. These movements would be included in interstate migration.

#### Overseas Arrivals and Departures: Intended Term of Residence, South Australia

| Year       | Long Term and Permanent |         | Short Term           |         |          |         | Total |         |         |
|------------|-------------------------|---------|----------------------|---------|----------|---------|-------|---------|---------|
|            |                         |         | Australian Residents |         | Visitors |         |       |         |         |
|            | Males                   | Females | Males                | Females | Males    | Females | Males | Females | Persons |
| Arrivals   |                         |         |                      |         |          |         |       |         |         |
| 1955....   | 2,021                   | 2,003   | 729                  | 766     | 326      | 238     | 3,076 | 3,007   | 6,083   |
| 1956....   | 2,748                   | 2,328   | 549                  | 731     | 367      | 215     | 3,664 | 3,274   | 6,938   |
| 1957....   | 2,642                   | 2,534   | 504                  | 592     | 309      | 211     | 3,455 | 3,337   | 6,792   |
| 1958....   | 2,629                   | 2,904   | 564                  | 644     | 454      | 178     | 3,647 | 3,726   | 7,373   |
| 1959....   | 3,455                   | 3,264   | 572                  | 469     | 601      | 202     | 4,628 | 3,935   | 8,563   |
| 1960....   | 2,990                   | 2,786   | 671                  | 592     | 446      | 218     | 4,107 | 3,596   | 7,703   |
| 1961....   | 3,443                   | 3,365   | 469                  | 437     | 465      | 159     | 4,377 | 3,961   | 8,338   |
| 1962....   | 2,526                   | 2,542   | 588                  | 624     | 619      | 240     | 3,733 | 3,406   | 7,139   |
| 1963....   | 3,275                   | 3,287   | 671                  | 739     | 577      | 296     | 4,523 | 4,322   | 8,845   |
| 1964....   | 5,019                   | 5,101   | 650                  | 686     | 632      | 282     | 6,301 | 6,069   | 12,370  |
| Departures |                         |         |                      |         |          |         |       |         |         |
| 1955....   | 691                     | 779     | 777                  | 694     | 235      | 138     | 1,703 | 1,611   | 3,314   |
| 1956....   | 813                     | 785     | 605                  | 664     | 581      | 189     | 1,999 | 1,638   | 3,637   |
| 1957....   | 774                     | 655     | 431                  | 461     | 686      | 146     | 1,891 | 1,262   | 3,153   |
| 1958....   | 1,187                   | 971     | 695                  | 556     | 482      | 189     | 2,364 | 1,716   | 4,080   |
| 1959....   | 1,460                   | 1,123   | 807                  | 621     | 673      | 256     | 2,940 | 2,000   | 4,940   |
| 1960....   | 1,541                   | 1,299   | 1,211                | 1,024   | 621      | 263     | 3,373 | 2,586   | 5,959   |
| 1961....   | 1,368                   | 1,155   | 1,226                | 980     | 533      | 233     | 3,127 | 2,368   | 5,495   |
| 1962....   | 1,470                   | 1,339   | 914                  | 831     | 717      | 303     | 3,101 | 2,473   | 5,574   |
| 1963....   | 1,677                   | 1,520   | 913                  | 901     | 682      | 338     | 3,272 | 2,759   | 6,031   |
| 1964....   | 1,724                   | 1,653   | 1,087                | 1,131   | 815      | 470     | 3,626 | 3,254   | 6,880   |

NOTE.—Crew members and 'through' passengers (i.e. persons remaining on board a ship while in Australian waters or travelling in an aircraft passing through Australia) are excluded.

The number of long-term and permanent arrivals (10,120) and departures (3,377) in 1964 were each the highest ever recorded in South Australia.

Revised questions for travellers introduced in mid 1958 have permitted the separation of permanent from other long term movements, and also the identification of former settlers departing among the permanent departures. This information, available for the whole of Australia only, shows that in 1963 there were 9,102 former settlers leaving Australia who stated that they were departing permanently. Of these 3,359 intended to settle in the United Kingdom or Ireland, 2,487 elsewhere in Europe, 1,501 in New Zealand, and 866 in the United States of America. Other residents departing permanently totalled 7,176, of whom 1,791 intended to settle in the United Kingdom or Ireland, 1,703 in New Zealand and 1,073 in Papua and New Guinea.

### **Assisted Migration**

Resumption of migration was the subject of negotiation between the Commonwealth and British Governments towards the end of 1945, and two agreements were signed in March 1946. These agreements, which came into operation on 31st March 1947, provided for free and assisted passages to be granted to British residents desirous of settling in Australia. The Free Passage Agreement, which applied to British ex-servicemen and their dependants was terminated in February 1955. From April 1949, the Assisted Passage Agreement continued in operation under renewal from time to time, and was again renewed from 1st April 1962.

Under the existing financial arrangements, the British Government's contribution towards the Assisted Passage Scheme is decided when the agreement is extended, and for the five years from April 1962, was fixed at a maximum amount of £150,000 sterling a year.

The number of British migrants who came to Australia under the Free and Assisted Passage Agreements during the period January 1947 to June 1963 totalled 469,638 and 40,582 of these stated at the time that their proposed destination was South Australia. Included in the Australian total shown above were 120,903 Commonwealth nominees who comprised workers selected against known and assessed employment demands in Australia.

Since the commencement of the assisted passage schemes in 1947, the migration of unaccompanied children and youths from Britain has been encouraged under the auspices of approved voluntary organizations.

Migration schemes with the governments of other countries were entered into and these included the Netherlands scheme in 1951, the Italian, German, Austrian, and Greek schemes in 1952, and others. An agreement to settle displaced persons in Australia was made with the International Refugee Organization in July 1947.

### **Citizenship and Naturalization**

*The Nationality and Citizenship Act* 1948 came into force on Australia Day, 26th January 1949, and repealed all previous Commonwealth legislation on this subject. The most significant effect of the Act was the creation for the first time of the status of "Australian Citizen". In this respect the Act was complementary to citizenship legislation passed or about to be passed by other countries of the Commonwealth of Nations. All Australian citizens, and the citizens of other countries of the Commonwealth of Nations are declared to be British subjects.

Nationality of Persons Naturalized, South Australia

| Nationality           | 1955  | 1956  | 1957  | 1958  | 1959  | 1960  | 1961  | 1962  | 1963  | 1964  |
|-----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Austrian .....        | 7     | 14    | 24    | 28    | 31    | 114   | 127   | 221   | 112   | 89    |
| Czechoslovakian ..... | 135   | 226   | 200   | 137   | 63    | 32    | 20    | 50    | 22    | 11    |
| Dutch .....           | 64    | 238   | 421   | 676   | 603   | 643   | 440   | 907   | 578   | 607   |
| Estonian .....        | 100   | 245   | 216   | 137   | 61    | 48    | 16    | 35    | 8     | 12    |
| German .....          | 57    | 115   | 470   | 655   | 901   | 1,244 | 737   | 1,094 | 519   | 442   |
| Greek .....           | 58    | 85    | 112   | 180   | 311   | 804   | 555   | 882   | 481   | 636   |
| Hungarian .....       | 333   | 353   | 365   | 183   | 91    | 99    | 66    | 348   | 243   | 154   |
| Italian .....         | 284   | 564   | 934   | 1,462 | 1,282 | 1,365 | 1,033 | 1,574 | 886   | 729   |
| Latvian .....         | 279   | 746   | 712   | 449   | 291   | 190   | 84    | 133   | 47    | 44    |
| Lithuanian .....      | 127   | 333   | 394   | 291   | 137   | 74    | 65    | 54    | 24    | 25    |
| Polish .....          | 379   | 1,144 | 1,470 | 1,539 | 845   | 513   | 303   | 424   | 279   | 172   |
| Russian .....         | 17    | 30    | 84    | 84    | 32    | 23    | 16    | 39    | 51    | 30    |
| Ukranian .....        | 139   | 622   | 730   | 552   | 318   | 193   | 86    | 127   | 89    | 56    |
| Yugoslavian .....     | 243   | 644   | 565   | 454   | 287   | 237   | 181   | 279   | 243   | 233   |
| Stateless .....       | 30    | 167   | 155   | 71    | 49    | 66    | 34    | 63    | 34    | 50    |
| Other.....            | 116   | 191   | 177   | 199   | 130   | 150   | 83    | 233   | 133   | 165   |
| Total .....           | 2,368 | 5,717 | 7,029 | 7,097 | 5,432 | 5,795 | 3,846 | 6,463 | 3,749 | 3,455 |

There were 3,143 naturalization certificates granted in 1963 and 2,915 in 1964. Each certificate covers the person being naturalized and his/her children under the *Nationality and Citizenship Act 1948-1960*.

5.4. CHARACTERISTICS OF THE POPULATION

Statistics relating to characteristics of the population of South Australia are derived from information obtained at each population census. At the 1961 Census, these characteristics included the sex distribution, age distribution, and the conjugal condition of the population. Information was also obtained on the country of birth, period of residence, nationality, religion and occupational status of the population.

Sex Distribution

The masculinity of the population of South Australia, *i.e.*, the number of males to each 100 females at each census is shown below.

| Census Year     | Masculinity | Census Year     | Masculinity |
|-----------------|-------------|-----------------|-------------|
| 1844 .. . . . . | 126.1       | 1891 .. . . . . | 105.6       |
| 1846 .. . . . . | 130.4       | 1901 .. . . . . | 101.5       |
| 1851 .. . . . . | 124.3       | 1911 .. . . . . | 103.1       |
| 1855 .. . . . . | 103.8       | 1921 .. . . . . | 100.6       |
| 1861 .. . . . . | 105.3       | 1933 .. . . . . | 100.3       |
| 1866 .. . . . . | 109.2       | 1947 .. . . . . | 98.2        |
| 1871 .. . . . . | 105.6       | 1954 .. . . . . | 102.7       |
| 1876 .. . . . . | 107.0       | 1961 .. . . . . | 102.3       |
| 1881 .. . . . . | 111.4       |                 |             |

The masculinity in 1961 (102.3) was very close to the overall Australian figure of 102.24.

At each Census except 1947 the State's masculinity was greater than 100, *i.e.*, there were more males than females in South Australia. The lower rate

at the 1947 Census was due in part to the loss of male lives in World War II, while the subsequent increase can be attributed mainly to the predominantly male migration inflow of the early post-war period. This is shown very clearly in the following table which gives masculinity in five-yearly age groups at the last four censuses. The masculinity rates in the 20-24 and 25-29 age groups fell considerably between 1933 and 1947, but then rose to such an extent that by 1954 they were higher in these age groups than in any other age group.

**Masculinity of Population According to Age, South Australia**  
*Censuses 1933 to 1961*

| Age Last Birthday<br>(Years) | 1933   | 1947   | 1954   | 1961   |
|------------------------------|--------|--------|--------|--------|
| 0-4 .....                    | 104.78 | 104.30 | 104.46 | 103.21 |
| 5-9 .....                    | 102.80 | 106.18 | 104.85 | 104.98 |
| 10-14 .....                  | 102.96 | 104.60 | 105.38 | 105.75 |
| 15-19 .....                  | 103.47 | 100.43 | 105.27 | 105.55 |
| 20-24 .....                  | 102.09 | 95.29  | 113.81 | 109.21 |
| 25-29 .....                  | 106.25 | 96.70  | 111.99 | 110.23 |
| 30-34 .....                  | 102.72 | 99.26  | 106.65 | 110.78 |
| 35-39 .....                  | 93.22  | 101.27 | 105.80 | 105.31 |
| 40-44 .....                  | 97.30  | 107.23 | 107.05 | 104.86 |
| 45-49 .....                  | 100.23 | 99.93  | 110.99 | 107.65 |
| 50-54 .....                  | 99.04  | 89.83  | 104.54 | 106.49 |
| 55-59 .....                  | 98.02  | 96.52  | 91.53  | 105.42 |
| 60-64 .....                  | 96.43  | 93.65  | 87.94  | 88.90  |
| 65-69 .....                  | 89.36  | 88.05  | 87.80  | 77.48  |
| 70-74 .....                  | 90.34  | 83.07  | 81.72  | 78.01  |
| 75-79 .....                  | 94.58  | 77.76  | 73.53  | 71.88  |
| 80-84 .....                  | 82.90  | 70.90  | 66.71  | 62.44  |
| 85-89 .....                  | 70.12  | 65.19  | 62.38  | 59.06  |
| 90 and over .....            | 63.95  | 56.17  | 53.08  | 40.60  |
| All ages.....                | 100.34 | 98.16  | 102.72 | 102.32 |

The higher male birth rate is responsible for the larger number of males in the younger age groups whilst the higher male death rate is reflected in the very low masculinity ratios of the older age groups.

### Age Distribution

Details of the age distribution of the population are of particular importance, as apart from revealing changes which have occurred in the age structure from one census to the next, they also supply basic material for the calculation of fertility rates, and morbidity rates, probabilities of survival and annuity rates.

Age distribution of the population at the 1954 and 1961 Censuses is given in the table below. In the seven-year period the population increased by 172,246 persons (or 21.6%) and 101,542 of these were under 21 years of age. Population in the age group 10-14 years increased by 65.7% and in the age group 15-19 years by 57.5%.

Age Distribution<sup>(a)</sup> of Population, South Australia  
Censuses 1954 and 1961

| Age Last Birthday<br>(Years) | 30th June 1954 |         |         | 30th June 1961 |         |         | Increase<br>Persons |
|------------------------------|----------------|---------|---------|----------------|---------|---------|---------------------|
|                              | Males          | Females | Persons | Males          | Females | Persons |                     |
| 0-4 .....                    | 45,066         | 43,142  | 88,208  | 52,311         | 50,682  | 102,993 | 14,785              |
| 5-9 .....                    | 42,292         | 40,336  | 82,628  | 50,927         | 48,509  | 99,436  | 16,808              |
| 10-14 .....                  | 30,650         | 29,086  | 59,736  | 50,884         | 48,119  | 99,003  | 39,267              |
| 15-19 .....                  | 24,274         | 23,059  | 47,333  | 38,276         | 36,265  | 74,541  | 27,208              |
| 20-24 .....                  | 26,431         | 23,224  | 49,655  | 31,538         | 28,879  | 60,417  | 10,762              |
| 25-29 .....                  | 32,905         | 29,381  | 62,286  | 29,600         | 26,852  | 56,452  | (-) 5,834           |
| 30-34 .....                  | 32,958         | 30,903  | 63,861  | 35,328         | 31,891  | 67,219  | 3,358               |
| 35-39 .....                  | 29,718         | 28,088  | 57,806  | 37,175         | 35,300  | 72,475  | 14,669              |
| 40-44 .....                  | 29,280         | 27,351  | 56,631  | 32,746         | 31,229  | 63,975  | 7,344               |
| 45-49 .....                  | 25,068         | 22,586  | 47,654  | 31,959         | 29,687  | 61,646  | 13,992              |
| 50-54 .....                  | 20,671         | 19,773  | 40,444  | 26,240         | 24,641  | 50,881  | 10,437              |
| 55-59 .....                  | 16,843         | 18,401  | 35,244  | 20,934         | 19,857  | 40,791  | 5,547               |
| 60-64 .....                  | 16,059         | 18,261  | 34,320  | 16,305         | 18,340  | 34,645  | 325                 |
| 65-69 .....                  | 13,492         | 15,367  | 28,859  | 13,497         | 17,419  | 30,916  | 2,057               |
| 70-74 .....                  | 9,230          | 11,294  | 20,524  | 11,003         | 14,104  | 25,107  | 4,583               |
| 75-79 .....                  | 5,126          | 6,971   | 12,097  | 6,854          | 9,535   | 16,389  | 4,292               |
| 80-84 .....                  | 2,551          | 3,824   | 6,375   | 3,185          | 5,101   | 8,286   | 1,911               |
| 85-89 .....                  | 1,013          | 1,624   | 2,637   | 1,167          | 1,976   | 3,143   | 506                 |
| 90 and over .....            | 276            | 520     | 796     | 296            | 729     | 1,025   | 229                 |
| Total .....                  | 403,903        | 393,191 | 797,094 | 490,225        | 479,115 | 969,340 | 172,246             |

(a) Adjusted for age not stated.

The next table shows that the proportion of the population under 15 years of age continued to fall between 1901 and 1947 but has since risen to approximately the same level as 1911. On the other hand, the proportion 15 years and under 65 years showed a continued increase to 1947 but fell to the 1901 level by 1961. The proportion of the population 65 years and over continued to rise except for a very slight fall in 1961.

Proportional Age Distribution of Population, South Australia  
Censuses 1901 to 1961

| Census   | Males          |                       |                   | Females        |                       |                   | Persons        |                       |                   |
|----------|----------------|-----------------------|-------------------|----------------|-----------------------|-------------------|----------------|-----------------------|-------------------|
|          | Under 15 Years | 15 Years and Under 65 | 65 Years and Over | Under 15 Years | 15 Years and Under 65 | 65 Years and Over | Under 15 Years | 15 Years and Under 65 | 65 Years and Over |
|          | Per Cent       |                       |                   |                |                       |                   |                |                       |                   |
| 1901.... | 36.0           | 60.0                  | 4.0               | 35.9           | 59.8                  | 4.3               | 35.9           | 59.9                  | 4.2               |
| 1911.... | 31.1           | 64.4                  | 4.5               | 31.3           | 63.8                  | 4.9               | 31.2           | 64.1                  | 4.7               |
| 1921.... | 32.2           | 62.8                  | 5.0               | 31.3           | 63.5                  | 5.2               | 31.7           | 63.2                  | 5.1               |
| 1933.... | 26.8           | 66.6                  | 6.6               | 26.0           | 66.6                  | 7.4               | 26.4           | 66.6                  | 7.0               |
| 1947.... | 25.1           | 67.0                  | 7.9               | 23.5           | 67.0                  | 9.5               | 24.3           | 67.6                  | 8.7               |
| 1954.... | 29.2           | 62.9                  | 7.9               | 28.6           | 61.3                  | 10.1              | 28.9           | 62.1                  | 9.0               |
| 1961.... | 31.4           | 61.2                  | 7.4               | 30.7           | 59.1                  | 10.2              | 31.1           | 60.1                  | 8.8               |

The mean or average age of the population of South Australia at the 1947 Census was 33.3 years (males 32.7 and females 33.9), in 1954 was 32.2 years (males 31.5 and females 32.9), and by 1961 had fallen further to 31.3 years (males 30.6 and females 32.1).

Conjugal Condition

The marital status of the population was ascertained at the 1954 and 1961 Censuses, when persons were asked to state whether they were never married, married, married but permanently separated, widowed, or divorced.



In 1961, the number of persons who stated they were never married represented 47.6% of the total population, a small increase on the 45.7% in 1954, which can be explained by a rise in the proportion of the population below marriageable age. Married persons in 1961 were 45.8% of the total as against 47.4% in 1954.

### Conjugal Condition of Population, South Australia

Censuses 1954 and 1961

| Conjugal Condition                          | 30th June 1954 |          |         |          | 30th June 1961 |          |         |          |
|---|----------------|----------|---------|----------|----------------|----------|---------|----------|
|   | Males          |          | Females |          | Males          |          | Females |          |
|   | Number         | Per Cent | Number  | Per Cent | Number         | Per Cent | Number  | Per Cent |
| Never married—                              |                |          |         |          |                |          |         |          |
| Under 15 years of age . . . . .             | 118,008        | 29.22    | 112,564 | 28.63    | 154,122        | 31.44    | 147,310 | 30.74    |
| 15 years of age and over . . . . .          | 78,658         | 19.47    | 54,980  | 13.98    | 93,927         | 19.16    | 66,055  | 13.79    |
| Total . . . . .                             | 196,666        | 48.69    | 167,544 | 42.61    | 248,049        | 50.60    | 213,365 | 44.53    |
| Married . . . . .                           | 189,878        | 47.01    | 187,780 | 47.76    | 223,321        | 45.56    | 220,579 | 46.04    |
| Married but permanently separated . . . . . | 3,911          | 0.97     | 4,181   | 1.06     | 5,049          | 1.03     | 5,540   | 1.16     |
| Widowed . . . . .                           | 10,026         | 2.48     | 30,397  | 7.73     | 10,303         | 2.10     | 35,974  | 7.51     |
| Divorced . . . . .                          | 2,901          | 0.72     | 3,082   | 0.79     | 3,503          | 0.71     | 3,657   | 0.76     |
| Not stated . . . . .                        | 521            | 0.13     | 207     | 0.05     | (a)            | (a)      | (a)     | (a)      |
| Grand total                                 | 403,903        | 100.00   | 393,191 | 100.00   | 490,225        | 100.00   | 479,115 | 100.00   |

(a) In 1961 conjugal condition was allocated prior to tabulation where this information was not stated.

The proportion of widowed persons fell slightly from 5.1% of the population in 1954 to 4.8% in 1961. In the same period the ratio of widowed females to widowed males increased from 303:100 to 349:100. The disparity between the number of widowed males and widowed females is the result of the greater longevity of females coupled with the usually younger age at marriage, and the greater proportion of widowed males who remarry.

### Period of Residence in Australia

The post-war migration flow into Australia is shown by the numbers of persons who have taken up residence in Australia since the late 1940's. The following table gives details of period of residence of such persons residing in South Australia at the 1954 and 1961 Censuses.

#### Period of Residence in Australia of Persons Residing in South Australia

Censuses 1954 and 1961

| Period of Residence             | 30th June 1954 |         |         | 30th June 1961 |         |         | Increase<br>Persons |
|---------------------------------|----------------|---------|---------|----------------|---------|---------|---------------------|
|                                 | Males          | Females | Persons | Males          | Females | Persons |                     |
| Under 1 year . . . . .          | 5,105          | 3,707   | 8,812   | 8,859          | 6,381   | 15,240  | 6,428               |
| 1 year and under 2 . . . . .    | 3,544          | 2,896   | 6,440   | 6,678          | 5,662   | 12,340  | 5,900               |
| 2 years and under 3 . . . . .   | 8,038          | 4,384   | 12,422  | 6,522          | 6,388   | 12,910  | 488                 |
| 3 years and under 4 . . . . .   | 6,774          | 4,724   | 11,498  | 4,321          | 5,178   | 9,499   | (-) 1,999           |
| 4 years and under 5 . . . . .   | 10,528         | 6,808   | 17,336  | 4,969          | 5,212   | 10,181  | (-) 7,155           |
| 5 years and under 6 . . . . .   | 7,336          | 4,944   | 12,280  | 6,981          | 5,329   | 12,310  | 30                  |
| 6 years and under 7 . . . . .   | 2,340          | 1,410   | 3,750   | 6,385          | 4,886   | 11,271  | 7,521               |
| 7 years and under 14 . . . . .  | 19,933         | 16,130  | 36,063  | 40,110         | 28,776  | 68,886  | 62,950              |
| 14 years and under 21 . . . . . |                |         |         | 1,392          | 1,247   | 2,639   |                     |
| 21 years and over . . . . .     |                |         |         | 15,087         | 12,401  | 27,488  |                     |
| Not stated . . . . .            | 1,361          | 643     | 2,004   | 2,236          | 1,112   | 3,348   | 1,344               |
| Born outside Australia          | 64,959         | 45,646  | 110,605 | 103,540        | 82,572  | 186,112 | 75,507              |
| Born in Australia . . . . .     | 338,944        | 347,545 | 686,489 | 386,685        | 396,543 | 783,228 | 96,739              |
| Total population . . . . .      | 403,903        | 393,191 | 797,094 | 490,225        | 479,115 | 969,340 | 172,246             |

In 1947 there were 43,552 persons residing in South Australia who were not born in Australia and only about 10% of these had lived in Australia for less than 10 years. By 1954 the number of such persons had risen to 110,605, of whom 65% had resided in Australia for less than 7 years; and by 1961 the number was 186,112, of whom 45% had resided in Australia for less than 7 years and a further 37% for 7 years but less than 14 years.

### Country of Birth

At the first census conducted by the Commonwealth in 1911, the people of Australia were asked to state their place of birth. The Australian-born content of the population in South Australia was 85.7% in 1911, 88.3% in 1921, 90.3% in 1933, and 93.3% in 1947. Oversea migration had lowered the proportion of Australian-born persons to 86.1% by 1954, whilst in 1961 the proportion was down to 80.8%. In 1961, 8.1% of the remainder were born in the United Kingdom or the Republic of Ireland. At the earlier censuses this percentage was as high as 11% in 1911 but had fallen to 5.1% by 1947.

### Country of Birth of Population, South Australia

*Censuses 1954 and 1961*

| Country of Birth                                | 30th June 1954 |         |         | 30th June 1961 |         |         | Increase<br>Persons |
|---|----------------|---------|---------|----------------|---------|---------|---------------------|
|   | Males          | Females | Persons | Males          | Females | Persons |                     |
| Australia .....                                 | 338,944        | 347,545 | 686,489 | 386,685        | 396,543 | 783,228 | 96,739              |
| New Zealand .....                               | 780            | 745     | 1,525   | 936            | 890     | 1,826   | 301                 |
| Europe—   |                |         |         |                |         |         |                     |
| United Kingdom and<br>Republic of Ireland ..... | 27,098         | 23,379  | 50,477  | 41,684         | 37,102  | 78,786  | 28,309              |
| Germany .....                                   | 5,338          | 4,279   | 9,617   | 8,345          | 7,662   | 16,007  | 6,390               |
| Greece .....                                    | 1,819          | 990     | 2,809   | 5,341          | 4,187   | 9,528   | 6,719               |
| Italy .....                                     | 8,112          | 3,721   | 11,833  | 15,446         | 10,784  | 26,230  | 14,397              |
| Malta .....                                     | 595            | 309     | 908     | 1,030          | 732     | 1,762   | 854                 |
| Netherlands .....                               | 2,285          | 1,651   | 3,936   | 6,781          | 5,758   | 12,539  | 8,603               |
| Poland .....                                    | 4,481          | 2,116   | 6,597   | 4,471          | 2,468   | 6,939   | 342                 |
| Other .....                                     | 11,054         | 6,268   | 17,322  | 14,686         | 9,415   | 24,101  | 6,779               |
| Total Europe .....                              | 60,786         | 42,713  | 103,499 | 97,784         | 78,108  | 175,892 | 72,393              |
| Other countries .....                           | 3,393          | 2,188   | 5,581   | 4,820          | 3,574   | 8,394   | 2,813               |
| Total born outside Australia                    | 64,959         | 45,646  | 110,605 | 103,540        | 82,572  | 186,112 | 75,507              |
| Total .....                                     | 403,903        | 393,191 | 797,094 | 490,225        | 479,115 | 969,340 | 172,246             |

Of persons born in Europe, the greatest numerical increase between 1954 and 1961 was in persons born in the United Kingdom and the Republic of Ireland although higher proportional increases were recorded for persons born in some other European countries, *e.g.*, Germany, Greece, Italy, and the Netherlands.

### Nationality

The nationality (or country of allegiance) of the population of South Australia at June 1954 and 1961 is given in the following table. For purposes of this table, Irish nationality is included with British. Decreases in the number of persons of some nationalities in 1961 are due in part to British naturalization of some former aliens.

## Nationality (i.e., Allegiance) of Population, South Australia

Censuses 1954 and 1961

| Nationality                               | 30th June 1954 |                |                | 30th June 1961 |                |                | Increase       |
|---|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
|   | Males          | Females        | Persons        | Males          | Females        | Persons        | Persons        |
| <b>British (a)—</b>                       |                |                |                |                |                |                |                |
| Born in Australia .....                   | 338,944        | 347,545        | 686,489        | 386,685        | 396,543        | 783,228        | 96,739         |
| Born outside Australia ...                | 35,124         | 28,509         | 63,633         | 71,059         | 57,413         | 128,472        | 64,839         |
| <b>Total British .....</b>                | <b>374,068</b> | <b>376,054</b> | <b>750,122</b> | <b>457,744</b> | <b>453,956</b> | <b>911,700</b> | <b>161,578</b> |
| <b>Foreign—</b>                           |                |                |                |                |                |                |                |
| Dutch .....                               | 2,279          | 1,713          | 3,992          | 5,216          | 4,678          | 9,894          | 5,902          |
| German .....                              | 3,621          | 2,357          | 5,978          | 4,537          | 3,753          | 8,290          | 2,312          |
| Greek .....                               | 1,272          | 687            | 1,959          | 3,767          | 3,297          | 7,064          | 5,105          |
| Hungarian .....                           | 788            | 389            | 1,177          | 699            | 476            | 1,175          | (-) 2          |
| Italian .....                             | 6,511          | 2,781          | 9,292          | 9,928          | 7,935          | 17,863         | 8,571          |
| Latvian, Lithuanian and<br>Estonian ..... | 2,984          | 2,339          | 5,323          | 547            | 332            | 879            | (-) 4,444      |
| Polish .....                              | 4,249          | 2,503          | 6,752          | 1,465          | 926            | 2,391          | (-) 4,361      |
| Ukranian .....                            | 1,559          | 1,103          | 2,662          | 373            | 226            | 599            | (-) 2,063      |
| Yugoslavian .....                         | 1,578          | 792            | 2,370          | 1,456          | 857            | 2,313          | (-) 57         |
| Other (including Stateless) ..            | 4,994          | 2,473          | 7,467          | 4,493          | 2,679          | 7,172          | (-) 295        |
| <b>Total foreign .....</b>                | <b>29,835</b>  | <b>17,137</b>  | <b>46,972</b>  | <b>32,481</b>  | <b>25,159</b>  | <b>57,640</b>  | <b>10,668</b>  |
| <b>Total .....</b>                        | <b>403,903</b> | <b>393,191</b> | <b>797,094</b> | <b>490,225</b> | <b>479,115</b> | <b>969,340</b> | <b>172,246</b> |

(a) Includes Irish.

Persons of British nationality represented 99.7% of the State population in 1947, but the proportion fell to 94.1% by 1954 and was at this same level in 1961.

**Other Characteristics**

Some census information relating to religion of the population is given in Part 6.5, and details of occupation, occupational status and industry are set out in Part 7.1.

## **PART 6**

# **SOCIAL ENVIRONMENT**

## **6.1. LAW, ORDER AND PUBLIC SAFETY**

### **LAW AND ADMINISTRATION**

The law in force in South Australia consists of—

- (i) So much of the common law of England and such English Statute law as came into force on the original settlement of the colony in 1836;
- (ii) Acts passed by the Parliament of the State of South Australia, together with regulations, rules, orders, etc., made thereunder;
- (iii) Acts passed by the Parliament of the Commonwealth of Australia within the scope of its allotted powers, together with regulations, rules, orders, etc., made thereunder;
- (iv) Imperial law binding South Australia as part of the British Commonwealth, as part of the Commonwealth of Australia or as a State—subject, since 1931, to the Statute of Westminster. (This relates mainly to external affairs or matters of Imperial concern);
- (v) Case law. (This consists of judicial decisions of the English, Commonwealth, or State Courts, respectively, and represents an important part of the law in force in South Australia.)

The scope of Commonwealth legislation is limited to the subjects specified in the Commonwealth Constitution. In some cases Commonwealth powers of legislation are exclusive of, in others concurrent with, those of the State. In all cases of conflict, valid Commonwealth laws override State laws.

## LEGAL PROFESSION

Legal practitioners in South Australia are admitted to the Bar, after the prescribed academic training and service in articles, as barristers, solicitors, attorneys and proctors. This means that the legal profession is not divided, as it is in the eastern States. A practitioner is entitled to pursue any one or more of the four callings.

The legal profession is controlled by the Legal Practitioners Act, 1936-1948. Rules of Court prescribe the conditions of entry to the profession, regulate articles of clerkship and specify the legal examinations which must be passed before admission to practice. Women are eligible for admission. A practitioner duly admitted to practice has the right of audience in all courts of South Australia. The Act provides for the hearing of charges of unprofessional conduct by the statutory committee of the Law Society and for its report to be referred to the Supreme Court which may make any order it thinks fit.

In 1964 there were 340 legal practitioners actually practising in the State—of these 305 were practising in the City of Adelaide.

## LEGAL DEPARTMENT

In South Australia the Attorney-General is a Minister of State Parliament. There is a Crown Solicitor who, under the Attorney-General, acts as legal adviser to the Government.

The Attorney-General is charged with the conduct of business relating to the Supreme Court, the officers of the Crown Solicitor's Department (which includes the Crown Prosecutor), the Parliamentary Draftsman and court reporters as well as Statute Law consolidation and certain Acts, including the Criminal Law Consolidation Act. He also advises Ministers on questions on which his legal opinion is required, initiates and defends proceedings by and against the State and determines whether informations should be laid in cases of indictable offences.

The Attorney-General supervises the working of inferior courts and the operations of the various officers connected with the Supreme Court. He administers Acts of Parliament relating to justices, coroners, lands titles, registration of firms, companies and deeds, licensing and the Electoral Department.

## SUPREME COURT

The various jurisdictions of the Court are civil, criminal, matrimonial causes and testamentary causes.

Judges of the Supreme Court are appointed by commission of the Governor on the advice of the Executive Council. A person may not be appointed a judge of the Supreme Court unless he is a legal practitioner of ten years' standing.

The Supreme Court Act, 1935-1963, provides *inter alia* for the constitution, jurisdiction, powers and duties, of the Supreme Court and its judges. One of the powers of the judges of the Court of particular importance is that of making Rules of Court regulating the procedure of the Court. In particular the Rules may regulate the admission to practice of practitioners of the Supreme Court and control their conduct. All Rules of Court are published in the *Government Gazette*.

There are at present six judges of the Supreme Court, comprising the Chief Justice and five puisne judges. A judge holds office until the age of 70 years at a salary fixed by Statute. The Court sits in Adelaide, but holds circuit sessions three times each year at Port Augusta and Mount Gambier.

### Civil and Criminal Jurisdiction

Generally speaking, the Supreme Court has unlimited civil and criminal jurisdiction, limited only in respect of matters which are reserved for the original jurisdiction of federal courts. English practice applies where no contrary provisions exist in the State's Statute law.

Crimes and misdemeanours prosecuted by indictment in the Supreme Court must be tried before a jury of 12 persons who find as to the facts of the case, the punishment being determined by the judge. Capital punishment applies in the case of murder, treason and certain offences under the Commonwealth *Crimes Act* 1940-1960, and *Crimes (in Aircraft) Act* 1963.

The Court has original jurisdiction over all litigious matters arising in the State except where its jurisdiction is excluded by Statute. Its original jurisdiction is usually exercised by one judge although it is possible in theory to try a civil issue with a jury.

The money value of judgments entered during 1964 either on liquidated claims or claims for unspecified damages was £733,702.

The Court also has power at common law to restrain inferior courts acting in excess of their jurisdiction and may, by order, compel them to enforce a legal right. The Court also acts as a court of appeal from inferior courts. During 1964, the Supreme Court heard 121 appeals from inferior courts. Of these, 75 (of which 25 were allowed) were from decisions of special magistrates and 44 (of which 23 were allowed) were from decisions of justices of the peace.

In proper cases, appeals may be carried from decisions of the Supreme Court to the High Court of Australia, or to the Privy Council.

The following table gives details of persons tried, convicted, and executed for the years 1955 to 1964. In the post-war period to the end of 1964 a total of 21 persons have been sentenced to death in South Australia, 15 of these sentences being subsequently commuted. No female has been executed in the State since 1873.

### Supreme and Circuit Courts: Trials, Convictions and Executions, South Australia

| Year      | Tried |         | Convicted |         | Executed |
|-----------|-------|---------|-----------|---------|----------|
|           | Males | Females | Males     | Females | Males    |
| 1955..... | 369   | 21      | 323       | 17      | —        |
| 1956..... | 379   | 22      | 347       | 15      | 1        |
| 1957..... | 499   | 22      | 444       | 15      | —        |
| 1958..... | 480   | 24      | 438       | 19      | 1        |
| 1959..... | 528   | 17      | 482       | 17      | —        |
| 1960..... | 590   | 27      | 557       | 23      | —        |
| 1961..... | 622   | 17      | 591       | 15      | —        |
| 1962..... | 743   | 24      | 697       | 21      | —        |
| 1963..... | 737   | 35      | 716       | 29      | —        |
| 1964..... | 650   | 21      | 608       | 21      | 1        |

Details of convictions classified by type of offence are set out below:—

**Supreme and Circuit Courts: Persons Convicted<sup>(a)</sup>, South Australia**

| Type of Offence   | 1960       | 1961       | 1962       | 1963       | 1964       |
|---|------------|------------|------------|------------|------------|
| <b>Offences against the person—</b>                       |            |            |            |            |            |
| Murder and attempted murder .....                         | 1          | —          | 6          | 2          | 3          |
| Other acts causing death, injury or endangering life..... | 27         | 22         | 28         | 32         | 39         |
| Offences against females .....                            | 153        | 149        | 242        | 182        | 142        |
| Unnatural offences .....                                  | 12         | 29         | 33         | 33         | 39         |
| Other offences against the person .....                   | 7          | 15         | 23         | 12         | 11         |
| <b>Total .....</b>  | <b>200</b> | <b>215</b> | <b>332</b> | <b>261</b> | <b>234</b> |
| <b>Offences against property—</b>                         |            |            |            |            |            |
| Robbery .....   | 16         | 9          | 10         | 10         | 8          |
| Breaking and entering .....                               | 201        | 239        | 218        | 274        | 214        |
| Embezzlement and stealing by servants ...                 | 9          | 11         | 15         | 18         | 8          |
| Fraud and false pretences .....                           | 38         | 24         | 40         | 31         | 23         |
| Other offences against property .....                     | 56         | 37         | 39         | 45         | 46         |
| <b>Total .....</b>  | <b>320</b> | <b>320</b> | <b>322</b> | <b>378</b> | <b>299</b> |
| <b>Other offences—</b>                                    |            |            |            |            |            |
| Forgery and offences against the currency .               | 22         | 20         | 22         | 30         | 29         |
| Breach of recognizance .....                              | 14         | 15         | 13         | 24         | 25         |
| Other.....  | 24         | 36         | 29         | 52         | 42         |
| <b>Total .....</b>  | <b>60</b>  | <b>71</b>  | <b>64</b>  | <b>106</b> | <b>96</b>  |
| <b>Grand total .....</b>                                  | <b>580</b> | <b>606</b> | <b>718</b> | <b>745</b> | <b>629</b> |

(a) In the case of multiple charges, where more than one conviction is recorded, the most serious offence is counted.

### Matrimonial Causes Jurisdiction

As in other States, the Supreme Court exercises jurisdiction in matrimonial causes pursuant to the Commonwealth *Matrimonial Causes Act* 1959 which came into operation on 1st February, 1961. The Act superseded the existing State law, making many important changes in the practice and procedure of the Supreme Court in matrimonial causes.

“Matrimonial cause” normally refers to proceedings for a decree of dissolution of marriage; however, the Court also hears proceedings for a decree of nullity of marriage, judicial separation or restitution of conjugal rights.

The jurisdiction of the Supreme Court is co-extensive with the Supreme Courts of the other States: there is no requirement that either or both parties shall be domiciled or resident within the territorial boundaries of the jurisdiction of the court. However, the Court will transfer to the most convenient court any suit for which it considers itself not to be the appropriate court.

Proceedings for a decree of dissolution of marriage, or of nullity of a voidable marriage, can be instituted only by a person domiciled in Australia; while proceedings for a decree of nullity of a void marriage can be instituted by a person domiciled or resident in Australia. The grounds upon which a petition for dissolution of marriage may be granted are set out in Section 28 of the Act, the most important being adultery, desertion for two years, and habitual cruelty. Details of divorces granted and the grounds for divorce are shown in Part 6.9.

At the same time as the proceedings for principal relief, the Court may hear a claim for permanent maintenance and also a claim for custody of children. The powers of the Court in proceedings with respect to the custody, guardianship, welfare, advancement or education of children of the marriage are dealt with in Section 85 which provides that the Court shall regard the interests of the children as the paramount consideration but, subject to that, may make such order as it thinks proper. The Court also has wide powers in respect of the settlement of property.

### **Testamentary Causes Jurisdiction**

The Supreme Court in its testamentary causes jurisdiction is the only authority competent to grant probate of the will, or administration of the estate, of any deceased person who leaves real or personal property in the State. Pending a grant of probate or administration, all property of the deceased person is vested in the Public Trustee, and with a few exceptions, the property cannot be dealt with in any way until a grant has been obtained. The Court will not issue a grant until death duty has been paid.

The powers of the Court are exercised by a judge, the Master and the Registrar or Deputy Registrar of Probates. The latter deal with all applications for probate and administration where there is no contention and any matters prescribed by the rules. In cases of doubt or difficulty, the Registrar refers the matter to a Judge in Chambers. The records of the Court are available for public inspection, and copies of wills and other documents may be obtained.

In 1964, there were 4,679 grants of probate and administration.

### **LOCAL COURTS**

Local courts were first established in South Australia by an ordinance of 1850 and originally had criminal as well as civil jurisdiction.

The Local Courts Act, 1926, effected important alterations in the structure and jurisdiction of local courts by abolishing juries in local courts and also justices as constituent members of courts of full jurisdiction (except on the application of a party), by conferring equitable jurisdiction on the Local Court of Adelaide of Full Jurisdiction, and by giving a full appeal to the Supreme Court on facts as well as on law from all judgments, determinations, and orders of local courts in actions involving over £30.

Local courts are now established under the Local Courts Act, 1926-1962, and have only civil jurisdiction. They are to be found in Adelaide and the main country towns, and have jurisdiction in common law claims up to a limit of £1,250. The Local Court of Adelaide has certain equitable jurisdiction as set out in the Local Courts Act. In addition the Local Court of Adelaide and a number of specified local courts (*e.g.*, Port Adelaide, Port Pirie, Mount Gambier and others) exercise jurisdiction under certain other Acts, the principal of which is the Workmen's Compensation Act.

Claims under £30 may be heard by a Local Court of Limited Jurisdiction, that is, a local court constituted by two justices of the peace. Claims for a greater amount must be heard by a special magistrate or, in the Local Court of Adelaide, may be heard by the Local Court Judge.

Under Section 28 of the Local Courts Act the Local Court Judge may make Rules of Court for carrying the Act or any other Act conferring jurisdiction upon local courts into effect.



## Local Courts: Summary of Transactions, South Australia

| Year      | Total Claims         |                 | Verdicts and Judgments |        |                     |        |        |        | Service and Execution of Process Act      |                 |                   |
|-----------|----------------------|-----------------|------------------------|--------|---------------------|--------|--------|--------|---|-----------------|-------------------|
|           | Sum-mones Issued (a) | Amount Sued For | Verdicts by Trial      |        | Judgment by Default |        | Total  |        | Sum-mones for Service out of Jurisdiction | Certificates    |                   |
|           |                      |                 | Number                 | Amount | Number              | Amount | Number | Amount |   | To Other States | From Other States |
|           |                      | £'000           |                        | £'000  |                     | £'000  |        | £'000  |   |                 |                   |
| 1960..... | 85,287               | 3,092           | 1,653                  | 132    | 37,720              | 1,396  | 39,373 | 1,528  | 2,553                                     | 673             | 148               |
| 1961..... | 106,097              | 4,530           | 1,410                  | 157    | 47,848              | 1,988  | 49,258 | 2,145  | 2,983                                     | 962             | 202               |
| 1962..... | 94,566               | 3,840           | 1,370                  | 186    | 46,287              | 1,880  | 47,657 | 2,066  | 2,728                                     | 1,088           | 230               |
| 1963..... | 97,038               | 3,670           | 1,232                  | 182    | 46,569              | 1,860  | 47,801 | 2,042  | 2,617                                     | 1,095           | 266               |
| 1964..... | 103,218              | 4,124           | 1,407                  | 168    | 53,679              | 1,966  | 55,086 | 2,134  | 2,487                                     | 1,237           | 269               |

(a) Including those withdrawn or settled out of Court.

## COURTS OF SUMMARY JURISDICTION

Courts of summary jurisdiction are established in all major towns and hear all criminal cases where the penalty prescribed is imprisonment for two years or less. Their procedure is regulated by the Justices Act, 1921-1960. They are presided over either by a special magistrate or by two justices of the peace, with the more serious causes generally being heard by a special magistrate.

Special magistrates are appointed under the Justices Act, and each appointment must be approved by the Chief Justice. In practice appointees are required to be practitioners of the Supreme Court who have been practising for some years.

Courts of Summary Jurisdiction (Magistrates Courts), South Australia  
Persons Convicted, Including Juveniles<sup>(a)</sup>

| Offence                        | 1959-60 | 1960-61 | 1961-62 | 1962-63 | 1963-64 |
|--------------------------------|---------|---------|---------|---------|---------|
| Against the person .....       | 191     | 218     | 285     | 310     | 355     |
| Against property—              |         |         |         |         |         |
| Burglary and housebreaking ..  | 325     | 485     | 376     | 471     | 431     |
| Larceny (various) .....        | 1,267   | 1,723   | 1,705   | 1,675   | 1,941   |
| Other .....                    | 654     | 1,004   | 1,123   | 1,008   | 1,179   |
| Against morality .....         | 237     | 213     | 338     | 360     | 342     |
| Against good order—            |         |         |         |         |         |
| Drunkenness .....              | 5,273   | 5,438   | 6,178   | 7,485   | 6,952   |
| Unlawfully on premises .....   | 341     | 416     | 427     | 386     | 347     |
| Vagrancy .....                 | 381     | 364     | 391     | 414     | 378     |
| Other .....                    | 666     | 799     | 913     | 939     | 1,147   |
| Other, relating to—            |         |         |         |         |         |
| Road Traffic Act .....         | 24,617  | 26,693  | 27,672  | 31,840  | 27,645  |
| Licensing .....                | 1,167   | 1,644   | 1,528   | 1,610   | 1,018   |
| Maintenance Act .....          | 1,629   | 1,586   | 1,612   | 1,545   | 1,918   |
| Police Act .....               | 648     | 881     | 1,060   | 1,176   | 946     |
| Local government .....         | 1,657   | 6,620   | 6,224   | 4,150   | 5,101   |
| Australian Broadcasting Act .. | 504     | 664     | 683     | 1,012   | 2,284   |
| Income tax assessment .....    | 875     | 413     | 744     | 824     | 811     |
| Other .....                    | 2,099   | 2,994   | 2,272   | 2,319   | 3,011   |
| Total persons convicted—       |         |         |         |         |         |
| Males .....                    | 40,632  | 49,488  | 50,926  | 54,846  | 52,739  |
| Females .....                  | 1,899   | 2,667   | 2,605   | 2,678   | 3,067   |
| Total .....                    | 42,531  | 52,155  | 53,531  | 57,524  | 55,806  |

(a) Where multiple charges have been laid against one individual at the same time each type of offence has been counted separately.

Offences under the Road Traffic Act accounted for 50% of total convictions in 1963-64. This compares with 53% in 1958-59, 50% in 1954-55 and 42% in 1950-51.

Of the 3,067 females convicted in 1963-64, 704 were convicted of offences under the Road Traffic Act, 273 under the Maintenance Act, 366 under laws relating to local government (largely city parking offences), and 289 were convicted of various forms of larceny.

### JUVENILE COURTS

Juvenile courts for the trial of juvenile offenders *i.e.* persons under 18 years of age are presided over by a special magistrate or two justices of the peace who are approved as suitable to exercise this jurisdiction. The courts may try any offence (except homicide) committed by a juvenile. The penalties that may be imposed are a fine, a bond with or without supervision, or committal to the custody and control of the Children's Welfare Department or committal to a training school. Juvenile courts also exercise jurisdiction over destitute, neglected or uncontrolled children and may commit such children to a children's home. The principles upon which a juvenile court must act in making orders in respect of juveniles are set out in Section 15 of the Juvenile Courts Act, 1941, which reads as follows—

“Every juvenile court in making any order against a child shall have regard to the welfare of the child and the desirability of removing him from unsuitable surroundings and making proper provision for his education and training.”

#### Juveniles Convicted<sup>(a)</sup>, South Australia

| Offences                      | 1959-60 | 1960-61 | 1961-62 | 1962-63 | 1963-64 |
|-------------------------------|---------|---------|---------|---------|---------|
| Against the person .....      | 12      | 24      | 38      | 35      | 42      |
| Against property—             |         |         |         |         |         |
| Burglary and housebreaking .. | 323     | 479     | 360     | 450     | 420     |
| Larceny (various) .....       | 483     | 563     | 584     | 681     | 759     |
| Other .....                   | 174     | 233     | 268     | 255     | 334     |
| Against morality .....        | 137     | 82      | 157     | 186     | 166     |
| Against good order—           |         |         |         |         |         |
| Unlawfully on premises .....  | 47      | 102     | 98      | 132     | 83      |
| Other .....                   | 87      | 102     | 116     | 160     | 233     |
| Other—                        |         |         |         |         |         |
| Road Traffic Act .....        | 1,591   | 1,292   | 995     | 888     | 1,012   |
| Maintenance Act .....         | 239     | 332     | 348     | 325     | 398     |
| Police Act .....              | 59      | 107     | 124     | 169     | 195     |
| Other .....                   | 163     | 227     | 223     | 253     | 388     |
| Total juveniles convicted—    |         |         |         |         |         |
| Males .....                   | 3,032   | 3,197   | 2,948   | 3,160   | 3,647   |
| Females .....                 | 283     | 346     | 363     | 384     | 383     |
| Total .....                   | 3,315   | 3,543   | 3,311   | 3,544   | 4,030   |

(a) Under 18 years. Includes both police and private cases.

The 383 females convicted in 1963-64 included 240 charged under the Maintenance Act; *i.e.* they were girls found to be neglected, destitute or uncontrolled.

## ADOPTION COURTS

Adoption courts are held in Adelaide, Port Adelaide and all major country towns. They are presided over by a special magistrate and two justices of the peace, one of whom must be a woman. The function of these courts is to enquire into the character and standing of persons applying to adopt a child and to decide whether the adoption would be for the benefit of the child. For details of adoptions see the table on page 198.

## LICENSING COURTS

The licensing of hotels, storekeepers, billiard saloons and clubs is governed by the Licensing Act, 1932-1963, which is based on a similar Act of 1917. For the purpose of the Act, the State is divided into a series of districts.

The Licensing Court is presided over by a special magistrate who has been appointed to do this work.

A local option poll is necessary before a new licence can be granted. At the hearing of the application a memorial by resident electors may be presented either in support of or against the application. The court must also consider any objections made in accordance with the Act, *e.g.* that the proposed licensed premises would constitute a disturbance to the peace or would be too near a church or a school, etc.

The Licensing Court also grants permits for restaurants to serve Australian wines with meals during meal hours.

Details of the number of licences operating in recent years are given in the table below. The effect of the local option system in restraining any extension of liquor outlets is reflected in the table. The number of hotel licences has remained virtually unaltered since 1925 and has not been below 580 since 1880 when the State's population (including Northern Territory) was little more than one quarter of the present population.

## Hotels and Other Licensed Premises, South Australia

| Type of Licence                   | At 31st December |            |            |            |            |
|-----------------------------------|------------------|------------|------------|------------|------------|
|                                   | 1960             | 1961       | 1962       | 1963       | 1964       |
| Hotels .....                      | 587              | 584        | 588        | 588        | 589        |
| Storekeeper's Australian wine.... | 83               | 83         | 83         | 83         | 86         |
| Storekeepers .....                | 45               | 45         | 44         | 44         | 50         |
| Distiller's storekeepers .....    | 18               | 18         | 19         | 18         | 19         |
| Clubs .....                       | 26               | 32         | 35         | 36         | 41         |
| Wine saloons .....                | 14               | 14         | 14         | 14         | 14         |
| Brewers .....                     | 8                | 8          | 8          | 8          | 8          |
| Railway refreshment rooms .....   | 1                | 1          | 1          | 1          | 1          |
| Billiards (a) .....               | 56               | 53         | 52         | 51         | 51         |
| <b>Total licences .....</b>       | <b>838</b>       | <b>838</b> | <b>844</b> | <b>843</b> | <b>859</b> |
| <b>Restaurant permits</b>         | <b>57</b>        | <b>66</b>  | <b>79</b>  | <b>88</b>  | <b>102</b> |

(a) Excludes billiard tables at hotels and clubs.

## BANKRUPTCY

Since 1928 bankruptcy has been under federal jurisdiction. Under the Commonwealth *Bankruptcy Act* 1924-1959 South Australia is a bankruptcy "district" and jurisdiction is exercised through the Court of Insolvency of the State of South Australia exercising Commonwealth jurisdiction in bankruptcy.

## Bankruptcies: Numbers, Liabilities, Assets, South Australia

| Year      | Sequestration Orders and Orders for Administration of Deceased Debtors Estates |             |         | Compositions, Schemes of Arrangement and Deeds of Assignment |             |         | Total Debtors |
|-----------|--|-------------|---------|--|-------------|---------|---------------|
|           | Number   | Liabilities | Assets  | Number   | Liabilities | Assets  |               |
|           |  | £           | £       |  | £           | £       |               |
| 1960..... | 322  | 551,368     | 291,285 | 46   | 122,193     | 100,757 | 368           |
| 1961..... | 502  | 1,600,276   | 696,901 | 59   | 302,865     | 294,988 | 561           |
| 1962..... | 528  | 930,171     | 458,584 | 92   | 602,955     | 449,153 | 620           |
| 1963..... | 496  | 1,031,136   | 449,518 | 88   | 700,884     | 605,195 | 584           |
| 1964..... | 626  | 1,269,669   | 630,496 | 49   | 271,983     | 236,306 | 675           |

## JURY SYSTEM

The procedure in relation to juries is governed by the Juries Act, 1927-1965.

With certain exceptions all men over the age of 25 and under 65 who are enrolled as electors for the House of Assembly are qualified and liable to serve as jurors. Men exempted from liability to serve include judges, members of Parliament, certain public officers, members of the defence forces, clergymen, legal practitioners, magistrates, police officers, doctors, dentists, pharmacists and school masters.

Legislation passed in 1965 provided for women to serve on juries under the same qualifications as men. Automatically exempted are nurses and wives of judges or magistrates, but any other woman may be exempted upon application. It is anticipated that women will first sit on juries in 1966.

A jurors list is compiled annually for each jurors district by the Sheriff. The jurors summoned to hear and determine an issue are decided by lot. Accused persons and the Crown each have the right to challenge three jurors without assigning reasons.

## STATE INDUSTRIAL TRIBUNALS

Industrial arbitration in South Australia was inaugurated in 1894 by the establishment of Boards of Conciliation. Since then the system has undergone fundamental changes from time to time and the present basis is the Industrial Code, 1920-1963. Under the Code the Board of Industry, the Industrial Court and over 60 Industrial Boards are established.

For details on the composition of these bodies and their functions see Part 7.2.

## LEGAL ASSISTANCE SCHEME

The Poor Persons Legal Assistance Scheme is administered by the Law Society of South Australia Incorporated. It has been in operation since 1933 as a means

of providing legal help necessary for persons who would otherwise through lack of money be embarrassed or prevented from the proper assertion of their legal rights.

The basis of the scheme is an agreement between the Government and the Law Society which has given an undertaking that "no person shall be without proper legal assistance if he is deserving of such assistance and would be unable to obtain it without the help of the Society's members". In return, the Government makes an annual grant to the Society (£8,985 in 1963-64) to cover the administrative expenses in carrying out the scheme. In addition, the Government makes a half-yearly grant out of which members of the profession who undertake assignments under the scheme receive payment of out-of-pocket expenses and a proportionate amount of costs. The last grant in 1964 was £4,500 representing 4s. in the pound.

#### PUBLIC TRUSTEE

The office of Public Trustee was established in 1881 and is now regulated by the Administration and Probate Act, 1919-1960.

The office provides a necessary and efficient service to the public in ensuring the safe and economical administration of estates and the protection of infants and absentee beneficiaries in estates administered by private administrators.

Any person may appoint the Public Trustee to be the executor and trustee of a will. He may also appoint him as trustee of any disposition of property creating a trust, other than a trust exclusively for religious purposes.

The Public Trustee, where directed by the Court, becomes administrator of certain deceased estates; acts as guardian of certain infants; controls a protected person's property under the Aged and Infirm Persons' Property Act; and receives, invests and distributes for the benefit of widows and orphan dependants, amounts awarded under the Workmen's Compensation Act.

Under the Mental Health Act, the Public Trustee has control of the estates of patients in Government mental hospitals, and may be appointed to act for the estate of any person found to be of unsound mind.

#### THE SOUTH AUSTRALIAN POLICE FORCE

Although South Australia was colonized in 1836 there was no police force until 1838. The formation of a police force became necessary following the arrival of former convicts from the eastern colonies, and trouble with natives at Port Lincoln and along the River Murray. The original police force was administered by a board of commissioners until 1840, when the first Commissioner of Police was appointed.

Early mobility depended largely on horses, and it was not until 1922 that the first motor cycles were introduced into the force as a forerunner of the present day motorized components. The system of radio-controlled patrols was introduced in 1948. In addition to the metropolitan network, all country police headquarters and a number of outback stations are in constant radio contact with the central radio room in Adelaide.

Police Personnel<sup>(a)</sup>, South Australia

As at 30th June

| Personnel                        | 1960  | 1961  | 1962  | 1963  | 1964  |
|----------------------------------|-------|-------|-------|-------|-------|
| Commissioned officers .....      | 36    | 37    | 38    | 38    | 39    |
| Non-commissioned officers .....  | 268   | 269   | 342   | 379   | 456   |
| Constables .....                 | 963   | 1,035 | 1,047 | 985   | 956   |
| Women police .....               | 34    | 35    | 39    | 39    | 45    |
| Total active police force        | 1,301 | 1,376 | 1,466 | 1,441 | 1,496 |
| Inhabitants per active member .. | 727   | 704   | 682   | 700   | 690   |

(a) Active police force strength ; excludes trainees, Women Police auxiliaries, civil staff, etc.

Routine maintenance of law and order and reduction of opportunities for criminal activity are the main functions of the Uniformed Branch.

The Traffic Division, while concerned with the general regulation and control of traffic, also aims at reducing the number of road fatalities and injuries. Testing of vehicles for roadworthiness, lecturing on road courtesy and safety, practical driving courses and driving tests for licence applicants are all aimed at greater road safety.

The Criminal Investigation Branch is split into squads each concerned with a particular type of crime. Auxiliary services provided by the *modus operandi*, fingerprint and photographic, scientific, ballistics and handwriting sections are often essential aids in criminal investigation.

Women Police officers have a role in the social welfare of the community which is now well recognized. These officers render assistance to lost and destitute children and endeavour to alleviate domestic suffering and hardship. They are also active in the fight against juvenile delinquency. At the 30th June 1964 there were 45 Women Police officers.

In 1959 a Police Emergency Operations Group consisting of a Cliff Rescue Squad, Underwater Recovery Squad and an Emergency Squad was constituted. The Commissioner of Police is also responsible for the Emergency Fire Services, operations of which are outlined on pages 125-126.

Today, with a proliferation of laws and changing policing techniques, much emphasis is placed on the work of the Training Division. Police cadets (enrolled at 16 or 17 years) are given a three year course of academic and practical instruction at the Fort Largs Training Academy before graduating to active police work. At 30th June 1964 there were 318 police cadets. As well as this initial training, refresher courses keep the members abreast of changing administrative and legal developments, and of changes in policing techniques. Also provided are specialist and higher training courses for senior officers, and each year a number of members attend the Civil Defence School at Mount Macedon, Victoria.

## South Australian Police Force, Revenue and Expenditure

| Year          | Expenditure        |         |           | Revenue | Net Cost  |                |
|---------------|--------------------|---------|-----------|---------|-----------|----------------|
|               | Wages and Salaries | Other   | Total     |         | Total     | Per Inhabitant |
|               | £                  | £       | £         | £       | £         | £              |
| 1959-60 ..... | 1,682,378          | 601,366 | 2,283,744 | 34,120  | 2,249,624 | 2.41           |
| 1960-61 ..... | 1,892,555          | 672,265 | 2,564,820 | 43,092  | 2,521,728 | 2.60           |
| 1961-62 ..... | 2,132,441          | 734,908 | 2,867,349 | 41,897  | 2,825,452 | 2.85           |
| 1962-63 ..... | 2,181,408          | 776,925 | 2,958,333 | 45,820  | 2,912,513 | 2.89           |
| 1963-64 ..... | 2,319,615          | 852,138 | 3,171,753 | 49,132  | 3,122,621 | 3.03           |

## GAOLS AND PRISONS.

There were seven gaols and prisons in use in South Australia during the year 1963-64. Adelaide Gaol, a holding centre for remand prisoners and sentenced prisoners serving under 3 months, also houses a women's section. Yatala Labor Prison (8 miles from Adelaide) is a maximum security institution for sentences from 3 months to life. Gladstone Prison (mid-North), Port Augusta Gaol (North), Mount Gambier Gaol (South East), and Port Lincoln Gaol (West Coast), are all medium security institutions. Cadell Training Centre on the River Murray 100 miles from Adelaide is a dual purpose training institution, accommodating 60 selected minimum security trainees and 60 medium security short-term prisoners. In addition there are 7 police prisons strategically situated throughout the State to cater for short-term prisoners.

Plans are well advanced for new gaols to be built at Port Augusta and Port Lincoln. A new women's prison is to be built at the suburb of Northfield to replace the present women's section at the Adelaide Gaol. Two other projects, as adjuncts to Yatala Labor Prison, are also under consideration, viz an Alcoholics Rehabilitation Centre, and a hospital for criminal mental defectives.

In common with other States and countries the emphasis in South Australia is on rehabilitation. With this end in view officers are carefully selected and undergo an intensive training course before being appointed to the prison service. Refresher and advanced training courses are held continuously to keep officers informed on penological matters. A large variety of trades and industries is available throughout the institutions enabling prisoners to be trained for ultimate outside employment. Education courses at all levels are available at no cost; special classes are held for migrants and illiterates; medical, dental, psychological, and psychiatric services are also provided. A classification committee ensures that prisoners are correctly assessed for education, employment, and other training purposes, etc. and group counselling is practised in all institutions. Chaplains, the Prisoners' Aid Association and other voluntary organizations willingly assist the prison administration in a wide range of matters affecting the well-being and after care of prisoners and their families.

Two valuable community services rendered by prisoners are the transcription of books into braille for the blind, and the provision of emergency fire service units at three institutions.

In South Australia the terms "parole" and "probation" are synonymous. Prisoners may be released on probation by the courts or released on probation from prison after serving portion of their sentence. Both categories of probationers

come under the supervision of probation officers of the Adult Probation Service. Officers of this service also supervise prisoners released on licence, such as habitual criminals, and those serving life sentences. The Adult Probation Service also prepares pre-sentence reports for the courts.

### Gaols and Prisons, South Australia

| Year          | Total Accommodation for Prisoners | Prisoners Received to Serve Sentence (a) (b) |         | Daily Average Number of Prisoners under Sentence (a) |         |
|---------------|-----------------------------------|--|---------|--|---------|
|               |                                   | Males  | Females | Males  | Females |
| 1959-60 ..... | 959                               | 4,282  | 106     | 538  | 14      |
| 1960-61 ..... | 965                               | 4,478  | 107     | 622  | 14      |
| 1961-62 ..... | 1,015                             | 5,005  | 149     | 694  | 17      |
| 1962-63 ..... | 1,018                             | 4,933  | 108     | 652  | 10      |
| 1963-64 ..... | 1,015                             | 4,314  | 178     | 679  | 16      |

(a) Number of prisoners excludes debtors and Aborigines.

(b) Counted once each time received.

## PUBLIC SAFETY

### FIRE SERVICES

#### The Fire Brigades Board

Provision for the establishment and maintenance of fire brigades in South Australia under the control and management of the Fire Brigades Board was first enacted in 1882.

In accordance with its general duty of extinguishing fires and protecting life and property in case of fire, the Board maintains suitably equipped fire brigades in proclaimed fire districts in the Adelaide Metropolitan Area and in 23 country towns. During the year 1963-64 these brigades received 3,928 calls. Some of these brigades are manned by permanent personnel and others by auxiliary firemen, there being at 30th June 1964, 286 officers and firemen and 93 auxiliary firemen.

In addition to its main function, the Board provides a service section for the regular maintenance of private fire equipment installed in public and private premises, and makes its officers available for inspection of premises and for advice on fire protection generally, as well as to demonstrate the use and handling of various types of first aid fire equipment. The Board also provides a burning-off service available in the season to owners of vacant properties, within the areas in which the Board has jurisdiction.

The cost of operating the Fire Brigades Board is borne by proportionate contributions from the State Government (16% in 1963-64), insurance companies (60%) and municipalities and district councils subject to the Act (24%).

#### South Australian Emergency Fire Services

The South Australian Emergency Fire Services was formed as a branch of Civil Defence during World War II. When Civil Defence was disbanded, redundant trailer pumps were issued to local governing bodies by the State Government and the Emergency Fire Service was developed into a volunteer country fire service, to protect those areas outside of the districts covered under



the Fire Brigades Act. The responsibility and authority for fire prevention and control in these outer areas are vested in local government by the Bushfires Act and Local Government Act.

E.F.S. Headquarters, a branch of the Police Department, functions as a co-ordinating centre. The Director of Emergency Fire Services, responsible to the Commissioner of Police, advises on fire protection problems, conducts competitions and training programmes, and co-ordinates fire fighters and auxiliaries in major fire control.

Fire equipment purchased by E.F.S. organizations and councils is subsidized by the Bushfires Equipment Subsidies Fund (equal contributions by the State Government and by fire insurers): the current subsidy is 50%.

#### South Australian Emergency Fire Services

| Particulars   | 1960     | 1961     | 1962     | 1963     | 1964     |
|---|----------|----------|----------|----------|----------|
| Strength of service at 30th June—                   |          |          |          |          |          |
| Affiliated organizations . . . . .                  | 245      | 313      | 313      | 338      | 345      |
| Volunteer members . . . . .                         | 4,100    | 5,200    | 5,500    | 5,600    | 6,500    |
| Fires attended to in twelve months ended 30th June— |          |          |          |          |          |
| Number of fires . . . . .                           | 344      | 810      | 1,359    | 645      | 1,249    |
| Acres burnt . . . . .                               | 511,981  | 491,207  | 80,015   | 25,117   | 144,931  |
| Financial losses . . . . .                          | £121,002 | £410,010 | £166,423 | £110,969 | £238,682 |

#### LIFE SAVING

##### The Royal Life Saving Society

The South Australian Branch of the Royal Life Saving Society—Australia was established in 1909 and the formation of clubs at various beaches followed. In 1952 an agreement was made with the Surf Life Saving Association whereby this body undertook responsibility for life saving on ocean beaches, the Royal Life Saving Society retaining responsibility in all other areas of activity.

In South Australia the Society has developed into a large teaching body administered by a State Council, giving instruction to schools and other interested bodies in the various methods of life saving, including the current methods of artificial respiration. This is done through the medium of honorary instructors and examiners. In the winter months the emphasis is on talks and demonstrations on resuscitation, but during the swimming season weekly life saving instruction and examination and the performance of life saving demonstrations are conducted throughout the State. Certificates and medallions are issued to candidates who pass the various examinations. In the 1963-64 season these awards exceeded 19,000.

The honorary work of the Society is financed mainly by grants made by both the Commonwealth and the State Governments, and by donations.

##### The Surf Life Saving Association

The South Australian State Centre of the Surf Life Saving Association of Australia was formed in 1952, with the co-operation of the South Australian Branch of the Royal Life Saving Society and the Surf Life Saving Association of Australia.

The Henley, Glenelg and Moana Life Saving Clubs formed the nucleus of this body, which now has 17 affiliated clubs situated at Semaphore, Grange, Henley, West Beach, Glenelg, Somerton, Brighton, Seacliff, Christies Beach, Port Noarlunga, Southport, Moana, Chiton Rocks, Port Elliot, Kingscote, Port Lincoln and Whyalla.

Voluntary members give many hours to patrolling their respective beaches each weekend and public holiday from the beginning of November until the end of March. At 30th June 1964 there were 1,200 members in Association clubs. From 1952 to the end of the 1963-64 season 695 rescues were performed with no loss of life on South Australian beaches whilst being patrolled by club members. During this same period many hundreds of persons received first-aid treatment.

The South Australian State Centre receives an annual grant from the State Government and individual clubs have been assisted with subsidies when building their club houses.

### **"Learn to Swim" Campaign**

Vacation swimming classes organized by the Education Department were first established on an extensive scale in January 1956. Thirty-six country and 14 metropolitan swimming centres were set up and over 7,000 children enrolled for instruction. The January "Learn to Swim" campaign has been continued in each subsequent year and has grown steadily: in the summer vacation of 1963-64, 100 country and 32 metropolitan swimming centres were used, and the total student enrolment was over 30,000. Instruction is provided over a period of 10 days by qualified swimming teachers.

Swimming classes have also been conducted in school time since October 1954, and in the summer of 1963-64 some 33,000 children were enrolled in such classes.

The success of the campaign can be illustrated by the fact that of children aged 11 years and over in departmental schools, 78% could swim at least 10 yards in 1964, compared with 58% in 1954.

## **INDUSTRIAL ACCIDENT PREVENTION**

The post war growth of industrial activity in this State was accompanied by an increasing toll of injuries and fatalities sustained during the course of employment. Legislation requires certain minimum standards of safety in working conditions to be provided in various industries, and inspections are made to ensure compliance with legislative requirements. However, legislation and inspection are not the only means of minimizing industrial accidents and in the late 1950's the South Australian Government implemented a programme of education for management, supervisors and employees in accident prevention measures, with the object of making all sections of industry more "safety conscious".

Safety officers employed in the Department of Labour and Industry actively pursue this policy by conducting safety training courses, presenting lectures, screening films and distributing industrial safety pamphlets produced within the department.

In 1963 the Industrial Accident Prevention Society of South Australia was formed in an endeavour to interest management in the need for a planned accident prevention programme and to assist them in under-taking such a programme. These aims are being achieved by safety surveys of factories, the conducting of safety training courses and the distribution of safety publications.

In addition the Safety Engineering Society of Australasia, the Australian Institute of Management (Adelaide Division), the South Australian Institute of Technology and the Commonwealth Department of Labour and National Service make valuable contributions within their particular spheres of activities to the promotion of industrial safety.

#### THE NATIONAL SAFETY COUNCIL (S.A.) INCORPORATED

The National Safety Council had its origin in the Look Both Ways Club, which was formed at the turn of the century for the promotion of greater road safety. The Council, which is a constituent member of the Australian Road Safety Council, was incorporated under its present name in 1930. Its aim is to co-ordinate and pursue means for the prevention of accidents and to educate the public to a greater sense of safety consciousness.

The Council is controlled by a Committee of Management, and has sub-committees concerned with traffic, child, youth, industrial and general safety. Both the State and Commonwealth Governments have in the past made annual grants to the Council, the latter grant being specifically earmarked for road safety practices. In 1963-64 these grants were £4,500 and £6,250 respectively.

## 6.2. EDUCATION

In South Australia attendance at school is compulsory for children from six to fifteen years of age. Many children, however, commence their formal education at an earlier age than six, either by attending a kindergarten or by enrolling at school after reaching five years of age.

Education at the primary and secondary level is available at State schools, controlled by the Education Department, and at private schools, most of which are denominational. The Education Department also controls the South Australian School of Art and the Apprentice Trade Schools. Roseworthy Agricultural College is conducted by the Department of Agriculture. The University of Adelaide and the South Australian Institute of Technology are independently controlled but are financially dependent on Government grants.

Facilities for adult education are provided by the Workers Educational Association, the University and the Education Department.

### Historical

The first school in South Australia was conducted on Kangaroo Island in 1836. A private venture, it closed after several months through insufficient financial support. In 1835 there had been formed in London the South Australian School Society with the object of establishing infant schools in the new colony. The Society's first and only school opened in Adelaide in 1838, and continued until 1843 when it was relinquished to private interests.

It was not until 1847 that the Government showed its first official interest in education by authorizing the payment of a subsidy to approved teachers of £1 per pupil per annum. The Education Act of 1851 went further and set up a Central Board of Education with power to license schools and teachers. The Board could also make grants for school buildings and pay salaries of from £40 to £100 per annum to licensed teachers.

At this time parents of means customarily sent their children to private schools, of which there were a large number, in most cases under the ownership of private citizens. There were also the church schools including St. Peter's School Collegiate (1847), Pulteney Street Church of England Grammar School (1848), Prince Alfred College (1869), and a number of Catholic schools.

The present system of public schools, controlled and supported by the Government, dates from the Education Act of 1875. This Act, for the first time, made attendance at school compulsory. The compulsion, however, applied only to children aged from 7 to 13 years, and required attendance for only 70 days a half-year. Fees ranging from 4d. to 9d. per week were charged, but exemption from payment was granted in cases of poverty. The payment of fees continued until 1892 for children under 13 years of age, and until 1898 for those aged 13 or more. In 1876 most of the licensed schools were taken over as public schools.

To provide secondary education for girls, the Education Department in 1879 opened the Advanced School for Girls; however, fees were charged and the school was self-supporting. It was not until 1897 that the Education Department opened a secondary school for boys—the Agricultural School, which was closed after five years, and subsequently re-opened in 1903 under the auspices of the School of Mines as the Adelaide Technical High School.

The State's present extensive system of secondary schools dates from 1907 when continuation classes were started at seven country primary schools. In the following year these classes were made district high schools, although still attached to primary schools. In the same year the Adelaide Continuation School was opened, to be amalgamated a few months later with the Advanced School for Girls as the Adelaide High School.

In 1915, following a Royal Commission on Education, attendance at school was made compulsory for 5 days per week for children aged 6 to 14 years. At the same time provision was made for technical education, and for a further expansion of secondary education.

In 1920 the Correspondence School was started, and in 1922 a number of primary schools became higher primary schools, thus making secondary education available in the more remote country areas. The present technical high schools originated in 1925 when many of the large metropolitan primary schools were made central schools, giving courses of secondary education.

The last 25 years have seen a policy of consolidation of country schools; over 600 small schools have been closed and bus services to centrally situated schools provided instead.

Various institutions for tertiary education developed alongside the State school system. In 1861 the South Australian School of Art was founded, coming under the control of the Education Department in 1909. The University of Adelaide was established by Act of Parliament in 1874 and began academic work two years later. In 1885 Roseworthy Agricultural College was opened, and in 1889 the School of Mines and Industries, later to become the South Australian Institute of Technology, was established. The present system of training for apprentices began with the Technical Education of Apprentices Act of 1917.

### PRE-SCHOOL EDUCATION

The kindergarten movement in South Australia was founded in 1905. Until the end of World War II kindergartens were primarily designed for the care and education of under-privileged children. Since 1946 they have become generally accepted as a phase of education, with a consequent rapid increase in facilities.

Although a few independent kindergartens are conducted by private individuals, or by private schools, the vast majority of pre-school education is under the supervision of the Kindergarten Union of South Australia (Inc). This organization has a twofold function: firstly in the training of kindergarten teachers (see page 151), and secondly in the supervision of over 100 kindergartens situated throughout the State.

While the supervision covers various aspects of organization it is largely concerned with the educational programme. As well as encouraging the creative, physical and mental development of the 4-5 year old child the kindergarten prepares him for the experiences of formal schooling. Sessions are generally of 2½-3 hours duration each day, with enrolments limited to 30 pupils per session. In most cases two sessions are held daily thus providing for 60 children.

The Kindergarten Union, while a voluntary organization, receives approximately 60% of its revenue from a State Government grant. Part of this grant is in turn used to subsidize the salaries of teachers at individual kindergartens. However, local committees are responsible for the construction, equipping and maintenance of their own kindergartens, revenue for these purposes coming from either direct contributions or various fund raising activities.

#### Kindergartens<sup>(a)</sup>, South Australia

| Year Ended            | Kinder-<br>gartens<br>(b) | Instruc-<br>tors | Scholars:<br>Average<br>Atten-<br>dance | Receipts    |         |         | Expenditure |                  |         |
|-----------------------|---------------------------|------------------|---|-------------|---------|---------|-------------|------------------|---------|
|                       |                           |                  |   | Govt<br>Aid | Other   | Total   | Salaries    | Other            | Total   |
|                       | No.                       | No.              | No.                                     | £           | £       | £       | £           | £                | £       |
| August 1960 .....     | 110                       | 285              | 3,726                                   | 145,000     | 102,188 | 247,188 |             |                  |         |
| August 1961 .....     | 111                       | 294              | 3,995                                   | 160,000     | 106,940 | 266,940 |             | Not<br>available |         |
| August 1962 .....     | 114                       | 308              | 4,008                                   | 176,216     | 114,191 | 290,407 | 197,993     | 109,564          | 307,557 |
| December 1963(c)..... | 117                       | 319              | 4,747                                   | 249,008     | 179,362 | 428,370 | 249,773     | 130,800          | 380,573 |
| December 1964 .....   | 120                       | 328              | 4,760                                   | 202,257     | 145,285 | 347,542 | 247,385     | 116,841          | 364,226 |

(a) Administered by the Kindergarten Union from 1962 ; controlled by or affiliated with the Kindergarten Union prior to 1962.

(b) At end of period.

(c) Sixteen months ended December.

#### GENERAL SCHOOL EDUCATION

The State Government, through the Education Department, provides free facilities for primary and secondary education; however, parents may choose between State and private schools.

The Education Department functions under the Minister of Education. The permanent head of the department is the Director of Education, assisted by a Deputy Director and Superintendents of primary schools, high schools, technical schools, rural schools, and recruiting and training. Northern Territory schools also are controlled by the Education Department on behalf of the Commonwealth Government, with a Superintendent stationed at Darwin.

The work of the schools is materially assisted by the school councils and committees, and also by the mothers' clubs, parents' and friends' associations and welfare clubs. These bodies have for many years been instrumental in raising large sums for the purchase of additional amenities for the schools.

In country areas many children are conveyed to State schools by free bus services provided by the Education Department. At the end of 1964 there were 595 bus services carrying 21,100 pupils daily to 307 schools.

Although private schools largely follow the State schools in their curricula, the Education Department exercises no formal authority over these schools beyond requiring them to submit certain statistical returns.

The Catholic school system is organized on a diocesan basis. South Australia is divided into two dioceses, Adelaide and Port Pirie. Within the former, supervision is exercised by the Archbishop through the Director of Catholic Education and Inspector of Schools; within the latter, by the Bishop through his Inspector of Schools.

**Schools**

Details of schools operating in South Australia in 1964 are given in the table below. The average size of State schools has increased rapidly since 1940 partly as a result of the consolidation of country schools. The 660 State schools in 1964 compared with 1,060 in 1940 and 1,123 in the peak year of 1935. In 1940 there was an average of 84 pupils to each State school, with this figure increasing to 145 by 1950 and 295 by 1960. There has been a similar movement in the average size of private schools.

**Schools by Size, South Australia**

*As at 1st August, 1964*

| Pupils on Roll       | State Schools |                   |           |             |            | Private Schools |
|----------------------|---------------|-------------------|-----------|-------------|------------|-----------------|
|                      | Primary       | Primary-Secondary | Secondary | Special (a) | Total      |                 |
| Under 21 .....       | 85            | —                 | —         | 5           | 90         | 7               |
| 21 to 35 .....       | 71            | —                 | —         | 5           | 76         | 7               |
| 36 to 100 .....      | 145           | —                 | 1         | 11          | 157        | 39              |
| 101 to 200 .....     | 49            | 6                 | 9         | 3           | 67         | 44              |
| 201 to 300 .....     | 17            | 11                | 14        | 1           | 43         | 30              |
| 301 to 400 .....     | 24            | 8                 | 4         | —           | 36         | 19              |
| 401 to 600 .....     | 33            | 11                | 16        | —           | 60         | 13              |
| 601 to 800 .....     | 37            | 3                 | 16        | —           | 56         | 7               |
| 801 to 1,000 .....   | 22            | 1                 | 6         | —           | 29         | 4               |
| 1,001 to 1,200 ..... | 27            | —                 | 4         | —           | 31         | —               |
| 1,201 to 2,000 ..... | 6             | —                 | 9         | —           | 15         | —               |
| <b>Total .....</b>   | <b>516</b>    | <b>40</b>         | <b>79</b> | <b>25</b>   | <b>660</b> | <b>170</b>      |

(a) Occupation centres, speech and hearing centres and schools for Aborigines.

**Teachers**

The numbers of teachers employed in primary and secondary schools in recent years are shown in the following table. A rapid expansion in the school population in the post war period necessitated a considerable increase in teaching staff. The 7,340 full-time and 477 part-time teachers at State schools in 1964 compares with 2,634 and 291 in 1946. The number of females employed as teachers has increased more rapidly than males, and whereas females constituted 46% of the full-time teaching staff in State schools in 1946, in 1964 they represented 59%.

## Teachers, South Australia

| At 1st August          | State Schools |         |           |         | Private Schools |         |           |         |
|------------------------|---------------|---------|-----------|---------|-----------------|---------|-----------|---------|
|                        | Full-time     |         | Part-time |         | Full-time       |         | Part-time |         |
|                        | Males         | Females | Males     | Females | Males           | Females | Males     | Females |
| 1960 (a).....          | 2,137         | 3,332   | 10        | 472     | 319             | 760     | 58        | 255     |
| 1961.....              | 2,330         | 3,540   | 12        | 439     | 335             | 769     | 67        | 271     |
| 1962.....              | 2,487         | 3,825   | 14        | 418     | 341             | 789     | 53        | 271     |
| 1963.....              | 2,729         | 4,166   | 14        | 417     | 361             | 804     | 57        | 262     |
| 1964.....              | 2,977         | 4,363   | 23        | 454     | 389             | 842     | 68        | 261     |
| <i>Type of School—</i> |               |         |           |         |                 |         |           |         |
| 1964                   |               |         |           |         |                 |         |           |         |
| Primary.....           | 1,287         | 2,973   | —         | 266     | 39              | 346     | 16        | 105     |
| Prim.-Secondary .      | 356           | 393     | —         | 18      | 228             | 442     | 35        | 136     |
| Secondary.....         | 1,296         | 920     | 21        | 165     | 122             | 48      | 17        | 20      |
| Special (b).....       | 38            | 77      | 2         | 5       | —               | 6       | —         | —       |

(a) At last school day in December.

(b) Includes occupation centres, speech and hearing centres, schools for Aborigines.

## Scholars

School enrolments, which had been declining since 1932, started to rise rapidly at the end of World War II, and since 1945 have nearly trebled. Enrolments in recent years, classified by whether attending State or private schools and by age of the scholar, are given below.

## Primary and Secondary Scholars, South Australia

As at 1st August

| Age        | At State Schools |         |         |         | At Private Schools |        |        |        |
|------------|------------------|---------|---------|---------|--------------------|--------|--------|--------|
|            | 1961             | 1962    | 1963    | 1964    | 1961               | 1962   | 1963   | 1964   |
| 5.....     | 12,913           | 13,534  | 14,032  | 15,169  | 2,536              | 2,650  | 2,479  | 2,392  |
| 6.....     | 16,974           | 17,212  | 17,807  | 18,256  | 3,132              | 3,136  | 3,081  | 3,208  |
| 7.....     | 16,687           | 17,194  | 17,441  | 18,345  | 3,074              | 3,078  | 3,082  | 3,098  |
| 8.....     | 17,153           | 16,781  | 17,449  | 18,005  | 3,010              | 3,007  | 2,959  | 3,114  |
| 9.....     | 16,779           | 17,295  | 17,147  | 17,609  | 3,059              | 3,055  | 2,937  | 3,109  |
| 10.....    | 16,722           | 16,937  | 17,586  | 17,553  | 3,101              | 3,114  | 3,253  | 3,080  |
| 11.....    | 16,652           | 16,722  | 17,035  | 17,698  | 3,177              | 3,179  | 3,095  | 3,192  |
| 12.....    | 15,790           | 16,617  | 16,811  | 17,223  | 3,320              | 3,392  | 3,308  | 3,278  |
| 13.....    | 15,434           | 15,672  | 16,445  | 16,980  | 3,446              | 3,374  | 3,619  | 3,561  |
| 14.....    | 14,524           | 13,681  | 14,430  | 16,476  | 3,366              | 3,135  | 3,247  | 3,397  |
| 15.....    | 8,264            | 11,477  | 11,086  | 11,748  | 2,336              | 2,737  | 2,822  | 2,779  |
| 16.....    | 3,975            | 5,009   | 6,676   | 6,708   | 1,534              | 1,657  | 2,100  | 2,042  |
| 17.....    | 1,037            | 1,436   | 1,877   | 2,385   | 698                | 732    | 847    | 1,091  |
| 18.....    | 294              | 333     | 325     | 459     | 193                | 156    | 202    | 310    |
| Total .... | 173,198          | 179,900 | 186,147 | 194,614 | 35,982             | 36,402 | 37,031 | 37,651 |

A division of enrolments in 1964 between primary and secondary levels is set out below. In 1945 approximately 17% of total enrolments were at the secondary level; by 1964 this figure had risen to 28%. This table also illustrates

the somewhat greater importance of private schools at the secondary level where they account for some 20% of enrolments as opposed to 15% at the primary level.

**Primary and Secondary Scholars**

*As at 1st August, 1964*

| Age          | At State Schools |               |                | At Private Schools |               |               | Total Scholars |
|--------------|------------------|---------------|----------------|--------------------|---------------|---------------|----------------|
|              | Primary          | Secondary     | Total          | Primary            | Secondary     | Total         |                |
| 5.....       | 15,169           | —             | 15,169         | 2,392              | —             | 2,392         | 17,561         |
| 6.....       | 18,256           | —             | 18,256         | 3,208              | —             | 3,208         | 21,464         |
| 7.....       | 18,345           | —             | 18,345         | 3,098              | —             | 3,098         | 21,443         |
| 8.....       | 18,005           | —             | 18,005         | 3,114              | —             | 3,114         | 21,119         |
| 9.....       | 17,609           | —             | 17,609         | 3,109              | —             | 3,109         | 20,718         |
| 10.....      | 17,552           | 1             | 17,553         | 3,080              | —             | 3,080         | 20,633         |
| 11.....      | 17,670           | 28            | 17,698         | 3,187              | 5             | 3,192         | 20,890         |
| 12.....      | 13,450           | 3,773         | 17,223         | 2,403              | 875           | 3,278         | 20,501         |
| 13.....      | 4,412            | 12,568        | 16,980         | 908                | 2,653         | 3,561         | 20,541         |
| 14.....      | 1,505            | 14,971        | 16,476         | 229                | 3,168         | 3,397         | 19,873         |
| 15.....      | 286              | 11,462        | 11,748         | 29                 | 2,750         | 2,779         | 14,527         |
| 16.....      | 70               | 6,638         | 6,708          | 3                  | 2,039         | 2,042         | 8,750          |
| 17.....      | 40               | 2,345         | 2,385          | —                  | 1,091         | 1,091         | 3,476          |
| 18.....      | 27               | 432           | 459            | 1                  | 309           | 310           | 769            |
| <b>Total</b> | <b>142,396</b>   | <b>52,218</b> | <b>194,614</b> | <b>24,761</b>      | <b>12,890</b> | <b>37,651</b> | <b>232,265</b> |

**PRIMARY EDUCATION**

Children normally begin their schooling at the age of 5 years when they enrol for primary education at either a State or private school. Primary education involves a seven year course and concludes with the award of the Progress Certificate in Grade VII.

**STATE SCHOOLS**

Metropolitan children attend primary schools. Country children normally attend a primary or an area school; however those in remote areas may receive lessons by correspondence.

The following table shows the number of primary and area schools operating in recent years and the number of primary scholars enrolled at State schools.

**State Primary Education, South Australia**

| At 1st August | Schools          |       |          | Scholars Enrolled |         |                  |                       |           | Total   |
|---------------|------------------|-------|----------|-------------------|---------|------------------|-----------------------|-----------|---------|
|               | Primary          |       | Area (a) | Primary Schools   |         | Area Schools (a) | Correspondence School | Other (b) |         |
|               | With Infant Dept | Total |          | Infant Depts      | Other   |                  |                       |           |         |
| 1960.....     | 80               | 535   | 35       | 24,860            | 94,612  | 8,851            | 872                   | 812       | 130,007 |
| 1961.....     | 81               | 537   | 36       | 23,744            | 97,748  | 9,223            | 889                   | 852       | 132,456 |
| 1962.....     | 84               | 526   | 36       | 24,628            | 99,101  | 9,094            | 883                   | 1,158     | 134,864 |
| 1963.....     | 87               | 518   | 37       | 24,940            | 101,613 | 9,348            | 839                   | 1,439     | 138,179 |
| 1964.....     | 86               | 516   | 39       | 25,034            | 105,451 | 9,752            | 858                   | 1,428     | 142,523 |

(a) Figures for 1960 include schools previously known as higher primary schools. The figures for scholars enrolled include primary scholars only.

(b) Includes Aboriginal schools, schools for handicapped children and high schools (preparatory classes).



### **Primary Schools**

Children begin in either the infant department of a large school or in Grade I of a smaller school, school sizes varying from over 1,000 pupils to as few as ten pupils.

At the beginning of 1964, 87 primary schools had separate infant departments. In these departments the children progress through Grades I and II. It is in the infant departments, and Grades I and II of other primary schools, that children are first formally introduced to books, music, numbers, colour, and form and movement. Rhythm and organized games form an important part of infant activity.

The primary school curriculum is not rigid but specifies a general framework under the headings of English, arithmetic, creative art and craft, and "other life interests" which include social studies, nature study, music, physical education and religious instruction. Within this framework teachers select and arrange studies in the light of their pupils' needs.

School libraries form an integral part of the primary education system, as do also facilities for showing films and for listening to the school broadcasts provided by the Australian Broadcasting Commission. Facilities are also available for physical education and various forms of craftwork.

### **Area Schools**

Area schools, situated in country centres, cater for both primary and secondary pupils. The primary course is similar to that of the primary schools.

### **Correspondence School**

The Correspondence School was started in 1920 to cater for children unable to attend ordinary schools. Most of such children live in remote parts of South Australia and the Northern Territory, but there are others who cannot attend school through invalidity.

Connected with the Correspondence School are the "Schools of the Air" at Ceduna, Port Augusta and Alice Springs which provide two-way radio communication between teacher and pupils and so supplement the correspondence lessons.

At 1st August 1964 there were 415 boys and 443 girls receiving primary education through the Correspondence School.

## **PRIVATE SCHOOLS**

At 1st August 1964, 24,761 children were receiving primary education through private schools. The majority of these children were attending Catholic schools (see table on page 139).

### **Catholic Schools**

Most children under the Catholic school system receive their primary education in parochial schools. At these schools no fees are demanded, but parents are asked to make some voluntary contributions. Such schools are parochial property and the parochial authorities are responsible for the buildings, maintenance and equipment.

Catholic primary schools follow the curricula of the Education Department in the secular subjects and, apart from visits from the Catholic school Inspector, are examined annually by the State school Inspector. Such an examination is necessary for the children in Grade VII, if Progress Certificates are to be granted.

A number of children receive their primary education in the colleges for boys and girls. These colleges are fee-charging.

### **Other Schools**

Primary schools are conducted by the Church of England, the Lutheran Church, and the Seventh-Day Adventists Church. Primary education is also provided in preparatory schools attached to secondary schools run by the Church of England, the Methodist Church and the Presbyterian Church, and at two schools under private ownership.

### **SCHOOLS FOR HANDICAPPED CHILDREN**

The Education Department, through the Psychology Branch, makes provision for children suffering from mental or physical disability. The Psychology Branch provides advice for parents and teachers of backward children and problem children, many of whom are helped in the Opportunity and Remedial Classes conducted at some of the large primary schools. There are also 6 Occupation Centres for children with serious mental deficiency, and a Sheltered Workshop Training Centre for mentally retarded adolescents.

For children with severely defective hearing there are 2 Speech and Hearing Centres, and there is provision for hard-of-hearing children at ordinary schools. Speech therapists are available to help children with defective speech.

The Education Department conducts schools at Minda Home for the mentally retarded, Townsend House for blind, deaf and dumb children, Somerton Crippled Children's Home and Escourt House convalescent home. The school at the Woodville Spastic Home is privately managed but employs a departmental officer as Head Teacher.

A number of private agencies also provide educational facilities for handicapped children.

### **SECONDARY EDUCATION**

Children who have completed their primary schooling are required by law to attend a secondary school until the end of the term in which they reach their fifteenth birthday. Secondary education may be obtained at either State or private schools.

#### **STATE SCHOOLS**

The Education Department provides several kinds of secondary schools. Metropolitan students may choose between high schools and technical high schools, but are required to attend schools within the zone in which they reside. In the country secondary education is provided by high schools in most of the larger towns, and by high or area schools in many of the smaller centres. High schools and area schools do not co-exist in the one centre. There are, however, technical high schools at Mount Gambier and Whyalla, and certain students may use the facilities of the Correspondence School.

#### **High Schools**

High schools are provided in the metropolitan area and in most of the larger country towns. These schools are normally co-educational. High schools provide both academic and non-academic courses, with special provision for commercial subjects, and in some cases for instruction in craft subjects. Thus a variety of courses is available.

The general course is primarily concerned with preparing students for the Public Examinations Board (P.E.B.) examinations. A selection from English,

mathematics, geography, history, foreign languages, sciences, social studies, drawing, woodwork, home science, physical education and music is the curriculum of most schools, at least for selected classes. Organized sport is available in all schools, and dramatic work, opera, and other musical forms are common activities.

The actual course of study that the student undertakes is largely determined by a series of tests given within the first day or two at school. Students sit for the Intermediate, Leaving, and Matriculation examinations of the P.E.B. Matriculation classes are available only at certain high schools.

The commercial course also leads to the P.E.B. examinations and includes book-keeping, typewriting, English, geography, drawing, arithmetic, and in some cases shorthand. Students may sit for the Intermediate and Leaving examinations, and many metropolitan high schools also offer a non-examination course in typing and commercial practice.

Agricultural science is taught in several country high schools. In addition Urrbrae Agricultural High School, in the metropolitan area, provides a secondary education for boys who aim to take up a career connected with agriculture. The school's syllabus includes agricultural science, farm mechanics and field work as well as the normal academic subjects. Students may sit for both the Intermediate and Leaving examinations of the P.E.B.

Alternative courses, which do not lead to the P.E.B. examinations, are available at a number of high schools. These courses, which diverge from the general course at the beginning of the second year, have a strong practical bias. An Education Department certificate is granted on the results of an examination held at the end of the third year.

### **Technical High Schools**

Technical high schools combine academic and practical education. While aiming at a general secondary education for their pupils they put special emphasis on various forms of handwork. These schools are not normally co-educational.

Technical high school courses lead to the award of the Intermediate Technical Certificate of the Education Department at the end of the third year, and either the Leaving Technical Certificate or the Leaving Certificate of the P.E.B. in the fourth year. At Adelaide and Whyalla Technical High Schools students may also sit for the Matriculation examination of the P.E.B. after five years.

Courses at boys' schools include English, science, mathematics, social studies, art and crafts, technical drawing, woodwork and various forms of metalwork. For able students planning to matriculate, additional academic subjects are available. The particular course that a boy undertakes depends on his interests, ability and aptitude, and also on his plans for tertiary education.

Girls' schools teach certain academic subjects, various arts and crafts and commercial practice. All girls' schools teach general science leading to physiology in the third year, and a foreign language is available to selected students. The arts and crafts subjects include art, dressmaking and home management. Commercial training, which commences in the second year, includes shorthand, typing, book-keeping and business practice. Special secretarial courses are available at Leaving Certificate level in a number of schools.

### **Area Schools**

Area Schools are provided in certain country districts not served by High Schools. They cater for both primary and secondary pupils and are co-educational.

In the first year of secondary education at area schools all students take a common course, after which some students study a general course on the same lines as those followed in high schools enabling them to sit for the P.E.B. Intermediate and Leaving Examinations thus leading to matriculation, while other students take a special area school course.

In addition to special courses in English, mathematics, science and social studies, the area school course syllabus includes metalwork, woodwork and art for boys and domestic science, needlework and art for girls. In an increasing number of area school commercial studies are being introduced, while agricultural science has become a special feature of many of these schools.

In general, third year, and in most schools, fourth year area school courses emphasise rural interests and lead to Intermediate and Leaving Area School Certificates which are awarded by the Education Department.

### Special Rural Schools

As from the beginning of 1966 seven "Special Rural Schools" have been established in remote country areas. These schools are intended to supply a limited secondary education in areas where it has been shown that there is an obvious need for secondary education but where the establishment of an area school is not warranted. It is proposed in the first instance in these schools to provide academic studies leading to a P.E.B. Intermediate Certificate as a secondary "top" to a normal primary school.

### Correspondence School

Children who are unable to attend any of the aforementioned secondary schools may receive secondary education through the Correspondence School.

Lessons are forwarded to cover nine academic subjects (all to Leaving standard), and also certain drawing subjects. Assistance may take the form of full correspondence or supplementary courses. Supplementary courses are conducted through a primary school Head Teacher, who may, in the case of remoteness from secondary school facilities, conduct grades beyond Grade VII. Correspondence lessons are supplemented by radio lessons from the "Schools of the Air".

At 1st August 1964 there were 39 boys and 68 girls receiving secondary education through full correspondence courses.

### State Secondary Schools, South Australia

| At 1st August | High              |                           | Technical High    |                           | Area (a)          |                           | Correspondence Pupils Enrolled (b) | Other Pupils Enrolled (c) |
|---------------|-------------------|---------------------------|-------------------|---------------------------|-------------------|---------------------------|------------------------------------|---------------------------|
|               | Number of Schools | Number of Pupils Enrolled | Number of Schools | Number of Pupils Enrolled | Number of Schools | Number of Pupils Enrolled |                                    |                           |
| 1960.....     | 50                | 24,837                    | 19                | 8,661                     | 35                | 2,708                     | 346                                | 155                       |
| 1961.....     | 51                | 27,231                    | 23                | 9,857                     | 36                | 3,150                     | 351                                | 140                       |
| 1962.....     | 52                | 29,872                    | 23                | 11,307                    | 36                | 3,433                     | 292                                | 123                       |
| 1963.....     | 53                | 31,860                    | 24                | 11,891                    | 37                | 3,547                     | 102                                | 149                       |
| 1964.....     | 53                | 33,964                    | 26                | 14,033                    | 39                | 3,936                     | 107                                | 178                       |

(a) Figures for 1960 include schools previously known as higher primary schools.

(b) Full correspondence students only.

(c) Pupils receiving secondary education at primary schools assisted by supplementary correspondence courses

### PRIVATE SCHOOLS

Secondary education is also provided by private schools. These schools, for the most part, are identified with various religious denominations. Private

secondary schools normally charge fees; however, a limited number of internal scholarships are available and students may qualify for certain State scholarships. In addition to normal day attendance many private schools offer boarding facilities for country students.

Private schools provide academic courses preparing students for the P.E.B. examinations, and this determines their academic curricula for third and subsequent years. Church schools give religious as well as secular education.

### Catholic Schools

The Catholic school system provides secondary education at boarding colleges and day schools in metropolitan and country areas.

A special committee of teachers is responsible to the Director of Catholic Education for drawing up syllabuses and for setting external diocesan examinations in all subjects for first and second year students. Other years follow the P.E.B. syllabuses. Both general and commercial courses are available to students, and home science is taught in some girls' schools. An agricultural college for boys is conducted at Mount Gambier where a theoretical and practical study of agriculture is combined with the regular secondary course.

Generally, Catholic secondary schools are the property of the religious communities who conduct them and are supported by the fees charged.

### Other Schools

The Church of England, the Methodist Church, the Lutheran Church and the Presbyterian Church all conduct secondary schools for boys and girls in the metropolitan area. Most schools have facilities for boarders.

At boys' schools, emphasis is on general academic and commercial courses. Scotch College, Mitcham, however, provides agricultural training for boys along with the normal academic subjects. Girls' schools generally provide alternative courses for those students not academically inclined. In addition, all these schools offer a wide range of extra-curricular activities.

There are also two undenominational schools for girls which offer facilities similar to those of the church schools.

Training in typing and shorthand is provided at privately owned business colleges which specialize in this field. A number of these colleges also prepare students in certain P.E.B. subjects.

The following tables give details of private schools and cover both primary and secondary education.

Private Schools<sup>(a)</sup>, South Australia

| Year      | Number of Schools | Number of Teachers<br>(b) | Scholars on Roll, 1st August |         |           |         | Total  |
|-----------|-------------------|---------------------------|------------------------------|---------|-----------|---------|--------|
|           |                   |                           | Primary                      |         | Secondary |         |        |
|           |                   |                           | Males                        | Females | Males     | Females |        |
| 1960..... | 163               | 1,392                     | 12,217                       | 12,573  | 5,280     | 5,300   | 35,370 |
| 1961..... | 165               | 1,442                     | 12,216                       | 12,664  | 5,634     | 5,468   | 35,982 |
| 1962..... | 164               | 1,454                     | 12,223                       | 12,739  | 5,667     | 5,773   | 36,402 |
| 1963..... | 166               | 1,484                     | 12,015                       | 12,662  | 6,109     | 6,245   | 37,031 |
| 1964..... | 170               | 1,560                     | 12,048                       | 12,713  | 6,261     | 6,629   | 37,651 |

(a) Excluding business colleges.

(b) Includes part-time teachers.

In the table below private scholars are classified according to the denominational affiliation of the school they attended. The predominant contribution of Catholic schools is clearly evident from the table. In 1964 Catholic schools accounted for 82% of primary scholars and 49% of secondary scholars attending private schools.

**Scholars at Private Schools, South Australia**

*As at 1st August*

| Denomination of School                            | 1960          | 1961          | 1962          | 1963          | 1964          |
|---|---------------|---------------|---------------|---------------|---------------|
| <b>Primary—</b>                                   |               |               |               |               |               |
| Catholic .....                                    | 19,723        | 19,800        | 20,146        | 20,167        | 20,308        |
| Church of England .....                           | 2,156         | 2,086         | 2,008         | 1,929         | 1,771         |
| Methodist .....                                   | 459           | 537           | 579           | 560           | 567           |
| Lutheran .....                                    | 857           | 834           | 862           | 875           | 893           |
| Presbyterian and Baptist/<br>Congregational ..... | 680           | 689           | 675           | 626           | 665           |
| Seventh Day Adventist .....                       | 127           | 127           | 100           | 103           | 116           |
| Udenominational .....                             | 788           | 807           | 592           | 417           | 441           |
| <b>Total primary .....</b>                        | <b>24,790</b> | <b>24,880</b> | <b>24,962</b> | <b>24,677</b> | <b>24,761</b> |
| <b>Secondary—</b>                                 |               |               |               |               |               |
| Catholic .....                                    | 5,150         | 5,490         | 5,606         | 5,988         | 6,313         |
| Church of England .....                           | 2,124         | 2,181         | 2,208         | 2,224         | 2,290         |
| Methodist .....                                   | 1,090         | 1,166         | 1,250         | 1,337         | 1,409         |
| Lutheran .....                                    | 512           | 555           | 563           | 600           | 603           |
| Presbyterian and Baptist/<br>Congregational ..... | 1,179         | 1,211         | 1,251         | 1,332         | 1,308         |
| Seventh Day Adventist .....                       | 33            | 43            | 45            | 43            | 32            |
| Udenominational .....                             | 492           | 456           | 517           | 830           | 935           |
| <b>Total secondary ...</b>                        | <b>10,580</b> | <b>11,102</b> | <b>11,440</b> | <b>12,354</b> | <b>12,890</b> |

**EXAMINATIONS AND SCHOLARSHIPS**

**Examinations**

In addition to internal examinations conducted by the schools there are a number of external examinations which form important stepping-stones in the life of the student.

The Progress Certificate is awarded, upon successful completion of the primary course, as evidence of ability to undertake secondary education. This certificate also qualifies the secondary student for certain educational allowances, as outlined on page 140. At the end of 1963 approximately 97% of eligible students received Progress Certificates.

After three years secondary study the student normally sits for the Intermediate examination of the Public Examinations Board, or the Intermediate Technical or Area School examinations of the Education Department. The Leaving, Leaving Technical and Leaving Area School examinations are similarly held at the end of the fourth year.

The Public Examinations Board conducts a further examination at the completion of the fifth year. Prior to 1966 this examination has been known as the Leaving Honours examination and while considered a desirable fore-runner to University study has not been compulsory for entrance to the University, (matriculation being based on the Leaving examination). From 1966 this examination will become the Matriculation examination.

Candidates for Examinations, South Australia<sup>(a)</sup>

| Year      | Public Examinations Board |           |                    | Education Department |         |                   |         |
|-----------|---------------------------|-----------|--------------------|----------------------|---------|-------------------|---------|
|           | Inter-<br>mediate         | Leaving   | Leaving<br>Honours | Technical            |         | Area              |         |
|           |                           |           |                    | Inter-<br>mediate    | Leaving | Inter-<br>mediate | Leaving |
|           | Number of Candidates (b)  |           |                    |                      |         |                   |         |
| 1960..... | 8,181                     | 4,235     | 1,419              | 1,594                | 360     | Not<br>available  |         |
| 1961..... | 9,273                     | 4,662     | 1,502              | 1,939                | 409     |                   |         |
| 1962..... | 10,929                    | 5,733     | 1,766              | 2,702                | 444     |                   |         |
| 1963..... | 11,185                    | 6,584     | 2,267              | 2,598                | 528     |                   |         |
| 1964..... | 11,670                    | 7,092     | (c) 2,732          | 2,780                | 531     |                   |         |
|           | Number who Qualified      |           |                    |                      |         |                   |         |
| 1960..... | 4,273                     | (d) 2,384 | 1,196              | 1,074                | 213     | 131               | 33      |
| 1961..... | 5,234                     | (d) 2,707 | 1,290              | 1,303                | 259     | 144               | 28      |
| 1962..... | 5,920                     | (d) 3,366 | 1,519              | 1,765                | 267     | 167               | 44      |
| 1963..... | 5,951                     | (d) 3,742 | 1,914              | 1,672                | 372     | 201               | 58      |
| 1964..... | 6,087                     | 4,069     | 2,236              | 1,747                | 301     | 387               | 78      |

(a) Includes Northern Territory.

(b) Number who presented themselves in sufficient subjects to be eligible for the certificate in the year shown.

(c) Total number of candidates.

(d) Does not include candidates who qualified after supplementary examinations.

### Scholarships

The Commonwealth Government, the State Government and various private benefactors provide a variety of scholarships each year for South Australian students.

#### *Scholarships Available at Secondary Level*

The Progress Certificate awarded on the completion of primary schooling entitles secondary students, whether at State or private schools, to a book allowance of £8 per annum for the first three years, and £9 and £10 for the fourth and fifth years respectively. Students who have to travel considerable distances to the nearest suitable school, or school bus, may also receive travelling expenses or, if forced to live away from home, a boarding allowance. The boarding allowance is £75 per annum increasing to £100 in the Matriculation year. In 1962-63 £650,000 was paid in progress allowances.

The Commonwealth Government recently introduced a scheme for awarding scholarships to secondary students. Two-year scholarships, of which 951 were available in South Australia in 1965, are awarded on the results of the Intermediate examination of the Public Examinations Board or a special Intermediate Technical examination of the Education Department. The department correlates the results of these two examinations. The scholarships, which are tenable at any school, are free of a means test and offer £100 for maintenance, and up to £100 for fees and books, in each year. Technical scholarships similar to the two-year scholarships but tenable in second and subsequent years at a tertiary technical institution are also awarded by the Commonwealth.

The State Government offers three classes of exhibitions to encourage students to remain at school after the Intermediate (third) year. These exhibitions are

awarded, through the Scholarships Section of the Education Department, on the results of the Intermediate examinations of the Public Examinations Board and the Education Department. A predetermined number of exhibitions are reserved each year for country students. There are 200 Intermediate exhibitions on P.E.B. certificate results, 60 Intermediate Technical exhibitions on Technical certificate results, and 400 Continuation exhibitions on P.E.B. or Area School certificate results awarded annually. Intermediate and Continuation exhibitions pay £25 for the fourth year and £30 for the fifth year of secondary education, Intermediate Technical exhibitions pay £25 for the fourth year only.

The Education Department also awards teaching scholarships (see page 151).

The Commonwealth Government, through the Soldiers' Children Education Scheme, offers assistance at the secondary level to children of ex-servicemen whose death, blindness or total and permanent incapacity was the result of war service. Eligible children, upon reaching 12 years of age, qualify for a fortnightly allowance while attending school. Where appropriate, a living-away-from-home allowance is also paid, and the payment of allowances is subject to satisfactory attendance and progress. At 31st March 1965 allowances were 19s., 28s. 9d. or 63s. 3d. per week depending on age, if living at home, and 63s. 3d. or 97s. 9d. if living away from home. The student receives guidance and advice on his course of studies from the Soldiers' Children Education Board.

Government scholarships are tenable at both State and private schools, however, the latter also award a limited number of internal scholarships carrying free tuition. The Scholarships Section of the Education Department also administers a number of privately endowed scholarships.

#### *Scholarships Awarded at Tertiary Level*

The Commonwealth Government, through the Commonwealth Scholarships Board, each year offers Open Entrance scholarships, Second and Later Year scholarships, and Mature Age scholarships to students eligible for, or already undertaking, tertiary education. These scholarships, which are normally awarded on the Public Examinations Board Leaving examination results are tenable at the University, South Australian Institute of Technology, Roseworthy Agricultural College, Kindergarten Training College, or South Australian School of Art. Second and Later Year scholarships, and in certain cases Mature Age scholarships, are awarded on tertiary results.

#### **Commonwealth Scholarships, South Australia<sup>(a)</sup>**

| Year      | New Awards Accepted                      |               |       | Scholars<br>in<br>Training<br>at<br>30th June | Expenditure<br>(Year ending 30th June) |                     |           |
|-----------|--|---------------|-------|---|--|---------------------|-----------|
|           | Open<br>Entrance<br>and<br>Mature<br>Age | Later<br>Year | Total |   | Fees                                   | Living<br>Allowance | Total     |
| 1960..... | 285                                      | 71            | 356   | (b)1,051                                      | £ 74,527                               | £ 78,211            | £ 152,738 |
| 1961..... | 363                                      | 70            | 433   | 1,033   | 88,060                                 | 82,234              | 170,294   |
| 1962..... | 377                                      | 102           | 479   | 1,144   | 97,312                                 | 86,807              | 184,119   |
| 1963..... | 382                                      | 86            | 468   | 1,204   | 124,519                                | 117,658             | 242,177   |
| 1964..... | 482                                      | 108           | 590   | 1,335   | 163,737                                | 122,053             | 285,790   |

(a) Includes students who live in Northern Territory and sit for the P.E.B. examinations.

(b) At 30th September.



Students awarded a Commonwealth scholarship are entitled to the payment of certain fees and allowances without a means test. In addition, they may be granted a living allowance in accordance with a prescribed means test. At 31st March 1965 the maximum annual allowance was £260 for a student living at home and £396 10s. for a student living away from home.

Students under the Soldiers' Children Education Scheme may receive a basic allowance of 100s. per week while undergoing tertiary education. Additional allowances are paid if living away from home or if supporting a family. All fees are paid and the student is reimbursed for fares, text books and equipment.

Students undergoing industrial training receive a basic allowance of 23s. per week plus the other benefits.

#### Soldiers' Children Education Scheme, South Australia<sup>(a)</sup>

| Year       | Number of Beneficiaries in Training (b) |          |            |       | Expenditure on Benefits |                                  |         |
|------------|---|----------|------------|-------|-------------------------|----------------------------------|---------|
|            | Primary and Secondary                   | Tertiary | Industrial | Total | Allowances              | Fees, Books, Equipment and Fares | Total   |
|            |   |          |            |       | £                       | £                                | £       |
| 1959-60 .. | 565                                     | 91       | 93         | 749   |                         | Not available                    | 63,890  |
| 1960-61 .. | 611                                     | 113      | 103        | 827   |                         |                                  | 72,739  |
| 1961-62 .. | 661                                     | 118      | 91         | 870   | 68,412                  | 13,502                           | 81,914  |
| 1962-63 .. | 689                                     | 115      | 92         | 896   | 79,268                  | 16,534                           | 95,802  |
| 1963-64 .. | 680                                     | 118      | 114        | 912   | 92,036                  | 14,726                           | 106,762 |

(a) Includes Northern Territory.

(b) Beneficiaries 12 years and over. Number at end of year.

The State Government traditionally awards a number of bursaries each year. These offer free tuition at the University and other tertiary institutions, plus a living allowance. Bursaries are awarded on the results of the appropriate Public Examinations Board and Education Department examinations.

#### State Government Bursaries, South Australia

##### Number Current During the Year

| Type  | 1960 | 1961 | 1962 | 1963 | 1964 |
|---|------|------|------|------|------|
| Leaving Technical bursaries .....           | 17   | 17   | 19   | 16   | 22   |
| Leaving and Leaving Honours bursaries ..... | 274  | 265  | 286  | 282  | 281  |
| Special Agricultural scholarships ..        | 7    | 6    | 9    | 8    | 7    |

The University of Adelaide awards a number of prizes, grants and scholarships each year, details of which are given in the Calendar of the University.

Many students also receive assistance at the tertiary level through studentships offered by government departments and private firms (for teaching studentships see pages 151-152).

A number of adults receive training through three Commonwealth Training Schemes currently operating in South Australia. The schemes, the Korea and Malaya Training Scheme, the Disabled Members and Widows Training Scheme, and the Social Services Training Scheme, are administered by the Technical Branch of the Education Department.

## TERTIARY EDUCATION

### THE UNIVERSITY OF ADELAIDE

The University was founded by Act of Parliament in 1874 and began its academic work in 1876. From its inception it admitted women on equality with men. Its original staff was four professors, three part-time lecturers and a registrar-librarian. Students in 1876 numbered 52, and the curriculum was confined to arts and science. Within a decade law, music and medicine were added; in 1888 studies in engineering were instituted in collaboration with the South Australian School of Mines and Industries; and at the turn of the century the University broke new ground for Australian universities by founding a conservatorium of music and by instituting studies in commercial subjects. Between the two wars the Waite Agricultural Research Institute and faculties of dentistry and economics were established, studies in agricultural science and engineering greatly developed, and diploma courses in pharmacy, public administration and physical education instituted.

In 1966 the University will extend its work to a new site at Bedford Park with a separate staff and about 500 first-year students in arts and science and some post-graduate students. Second, third and honours year under-graduate work will be added in succeeding years. The State Government has announced its intention of making the new University an autonomous institution once it is established. It will then be known as Flinders University of South Australia. Future plans include a hall of residence under the control of the University.

The governing body of the University is the Council comprising the Chancellor and the Vice-Chancellor (*ex officio*), twenty members elected by the graduates of the University of at least three years' standing and five members appointed by Parliament. The present Chancellor, Sir George Ligertwood, was elected in 1961. The principal advisory committees of the Council are the Education Committee and the Finance Committee each of which is appointed by the Council. There is also the usual University structure of faculties, boards of studies and special committees to advise on particular aspects of the University's work.

As can be seen from the following table the University is largely supported by Government grants; they constituted 89% of the total revenue for 1964 while student fees yielded less than 9%. There has been a tenfold increase in the annual revenue of the University since the end of World War II.

The University of Adelaide<sup>(a)</sup>, Finance

| Particulars                         | 1960             | 1961             | 1962             | 1963             | 1964             |
|-------------------------------------|------------------|------------------|------------------|------------------|------------------|
|                                     | £                | £                | £                | £                | £                |
| <b>Revenue—</b>                     |                  |                  |                  |                  |                  |
| <b>Government grants—</b>           |                  |                  |                  |                  |                  |
| State .....                         | 1,309,929        | 2,009,300        | 2,258,500        | 2,413,626        | 2,958,500        |
| Commonwealth .....                  | 683,271          | 839,600          | 921,968          | 1,002,600        | 1,203,600        |
| Fees .....                          | 189,463          | 226,758          | 245,135          | 359,205          | 395,987          |
| Interest and dividends .....        | 44,028           | 39,559           | 34,535           | 58,601           | 52,153           |
| Other .....                         | 49,017           | 22,108           | 25,137           | 34,735           | 38,375           |
| <b>Total general receipts .....</b> | <b>2,275,708</b> | <b>3,137,325</b> | <b>3,485,275</b> | <b>3,868,767</b> | <b>4,648,615</b> |
| <b>Endowment .....</b>              | <b>58,979</b>    | <b>61,552</b>    | <b>24,385</b>    | <b>33,768</b>    | <b>8,377</b>     |
| <b>Total revenue .....</b>          | <b>2,334,687</b> | <b>3,198,877</b> | <b>3,509,660</b> | <b>3,902,535</b> | <b>4,656,992</b> |
| <b>Expenditure—</b>                 |                  |                  |                  |                  |                  |
| General account .....               | 1,926,668        | 2,460,804        | 2,662,491        | 3,014,679        | 3,884,761        |
| Capital .....                       | 522,413          | 496,977          | 637,577          | 1,244,274        | 833,737          |
| <b>Total expenditure .....</b>      | <b>2,449,081</b> | <b>2,957,781</b> | <b>3,300,068</b> | <b>4,258,953</b> | <b>4,718,498</b> |

(a) Includes Waite Agricultural Research Institute

In 1964 the University had 11 faculties: arts (10 departments), economics (2), science (13), agricultural science (6), engineering (4), medicine (7), law, music, dentistry, architecture and town planning, and technology and applied science. It also provided diploma courses in pharmacy, physical education, physiotherapy, public administration and social studies, with arrangements made to convert the diploma course in pharmacy into a degree course in 1965. Higher degrees were provided in all faculties except technology.

Intending students are normally required to have passed the Public Examination Board Matriculation examination in a prescribed manner. Interstate and overseas students, however, may be accepted on alternative qualifications.

The period of study ranges from three years for certain degree and diploma courses to six years for medicine. In 1964, fees for full-time students varied between £104 and £151 per annum and entitled students to tuition and access to the Library and to the various facilities of the University Union. Students however may obtain financial assistance in a number of ways, as detailed on page 141. Provision is also made in certain faculties for part-time students who pay a reduced fee.

The original full-time academic staff of 4 in 1876 had grown by the end of 1963 to 63 professors, 58 readers, 148 senior lecturers, 171 lecturers, and 72 tutors and demonstrators. Teaching by part-time staff amounted in 1963 to 35,300 hours. Part-time staff were mainly engaged in large first-year classes involving laboratory work, and in the faculties of engineering, medicine and dentistry.

During the last decade significant changes have occurred in the composition of the student body. The proportion of full-time students has steadily risen, and the proportion taking diploma courses and part-time studies steadily declined. The most significant change, however, has been in the numbers of students proceeding to honours and higher degrees; here the rate of growth is double that of under-graduate enrolments. Details of student enrolments are given in the next two tables.

The University of Adelaide, Enrolments<sup>(a)</sup>

| Course   | 1959         | 1960         | 1961         | 1962         | 1963         |
|--|--------------|--------------|--------------|--------------|--------------|
| Higher degree candidates . . . . .                                 | 236          | 256          | 331          | 399          | 464          |
| Undergraduate, diploma, certificate<br>and miscellaneous students— |              |              |              |              |              |
| Arts . . . . .   | 1,804        | 1,873        | 1,993        | 2,170        | 2,372        |
| Economics . . . . .  | 398          | 391          | 406          | 442          | 458          |
| Science . . . . .  | 724          | 862          | 942          | 1,047        | 1,180        |
| Agricultural science . . . . .                                     | 88           | 89           | 82           | 79           | 94           |
| Engineering . . . . .  | 405          | 428          | 446          | 424          | 426          |
| Law . . . . .  | 116          | 145          | 173          | 225          | 266          |
| Medicine . . . . .   | 513          | 550          | 603          | 614          | 619          |
| Dentistry . . . . .  | 62           | 72           | 78           | 100          | 117          |
| Music . . . . .  | 45           | 49           | 46           | 58           | 54           |
| Technology and applied<br>science . . . . .                        | 449          | 492          | 573          | 610          | 643          |
| Architecture . . . . .   | 61           | 79           | 103          | 108          | 126          |
| Physical education . . . . .                                       | 63           | 55           | 79           | 98           | 133          |
| Social studies . . . . .   | 52           | 70           | 90           | 119          | 118          |
| Physiotherapy . . . . .  | 68           | 61           | 74           | 77           | 85           |
| Pharmacy . . . . .   | 184          | 196          | 193          | 215          | 210          |
| Home science . . . . .   | 25           | 45           | 31           | 31           | 44           |
| Optometry . . . . .  | 7            | 10           | 7            | 8            | 7            |
| <b>Total . . . . .</b>   | <b>5,300</b> | <b>5,723</b> | <b>6,250</b> | <b>6,824</b> | <b>7,416</b> |

(a) Each student is counted once only—in the category appropriate to his/her principal course. Students of the Elder Conservatorium of Music not also enrolled for degree or diploma subjects are excluded.

The University of Adelaide, Enrolments<sup>(a)</sup>, 1963

| Course   | New Students | All Students |              |            |              |
|--|--------------|--------------|--------------|------------|--------------|
|  |              | Full-time    | Part-time    | External   | Total        |
| Higher degree candidates . . . . .                                 | 40           | 177          | 112          | 175        | 464          |
| Undergraduate, diploma, certificate<br>and miscellaneous students— |              |              |              |            |              |
| Arts . . . . .   | 595          | 737          | 1,321        | 314        | 2,372        |
| Economics . . . . .  | 122          | 134          | 321          | 3          | 458          |
| Science . . . . .  | 392          | 980          | 197          | 3          | 1,180        |
| Agricultural science . . . . .                                     | 44           | 92           | 2            | —          | 94           |
| Engineering . . . . .  | 97           | 362          | 64           | —          | 426          |
| Law . . . . .  | 70           | 202          | 60           | 4          | 266          |
| Medicine . . . . .   | 104          | 619          | —            | —          | 619          |
| Dentistry . . . . .  | 37           | 117          | —            | —          | 117          |
| Music . . . . .  | 11           | 41           | 13           | —          | 54           |
| Technology and applied<br>science . . . . .                        | 130          | 197          | 445          | 1          | 643          |
| Architecture . . . . .   | 39           | 104          | 22           | —          | 126          |
| Physical education . . . . .                                       | 48           | 109          | 22           | 2          | 133          |
| Social studies . . . . .   | 25           | 85           | 32           | 1          | 118          |
| Physiotherapy . . . . .  | 19           | 85           | —            | —          | 85           |
| Pharmacy . . . . .   | 48           | 208          | 2            | —          | 210          |
| Home science . . . . .   | 25           | —            | 43           | 1          | 44           |
| Optometry . . . . .  | 1            | 1            | 6            | —          | 7            |
| <b>Total . . . . .</b>   | <b>1,847</b> | <b>4,250</b> | <b>2,662</b> | <b>504</b> | <b>7,416</b> |

(a) Each student is counted once only—in the category appropriate to his/her principal course. Students of the Elder Conservatorium of Music not also enrolled for degree or diploma subjects are excluded.

From its inception until the end of 1963 the University had conferred 10,802 degrees and 4,608 diplomas by examination. The growth of the University in recent years is indicated by the number of degrees and diplomas awarded in 1964, in excess of 1,000.

The over-all controlling body of student activities outside the classroom is the Union Council, comprised of representatives of the students, graduates, staff and Council of the University. The Union Council receives the annual fee £13 10s. (pro-rata for part time students) payable by all students proceeding to a degree or diploma; from this income it makes grants to the Sports Association for the maintenance of some 33 sporting clubs and to the Students' Representative Council for the support of some 50 student societies. It is also responsible for the Union buildings, including the three refectories and Union Hall. The Union buildings aggregate about 48,500 sq. ft. of floor space; the playing fields available to the Sports Association cover about 60 acres.

The residential colleges are independent bodies affiliated with the University. The three colleges for men were founded by churches, but impose no denominational restrictions on admission; the women's college has no denominational affiliation. All four are situated in North Adelaide within easy walking distance of the University. Their names, church affiliations, years of founding and residential capacities are:

|                      |                      |      |                         |
|----------------------|----------------------|------|-------------------------|
| St. Mark's . . . . . | Anglican . . . . .   | 1925 | 115 students, 10 tutors |
| St. Ann's . . . . .  | Non-denominational . | 1947 | 90 students, 5 tutors   |
| Aquinas . . . . .    | Roman Catholic . . . | 1948 | 85 students, 10 tutors  |
| Lincoln . . . . .    | Methodist . . . . .  | 1952 | 120 students, 9 tutors  |

### The Library

The central library of the University is named the Barr Smith Library in honour of its original benefactor, Robert Barr Smith, who during the first 25 years of the University's existence provided £20,000 for books, and of his son, Tom Elder Barr Smith, who provided the first part of the present building.

Borrowing facilities are available to matriculated students, country students and graduates. Branch libraries are located in the medical, law and music schools, the Medical Library incorporating the Library of the British Medical Association.

### The Waite Agricultural Research Institute

The Waite Agricultural Research Institute, Netherby, provides facilities for teaching in the third, fourth and honours years of the degree in agricultural science, and for post-graduate training and research. Further details are given in Part 6.3, pages 156-157.

## THE SOUTH AUSTRALIAN INSTITUTE OF TECHNOLOGY

The South Australian Institute of Technology, which pioneered technical education in South Australia, was established in 1889 as the South Australian School of Mines & Industries. The School of Mines, as it became generally known, was set up under an Act of Parliament and rapidly grew in stature and reputation. In 1960, it was renamed the South Australian Institute of Technology.

From earliest times there had been co-operation between the University and the School of Mines, and in 1903 joint engineering courses were established. An important development in the history of technical education came in 1957 with an agreement between these institutions whereby certain courses of study at the School would lead to the Degree of Bachelor of Technology at the University. Other degree courses have subsequently been introduced.

Although independent of the Education Department, the Institute maintains a close and harmonious relationship with the department, and since 1959 there has been a progressive transfer of control of activities between the two. Classes up to and including matriculation level and some trade classes have been transferred to the control of the Education Department, as was the Adelaide Technical High School in September 1963. This has enabled the Institute to expand its work in the professional and semi-professional fields, including the assumption of control of the technical training centres at Whyalla and Port Pirie in 1962.

The Institute is administered by a council appointed by the Governor. The council has complete authority within the limits of the finance placed at its disposal and for which it is responsible annually to Parliament. The autonomy provided by this feature of sovereign control makes the Institute unique among Australian technical institutes.

In 1964 government aid represented 70% of the Institute's receipts. Financial details for this and earlier years are given in the following table.

#### South Australian Institute of Technology: Revenue and Expenditure

| Particulars          | 1960           | 1961           | 1962           | 1963           | 1964             |
|----------------------|----------------|----------------|----------------|----------------|------------------|
|                      | £              | £              | £              | £              | £                |
| <b>Receipts—</b>     |                |                |                |                |                  |
| Government aid ..... | 356,940        | 369,000        | 424,000        | 500,500        | 846,100          |
| Student fees .....   | 82,056         | 90,631         | 104,376        | 144,921        | 157,144          |
| Other.....           | 9,947          | 17,304         | 26,905         | 102,592        | 207,242          |
| <b>Total .....</b>   | <b>448,943</b> | <b>476,935</b> | <b>555,281</b> | <b>748,013</b> | <b>1,210,486</b> |
| <b>Expenditure—</b>  |                |                |                |                |                  |
| Salaries .....       | 307,721        | 359,740        | 439,217        | 493,045        | 538,449          |
| Other.....           | 90,868         | 61,653         | 63,747         | 214,859        | 507,827          |
| <b>Total .....</b>   | <b>398,589</b> | <b>421,393</b> | <b>502,964</b> | <b>707,904</b> | <b>1,046,276</b> |

A wide range of courses and subjects to varying levels is offered; many courses lead to the award of a degree by the University or a diploma or certificate by the Institute. In 1965 the Institute offered 15 degree courses including engineering courses leading to a degree in technology, courses in chemical technology and metallurgy for a degree in applied science and a degree course in pharmacy.

Diploma and certificate courses applicable to local needs are conducted at the Whyalla division of the Institute and other courses are conducted at Port Pirie and Woomera.

In 1964 the Institute conducted 645 classes in 363 individual subjects.

## South Australian Institute of Technology, Students and Staff

| Particulars                 | 1960   | 1961   | 1962   | 1963   | 1964   |
|-----------------------------|--------|--------|--------|--------|--------|
| Students—                   |        |        |        |        |        |
| Individual enrolments ..... | 10,266 | 10,641 | 11,170 | 11,114 | 10,690 |
| Subject enrolments .....    | 14,033 | 15,366 | 16,859 | 17,073 | 17,443 |
| Teaching staff—             |        |        |        |        |        |
| Full-time .....             | 122    | 125    | 164    | 170    | 139    |
| Part-time .....             | 204    | 226    | 246    | 268    | 341    |

Of the 10,690 individuals enrolled in 1964, 687 were taking degree courses, 2,288 diploma courses, 262 semi-professional courses, 733 technician courses and 1,739 were enrolled in various other courses such as woolclassing, supervision, personnel administration and so on. The remaining 4,981 students were enrolled in the many single subject classes such as dressmaking, home science, millinery, welding, etc.

The majority of students attending the Institute do so on a part-time basis.

## TECHNICAL CORRESPONDENCE SCHOOL

The Technical Correspondence School provides correspondence courses in a wide range of subjects. Students may receive tuition in Public Examination Board subjects, certain University subjects, and in certain subjects analagous to those of the Institute of Technology. The school also provides trade school courses for apprentices, various accounting and commercial courses and a wide variety of specialist and leisure interest courses. Tuition for certain prisoners at Yatala and other gaols is conducted through the school.

In 1964 there were 4,683 persons, including 656 apprentices, enrolled with the Technical Correspondence School.

## ROSEWORTHY AGRICULTURAL COLLEGE

Roseworthy Agricultural College was opened to students in 1885 and thus ranks as the oldest of Australian agricultural colleges. Admission is limited to young men over 16 years of age who have reached a satisfactory level of secondary education. There is a strong practical bias to the course and almost half of the graduating students take responsible positions on farming or pastoral properties.

Research and experimental work applicable to the area is conducted and the college is also involved in the production of pure seed of wheat and oat varieties suitable to South Australia. A major wheat and oat breeding programme is also conducted.

The college is situated 32 miles north of Adelaide in better class mallee country, the average annual rainfall being 17.1 inches. The total area of the college farm is 2,573 acres. Buildings, grounds, vineyard and orchard occupy about 100 acres. Nine hundred acres are cropped annually and about 400 acres are fallowed. Jersey, Polled Shorthorn, Merino, Southdown and Berkshire studs are conducted.

A special course in oenology is conducted leading to a Roseworthy diploma. Australia's wine technologists are trained at Roseworthy and a small wine cellar is part of the establishment.

At 30th June 1964 there were 99 students enrolled at the college.

**SOUTH AUSTRALIAN SCHOOL OF ART**

The School of Art at North Adelaide is the oldest such institution in Australia. It conducts full-time courses leading to the Diploma of Art in Fine Arts, Advertising Art and Art Teaching. Classes in related subjects are also provided for part-time students.

The Diploma in Art Teaching is a three year course, the art education section of which is provided at the School of Art. Other diploma courses are of four years with a study of specialized subjects following a common first-year course.

During 1964, 268 full-time diploma students and 475 part-time students enrolled at the School.

**TRADE EDUCATION**

The Apprentices Act, 1950, requires apprentices to attend schools or undertake correspondence courses for a minimum of three years of their indenture period.

To provide training for apprentices the Education Department has ten trade schools in the metropolitan area. Classes are also conducted at Port Pirie, Whyalla, Port Augusta and Mount Gambier, and many apprentices are catered for through the Technical Correspondence School.

Although the Act only requires apprentices to attend trade school for three years, facilities are provided for those showing ability to attend for a fourth and fifth year. Most metropolitan trade schools also provide advanced courses for adult tradesmen and others employed in industry.

The trade school curriculum covers 100 subjects related to 40 trades. While many of these subjects form part of the requirements for the Advanced Trade Certificate, the others are designed to meet special demands for training in new processes and techniques.

**Trade Education, South Australia**  
*Number of Apprentices Enrolled in December*

| Schools  | 1960         | 1961         | 1962         | 1963         | 1964         |
|--|--------------|--------------|--------------|--------------|--------------|
| Metropolitan trade schools . . . . .             | 3,794        | 4,068        | 4,196        | 4,712        | 5,553        |
| Country technical schools . . . . .              | 478          | 544          | 525          | 559          | 619          |
| Technical correspondence school<br>(a) . . . . . | 615          | 608          | 613          | 652          | 656          |
| <b>Total . . . . .</b>                           | <b>4,887</b> | <b>5,220</b> | <b>5,334</b> | <b>5,923</b> | <b>6,828</b> |

(a) Includes Northern Territory apprentices.

**ADULT EDUCATION**

**Education Department: Adult Education**

The Education Department provides adult education for part-time students in country areas through its 13 adult education centres (two of which are in the Northern Territory) the Whyalla Technical School, and the Port Pirie Technical College—with branch classes conducted in 140 towns. In the metropolitan area classes are held at 16 technical high schools, 8 trade schools and the School of Art.



The 189 subjects currently available to adult classes include academic subjects up to matriculation standard and beyond, technical subjects for apprentices and adult tradesmen, commercial and other vocational subjects, art and craft subjects, and a wide range of cultural activities.

### Workers' Educational Association of South Australia

The Workers' Educational Association of South Australia was established in 1914. Patterned on the English W.E.A., it is a voluntary adult education organization which works in close co-operation with the University of Adelaide's Department of Adult Education.

Activities it organizes directly, or in which it provides major assistance to other bodies, include a comprehensive day and evening class programme, postal courses for trade unionists, an international adult and children's film festival, adult education courses on television and a short-period residential college.

It possesses a residential college at Goolwa, an adult education centre in the city, and a bookshop in the University grounds which provides books for University and W.E.A. students.

In 1964 there were 39 classes with a total enrolment of 2,638 students organized independently by the W.E.A., and a further 66 classes with an enrolment of 2,618 were organized by the W.E.A. in association with the University.

### University: Department of Adult Education

Adult education classes were started by the University in 1917, and in 1957 a Department of Adult Education was established.

The department, largely in association with the Workers' Educational Association, provides tutorial classes and lecture classes in a wide range of subjects. A library is available to students of these classes. The department also organizes study circles, discussions and seminars in a number of subjects, and lectures, discussion groups, music recitals and art exhibitions are arranged in country centres. A summer school for adults is conducted annually.

In 1963 the department began using television as a medium for adult education.

Aggregate enrolments for 1964 were 1,720 in courses, schools and conferences arranged independently by the department, and 2,618 in classes arranged jointly with the W.E.A.

### Education Department, Adult Education

#### Number of Subject Enrolments

| Centres                              | 1962   | 1963   | 1964   |
|--------------------------------------|--------|--------|--------|
| In Country Districts .....           | 11,746 | 11,127 | 13,797 |
| In Metropolitan Area—                |        |        |        |
| South Australian School of Art ..... | 712    | 911    | 627    |
| Trade Schools .....                  | 2,099  | 2,858  | 3,010  |
| Technical High Schools .....         | 7,221  | 8,441  | 10,037 |
| Technical Correspondence School ...  | 4,968  | 4,937  | 5,159  |
| Adelaide Woodwork School .....       | 172    | 211    | 207    |
| Total .....                          | 26,918 | 28,485 | 32,837 |

Adult education is also available through the Technical Correspondence School.

**Migrant Education**

The Education Department on behalf of the Commonwealth Government conducts classes for migrants who have an inadequate command of the English language. These classes are held at many metropolitan and country centres including migrant reception centres. Tuition is also provided through correspondence courses and radio lessons.

A field officer visits individuals and families in their homes or places of employment to acquaint them with the opportunities for learning English, and to offer to enrol them in one of the classes.

In 1964, 3,562 persons enrolled or re-enrolled for English classes and a further 2,389 took correspondence lessons.

**TEACHER TRAINING**

**Kindergarten**

The Kindergarten Training College is under the control of the Kindergarten Union of South Australia (Inc.).

Trainees undertake a three year course which includes lectures in a wide variety of subjects in addition to practical experience at kindergartens. Trainees may be granted training allowances by the Kindergarten Union (subject to a bond) or may enter as private students. Upon completion of the course trainees are awarded a diploma.

Trainees also benefit from the facilities of the Lady Gowrie Child Centre which is equipped for observational and experimental work with pre-school children, and is associated with the Kindergarten Union through the Australian Pre-School Association.

**Kindergarten Training College, South Australia**

| At 31st August | Lecturers |           | Student Teachers |
|----------------|-----------|-----------|------------------|
|                | Full-time | Part-time |                  |
| 1960.....      | 3         | 14        | 55               |
| 1961.....      | 3         | 12        | 64               |
| 1962.....      | 4         | 17        | 64               |
| 1963 (a).....  | 5         | 17        | 61               |
| 1964 (a).....  | 5         | 11        | 70               |

(a) At 31st December.

**Education Department**

The Education Department conducts training schools for teachers at Adelaide Teachers College, Wattle Park Teachers College and Western Teachers College. Courses are related to the various levels of education or to specialized fields. Infant and primary teachers are trained at Wattle Park and Western Teachers Colleges, and secondary trainees are generally attached to the Adelaide Teachers College which is situated adjacent to the University of Adelaide.

The normal training period for infant and primary teachers is two years. Certain infant and primary teachers, after having completed their normal training, may attend special courses to equip them for teaching handicapped children. Courses for secondary teachers are usually of four years. In addition to the general secondary course there are also specialist courses for teachers of commercial subjects, agriculture, music, physical education, art, home science and crafts.

External facilities, as well as those of the colleges, are used in the training of teachers. Secondary trainees have the opportunity of completing a university degree, and infant and primary training may involve some study at the University. In addition, the facilities of the Institute of Technology, Roseworthy Agricultural College, Waite Institute, the Elder Conservatorium of Music and the South Australian School of Art are used in the training of specialist teachers. Trainees also attend at certain schools where they observe skilled teachers at work and where they gain practical experience through the preparation and presentation of lessons.

Trainees may enter the colleges as private students; the majority, however, receive free tuition and allowances while training in return for a three year bond with the Education Department. To assist intending trainees in attaining the necessary entrance qualifications the department offers teaching scholarships.

**Students at Teachers' Colleges<sup>(a)</sup>, South Australia**

| Classification       | 1960         | 1961         | 1962         | 1963         | 1964         |
|----------------------|--------------|--------------|--------------|--------------|--------------|
| Infant .....         | 237          | 278          | 333          | 344          | 343          |
| Primary .....        | 548          | 747          | 981          | 1,056        | 1,141        |
| Secondary—           |              |              |              |              |              |
| General (b) .....    | 541          | 653          | 749          | 832          | 997          |
| Specialist (c) ..... | 293          | 343          | 395          | 503          | 587          |
| <b>Total .....</b>   | <b>1,619</b> | <b>2,021</b> | <b>2,458</b> | <b>2,735</b> | <b>3,068</b> |

(a) Number of students attending for whole or part of the year.

(b) Includes agriculture and music teachers.

(c) Includes commercial, physical education, craft and art teachers.

### Private Schools

In the Catholic school system only one religious order, the Sisters of Mercy, receives its training in South Australia. These Sisters attend the Education Department training colleges and the University of Adelaide. Other teaching personnel receive their training interstate.

Other private schools do not normally train their own teachers but employ persons considered to be suitably qualified.

### STATE EXPENDITURE ON EDUCATION

Details of expenditure by the State Government on education in recent years are given below. The considerable increase in annual expenditure shown in the table has been a continuous process since the end of World War II. In 1946-47

Government expenditure from revenue on education was £2 million with a further £56,000 of loan funds devoted to the construction and maintenance of schools. Above average increases have applied in the secondary, technical and university spheres (expenditure on universities being taken to include grants by the Commonwealth Government).

### State Expenditure on Education, South Australia

| Particulars   | 1959-60 | 1960-61 | 1961-62 | 1962-63 | 1963-64 |
|---|---------|---------|---------|---------|---------|
|   | £'000   |         |         |         |         |
| <i>Expenditure from Consolidated Revenue—</i>       |         |         |         |         |         |
| Primary .....                                       | 5,881   | 6,358   | 6,985   | 7,528   | 8,281   |
| Secondary .....                                     | 2,498   | 3,027   | 3,413   | 3,919   | 4,346   |
| Technical (a) .....                                 | 1,859   | 2,105   | 2,616   | 3,019   | 3,678   |
| Kindergarten Union grants .                         | 145     | 160     | 176     | 185     | 195     |
| University grants .....                             | 1,637   | 2,162   | 2,771   | 3,117   | 3,539   |
| Waite Agricultural Research Institute .....         | 284     | 320     | 358     | 350     | 412     |
| Roseworthy Agricultural College .....               | 115     | 129     | 130     | 128     | 135     |
| Pensions .....                                      | 230     | 258     | 297     | 344     | 387     |
| Payroll tax .....                                   | 215     | 233     | 268     | 299     | 334     |
| Miscellaneous .....                                 | 133     | 149     | 154     | 168     | 190     |
| Buildings—  |         |         |         |         |         |
| Schools (a) .....                                   | 672     | 779     | 1,017   | 989     | 1,190   |
| Agricultural College .....                          | 8       | 9       | 12      | 26      | 26      |
| Sinking fund payment .....                          | 253     | 300     | 352     | 439     | 513     |
| Interest on loan expenditure                        | 767     | 918     | 1,197   | 1,484   | 1,702   |
| Total expenditure from Consolidated Revenue ..      | 14,697  | 16,907  | 19,746  | 21,995  | 24,928  |
| <i>Receipts—</i>                                    |         |         |         |         |         |
| Education Department .....                          | 187     | 231     | 351     | 391     | 410     |
| Agricultural College .....                          | 46      | 48      | 42      | 45      | 53      |
| Miscellaneous .....                                 | 2       | 3       | 3       | 4       | 9       |
| Commonwealth grants to University .....             | 893     | 1,090   | 1,395   | 1,570   | 1,825   |
| Total receipts .....                                | 1,128   | 1,372   | 1,791   | 2,010   | 2,297   |
| Net expenditure from Consolidated Revenue ..        | 13,569  | 15,535  | 17,955  | 19,985  | 22,631  |
| <i>Loan Expenditure—</i>                            |         |         |         |         |         |
| Buildings—  |         |         |         |         |         |
| Schools, etc. ....                                  | 3,998   | 4,854   | 5,944   | 5,970   | 4,933   |
| Agricultural College .....                          | —       | 3       | 3       | 8       | 39      |
| School buses .....                                  | 36      | 81      | 135     | 132     | 134     |
| Student hostel advances (including buildings) ..... | —       | —       | 9       | 80      | 173     |
| Total .....   | 4,034   | 4,938   | 6,091   | 6,190   | 5,279   |
| Less repayments and redemptions                     | 305     | 322     | 543     | 427     | 541     |
| Net debit to loan accounts ..                       | 3,729   | 4,616   | 5,548   | 5,763   | 4,738   |

(a) Includes technical high schools and Institute of Technology.

### 6.3. SCIENTIFIC AND RESEARCH ORGANIZATIONS

#### THE WEAPONS RESEARCH ESTABLISHMENT

The Weapons Research Establishment, situated at Salisbury, is the largest of three organizations within the Research and Development Branch of the Department of Supply. The Research and Development Branch, with its headquarters in Melbourne, is responsible for research and scientific development in relation to defence, including the operation of the Joint United Kingdom-Australia Weapons Research Project.

The Weapons Research Establishment is concerned with research, development and testing of guided missiles, tracking of satellites and space vehicles, and, through Australia's membership of the European Launcher Development Organization, with the development of a launching vehicle for placing satellites in orbit for peaceful purposes.

The headquarters of the Weapons Research Establishment occupies an area of about six square miles at Salisbury, and includes Edinburgh Airfield from which the RAAF carries out the experimental and other flying required for the Establishment's projects. Facilities within the area have been provided for branches of British firms which have contracted with the British Ministry of Aviation to develop weapons systems or components.

The Establishment has four main sections—namely, the Trials Wing, the Space Physics Wing, the Weapons Research and Development Wing and the Engineering Wing. The Trials Wing is concerned with the operation, development and instrumentation of the Woomera Range and the planning, execution and assessment of trials. The Space Physics Wing undertakes the operation of United States satellite and space tracking stations throughout Australia, and conducts research and development in support of the range—including investigations into the characteristics of the upper atmosphere, using sounding rockets. The Weapons Research and Development Wing is concerned primarily with Australian-initiated defence research and weapon development, but assistance is also given with some phases of the Joint Project programme. The Engineering Wing provides the design and workshops effort required to support the work of the Establishment and the Range.

Testing ranges have been established at Woomera, which is approximately 280 miles north-west of Adelaide. A township, together with modern amenities such as hospital, school, kindergarten, community store, swimming pool and all sporting facilities, has been built at Woomera to accommodate the range and allied service personnel and their families. The population is approximately 5,000.

The total strength of Weapons Research Establishment is about 6,000 people, including staff at Salisbury and Woomera and attached Service personnel.

#### European Launcher Development Organization (ELDO)

By virtue of the major facilities at Woomera for launching space vehicles, Australia has become a member of ELDO, which has been established with the object of developing a launching vehicle for placing satellites in orbit for peaceful purposes. Other members of ELDO are Britain, Belgium, the Federal Republic of Germany, France, Italy and the Netherlands.

#### United States Space Projects

Agreements exist between the Australian and United States Governments for a co-operative programme for the establishment and operation in Australia, for scientific purposes, of facilities for space vehicle tracking and data recording.

Space tracking, telemetry and command stations have been established, or are under construction, at various points in Australia. One such station is operating at Island Lagoon (near Woomera).

All these are an integral part of the world-wide network of tracking and data recording stations being established by the United States National Aeronautics and Space Administration to support its programme for manned space vehicles, scientific satellites and deep space probes.

## THE COMMONWEALTH SCIENTIFIC AND INDUSTRIAL RESEARCH ORGANIZATION

The Commonwealth Scientific and Industrial Research Organization (C.S.I.R.O.) is a corporate body established by Act of Parliament. Its first responsibility is to carry out "scientific research and investigations in connection with, or for the promotion of primary or secondary industries in the Commonwealth . . .". The governing body is an executive of five full-time and four part-time members.

The executive is supported by a national advisory council and by a State committee in each State. These advisory bodies are composed of scientists, agriculturalist and industrialists. Council and committee members are frequently consulted, either individually or corporately, by the executive. They also take the initiative in bringing problems to the attention of the executive.

Three of the twenty two C.S.I.R.O. research divisions have their headquarters in South Australia: these are the Divisions of Biochemistry and General Nutrition, Soils, and Mathematical Statistics.

The Division of Biochemistry and General Nutrition's interests extend through the fields of nutritional biochemistry and nutritional physiology. The greater part of its efforts have been concentrated on research associated with sheep nutrition and wool and meat production. The division's work on the role of trace elements in plant and animal nutrition has been of far-reaching consequence. The animal nutrition work has led to practical means of controlling "coast disease" and "phalaris staggers", two common diseases of sheep. Plant nutrition research has shown how added traces of elements such as copper and zinc enable large tracts of country, previously regarded as desert, to be farmed profitably.

The division has its headquarters laboratory in the grounds of the University of Adelaide and a field station at O'Halloran Hill.

The Division of Soils has a headquarters laboratory adjacent to the Waite Institute, in the suburbs of Adelaide. Here the efforts of the Division's soil surveyors are consolidated into detailed maps showing the distribution of soil types in Australia. A good deal of chemical research has been concerned with phosphorus, since Australian soils are almost universally short of this element. Nitrogen-fixing micro-organisms in the soil are singled out for special study by the Division's microbiology group. Soil-water relationships dominate the attention of the Division's physicists; the swelling and shrinking of soils under the influence of water is important, since it can have practical effects on the stability of foundations and the water holding capacity of dams.

The Division of Mathematical Statistics has its headquarters in Adelaide, but its officers are stationed throughout Australia. Many of its officers are located in various other C.S.I.R.O. laboratories, where they contribute through their statistical knowledge to many different research programmes. The Division has developed a number of fundamental research interests of its own, particularly in theoretical and meteorological statistics.

### THE INSTITUTE OF MEDICAL AND VETERINARY SCIENCE

The Institute of Medical and Veterinary Science was established by Act of Parliament in 1937 to incorporate the functions of the former Adelaide Hospital Laboratory. Its present main buildings were occupied in May, 1939. The war years and those which immediately followed were so abnormal and conditions so difficult that any development which would normally have occurred was delayed severely. The period of relatively great expansion of its services and activities commenced in 1950 and is still continuing today. The increase in work is reflected in the increased number of tests performed by the Institute over the years since its inception. In 1963-64 there were 472,858 tests carried out as compared with 175,528 in 1952-53 and approximately 27,000 in 1938-39.

The Institute is administered by a council responsible to the Minister of Health. The Director of the Institute is the chief executive officer of the council.

The Institute provides diagnostic facilities in all branches of clinical pathology for the Royal Adelaide Hospital and other metropolitan and country hospitals, for public health authorities, for industry, and for private practitioners. It also undertakes work in all branches of Veterinary Pathology for the Department of Agriculture, and for veterinary practitioners and stockowners. Research is conducted into selected problems connected with disease in man, and in animals of economic importance. The staff of the Institute takes part in the teaching of the medical sciences to graduates, students and technicians.

#### The Institute of Medical and Veterinary Science

| Particulars                     | 1959-60 | 1960-61 | 1961-62 | 1962-63 | 1963-64 |
|---------------------------------|---------|---------|---------|---------|---------|
| Staff at end of year—           |         |         |         |         |         |
| Graduate .....                  | 44      | 42      | 56      | 58      | 58      |
| Other .....                     | 138     | 148     | 149     | 164     | 180     |
| Tests performed .....           | 466,375 | 473,808 | 440,799 | 447,587 | 472,858 |
| Revenue—                        | £       | £       | £       | £       | £       |
| State Government grant .....    | 186,000 | 211,000 | 198,000 | 252,000 | 287,000 |
| Fees for laboratory tests ..... | 66,515  | 92,980  | 92,639  | 95,632  | 92,108  |
| Other .....                     | 9,932   | 11,209  | 13,756  | 18,074  | 16,447  |
| Total .....                     | 262,447 | 315,189 | 304,395 | 365,706 | 395,555 |
| Expenditure—                    |         |         |         |         |         |
| Salaries and wages .....        | 198,883 | 209,515 | 226,366 | 245,229 | 290,938 |
| Other .....                     | 69,321  | 74,381  | 80,570  | 89,446  | 119,747 |
| Total .....                     | 268,204 | 283,896 | 306,936 | 334,675 | 410,685 |

### WAITE AGRICULTURAL RESEARCH INSTITUTE

The Waite Agricultural Research Institute was established, within the University of Adelaide, in 1924. The foundation of the Waite Institute was made possible by a gift from Mr. Peter Waite, a wealthy pastoralist, of land and property at Glen Osmond, together with an endowment. The Institute has received a number of endowments subsequent to this original gift and these have been used to assist in the establishment of additional laboratories and other research and teaching facilities.

The finance of the Institute is now drawn in large measure from grants made annually by the Commonwealth and State governments, on the basis of recommendations by the Australian Universities Commission. Research programmes at the Institute have also attracted a very satisfactory measure of support from other sources, notably primary industry bodies such as the Australian Wool Board, the Wheat Industry Research Council and the Australian Cattle and Beef Research Committee. More than 23% of the total Waite Institute budget of £435,000 in 1964 came from these sources.

The Institute contains six departments, each under the leadership of a professor. The departments are: agricultural biochemistry and soil science, agronomy, animal physiology, entomology, plant pathology and plant physiology. Until recent years, the Institute has centred its research and teaching activities on the plant and soil sciences. Recognition of the growing importance of the livestock industries in Australia led, a few years ago, to the introduction of animal studies and this development has now been firmly entrenched by the establishment in 1964 of the new Department of Animal Physiology.

The six departments are responsible for teaching the last two years of the four year under-graduate course leading to the degree of Bachelor of Agricultural Science, the first two years being given by appropriate science departments at the central University in Adelaide. The Waite Institute is noted for the development and maintenance of strong post-graduate schools in which students from all over Australia and many countries overseas, particularly British Commonwealth countries, are enrolled.

The research projects conducted at the Institute cover a wide range of topics, of which the following are a few examples; relationship of stocking rates to pasture composition and fertilizer practices; the protein chemistry of the wheat grain; the genetics and breeding of cereals and pasture plants; flower and fruit development in horticultural plants; studies on soil-borne and virus diseases of plants; the nutrition of the honey bee; and the biology and control of the *Sirex* wood-boring wasp.

## 6.4. CULTURE AND RECREATION

### LIBRARIES

#### The Public Library

The Public Library of South Australia has its origin in a collection of books assembled in London in 1834, two years before the province of South Australia was founded. The modern character of the Library was established in 1940 when, after the Price Report of 1937, the Library was separated from the Museum and Art Gallery and became a State Government department administered by the Libraries Board of South Australia. At the present time the Library is organized in three divisions—Reference Services, Lending Services and Technical Services.

The Library has a representative basic collection of 19th and 20th century materials in all subjects except medicine and law. It has considerable strength in a number of subjects including South Australian publications, librarianship, wine, Australian Aboriginals, River Murray shipping, sailing ships, and 19th century illustrated works on natural history. In addition there is an extensive collection of



tape recordings of Australian authors, folksongs and aboriginal music. The Library is an official depository for the publications of the United Nations, Unesco and some of the other specialized agencies, and the publications of the Australian, British, Californian, and Philippine governments.

The oldest section of the Library is the Reference Library which is the central basic collection. Since 1946 the books excepting rare, irreplaceable volumes, have been available for loan. About 5,000 periodicals are taken annually, and the newspaper reading room files 262 foreign and local newspapers. In 1963-64, 49,973 periodicals were lent. Legislation since 1878 provides for the deposit in the Library of copies of all items published in South Australia.

The Research Service, established in 1942, received 2,414 enquiries in 1963-64, mainly from industry. It supplies lists of references and arranges for the borrowing of books and periodicals selected from those lists as well as books and photocopies from interstate and overseas libraries. The service has an extensive collection of trade catalogues. The service also arranges documentary film evenings throughout the year in the lecture room. *Pinpointer*, a monthly index of popular Australian periodicals, is published.

In 1919 the Archives Section was established for the collection of original South Australian historical material. In 1925 Legislation was passed forbidding the destruction of government documents without reference to the Libraries Board. At the end of June 1964 there were 3,912 feet of occupied shelf space in the Archives. During the year 1963-64, 62,636 items (maps, views, documents and printed sources) were produced for 4,153 enquiries. A journal *South Australian*, is published twice a year.

The Reference Division also staffs 19 libraries in other government departments.

The Children's Library was established in 1915 and is believed to be the oldest in Australia. The carefully selected books include about 5,000 rare and old books in a special study collection. School classes visit the Library.

People living outside the Adelaide metropolitan area are served by the Country Lending Service which began lending books in 1938. This service has 12,422 active borrowers, of whom 7,262 are children. During 1963-64, 19,891 books were despatched in boxes to schools. Books are also lent to associations, clubs and gaols. The service also acts as a central pool for books and a central clearing house for enquiries from local public libraries. About 8,000 requests from these libraries are received each year.

In 1946 the Adelaide Lending Service was opened to serve metropolitan readers. Books were lent to 31,822 borrowers in 1963-64. There are special collections of books in foreign languages. 836 sets of plays were lent to play-reading and acting groups.

Another active section is the Youth Lending Service established in 1957. This caters for the needs of young people between the ages of 13 and 18 years. The service was used by over 11,000 young people in 1963-64. The collection, besides general literature, includes much on hobbies and careers of special interest to adolescents.

The Technical Services Division besides the usual cataloguing and accessions sections includes a bindery which employs more than 50 persons and a large photographic section. Photographic and xerographic copying facilities are available to the public and much work is done for the library itself. In 1962 the Libraries Board began an extensive programme of publishing facsimile editions and other works of Australian interest.

## Public Library of South Australia

| Year                                | Reference Library | Children's Library | Country Lending Service (a) | Adelaide Lending Service | Youth Lending Service | Total   |
|-------------------------------------|-------------------|--------------------|-----------------------------|--------------------------|-----------------------|---------|
| Volumes Held : 30th June            |                   |                    |                             |                          |                       |         |
| 1960.....                           | 194,933           | 24,693             | 99,742                      | 38,702                   | 8,691                 | 366,761 |
| 1961.....                           | 199,095           | 26,930             | 125,471                     | 38,146                   | 10,464                | 400,106 |
| 1962.....                           | 206,581           | 26,824             | 152,990                     | 40,316                   | 11,953                | 438,664 |
| 1963.....                           | 213,779           | 32,911             | 173,043                     | 42,434                   | 12,865                | 475,032 |
| 1964.....                           | 220,558           | 34,178             | 220,660                     | 44,528                   | 14,254                | 534,178 |
| Volumes Lent : Year Ended 30th June |                   |                    |                             |                          |                       |         |
| 1960.....                           | 49,260            | 176,207            | 193,757                     | 215,654                  | 87,882                | 722,760 |
| 1961.....                           | 52,766            | 166,862            | 180,851                     | 214,166                  | 85,050                | 699,695 |
| 1962.....                           | 62,075            | 204,798            | 186,684                     | 253,671                  | 99,610                | 806,838 |
| 1963.....                           | 69,471            | 225,756            | 202,689                     | 255,554                  | 110,304               | 863,774 |
| 1964.....                           | 73,454            | 236,355            | 208,893                     | 258,487                  | 118,294               | 895,483 |

(a) Volumes held include volumes on loan to local public libraries. In 1964 such loans amounted to 110,990. These have not been included in volumes lent.

The erection of a new building (the present main building was erected in 1884) has recently been commenced. The first stage will be the three floors with approximately 2,174,000 cubic feet and will cost about £1,500,000. All services now in outlying buildings will be housed in it.

#### Local Public Libraries

Local public libraries financed by municipal authorities are subsidized under the Libraries (Subsidies) Act, 1955-1958. With general oversight and planning by the Libraries Board, subsidies (in 1963-64 amounting to £31,137) are paid on a pound for pound basis. Sixteen libraries serving a quarter of the population of the State had been established by June 1964. In 1963-64 local public libraries lent 901,469 books to 70,731 registered readers. All book stocks (110,990) are interchangeable with a central pool maintained by the Libraries Board.

#### The Adelaide Circulating Library

The Adelaide Circulating Library also traces its origin to the collection of books dispatched from London shortly after foundation of the State. In 1884 the collection which has grown from this nucleus was divided, the text and reference books going to the newly formed Public Library, and the remaining works constituting the Adelaide Circulating Library.

The Library, which receives a small government grant each year, is controlled by a committee elected by subscribers.

At 30th June 1964 the library contained 110,000 volumes, and subscribers during the year 1963-64 numbered 4,458.

#### Institute Libraries

In 1884, when the Public Library was established, there were already in existence 108 institutes with a combined membership of 5,000.

Institute libraries are situated in the metropolitan area and in country areas throughout the State. These libraries are largely dependent on members' subscriptions but also receive a government subsidy. Many institutes receive considerable support from local councils.

The Institutes Association of South Australia Inc. acts as a co-ordinating authority and as a purchasing agency for the majority of institutes; these, however, retain complete autonomy, being governed by a committee elected by members.

The borrowing facilities of institute libraries are available only to subscribers, although at some libraries the general public has access to, and the use of, reading facilities. Many libraries cater for children.

The conduct of institutes is regulated by the Libraries and Institutes Act, 1939-1950.

#### Institute Libraries, South Australia

*As at 31st December*

| Particulars                       | 1960      | 1961      | 1962      | 1963      | 1964      |
|-----------------------------------|-----------|-----------|-----------|-----------|-----------|
| Number of institutes .....        | 218       | 213       | 211       | 206       | 204       |
| Subscribers .....                 | 24,445    | 24,415    | 24,252    | 23,453    | 23,651    |
| Number of volumes .....           | 784,674   | 755,344   | 764,407   | 761,761   | 725,335   |
| Volumes circulated during year .. | 2,142,830 | 2,024,727 | 1,993,456 | 1,967,099 | 1,933,184 |

#### Other Libraries

Particulars relating to the Barr Smith Library at the University of Adelaide are given on page 146. Other libraries include those of the Royal Society of South Australia (approximately 22,500 volumes), the South Australian Branch of the Royal Geographical Society of Australasia (16,000 volumes) and the Parliamentary Library (60,000 volumes).

### MUSEUMS

#### The South Australian Museum

Founded as a subsidiary of the South Australian Institute in 1856, the South Australian Museum was subsequently administered under the joint Board of the Public Library, Museum and Art Gallery and became a separate government department under the provisions of the Museum Act, 1939. Since then it has continued to develop as the focal point of natural history activities in this State.

Like most public museums, it serves a three-fold purpose—preservation, research and public education.

Several of the collections of specimens and data are outstanding, the collection of Australian ethnological objects being of world renown.

A staff of twelve professional research workers is responsible for the care of the collections, and for undertaking research, both pure and applied, on specimens under their control. This work is published in the *Records of the South Australian Museum*, and in other scientific periodicals.

Public education work includes the presentation of the latest information on the natural history of our unique fauna and flora in public display galleries covering more than 37,000 sq. ft. Educational booklets setting out useful information on a variety of subjects are published and sold to visitors at nominal cost.

#### Other Museums

A number of historic residences serve as museums. In 1961 the "Old Government House" at Belair was refurbished with relics of the colonial era and opened for public inspection. At "Whalers' Haven", Victor Harbor, a pioneer cottage has been restored and features many relics of early settlement with

particular emphasis on the whaling industry. The home of the poet Adam Lindsay Gordon, "Dingley Dell" at Port Macdonnell, is maintained as a museum and Captain Charles Sturt's original home at Grange is in the process of being restored. Items of local interest are exhibited at the Lobethal Archives and Historical Museum.

Various items of maritime association including pictures, models and fittings from early ships are displayed at the Nautical Museum at Port Adelaide.

A number of special museums are maintained at the University of Adelaide for the use of the staff and students and a Museum of Economic Botany is associated with the Botanic Garden.

#### **The National Trust of South Australia**

The National Trust of South Australia was established by Act of Parliament in 1955. The trust is administered by a council and is financed by gifts, legacies and subscriptions.

The trust encourages the preservation of buildings of architectural and historic interest. It also aims to preserve lands of beauty, such as "Wilabalangaloo", Berri, and to protect and develop the native flora and fauna as at "Watiparinga" Reserve, Eden Hills. The trust is also interested in preserving areas of scientific interest, the G. S. Sandison Reserve at Hallett Cove, with its glacial pavements, being such a property. At 30th June 1964 the Trust controlled 15 reserves totalling 1,100 acres.

In 1963 the paddle steamer *Marion* was purchased and refitted by the trust and now floats in the old graving dock at Mannum.

### **ART GALLERIES**

#### **The National Gallery**

The National Gallery of South Australia was opened in 1881. The first portion of the present building was completed in 1900 and this was greatly extended in 1936 as a result of a generous gift of £10,000 from Mr. Alexander Melrose and a grant of £16,000 from the Government. The gallery became a government department under the National Gallery Board in 1940. In 1962 a three storey air conditioned wing was added, which has greatly increased its capacity.

The collections contain a token representation of the art of all periods and include excellent examples of Australian and contemporary British art.

The gallery has benefited by many bequests, the Ragless, Elder, Morgan Thomas, Boxall, David Murray and Mortlock bequests together totalling over £126,000. Money has also been bequeathed for the Melrose Prize for a portrait or figure composition awarded every fourth year, and the Maude Vizard-Wholohan Prize awarded annually, alternately for a landscape or a figure subject in oils; there are additional Maude Vizard-Wholohan prizes for a water-colour and a print, and a prize for sculpture is awarded from time to time.

Many visiting exhibitions are displayed in the gallery. Lectures and demonstrations are given and collections of pictures and reproductions are circulated in country districts. A quarterly *Bulletin* has been published since 1939. An entirely free reproduction lending service is used by over 300 schools and government departments.

#### **Other Galleries**

A number of small commercial galleries present exhibitions throughout the year. One such gallery at Hahndorf is of particular interest through its historic setting.

The Royal South Australian Society of Arts and certain retail stores maintain galleries in which a limited number of exhibitions are held each year.

Beginning with the Citizens' Art Group exhibition in 1954 and the Advertiser exhibition in 1955 there has been growing interest in open air exhibitions as a medium for displaying local art. The 1965 Advertiser exhibition contained 886 exhibits submitted by 784 artists.

## MUSIC AND DRAMA

### MUSIC

In orchestral performance in South Australia the South Australian Symphony Orchestra maintained by the Australian Broadcasting Commission (see below), plays a leading role. The University Music Society presents approximately 10 subscription concerts each year including orchestral music, chamber music and various solo performances. In addition the Elder Conservatorium of Music arranges free Sunday afternoon concerts, lunch hour recitals by staff members and a number of student concerts including performances by senior and junior orchestras. Other performances include chamber music by local and overseas artists presented by Musica Viva.

The Elizabethan Theatre Trust Opera Company presents seasons of opera in South Australia and local groups active in this field include the Intimate Opera Group and the Gilbert and Sullivan Society. A number of societies and denominational groups make a regular contribution to choral music.

#### The Australian Broadcasting Commission

In the metropolitan area the South Australian Symphony Orchestra each year gives 30 orchestral subscription concerts, usually with an overseas conductor or soloist—often both—and six youth orchestral subscription concerts with overseas and resident conductors and soloists. The A.B.C. also presents a recital series of six concerts by overseas artists and a series of four choral concerts with the Symphony Orchestra and the Adelaide Philharmonic Choir. In addition there are three free orchestral concerts annually, and frequently the A.B.C. presents a series of summer concerts.

During 1964 there were 18 free concerts with the S.A. Symphony Orchestra for schoolchildren in the metropolitan area. Three country centres, Port Lincoln, Mount Gambier and Broken Hill, have their own A.B.C. subscription series of four concerts—one by the South Australian Symphony Orchestra and three by world class recital artists. In addition the Symphony Orchestra goes on tour into the country and during 1964 visited 10 country centres. In all these centres, the orchestra gave a free concert for schoolchildren as well as a public concert.

#### The Elder Conservatorium of Music

A Chair of Music was created at the University of Adelaide in 1884, and in 1898, following an endowment by Sir Thomas Elder, a Conservatorium was established.

The Elder Conservatorium of Music provides a comprehensive course of training for students in degree and diploma courses, and also caters for external students by providing instruction in the various branches of music as single studies. Students undertaking single studies attend certain classes in addition to receiving private tuition.

Concert experience is provided through regular informal concerts and through Students' Concerts, the latter providing experience in public performance.

In 1964 there were 14 students enrolled in the degree course, 43 in the diploma course and 445 students undertaking single studies only.

### DRAMA

Adelaide has two major theatres, Her Majesty's and the Majestic; the latter, however, is used only occasionally for live theatre, being a cinema for most of the year. There are in addition four smaller very modern theatres.

There are over 20 amateur theatrical groups operating in South Australia. The Adelaide Repertory Theatre Inc., which, with approximately 2,000 members, claims the largest membership of any amateur theatrical group in the southern hemisphere, has its permanent home at the Arts Theatre.

Many country centres support amateur theatrical groups and a number of these combine annually for the South East Drama Festival.

The Australian Elizabethan Theatre Trust, as well as presenting its own productions in Adelaide and certain country centres, lends producers at a fee and gives some financial and other support to non-professional productions.

### THE ADELAIDE FESTIVAL OF ARTS

In five years the Adelaide Festival of Arts, through three festivals, has grown into the greatest of its kind in Australia. Her Majesty Queen Elizabeth the Queen Mother, its patron, said of it in March 1964—"The Adelaide Festival of Arts is no longer an experiment but an established feature in the cultural life of Australia, with an ever growing reputation overseas".

#### **The First Festival, March 1960**

Initial steps for the festival were taken late in 1958 through the efforts of a group of Adelaide citizens. Their objective was a festival on international lines following generally the example of Edinburgh. Early in 1959 a small salaried administrative cadre was established, supported by scores of enthusiasts working voluntarily in 12 separate committees. The reliance on voluntary effort and the pattern of committees have remained a feature of the festival organization.

Although not without disappointments and frustrations, the first festival was a reassuring success, and total attendances exceeded 300,000. It covered almost every aspect of the arts, except ballet, with 74 performances for adult audiences and with an element of popular entertainment out of doors.

On the financial side, industrial firms and private individuals had underwritten the venture with guarantees while the Commonwealth and State Governments and the Adelaide City Council made substantial contributions.

#### **The Second Festival, March 1962**

The second festival, which saw a consolidation of the initial experiment and broadening of its concepts, benefited from a longer planning period, the setting up of a small permanent secretariat and the enlisting of a big band of voluntary helpers. An international promotions and publicity programme contributed to a wide spread of interest.

In two weeks there were 120 performances of drama, opera, symphony concerts, ballet and recitals and 12 major art shows besides ancillary activities. An outdoor festival fair at Elder Park provided light entertainment.

The aggregate attendance again exceeded 300,000, including nearly 17,000 at orchestral and choral concerts, 10,000 at chamber recitals, 35,000 at drama, 17,000 at ballet and 90,000 at art exhibitions.

### The Third Festival, March 1964

The third gala stabilized the festival concept. There was again an expansion of programme and an abundance of ancillary activities was stimulated by the festival.

More than 400,000 people attended festival events, with concerts and theatrical productions attracting 150,000 and art and other exhibitions 144,000. The number of visitors from overseas and other States was estimated at 8,000.

Artistically outstanding, the festival cost more to mount than its predecessors and notwithstanding governmental and civic support on the same lines as in 1962, it was found necessary to call up 60% of the sum underwritten by guarantors.

### BROADCASTING

The supervision of radio and television broadcasting is a Commonwealth responsibility and is carried out by the Australian Broadcasting Control Board under the *Broadcasting and Television Act 1942-63*. An office of the board is maintained in South Australia to administer the Act and in particular to supervise the programme content and the technical quality of transmission.

Radio and television stations fall into two categories—national and commercial. National stations are operated by the Australian Broadcasting Commission. These stations do not broadcast advertising material, the Commission being supported by an annual grant from Commonwealth revenue. Commercial stations are operated by companies licensed by the Postmaster-General and derive their revenue from advertising.

All radio and television receivers must be covered by licences issued by the Postmaster-General. Normal annual charges at present are £2 15s. for a listener's licence, £6 for a viewer's licence or £8 10s. for a combined licence, although reduced rates apply to pensioners who satisfy certain conditions and to persons living in remote areas, while licences are granted free of charge to blind persons and to schools. One licence covers all receivers owned by a licensee or his family and normally held at the licensee's address. Special licences are required for radio and television receivers on hire, the responsibility for the licence being borne by the hirer, and not the user, of the receiver.

### Radio

The first stations to broadcast in this State were 5DN and 5CL. Station 5DN was issued an experimental licence in June 1924 and began operating under a commercial licence in February 1925. In November 1924, 5CL was licensed as an "A class station", the forerunner of the national station. The technical management of 5CL was taken over by the Postmaster-General's Department in 1929 and the programmes by the Australian Broadcasting Commission in 1932.

Stations 5KA and 5AD followed in 1927 and 1930 respectively, and a second national station, 5AN, was established in 1937. The first country station was opened in 1931.

There are at present 5 metropolitan and 11 country stations operating. The country or regional stations relay programmes from metropolitan stations and in addition provide programmes of local interest.

The call signs and locations of stations are given below, all call signs in South Australia being prefixed by the number "5".

### Radio Stations, South Australia

At 31st December 1965

| National Stations |               | Commercial Stations |               |
|-------------------|---------------|---------------------|---------------|
| Call Sign         | Location      | Call Sign           | Location      |
| 5AN               | Adelaide      | 5AD                 | Adelaide      |
| 5CL               | Adelaide      | 5DN                 | Adelaide      |
| 5CK               | Port Pirie    | 5KA                 | Adelaide      |
| 5LN               | Port Lincoln  | 5AU                 | Port Augusta  |
| 5MG               | Mount Gambier | 5MU                 | Murray Bridge |
| 5MV               | Renmark       | 5PI                 | Crystal Brook |
| 5PA               | Penola        | 5RM                 | Renmark       |
| 5WM               | Woomera       | 5SE                 | Mount Gambier |

Adelaide's three commercial stations broadcast continuously, while all other stations operated between 121 and 127 hours per week as at June 1964.

Commercial stations broadcast mainly light entertainment. In 1963-64, during the main listening time from 7 a.m. to 10.30 p.m., an estimated 64.7% of broadcasting time by Adelaide commercial stations was devoted to light entertainment (including 51.6% to light and popular music). News broadcasts accounted for a further 9.4% and advertising 12.2%, while programmes in the categories of education, information, current affairs and the arts occupied 6.5% of broadcast time.

By contrast the national stations, being independent of advertising revenue, provide a much wider variety of programmes. In 1963-64, in Adelaide, light entertainment account for 32.2% of broadcasting time, news 9.9%, the arts 28.9% and programmes relating to education, information and current affairs 15.1%.

Details of broadcast listeners' licences at present in force are given below.

### Broadcast Listeners' Licences, South Australia<sup>(a)</sup>

Current at 30th June

| Type of Licence                    | 1960           | 1961           | 1962           | 1963           | 1964           |
|------------------------------------|----------------|----------------|----------------|----------------|----------------|
| Ordinary .....                     | 223,575        | 222,065        | 219,024        | 223,512        | 230,668        |
| Hirers' and short-term hirers' ... | —              | —              | 782            | 727            | 910            |
| Pensioner .....                    | 24,503         | 26,255         | 28,726         | 31,191         | 32,985         |
| Other .....                        | 1,070          | 1,155          | 1,141          | 1,311          | 1,464          |
| <b>Total .....</b>                 | <b>249,148</b> | <b>249,475</b> | <b>249,673</b> | <b>256,741</b> | <b>266,027</b> |

(a) Includes Northern Territory (2,693 licences at 30th June 1964).



**Television**

The State's first television station, NWS channel 9, a commercial station, began operating on 5th September 1959. It was followed by ADS channel 7 in October of the same year, and the Australian Broadcasting Commission began operating ABS channel 2 in March 1960. The remaining three stations became operative in 1965, two of these being country stations relaying programmes from ABS channel 2. A further station, operating from Mount Gambier, is planned for 1966.

The call signs, channels and location of television stations are given in the following table.

**Television Stations, South Australia**  
*At 31st December 1965*

| National Stations     |               | Commercial Stations   |          |
|-----------------------|---------------|-----------------------|----------|
| Call Sign and Channel | Location      | Call Sign and Channel | Location |
| ABS—2                 | Adelaide      | ADS—7                 | Adelaide |
| ABGS—1                | Mount Gambier | NWS—9                 | Adelaide |
| ABNS—1                | Port Pirie    | SAS—10                | Adelaide |

As the early stations became established their broadcasting time was increased until in December 1963 the two commercial stations were broadcasting in excess of 77 hours per week and the national station 67 hours. Early in 1964 there was a substantial reduction in hours of service and in June the three stations were each operating for approximately 60 hours.

On commercial channels there is a considerable emphasis on drama and light entertainment, whereas the Australian Broadcasting Commission devotes more time to programmes of an informative and educational nature. Surveys conducted by the Broadcasting Control Board in 1963-64 indicated that the proportions of total broadcasting time (other than advertising) for various types of programmes were as follows.

| Category                            | Commercial Stations | National Stations |
|-------------------------------------|---------------------|-------------------|
|                                     | %                   | %                 |
| Drama . . . . .                     | 49.6                | 27.3              |
| Light entertainment . . . . .       | 27.7                | 9.1               |
| Sport . . . . .                     | 6.1                 | 10.6              |
| News . . . . .                      | 4.2                 | 7.6               |
| Family . . . . .                    | 7.5                 | 10.1              |
| Information and education . . . . . | 1.3                 | 19.9              |
| Current affairs . . . . .           | 3.3                 | 9.2               |
| The arts . . . . .                  | 0.3                 | 6.2               |
| <b>Total . . . . .</b>              | <b>100.0</b>        | <b>100.0</b>      |

Details of television viewers' licences since the inception of television are given below. At 30th June 1959, before regular transmission began, 6,124 licences were operative in the State.

### Television Viewers' Licences, South Australia

Current at 30th June

| Type of Licence                    | 1960   | 1961    | 1962    | 1963    | 1964    |
|------------------------------------|--------|---------|---------|---------|---------|
| Ordinary .....                     | 81,093 | 117,312 | 120,234 | 136,410 | 155,401 |
| Hirers' and short-term hirers' ... | —      | —       | 13,551  | 17,696  | 22,157  |
| Pensioner .....                    | 3,791  | 7,346   | 9,848   | 13,082  | 16,453  |
| Other.....                         | 83     | 150     | 161     | 314     | 419     |
| Total .....                        | 84,967 | 124,808 | 143,794 | 167,502 | 194,430 |

### THE PRESS

The State's first newspaper, *The South Australian Gazette & Colonial Register*, was first printed in London in 1836, six months before colonization. The second issue of this paper, which served both as the official government publication and as an unofficial reporter of the news, was produced in Adelaide 12 months later. *The South Australian Government Gazette* emerged as a separate organ in 1839 and the newspaper continued as *The Register*. In 1850 *The Register* became the first continuous daily paper.

In the next 20 years several more daily newspapers were introduced, and for many years there were two morning and two evening papers daily. However, in the last 40 years the present system of three major newspapers—one morning daily, one evening daily and one weekend publication—has emerged.

*The Advertiser*, published each morning except Sunday, was first issued in 1858 as *The South Australian Advertiser*. It absorbed *The Register* in 1931. It is now distributed throughout the State, with about two thirds of its circulation within the Adelaide metropolitan area, and nearly all the remainder going to country districts within the State.

*The News*, published each evening except Sunday, was introduced in 1923. It replaced two evening newspapers, *The Express & Telegraph* and *The Journal* which traced back their origins to the 1860's. Almost 80% of sales of *The News* are in the metropolitan area.

*The Sunday Mail*, printed on Saturday evenings and distributed mainly on Sunday mornings, first appeared under this name in 1953 following a merger between *The Mail*, first printed in 1912 and the *Sunday Advertiser*, which was introduced in 1951. About 64% of sales of *The Sunday Mail* are metropolitan.

To support these major State-wide newspapers, a strong provincial press has been built up. There are at present 38 country newspapers operating in the State with a combined circulation approaching 90,000. Most of these are published weekly, although three appear bi-weekly and two tri-weekly. Of those still existing, *The Border Watch* (Mount Gambier) in 1861 and *The Bunyip* (Gawler) in 1863 were the first to appear. Earlier publications are,

however, recorded: *The Port Lincoln Herald* for example was being printed in the early 1840's.

There are also a number of district papers in the metropolitan area which contain items of local interest.

## PARKS AND GARDENS

### The Botanic Garden

The present site, occupying approximately 45 acres in the north parklands, was established as a botanic garden in 1854 and first opened to the public in 1857. In 1874 the adjacent area, now known as Botanic Park, was granted to the Botanic Garden and in 1935 an area previously occupied by the Mental Asylum was also added.

The garden is under the care, control and management of a board of governors of eight private members.

The Botanic Garden makes a feature of tropical and sub-tropical trees and shrubs, especially those from the arid tropics. Other plants include palms and a large varied collection of Australian native trees and shrubs. A large range of glasshouses, together with a tropical house, contain plants requiring protection for their growth. The Amazon giant water lily, *Victoria amazonica*, has been grown in the garden since the mid-1870's and is not cultivated elsewhere in Australia. More recently it has been grown out of doors.

In addition there are a large shade house, dahlia garden, wisteria arbor, roseary, and an extensive collection of cacti and succulents on the rockery of the tropical house and in two small glasshouses.

In the Museum of Economic Botany can be seen comprehensive carpological (seed pod) collections and displays of plant products.

The State Herbarium was re-established in 1954 at the Botanic Garden, and a new herbarium was completed in 1965.

Complete scientific and advisory services are available and the Botanic Garden is responsible for this work, both within the metropolitan area and country districts. Five experimental plantations have been established at Giles Corner, Kulpapa, Lameroo, Stansbury and Meningie.

### The Zoological Gardens

The Royal Zoological Society of South Australia was founded in 1878, and in 1883 approximately 19 acres of Botanic Park were granted to the society for the establishment of the Zoological Gardens. At the same time arrangements were made for the various exotic and Australian animals and birds previously housed in the Botanic Garden to be transferred to the Zoological Gardens.

During 1963-64 a total of 104 species and varieties of mammals were exhibited including a large collection of marsupials. Of particular interest is a colony of yellow-footed rock wallabies, the only such colony in any zoological garden in the world. The Zoological Gardens also contain a fine collection of Australian birds, a total of 239 species and varieties of Australian and exotic birds having been exhibited during 1963-64.

The many mammals, reptiles, and birds are displayed in cages and enclosures; however, a start has been made on plans to bring the gardens into line with the modern practice of keeping animals in moated yards freely open to public view.

The revenue necessary for maintaining and developing the gardens is obtained through an annual State Government grant and from gate receipts and sundry sources.

During 1963-64, 288,629 persons visited the Zoological Gardens.

#### **National Park and Wild Life Reserves**

The National Park and Wild Life Reserves Act, 1891-1960, provides for the setting aside of certain lands as national park and wild life reserves, and for the administration of such areas by a body of commissioners.

At 30th June 1964 areas vested in the commissioners consisted of National Park, Belair (2,074 acres) and 25 separate wild life reserves totalling 445,564 acres.

National Park is extensively developed with recreational facilities and includes a wild life reserve and a museum at "Old Government House". Of the 25 wild life reserves, Para Wirra, Cleland and The Knoll Reserves are being developed as recreational areas, the remainder being reserved for scientific purposes and for the protection of native fauna and flora.

#### **National Pleasure Resorts**

The South Australian Government has designated 25 areas throughout the State as national pleasure resorts to be administered by the Director of the Immigration, Publicity and Tourist Bureau. A number of these areas have been developed while others have been preserved in their natural state.

Some are of historical interest (such as Dingley Dell, near Port MacDonnell and the Old Toll House on the Glen Osmond Road). Others, for public recreation, include Loftia Park in the Mount Lofty Ranges. Four have caravan park facilities.

Others include features of scenic interest, such as Tantanoola Cave in the South East and Wilpena Pound in the Flinders Ranges. There are refreshment kiosk facilities at several, including Mount Lofty Summit, Morialta Falls Reserve and Waterfall Gully, all in the hills near Adelaide.

#### **Municipal Parks and Gardens**

The City of Adelaide is surrounded by 1,700 acres of parklands, considerable areas of which are devoted to sporting grounds and recreational facilities. In recent years intensive development of garden areas has been carried out and at 30th June 1964 there were 347 acres of gardens. Plantings during the year 1963-64 included 462 trees and 822 shrubs.

Most suburban and country local government authorities maintain parks and gardens within their domain.

### **SPORTING FACILITIES**

In 1964 the National Fitness Council of South Australia conducted a survey of recreational facilities in the metropolitan area. Summarized results of this and earlier surveys are given in the following table.

**Recreational Facilities<sup>(a)</sup>, Metropolitan Area**

| Facility                     | 1954         | 1958         | 1964         |
|------------------------------|--------------|--------------|--------------|
|                              |              | Acres        |              |
| Field sports (b) .....       | 2,585        | 2,497        | 2,065        |
| Children's playgrounds ..... | 95           | 87           | 79           |
| Parks and gardens .....      | 677          | 767          | 630          |
| Other (c) .....              | 1,718        | 1,866        | 2,981        |
| <b>Total .....</b>           | <b>5,075</b> | <b>5,217</b> | <b>5,755</b> |

(a) School recreational facilities and regional reserves such as National Park and Waterfall Gully are excluded.

(b) Includes tennis courts and bowling greens.

(c) Includes race courses, golf courses and areas reserved but undeveloped.

The total of 5,755 acres in 1964 represented approximately 9.5 acres per thousand persons.

**Sports Grounds**

Adelaide Oval, occupying approximately 15 acres of the north park lands, is leased to the South Australian Cricket Association and is the venue for major cricketing and Australian rules football events.

In addition there are a number of major suburban ovals where feature cricket and Australian rules football matches are played. Among the more important of these is Norwood Oval, which is also the main venue for outdoor night sports, especially baseball. Recently Kensington Oval has become the State headquarters for athletics following the laying of a top-class bituminized rubber athletic track, and this arena is also frequently used for soccer matches.

The park lands of the City of Adelaide are used extensively for sporting purposes and during 1963-64 permits were issued for the use of 245 sports grounds (excluding tennis courts).

Sports grounds are distributed throughout suburban Adelaide, at approximately one to two mile intervals, and throughout country areas. In addition sports areas are available at most State and private schools.

**Race Courses**

There are three registered courses within the metropolitan area—Victoria Park, occupying approximately 58 acres of the east park lands, Cheltenham and Morphettville. In addition there were at the 30th June 1964, 41 registered country courses. Picnic race meetings are held at a number of outlying centres.

**Trotting Tracks**

Trotting in the metropolitan area is conducted at the Royal Agricultural and Horticultural Society showgrounds at Wayville. At 30th June 1964 there were also tracks at Gawler and at 12 other country centres. Wayville, Gawler and 6 other country tracks have facilities for night trotting.

**Golf Courses**

At 30th June 1964 there were 6 public courses within the metropolitan area including two 18-hole courses and a par-3 links utilizing 248 acres of the north west park lands, and a course at National Park, Belair.

There were 6 private courses operating within the metropolitan area and a number of new courses have been, or are being, developed in near-metropolitan districts. In addition there are courses at many country centres.

### **Tennis Courts**

The South Australian Lawn Tennis Association's courts at Memorial Drive, North Adelaide occupy approximately 6 acres of the north park lands. These courts were the venue for Davis Cup matches in 1952, 1956 and 1963. In 1963-64 the park lands also contained 174 hard courts. Courts associated with schools, churches and private clubs exist throughout the metropolitan and country areas.

### **Bowling Greens**

At the 30th June 1964 there were 178 bowling clubs registered in South Australia—32 in the metropolitan area, 139 in country areas, 4 at Broken Hill, N.S.W., and 3 in the Northern Territory.

The size of clubs varied from the 35 rinks at Bordertown to as few as 5 rinks, with the two largest metropolitan clubs being Holdfast (33 rinks) and Lockleys (32 rinks).

Three bowling clubs occupy approximately 4½ acres of the city park lands.

### **Swimming Facilities**

At 30th June 1964 there were 52 public swimming pools in South Australia, 47 in country centres and 5 within the metropolitan area. Of these only 8 country and 2 metropolitan pools had been in use prior to 1950, recent activity having been stimulated by a State Government subsidy on pool construction. Of the 52 pools, 43 had treated water, the remainder were in lakes, dams, rivers or the sea, or utilized sea water.

In addition 23 State schools had swimming pools, 14 of these being in country areas. Swimming facilities are also available at a number of private schools.

The City Baths Olympic Pool, opened in 1940, is the venue for major swimming events.

The nature of Adelaide's foreshore and that of many country beaches, combined with the prevailing climate, provides ideal conditions for open sea summer bathing.

## **6.5. RELIGION**

Information on the religious affiliations of the population is obtained only at population censuses. There is, however, no legal obligation to answer the question on religion and at the 1961 Census respondents representing 10.59% of the South Australian population chose not to do so.

The Church of England has always had the greatest number of adherents, its relative importance having been fairly consistent since 1866 when it accounted for 31.8% of answers compared with 29.4% in 1961.

Changes in the pattern of religious affiliations appear to some extent attributable to migratory movements. This is particularly noticeable in the case of Catholics (*i.e.*, persons described as either Catholics or Roman Catholics) who accounted for only 14.3% of the answers in 1933 as opposed to 21.1% in 1961, thus reflecting the pattern of post-war migration.

## Religions of Population, Censuses 1954 and 1961, South Australia

| Religion                    | Persons |         | Increase | Proportion of Population |        |
|-----------------------------|---------|---------|----------|--------------------------|--------|
|                             | 1954    | 1961    |          | 1954                     | 1961   |
|                             |         |         |          | %                        | %      |
| Christian—                  |         |         |          |                          |        |
| Baptist .....               | 18,797  | 21,032  | 2,235    | 2.36                     | 2.17   |
| Brethren .....              | 516     | 573     | 57       | 0.06                     | 0.06   |
| Catholic (a) .....          | 81,978  | 123,424 | 41,446   | 10.29                    | 12.74  |
| Catholic, Roman (a) .....   | 43,792  | 59,630  | 15,838   | 5.49                     | 6.15   |
| Churches of Christ .....    | 19,162  | 23,906  | 4,744    | 2.40                     | 2.47   |
| Church of England .....     | 223,319 | 255,053 | 31,734   | 28.02                    | 26.31  |
| Congregational .....        | 15,650  | 17,867  | 2,217    | 1.96                     | 1.84   |
| Greek Orthodox .....        | 8,607   | 18,644  | 10,037   | 1.08                     | 1.92   |
| Lutheran .....              | 42,057  | 53,947  | 11,890   | 5.28                     | 5.57   |
| Methodist .....             | 193,234 | 216,769 | 23,535   | 24.24                    | 22.36  |
| Presbyterian .....          | 30,778  | 37,911  | 7,133    | 3.86                     | 3.91   |
| Salvation Army .....        | 5,823   | 6,411   | 588      | 0.73                     | 0.66   |
| Seventh Day Adventist ..... | 1,791   | 2,547   | 756      | 0.22                     | 0.26   |
| Protestant—Undefined .....  | 11,449  | 11,478  | 29       | 1.44                     | 1.19   |
| Other Christian .....       | 5,587   | 9,708   | 4,121    | 0.70                     | 1.00   |
| Total Christian ....        | 702,540 | 858,900 | 156,360  | 88.13                    | 88.61  |
| Non-Christian—              |         |         |          |                          |        |
| Hebrew .....                | 722     | 985     | 263      | 0.09                     | 0.10   |
| Other .....                 | 710     | 1,002   | 292      | 0.09                     | 0.10   |
| Total Non-Christian         | 1,432   | 1,987   | 555      | 0.18                     | 0.20   |
| Indefinite .....            | 1,817   | 2,614   | 797      | 0.23                     | 0.27   |
| No religion .....           | 1,785   | 3,234   | 1,449    | 0.23                     | 0.33   |
| No reply .....              | 89,520  | 102,605 | 13,085   | 11.23                    | 10.59  |
| Total .....                 | 797,094 | 969,340 | 172,246  | 100.00                   | 100.00 |

(a) So described in individual census schedules.

## 6.6. HEALTH

## HISTORICAL

The first Health Act in South Australia was passed in 1873. This Act, which was modelled on earlier English legislation, established a Central Board of Health, and a number of town councils were constituted as local boards. Regulations were mainly concerned with improved sanitation and the checking of "epidemic, endemic and contagious diseases". Amendments to this Act followed in 1876 and 1884, and a fourth Act, replacing earlier legislation, was passed in 1898. The present Health Act dates from 1935.

Administration was continued under the authority of the Central Board of Health until 1949 when the Department of Public Health was formed to co-ordinate the work of the board and other health activities.

The first hospital in South Australia was built in 1837. It was a small thatched hut situated on North Terrace near Holy Trinity Church and measured 18 feet by 12 feet. The foundation stone of the first Adelaide Hospital was laid in 1840. This building, which was eventually demolished in 1938, contained two 12-bed

wards and four smaller rooms. The first buildings of the present Royal Adelaide Hospital were erected in 1856-57.

Hospitals in the country were established at Mount Gambier in 1869, Wallaroo and Port Lincoln in 1870, Port Augusta in 1875, and Port Pirie in 1890. The Port Adelaide Casualty Hospital was erected in 1882.

The State's first mental hospital, now demolished, was situated in Botanic Park. The Parkside Mental Hospital commenced operation in 1870 under the control of the Colonial Surgeon. The Enfield Receiving House and the Northfield Mental Hospital (Hillcrest Hospital) were established in 1922 and 1929 respectively.

### ADMINISTRATION

The administration of health in South Australia is principally under the control of three main authorities—The Department of Public Health, the Hospitals Department and the Commonwealth Health Department. Broadly their activities cover different fields as follows—The Department of Public Health concentrating on general health matters including the prevention of disease, the Hospitals Department on hospitalization, and the Commonwealth Health Department on health on a national basis including national health services and quarantine.

The Department of Public Health embraces the activities of the Central Board of Health, the School Health Branch (including the Deafness Guidance Clinic), the Poliomyelitis Branch, the Food and Drugs Advisory Committee, the Radiological Advisory Committee, the Clean Air Committee, and also the public health aspects of the control of tuberculosis, including the chest clinic and the State X-ray health surveys.

The Central Board of Health administers the Health, Food and Drugs, Dangerous Drugs, Noxious Trades, Bakehouse Registration, and Notification of Births Acts. The board also has responsibilities under the Local Government Act and the Cremation Act.

The Health Act and the Food and Drugs Act constitute every municipal or district council a local board of health or local authority for its area, except that in the metropolitan area, the Metropolitan County Board (representing all metropolitan corporations) is the local authority under the Food and Drugs Act. The Central Board of Health acts as a supervisory body over all the 143 local boards under the Health Act, the Food and Drugs Act and the Bakehouse Registration Act. It has concurrent jurisdiction with local boards. Outside the boundaries of local boards the Central Board is the administering authority.

The Hospitals Department administers government hospitals and supervises the work of government subsidized hospitals in South Australia.

Other State authorities concerned with aspects of public health include the Engineering and Water Supply Department which is responsible for water supply and sewerage services, and the Metropolitan and Export Abattoirs Board responsible for the functioning of the metropolitan abattoirs and for the inspection of premises used for merchandising, storing or processing of meat.

Under the Health and Medical Services Act, 1949, an Advisory Council was constituted to investigate and report on matters referred to it by the Minister of Health. The matters may relate to any question concerning health, hospitals, medical services, the training and employment of any class of persons whose work relates to the promotion of health or to the treatment of disease or abnormality of the human body, and any proposals for new legislation relating to any of the matters referred to.

The work of the Commonwealth Department of Health includes the administration of the national health services, including medical, hospital, pharmaceutical



and pensioner benefits. Under the *Quarantine Act 1908-1961* the department is responsible for the various aspects of human, animal and plant quarantine. Persons ordered into quarantine are accommodated at the Torrens Island Quarantine Station.

The South Australian Branch of the Repatriation Department administers the medical services provided for ex-service personnel whose disabilities are accepted as being due to war service.

### GENERAL HOSPITAL SERVICES

The control of hospitals in South Australia is vested in several authorities including the Hospitals Department, the Repatriation Department, various religious and charitable organizations, local community committees and private owners.

### PUBLIC HOSPITALS

The Hospitals Department administers three general hospitals in the metropolitan area—Royal Adelaide Hospital, The Queen Elizabeth Hospital, and Morris Hospital (Tuberculosis). In the country there are government hospitals at Port Pirie, Mount Gambier, Port Lincoln, Port Augusta, Wallaroo and Barmera. In addition there are 50 other hospitals in country areas, conducted by local boards of management, which receive maintenance subsidies from the State Government and come under the general supervision of the Hospitals Department.

#### Public General Hospitals<sup>(a)</sup>, South Australia

| Particulars                    | 1959-60 | 1960-61 | 1961-62 | 1962-63 | 1963-64 |
|--------------------------------|---------|---------|---------|---------|---------|
| Hospitals .....                | 65      | 66      | 65      | 66      | 66      |
| Staff (at end of year)—        |         |         |         |         |         |
| Medical—                       |         |         |         |         |         |
| Honorary .....                 | 518     | 549     | 607     | 635     | 626     |
| Permanent .....                | 185     | 182     | 220     | 215     | 248     |
| Nursing .....                  | 2,790   | 2,889   | 3,121   | 3,194   | 3,387   |
| Attendants and others .....    | 2,551   | 2,677   | 3,004   | 3,368   | 3,423   |
| Patients—                      |         |         |         |         |         |
| Admitted and re-admitted ....  | 80,236  | 84,572  | 86,683  | 91,342  | 96,471  |
| Average daily number resident— |         |         |         |         |         |
| Males .....                    | 1,264   | 1,206   | 1,209   | 1,282   | 1,362   |
| Females .....                  | 1,419   | 1,552   | 1,560   | 1,619   | 1,643   |
|                                | £'000   | £'000   | £'000   | £'000   | £'000   |
| Revenue—                       |         |         |         |         |         |
| State Government aid .....     | 5,237   | 5,078   | 5,183   | 5,003   | 6,047   |
| Commonwealth (b) .....         | 1,013   | 887     | 806     | 916     | 1,049   |
| Fees .....                     | 1,369   | 2,066   | 2,290   | 2,471   | 2,454   |
| Other .....                    | 796     | 676     | 896     | 1,263   | 1,033   |
| Total .....                    | 8,415   | 8,707   | 9,175   | 9,653   | 10,583  |
| Expenditure—                   |         |         |         |         |         |
| Salaries .....                 | 3,895   | 4,294   | 4,816   | 5,025   | 5,500   |
| Maintenance, etc. ....         | 2,057   | 2,217   | 2,378   | 2,527   | 2,712   |
| Buildings—                     |         |         |         |         |         |
| New .....                      | 2,064   | 1,823   | 1,455   | 1,592   | 2,323   |
| Repairs .....                  | 364     | 409     | 463     | 458     | 531     |
| Total .....                    | 8,380   | 8,743   | 9,112   | 9,602   | 11,066  |

(a) Public hospitals are those which receive State or Commonwealth Government assistance, but not those which receive ONLY Commonwealth hospital and nursing home benefits. Mental hospitals are excluded.

(b) Hospital, pharmaceutical and tuberculosis benefits.

**Public General Hospitals<sup>(a)</sup>, South Australia 1963-64**

| Particulars                   | Royal Adelaide Hospital | Queen Elizabeth Hospital | Adelaide Children's Hospital | Other General Hospitals | Total  |
|-------------------------------|-------------------------|--------------------------|------------------------------|-------------------------|--------|
| Staff (at end of year)—       |                         |                          |                              |                         |        |
| Medical—                      |                         |                          |                              |                         |        |
| Honorary .....                | 271                     | 84                       | 91                           | 180                     | 626    |
| Permanent .....               | 125                     | 68                       | 36                           | 19                      | 248    |
| Nursing .....                 | 1,264                   | 577                      | 400                          | 1,146                   | 3,387  |
| Attendants and others .....   | 1,268                   | 585                      | 466                          | 1,104                   | 3,423  |
| Patients—                     |                         |                          |                              |                         |        |
| Admitted and re-admitted .... | 22,196                  | 15,220                   | 11,045                       | 48,010                  | 96,471 |
| Average daily number resident | 939                     | 448                      | 251                          | 1,367                   | 3,005  |

(a) Public hospitals are those which receive State or Commonwealth Government assistance, but not those which receive ONLY Commonwealth hospital and nursing home benefits.

**Royal Adelaide Hospital**

The Royal Adelaide Hospital is a general and casualty hospital for adults and is controlled by a board of three members, with the Director-General of Medical Services as chairman. The hospital, which incorporates a department of dentistry, is a university teaching hospital. Charges are made for in-patient treatment, and patients requiring out-patient treatment at the various clinics are subject to a means test as to eligibility.

In addition to the main hospital there are wards at Magill and Northfield. A section of the Northfield wards is used for infectious diseases cases.

At 30th June 1964 there were 1,254 beds at the hospital including 121 in the infectious diseases wards at Northfield. Extensive building additions and alterations are in hand.

**The Queen Elizabeth Hospital**

The Queen Elizabeth Hospital at Woodville is a general and casualty and maternity hospital controlled by a board of 3 members with the Director-General of Medical Services as chairman. It is a university teaching hospital, and is of recent origin, opening in 1954 with the completion of a temporary section. Permanent blocks followed in 1957 and 1959.

In 1960 the hospital took over the "Mareeba" babies hospital as its paediatric department.

At 30th June 1964 there were 531 beds at The Queen Elizabeth Hospital.

**Queen Victoria Maternity Hospital**

The Queen Victoria Maternity Hospital was founded by public subscription, opening in 1902. It is a university teaching hospital.

Controlled by a committee of management the hospital is financially dependent on State Government aid. In 1963-64 State aid constituted 45% of revenue and fees from patients 36%.

Accommodation at 30th June 1964 was 114 beds.

### Adelaide Children's Hospital

The Adelaide Children's Hospital was founded by public subscription in 1876 and the first patient admitted in 1879. It is controlled by a board of management and supported by State Government grants, public subscriptions and fees. In 1963-64 the hospital received 63% of its revenue in the form of State Government grants.

Children 14 years and under may receive in-patient and out-patient treatment; however, the provision of out-patient treatment is subject to a means test.

The hospital provides a training school for nurses and instruction for medical students. The University Department of Child Health is situated at the hospital.

The history of the hospital has been marked by continued expansion, the most recent addition being a multi-storied out-patient building completed in March 1964.

### HOSPITALS FOR TUBERCULOSIS

The State Government conducts a chest clinic and a tuberculosis hospital in the metropolitan area. At the chest clinic patients are examined and treated, suspected cases are investigated and contacts are advised of precautionary measures and periodically re-examined. The Morris Hospital, Northfield, which at 30th June 1964 had 86 beds, cares for tuberculosis patients received from the chest clinic.

The Kalyra Sanatorium at Belair is conducted by the James Brown Memorial Trust Inc. for tuberculosis sufferers. At 30th June 1964 there were 70 beds at the Sanatorium.

### REPATRIATION HOSPITALS

The Repatriation Commission maintains two hospitals in South Australia—the Repatriation General Hospital at Springbank and the auxiliary Repatriation Hospital "Birralee" at Belair.

The Springbank hospital was a military hospital during World War II, coming under the control of the Commission in 1947.

Medical and surgical in-patient treatment is provided for eligible ex-service personnel, eligible dependants and serving members of the forces. The average daily number of patients in the Hospital during 1963-64 was 288 and the staff at the end of the year totalled 459.

The average occupancy of "Birralee" during 1963-64 was 35.

Details of the number of patients treated at Springbank and Belair are given on page 195.

### PRIVATE HOSPITALS

There are several large private hospitals in the metropolitan area including Calvary Hospital, the Memorial Hospital and St. Andrew's Presbyterian Hospital, all of which are run by denominational bodies. Another large institution is the Home for Incurables at Fullarton which provides accommodation and nursing attention for persons suffering from chronic disease.

Details of all private institutions approved for payment of Commonwealth hospital or nursing home benefits are given in the following table.

## Private Hospitals, South Australia

| Year          | Number of Hospitals | Number of Beds at End of Year | Average Daily Occupancy |
|---------------|---------------------|-------------------------------|-------------------------|
| 1959-60 ..... | 144                 | 2,796                         | 2,049                   |
| 1960-61 ..... | 143                 | 2,866                         | 2,255                   |
| 1961-62 ..... | 156                 | 3,440                         | 2,477                   |
| 1962-63 ..... | 173                 | 3,755                         | 2,797                   |
| 1963-64 ..... | 165                 | 3,983                         | n.a.                    |

## MENTAL HEALTH SERVICES

The Mental Health Services, a division of the Hospitals Department, is responsible for the management of public psychiatric services.

Parkside Psychiatric Hospital, situated on a site of approximately 130 acres, had accommodation for 1,442 patients at 30th June 1964.

Of the patients admitted during 1963-64, 65% were voluntary patients.

Hillcrest Hospital, Northfield, had accommodation for 1,000 patients including two repatriation wards of 70 beds. A special interest of this hospital is the accommodation of the alcoholic patient.

Mental Hospitals<sup>(a)</sup>, South Australia

| Particulars                            | 1959-60 | 1960-61 | 1961-62 | 1962-63 | 1963-64 |
|--|---------|---------|---------|---------|---------|
| Staff—                                 |         |         |         |         |         |
| Medical .....                          | 14      | 15      | 16      | 19      | 24      |
| Nursing and attendants .....           | 468     | 508     | 534     | 566     | 618     |
| Patients—                              |         |         |         |         |         |
| Admitted and re-admitted (b) ..        | 680     | 748     | 609     | 578     | 557     |
| Daily average (c)—                     |         |         |         |         |         |
| Males .....                            | 1,394   | 1,369   | 1,340   | 1,343   | 1,307   |
| Females .....                          | 1,113   | 1,085   | 1,052   | 1,054   | 994     |
|  | £'000   | £'000   | £'000   | £'000   | £'000   |
| Revenue—                               |         |         |         |         |         |
| Commonwealth benefits .....            | 8       | 10      | 28      | 45      | 53      |
| Fees, etc. ....                        | 100     | 94      | 105     | 104     | 109     |
| Net cost met by State Government ..... | 1,082   | 1,167   | 1,163   | 1,392   | 1,715   |
| Total .....                            | 1,190   | 1,271   | 1,296   | 1,541   | 1,877   |
| Expenditure—                           |         |         |         |         |         |
| Salaries .....                         | 627     | 652     | 727     | 779     | 934     |
| Maintenance, etc. ....                 | 415     | 442     | 452     | 511     | 598     |
| Buildings—                             |         |         |         |         |         |
| New .....                              | 78      | 93      | 19      | 132     | 174     |
| Repairs .....                          | 70      | 84      | 98      | 119     | 171     |
| Total .....                            | 1,190   | 1,271   | 1,296   | 1,541   | 1,877   |

(a) Includes Parkside and Hillcrest hospitals, but excludes Receiving House, Enfield and receiving section at Parkside. Transfers from the latter establishments are included in the number of admissions.

(b) Certified only.

(c) Certified and voluntary.

Cleland and Paterson Houses, Parkside (114 beds) and the Receiving House at Enfield (80 beds) are smaller institutions concerned with the reception and

treatment of early cases of mental illness. 62% of the admissions to these institutions during 1963-64 were of voluntary patients.

The Mental Health Services also operates an out-patient clinic available for diagnostic interviews and psychotherapy, and a child guidance clinic. Each year 500 to 600 children with emotional and behaviour disorders are treated at the child guidance clinic and a number are educated at a day school run in co-operation with the Education Department. In many cases parents receive help and supportive psychotherapy.

## MATERNAL AND CHILD WELFARE

### MATERNITY HOSPITALS

In addition to the Queen Elizabeth Hospital and the Queen Victoria Maternity Hospital (see above), there are four large private hospitals in the metropolitan area which operate as maternity hospitals. Most district hospitals have special provision for maternity patients.

### MOTHERS' AND BABIES' HEALTH ASSOCIATION

The Mothers' and Babies' Health Association was established in 1909. This voluntary body, supported by government subsidy and public subscriptions, conducts maternal and infant welfare work throughout the State. At 260 regular centres Association sisters give advice on the management of babies and infants. Two Baby Health trains make regular visits to country districts and mothers in sparsely settled areas are contacted by correspondence. The Association holds classes for expectant mothers and provides for educational lectures in schools.

The Association's mothercraft hospital (Torrens House), in addition to providing accommodation for mothers and infants, serves as a training school for infant welfare and mothercraft courses.

### SCHOOL HEALTH SERVICES

Medical services were first introduced into schools in 1913. Since 1951 all school health services have been the responsibility of a branch of the Department of Public Health.

Medical officers examine children at State schools at approximately three-yearly intervals. During 1964, visits were made to 341 schools and 81,261 children were examined. Where defects are found, the parents are notified and advised to obtain treatment. At Woomera and certain centres on Eyre Peninsula children are examined by local practitioners on behalf of the department.

Dentists with full equipment visit schools in many country areas examining the children and providing treatment where necessary. The department's dental officers examined 5,749 children during 1964. Departmental dentists also attend at institutions of the Children's Welfare Department.

Tests for hearing loss are conducted at schools and kindergartens and where necessary children are referred to the deafness guidance clinic for further tests and advice.

The staff of the School Health Branch at the beginning of 1964 included 9 medical officers, 12 nurses, 13 dental officers, 12 dental assistants, 1 audiologist and 2 audiometrists.

### COMMUNICABLE DISEASES

Under the Health Act, 1935-1963, certain diseases have been designated as "infectious" and others as "notifiable". It is required that cases of infectious and notifiable diseases be reported to the local board of health, which in turn

advises the Central Board of Health, and that cases of tuberculosis be notified directly to the Central Board.

**Communicable Diseases: Cases Notified, South Australia**

| Disease                             | 1959  | 1960  | 1961  | 1962 | 18 Months ended 30/6/64 |
|-------------------------------------|-------|-------|-------|------|-------------------------|
| Acute rheumatism . . . . .          | 8     | 2     | 9     | 10   | 5                       |
| Diarrhoea, infantile . . . . .      | 4     | 3     | 3     | —    | 40                      |
| Diphtheria . . . . .                | 16    | 1     | 5     | 4    | —                       |
| Dysentery, bacillary . . . . .      | 61    | 73    | 97    | 46   | 246                     |
| Encephalitis . . . . .              | 11    | 26    | 11    | 4    | 11                      |
| Infective hepatitis . . . . .       | 749   | 1,121 | 1,406 | 504  | 436                     |
| Influenza (epidemic form) . . . . . | 1,163 | 12    | —     | —    | —                       |
| Malaria . . . . .                   | 1     | 1     | 2     | 1    | —                       |
| Meningococcal infection . . . . .   | 7     | 3     | 5     | 10   | 6                       |
| Paratyphoid . . . . .               | —     | 1     | 1     | —    | 11                      |
| Poliomyelitis . . . . .             | 1     | 12    | 44    | 19   | 8                       |
| Rubella . . . . .                   | 87    | 105   | 66    | 543  | 760                     |
| Salmonella infection . . . . .      | 45    | 72    | 36    | 69   | 128                     |
| Scarlet fever . . . . .             | 232   | 168   | 129   | 183  | 290                     |
| Tetanus . . . . .                   | 6     | 3     | 2     | —    | —                       |
| Trachoma . . . . .                  | 1     | —     | 124   | —    | 77                      |
| Tuberculosis . . . . .              | 283   | 288   | 214   | 254  | 306                     |
| Typhoid fever . . . . .             | 7     | 1     | 3     | 1    | 7                       |
| Other diseases . . . . .            | 10    | 11    | 8     | 5    | 15                      |

Venereal diseases became notifiable in South Australia from November 1965; prior to this the Director-General of Public Health was empowered to compel a venereal disease suspect to submit to medical examination and treatment. The Department of Public Health maintains a venereal diseases investigation clinic at the Royal Adelaide Hospital.

**Poliomyelitis Services**

Following the development of Salk vaccine, a poliomyelitis immunization programme was begun in 1956. The programme has corresponded with a dramatic decline in the incidence of poliomyelitis, as illustrated by the following figures.

**Poliomyelitis: South Australia**

| Year                  | Cases Notified | Deaths |
|-----------------------|----------------|--------|
| 1950 . . . . .        | 973            | 17     |
| 1951 . . . . .        | 1,491          | 61     |
| 1952 . . . . .        | 709            | 12     |
| 1953 . . . . .        | 398            | 22     |
| 1954 . . . . .        | 176            | 5      |
| 1955 . . . . .        | 182            | 6      |
| 1956 . . . . .        | 122            | 3      |
| 1957 . . . . .        | 16             | 1      |
| 1958 . . . . .        | 10             | 1      |
| 1959 . . . . .        | 1              | —      |
| 1960 . . . . .        | 12             | —      |
| 1961 . . . . .        | 44             | 2      |
| 1962 . . . . .        | 19             | 2      |
| 1963-64 (a) . . . . . | 8              | 1      |

(a) 18 months ended 30th June 1964.

All injections were given by the Poliomyelitis Services until 1961 when the vaccine became available to other authorities.

At first, immunization was restricted to children but was subsequently extended to adults and by 1961 it was estimated that 78% of the South Australian population 0-14 years and 46% of those aged 15-44 had completed a course of immunization.

#### **Anti-Tuberculosis Campaign**

Since March 1952 compulsory X-ray surveys of the population have been conducted in South Australia. With the advent of mobile survey units using miniature radiography it has been possible to X-ray all persons aged 21 years and over every 3 or 4 years. Where necessary persons are subsequently referred to their medical practitioner.

Children in Grade I at all State and certain private schools in the metropolitan area are given a tuberculin test. A further test is made at Grade VII level and where appropriate the children are vaccinated.

Other references appear on pages 176 and 192-193.

### **OTHER HEALTH SERVICES**

#### **Blood Transfusion Service**

The Red Cross Blood Transfusion Service collects and classifies blood for the daily needs of hospitals and to meet emergencies. During 1963-64 donors gave 38,861 individual donations either at the Service's centre or at a mobile unit visiting metropolitan and country centres.

The Service maintains a blood bank at the Royal Adelaide Hospital, and a reference laboratory which, in addition to classifying donors' blood, performs investigations for hospitals and medical practitioners.

The cost of maintaining the Blood Transfusion Service is met by the State Government (60%), the Commonwealth Government (30%) and the Red Cross Society (10%).

#### **Home Nursing**

The Royal District and Bush Nursing Society of South Australia, through its 34 branches in metropolitan and country districts, provides nursing facilities to those in need of home nursing. The services of the fully trained nursing staff are provided free of charge to those unable to afford a fee, and to others according to their means. During 1963-64 a total of 144,879 visits were made by 55 full-time nurses.

The Society also maintains a hospital at Marree and a medical centre at Iron Knob.

The Society obtains its revenue from State and Commonwealth aid (53% of total revenue in 1963-64), fees from patients (18%), and legacies, donations, local government aid and other sources (29%).

#### **Flying Doctor Services**

People living in outback areas may receive medical attention through the Flying Doctor services. Aeroplanes with doctors and pilots are operated from control centres at Ceduna, Port Augusta and Alice Springs. The centre at Ceduna is maintained by the Bush Church Aid Society and those at Port Augusta and Alice Springs by the Royal Flying Doctor Service of Australia (S.A. Section) Inc. In addition the Bush Church Aid Society maintains hospitals at Cook, Penong, Ceduna, Wudinna, Tarcoola, Coober Pedy and Rawlinna (W.A.), while

the Flying Doctor Service conducts regular medical, dental and ophthalmic clinics at Andamooka, Marree and Oodnadatta.

Settlers with transceiver sets may consult the doctor by contacting the control centre, and the doctor may diagnose and prescribe over the air or may be flown to give direct medical treatment. The radio facilities of the flying doctor services are also used by the School of the Air, various community organizations and for the general relaying of messages.

#### Ambulance Services

The St. John Council for South Australia Inc. has assumed responsibility for providing a full-time ambulance service for the metropolitan area. This service is manned and operated by the St. John Ambulance Brigade which also assists in ambulance operation in certain country areas. During 1964 the Brigade's ambulances travelled a distance of 544,344 miles and carried 57,128 patients.

Country ambulance services throughout the State are affiliated with the St. John Council.

#### Voluntary Agencies

There are many other voluntary bodies operating in South Australia and doing health work of a special nature.

Their activities cover such fields as care of the handicapped, hospital services, care of mother and baby, care of the aged and the provision of convalescent facilities.

### MEDICAL PERSONNEL

The following table lists registrations with the Medical, Dental, Pharmaceutical, Physiotherapy, and Nurses' Boards of South Australia, and with the Board of Optical Registration.

The figures for registered medical practitioners show the number of persons registered to practise medicine in South Australia and not the number actually practising, which is estimated at approximately two-thirds of those registered. Of those practising in June 1962 it was estimated that slightly less than half were general practitioners, the remainder being specialists or salaried medical officers.

#### Professional Medical Personnel: South Australia

*Number Registered at 31st December*

| Profession                           | 1960  | 1961  | 1962  | 1963  | 1964  |
|--------------------------------------|-------|-------|-------|-------|-------|
| Medical practitioners (a) . . . . .  | 1,681 | 1,739 | 1,821 | 1,883 | 2,002 |
| Dentists . . . . .                   | 305   | 302   | 303   | 311   | 311   |
| Pharmaceutical chemists . . . . .    | 675   | 698   | 740   | 743   | 758   |
| Opticians . . . . .                  | 93    | 94    | 90    | 90    | 93    |
| Nurses (b) . . . . .                 | 5,817 | 6,123 | 6,523 | 6,879 | 2,755 |
| Nurse aides . . . . .                | —     | —     | 98    | 266   | 357   |
| Midwives . . . . .                   | 2,801 | 2,911 | 2,990 | 3,016 | 3,136 |
| Mental nurses . . . . .              | 261   | 281   | 297   | 313   | 308   |
| Infant welfare nurses (c) . . . . .  | 372   | 374   | 379   | 428   | 454   |
| Infectious diseases nurses . . . . . | 44    | 48    | 48    | 34    | 36    |
| Physiotherapists . . . . .           | 376   | 393   | 413   | 426   | 463   |

(a) Includes personnel not practising in South Australia.

(b) Nurses may also be registered and included as midwives, mental nurses, etc.

(c) Includes mothercraft nurses from 1960.



Over the past 20 years there has been a considerable re-organization of general practice with a movement away from single practices to partnership and group practice arrangements.

### CREMATORIUMS AND CEMETERIES

The first crematorium in South Australia, the Adelaide Crematorium, was erected by the Cremation Society of South Australia and presented to the State Government in 1903. It was finally closed in November 1959.

Cremations are currently conducted at the Centennial Park Crematorium which was erected in 1956 and is operated by the Centennial Park Cemetery Trust.

Cemeteries in South Australia are divided into three main groups—those under the control of the State Government or local government authorities, those under church control and those under the control of trusts.

In each of the above groups the cemeteries are financed by the usual charges for burials and by the leasing of land for burial purposes. With church and trust cemeteries, the cost of maintenance is often derived from interest accruing from invested capital funds.

### STATE GOVERNMENT EXPENDITURE ON PUBLIC HEALTH

The following table shows expenditure by the State Government on various aspects of public health. It includes both the cost of maintaining the various State agencies and the subsidies paid to voluntary organizations active in this field. Expenditure on sewerage, drainage and water supply is excluded.

#### Net Expenditure by State Government on Public Health: South Australia

| Category                                    | 1959-60      | 1960-61      | 1961-62      | 1962-63      | 1963-64      |
|---|--------------|--------------|--------------|--------------|--------------|
|   | £'000        |              |              |              |              |
| <i>Care of sick and mentally afflicted—</i> |              |              |              |              |              |
| Government general hospitals . . . . .      | 3,418        | 3,526        | 3,924        | 4,164        | 4,636        |
| Subsidies to—                               |              |              |              |              |              |
| General hospitals (including                |              |              |              |              |              |
| Adelaide Children's                         |              |              |              |              |              |
| Hospital) . . . . .                         | 1,127        | 1,196        | 1,678        | 1,902        | 2,235        |
| Other . . . . .                             | 237          | 256          | 90           | 121          | 147          |
| Mental hospitals . . . . .                  | 1,181        | 1,261        | 1,348        | 1,478        | 1,794        |
| Institutions for mentally deficient         |              |              |              |              |              |
| children . . . . .                          | 41           | 27           | 69           | 43           | 44           |
| <i>Health of mothers and children—</i>      |              |              |              |              |              |
| Baby health centres . . . . .               | 86           | 89           | 146          | 124          | 108          |
| Maternity homes . . . . .                   | 148          | 128          | 123          | 140          | 124          |
| Medical and dental examination              |              |              |              |              |              |
| of school children . . . . .                | 72           | 80           | 89           | 91           | 111          |
| <i>Preservation of public health—</i>       |              |              |              |              |              |
| (including Public Health Depart-            |              |              |              |              |              |
| ment and administration of                  |              |              |              |              |              |
| Health Acts) . . . . .                      | 127          | 201          | 238          | 217          | 270          |
| <b>Total . . . . .</b>                      | <b>6,437</b> | <b>6,764</b> | <b>7,705</b> | <b>8,280</b> | <b>9,469</b> |

### MEDICAL RESEARCH

#### The Institute of Medical and Veterinary Science

Details of this organization are given under the heading of Scientific Organizations on page 156.

### **The Anti-Cancer Foundation**

The forerunner of the Foundation, the Anti-Cancer Campaign Committee, was formed within the University of Adelaide in 1928. The Committee's early activities were largely devoted to establishing and developing the Radiotherapy Department of the Royal Adelaide Hospital. As demand for these facilities grew the hospital assumed responsibility for routine treatment, and the Committee concentrated its activities on research. In 1962 the Committee was re-organized and became the Anti-Cancer Foundation of the University of Adelaide.

Early research was of a clinical nature, but more recently the Committee and the Foundation have subsidized research projects within the Institute of Medical and Veterinary Science and the various departments of the University.

The income of the Foundation is derived from gifts and bequests, government grants and subsidies, and from direct public appeals. The most recent appeal, in 1962, yielded £110,000.

### **The National Heart Foundation**

The National Heart Foundation of Australia, together with its South Australian Division, was established in February 1959. The National Heart campaign of 1961 raised £2,562,000 for the work of the Foundation, of which £331,000 was contributed in South Australia.

The campaign funds are being spent on research (70%), education (15%) and rehabilitation (15%). Research funds, distributed at the national level, support projects in various departments at the University of Adelaide, and at the Institute of Medical and Veterinary Science, the Royal Adelaide Hospital and the Adelaide Children's Hospital. Research funds are also used in providing local and overseas fellowships and travel grants.

To assist in its work in the fields of rehabilitation and public and professional education, the South Australian Division established the National Heart Foundation Centre in 1963.

## **6.7. SOCIAL WELFARE**

The Commonwealth and State Governments and a large number of voluntary agencies minister to the social welfare of the population. The Commonwealth Government is concerned largely with the dispensing of fixed monetary pensions and benefits and with the provision of repatriation services. State agencies operate in the fields of child welfare and the care of Aborigines and distribute emergency relief in contingencies where Commonwealth assistance is not available or proves insufficient. The voluntary agencies, many of which receive Government aid, provide a wide range of services in various fields of social welfare.

### **COMMONWEALTH PENSIONS AND BENEFITS**

#### **EXPENDITURE**

The following table sets out Commonwealth Government expenditure on social welfare. This includes social service payments, payments of national health benefits, grants under the Aged Persons Homes Act, and war and service pensions. It should be noted that the figures are for payments to recipients only, and do not include costs of administering the departments concerned.

## Commonwealth Expenditure on Social Welfare: South Australia

| Type of Benefit                     | 1959-60 | 1960-61 | 1961-62 | 1962-63 | 1963-64 |
|-------------------------------------|---------|---------|---------|---------|---------|
|                                     | £'000   |         |         |         |         |
| Social services—                    |         |         |         |         |         |
| Aged and invalid pensions (a) .     | 13,183  | 14,269  | 16,422  | 16,976  | 18,060  |
| Widows' pensions . . . . .          | 1,045   | 1,189   | 1,377   | 1,459   | 1,942   |
| Child endowment . . . . .           | 5,897   | 7,046   | 6,336   | 6,430   | 7,958   |
| Maternity allowance . . . . .       | 337     | 359     | 344     | 343     | 338     |
| Unemployment benefits . . . . .     | 249     | 343     | 893     | 592     | 376     |
| Sickness benefits . . . . .         | 172     | 158     | 199     | 263     | 254     |
| Other . . . . .                     | 159     | 167     | 166     | 168     | 176     |
| Total social service payments . . . | 21,042  | 23,531  | 25,737  | 26,231  | 29,104  |
| National health benefits . . . . .  | 5,988   | 6,405   | 7,284   | 8,032   | 8,540   |
| Aged persons homes . . . . .        | 330     | 533     | 557     | 439     | 674     |
| War pensions (b) . . . . .          | 5,052   | 5,686   | 5,579   | 6,190   | 6,768   |
| Service pensions (b) . . . . .      | 644     | 763     | 1,097   | 1,243   | 1,345   |
| Total payments . . . . .            | 33,056  | 36,918  | 40,254  | 42,135  | 46,431  |

(a) Includes allowances to wives of invalids and to wives of invalids on behalf of children.

(b) Includes Northern Territory. Includes pensions paid to dependants.

## COMMONWEALTH SOCIAL SERVICES

Brief details of Commonwealth pensions and benefits are given in this section; however in discussing the eligibility of persons for the various payments all the necessary qualifications and exceptions to the general rule have not been delineated. Similarly such terms as "income" and "property" have not been defined. For more complete details reference should be made to the booklet *Commonwealth Social Services* issued by the Department of Social Services.

## Historical

The first Commonwealth social service payments were made in 1909 when age pensions of 10s. per week, subject to a means test, were introduced. In the following year payments were extended to invalid pensioners.

Maternity allowances were introduced in 1912 and were subject to a means test from 1931 to 1943.

Child endowment was first paid in 1941; however, endowment for the first child and for student children dates from 1950 and 1964 respectively.

Rehabilitation services for invalid pensioners were introduced in 1941 and subsequently extended to unemployment and sickness beneficiaries in 1948 and tuberculosis patients, and young people of 14 and 15 years of age likely to become pensioners in 1955.

Widows' pensions were introduced in 1942, funeral benefits in 1943 and unemployment and sickness benefits in 1944. Widow pensioners became eligible for rehabilitation services in 1958.

All Aborigines, except those who are primitive or nomadic, became eligible for age, invalid, and widows' pensions in 1959.

Agreements for reciprocity in social service payments were first signed with New Zealand in 1943 and the United Kingdom in 1953.

**Age and Invalid Pensions**

Age pensions are payable to men aged 65 and over and woman aged 60 years and over, who are British subjects and who have lived in Australia continuously for a period of 10 years. If a person has completed 5 years but not 10 years continuous residence, but has lived in Australia for periods which, in total exceed 10 years, he may be eligible. Absences from Australia in certain circumstances and residence in New Zealand or the United Kingdom may be treated as residence in Australia.

Invalid pensions are payable to British subjects aged 16 years and over who have lived in Australia continuously for 5 years and who are permanently incapacitated to an extent of at least 85%, or are permanently blind. Where the incapacity or blindness occurred outside of Australia, other than during a temporary absence, 10 years continuous residence is necessary. If a person subject to the 10 year qualification has completed 5 years but not 10 years continuous residence, but has lived in Australia for periods which, in total exceed 10 years, he may be eligible. Absences from Australia in certain circumstances and residence in New Zealand or the United Kingdom may be treated as residence in Australia in qualifying for an invalid pension.

At the 31st December 1965 for both age and invalid pensions the maximum rate payable to an unmarried pensioner, or to a married pensioner whose spouse was not receiving an age or invalid pension, an unemployment, sickness or special benefit, a tuberculosis allowance or a service pension, was £6 per week. The maximum rate for a married couple, both being pensioners, was £5 10s. per week each. The non-pensioner wife of a invalid pensioner, or of an age pensioner who is permanently incapacitated for work or permanently blind, may be granted a wife's allowance of up to £3 per week. Where the pensioner is an invalid an allowance of 15s. per week is payable for each child under 16 years or student child under 21 years. A supplementary allowance of up to 20s. per week may be paid to certain pensioners paying rent and who are entirely or substantially dependent on their pensions.

Payment of the above rates of pension is subject to a means test. Under the means test, provided a person's annual income plus one tenth of the value of his property (in excess of £200) does not exceed £182 he is entitled to the full pension. If the combined income-property component figure exceeds £182 then the pension is accordingly reduced. There are certain items of income and property, including an owner-occupied dwelling, which are exempt from the means test. Blind persons are not subject to the means test except where receiving an allowance for a non-pensioner wife. The child's allowance for the first child of an invalid pensioner is also free of the means test.

**Age and Invalid Pensions: South Australia***Number of Pensioners*

| At 30th June | Age Pensioners |         |        | Invalid Pensioners |         |       |
|--------------|----------------|---------|--------|--------------------|---------|-------|
|              | Males          | Females | Total  | Males              | Females | Total |
| 1960.....    | 15,384         | 34,095  | 49,479 | 3,450              | 2,937   | 6,387 |
| 1961.....    | 16,013         | 35,976  | 51,989 | 3,748              | 3,217   | 6,965 |
| 1962.....    | 16,700         | 38,313  | 55,013 | 4,181              | 3,479   | 7,660 |
| 1963.....    | 16,799         | 39,430  | 56,229 | 4,315              | 3,612   | 7,927 |
| 1964.....    | 16,888         | 40,392  | 57,280 | 4,519              | 3,774   | 8,293 |

**Widows' Pensions**

Widows' pensions are paid to widows and other women who satisfy certain conditions. There is a means test on income and property.

There are three classes of pensions:—

Class A, a widow with one or more children under 16 years of age or a student child under 21 years in her custody, care and control.

Class B, a widow of at least 50 years of age with no children under 16 years, or a widow of at least 45 years of age who ceases to be eligible for a Class A pension because she no longer has a child in her custody, care and control.

Class C, a widow under 50 years of age has no children under 16 years of age but is in necessitous circumstances within 26 weeks of her husband's death. If a widow is pregnant, a pension may be continued until the birth of the child when she may qualify for a Class A pension.

For Classes A and B the term "widow" includes a deserted wife, a divorcee, a woman whose husband has been in prison at least 6 months, and a woman whose husband is in a mental hospital.

The normal residential qualification is 5 years' continuous residence immediately prior to claiming a pension; however, this period is reduced to one year if a woman and her husband were living permanently in Australia when he died. Continuity of residence is not considered as broken by certain absences. Residence in New Zealand or the United Kingdom counts as residence in Australia. The means test operates similarly to that for age pensions except that for a Class A widow the property component is relaxed somewhat.

At 31st December 1965 the maximum weekly rates were: for Class A widows, £8 (including £2 mothers' allowance) plus 15s. for each child; for Class B and C widows, £5 7s. 6d. Supplementary assistance of up to 20s. per week may be paid to widows who pay rent and are entirely or substantially dependent on their pension.

**Widows' Pensions: South Australia****Number of Pensioners***At 30th June*

| Class       | 1960  | 1961  | 1962  | 1963  | 1964  |
|-------------|-------|-------|-------|-------|-------|
| A .....     | 1,926 | 2,089 | 2,220 | 2,325 | 2,632 |
| B .....     | 2,493 | 2,792 | 2,989 | 3,060 | 3,208 |
| C .....     | 5     | 16    | 9     | 7     | 2     |
| D (a) ..... | 15    | —     | —     | —     | —     |
| Total ..... | 4,439 | 4,897 | 5,218 | 5,392 | 5,842 |

(a) Class D pensions abolished in 1960. These were for prisoners' wives who since 1960 receive either A or B class pensions.

**Child Endowment**

Persons resident in Australia who have the custody, care and control of one or more children under the age of 16 are eligible for child endowment. Approved institutions of which children are inmates are similarly eligible. Endowment is also paid for full-time students between the ages of 16 and 21 years. There is

no means test on child endowment, but one year's residence in Australia may be required if the mother and child were not born here.

At 31st December 1965 endowment was paid at the rate of 5s. per week for the first eligible child, 10s. for the second, and 15s. for the third and each subsequent eligible child. Endowment of 15s. is paid for each child in an institution, and for full-time students between the ages of 16 and 21 years.

#### Child Endowment<sup>(a)</sup>: South Australia

| At 30th June | Families         |                  | Institutions |                  | Total Endowed Children |
|--------------|------------------|------------------|--------------|------------------|------------------------|
|              | Endowed Families | Endowed Children | Number       | Endowed Children |                        |
| 1960.....    | 139,985          | 308,033          | 50           | 1,563            | 309,596                |
| 1961.....    | 142,663          | 317,236          | 51           | 1,760            | 318,996                |
| 1962.....    | 144,375          | 323,944          | 53           | 1,612            | 325,556                |
| 1963.....    | 146,377          | 329,198          | 55           | 1,644            | 330,842                |
| 1964.....    | 149,449          | 335,838          | 49           | 1,738            | 337,576                |

(a) Children under 16 years only. Student endowment commenced 14th January 1964 and was being paid in respect of 13,121 children at 30th June 1964.

#### Maternity Allowances

Any woman, permanently resident in Australia, who gives birth to a child in Australia, is entitled to a maternity allowance. The amount payable depends on the number of existing children under 16 years of age, and makes special allowance for multiple births. Maternity allowances are not subject to a means test.

At 31st December 1965 a mother with no other children under 16 years of age was entitled to an allowance of £15; where there were one or two such children the rate was £16, and where there were three or more such children £17 10s. An extra amount of £5 is paid for each additional child in multiple births.

#### Maternity Allowances: South Australia

##### Claims granted during year

| Category                        | 1959-60 | 1960-61 | 1961-62 | 1962-63 | 1963-64 |
|---------------------------------|---------|---------|---------|---------|---------|
| Single births—                  |         |         |         |         |         |
| No other children under 16....  | 6,420   | 6,510   | 6,271   | 6,526   | 6,812   |
| One or two children under 16..  | 10,144  | 10,194  | 9,976   | 9,904   | 9,735   |
| Three or more children under 16 | 4,596   | 4,830   | 4,823   | 4,700   | 4,317   |
| Multiple births—                |         |         |         |         |         |
| Twins .....                     | 281     | 238     | 258     | 226     | 230     |
| Triplets .....                  | 2       | 2       | —       | 1       | 2       |
| Total .....                     | 21,443  | 21,774  | 21,328  | 21,357  | 21,096  |

#### Unemployment and Sickness Benefits

Unemployment and sickness benefits are paid to persons who suffer temporary loss of regular earnings because of unemployment, sickness, or accident. There is a means test on income but not on property.

Persons eligible must be between 16 and 65 years of age (60 for women) with either 12 months residence or the intention to reside permanently in Australia. A person receiving an alternative pension (except a war pension) is ineligible for unemployment and sickness benefits. A married woman is not usually qualified to receive sickness benefit if her husband can support her.

To qualify for unemployment benefit a person must (a) be unemployed and be able to show that unemployment was not due to his being a direct participant in a strike, (b) be able and willing to undertake suitable work, and (c) have taken reasonable steps to secure work, including registration with the Commonwealth Employment Service.

The amount of income which a person may receive and still qualify for the maximum rate of benefit is £2 per week for an adult or married person under 21, and £1 per week for a single person under 21. The benefit is reduced by any amount in excess of these figures. For unemployment benefit the income of the claimant's spouse is taken into account.

At 30th June 1965 the maximum weekly benefits payable were £4 2s. 6d. for an adult or a married minor, £2 7s. 6d. for an unmarried minor 18-20 years of age and £1 15s. for an unmarried minor 16-17 years of age. An additional £3 weekly was payable for a dependent spouse, and 15s. for each child under 16 years. A special benefit may be granted to a person not normally qualified for an unemployment or sickness benefit if he is unable to earn a sufficient livelihood for himself and his dependants.

#### Unemployment and Sickness Benefits: South Australia

| Year          | Unemployment        |                               | Sickness            |                               | Special (a)         |                               |
|---------------|---------------------|-------------------------------|---------------------|-------------------------------|---------------------|-------------------------------|
|               | Admitted to Benefit | Average Number on Benefit (b) | Admitted to Benefit | Average Number on Benefit (b) | Admitted to Benefit | Average Number on Benefit (b) |
| 1959-60 ..... | 7,659               | 1,223                         | 5,043               | 651                           | 228                 | 174                           |
| 1960-61 ..... | 12,543              | 1,610                         | 4,760               | 617                           | 217                 | 160                           |
| 1961-62 ..... | 21,834              | 3,643                         | 5,307               | 679                           | 172                 | 135                           |
| 1962-63 ..... | 11,782              | 2,244                         | 5,274               | 760                           | 129                 | 135                           |
| 1963-64 ..... | 9,007               | 1,513                         | 5,553               | 788                           | 182                 | 141                           |

(a) Excludes special benefits to migrants in reception and training centres.

(b) Average number at the end of each week.

#### Rehabilitation

The Commonwealth Rehabilitation Service assists people who are unable to work because of physical handicap or who have had to give up their employment because of sickness or injury. It aims at helping disabled people to reach their maximum physical fitness and to prepare for suitable employment. The service provides a co-ordinated programme of treatment and training to meet the special needs of each disabled person. Rehabilitation is provided free to persons receiving, or eligible to receive an invalid or widow's pension, unemployment, sickness or special benefit. Recipients of tuberculosis allowance and children of 14 and 15 years otherwise likely to qualify for invalid pension at age 16 are also eligible.

All rehabilitation activities in South Australia are concentrated at the combined residential and day attendance centre at "St. Margarets", Payneham. "St. Margarets" has a treatment capacity of approximately 120, comprising 40 residents and 80 non-residents.

When a person begins treatment he continues to receive his existing pension or benefit plus certain expenses. When vocational training begins the pension or benefit is suspended and a rehabilitation allowance is paid instead. Certain additional allowances may also be paid during the period of training. The rehabilitation allowance for an invalid pensioner or an unemployment, sickness, or special beneficiary is equal to and calculated in the same way as the pension for an invalid pensioner. A widow pensioner receives the same rate as under a widows' pension.

The Commonwealth Employment Service works with the Rehabilitation Service to help find employment for disabled people. Loans may be granted to assist certain persons in the establishment of home employment.

#### Rehabilitation: South Australia

| Year          | Number Accepted for Rehabilitation | Number Placed in Employment | Expenditure (a) |
|---------------|------------------------------------|-----------------------------|-----------------|
|               |                                    |                             | £               |
| 1959-60 ..... | 237                                | 164                         | 91,804          |
| 1960-61 ..... | 188                                | 138                         | 100,758         |
| 1961-62 ..... | 217                                | 132                         | 102,184         |
| 1962-63 ..... | 286                                | 183                         | 99,051          |
| 1963-64 ..... | 249                                | 216                         | 105,862         |

(a) Excludes capital expenditure by the Department of Works on sites and buildings, and administrative costs of the Rehabilitation Service.

#### Funeral Benefits

A funeral benefit is payable to the person who has paid, or is liable to pay, the cost of the funeral of an age or invalid pensioner or of a person who, but for his death, would have been granted an age or invalid pension.

At 31st December 1965 the maximum benefit payable was £10, or £20 if the person responsible for the funeral was a pensioner.

During 1963-64, 3,618 claims for funeral benefits were granted in South Australia.

#### Homes for the Aged

The Aged Persons Homes Act provides that grants may be made to certain organizations towards the capital cost of erecting or purchasing approved homes for aged people. Church, charitable and ex-servicemen's organizations as well as any other organization approved by the Governor-General are eligible.

Grants may not exceed two thirds of the capital cost of the home including land or twice the amount (excluding borrowings and other government grants) raised by the organization towards the capital cost, whichever is the less.

At 30th June 1964, 190 grants had been approved in South Australia since the inception of the scheme in 1954. The amount granted, £3,489,555, was associated with the accommodation of 3,058 persons.



**Reciprocal Agreements**

Agreements for reciprocity in the payment of certain pensions and benefits exist with New Zealand and the United Kingdom. The reciprocal agreements cover age, invalid and widows' pensions, child endowment, unemployment and sickness benefits and the comparable social service benefits payable in these countries.

**NATIONAL HEALTH SERVICES****Expenditure**

The following table shows Commonwealth Government expenditure from the National Welfare Fund on the various aspects of the national health services. The amounts shown are the direct costs of these benefits and services and do not include the cost of administering the services.

**National Health Services Expenditure: South Australia**

| Type of Benefit                         | Year First Paid | 1959-60      | 1960-61      | 1961-62      | 1962-63      | 1963-64      |
|---|-----------------|--------------|--------------|--------------|--------------|--------------|
|   |                 |              |              | £'000        |              |              |
| Hospital benefits .....                 | 1946            | 1,562        | 1,786        | 1,966        | 2,224        | 2,499        |
| Medical benefits .....                  | 1953            | 991          | 1,051        | 1,186        | 1,323        | 1,410        |
| Pensioner medical service ...           | 1951            | 362          | 367          | 390          | 422          | 448          |
| Pharmaceutical benefits ....            | 1948            | 1,710        | 1,755        | 2,142        | 2,334        | 2,450        |
| Pensioner pharmaceutical benefits ..... | 1951            | 331          | 662          | 829          | 920          | 954          |
| Anti tuberculosis campaign ..           | 1947            | 747          | 492          | 428          | 446          | 419          |
| Free milk for school children           | 1951            | 274          | 281          | 332          | 355          | 353          |
| Miscellaneous .....                     | —               | 11           | 11           | 11           | 8            | 7            |
| <b>Total .....</b>                      | <b>—</b>        | <b>5,988</b> | <b>6,405</b> | <b>7,284</b> | <b>8,032</b> | <b>8,540</b> |

**Hospital Benefits**

The Commonwealth pays hospital benefits to patients in approved hospitals and nursing homes under the following arrangements—

- (a) Patients insured with a registered benefit organization and in an approved hospital receive a benefit (20s. per day at 30th June 1965) paid through the organization. Details of registered organizations are given on page 202.
- (b) Uninsured patients are entitled to a benefit (8s. per day) which is deducted from the patient's account and paid by the Commonwealth to the hospital.
- (c) Pensioners enrolled with the pensioner medical service and their dependants in public wards of public hospitals are entitled to a special benefit (36s. per day) which is paid to the hospital, no further charge being made on the pensioner by the hospital.

A Commonwealth nursing home benefit is paid for all qualified patients in approved nursing homes, whether the patient is insured or not. The benefit is deducted from the patient's account and paid by the Commonwealth to the nursing home. At 30th June 1965 this benefit was 20s. per day. Commonwealth benefit may not be payable where a patient receives a payment by way of compensation or damages.

**Hospital Benefits: South Australia**

| Year          | Procedure to<br>31st December, 1962 (a) |                        | Current Procedure   |                       |                       |                             | Total (b) |
|---------------|---|------------------------|---------------------|-----------------------|-----------------------|-----------------------------|-----------|
|               | Ordinary<br>Benefits                    | Additional<br>Benefits | Hospitals           |                       |                       | Nursing<br>Home<br>Patients |           |
|               |   |                        | Insured<br>Patients | Uninsured<br>Patients | Pensioner<br>Patients |                             |           |
|               |   |                        | £'000               |                       |                       |                             |           |
| 1959-60 ..... | 820                                     | 639                    | —                   | —                     | —                     | —                           | 1,459     |
| 1960-61 ..... | 824                                     | 783                    | —                   | —                     | —                     | —                           | 1,607     |
| 1961-62 ..... | 807                                     | 901                    | —                   | —                     | —                     | —                           | 1,708     |
| 1962-63 ..... | 457                                     | 673                    | 307                 | 29                    | 179                   | 308                         | 1,953     |
| 1963-64 ..... | —                                       | —                      | 923                 | 65                    | 504                   | 817                         | 2,309     |

- (a) During this period the Commonwealth paid ordinary benefits of 8s. or 12s. per day to all patients, and additional benefits of 4s., 8s., or 12s. per day to members of registered hospital benefit organizations.
- (b) Excludes amounts paid to special account deficits (these being reimbursements to registered hospital benefits organizations for losses incurred on chronic or pre-existing ailments and long-term illness and at advances in respect of these deficits).

**Medical Benefits**

Commonwealth medical benefits are paid in respect of medical expenses incurred by persons who are contributors to registered medical benefits organizations or by the dependants of such contributors. The benefits are normally paid through the organizations to the contributor upon receipt of a medical practitioner's account. Medical benefits organizations, with minor exceptions, also pay a fund benefit equal to or greater than the amount of the Commonwealth benefits. Commonwealth benefit may not be payable where a patient receives a payment by way of compensation or damages.

At 30th June 1965 Commonwealth medical benefits ranged from 8s. for a general practitioner consultation to £30 for certain major operations.

Commonwealth expenditure on medical benefits in this State in 1963-64 was £1,391,000, representing 29.2% of the cost of medical services for which benefits were payable. An additional £19,000 was paid by the Commonwealth to registered benefit organizations to cover losses incurred in paying benefits in cases of chronic or pre-existing ailments and long-term illness.

Further details of medical benefits organizations are given on pages 201-202.

**Pensioner Medical Service**

The pensioner medical service is a general practitioner service provided free of charge to eligible pensioners and their dependants. The service does not extend to specialist treatment, general anaesthetics or the treatment of fractures. Doctors participating in the service are remunerated by the Commonwealth on a concessional fee basis.

In addition to the general practitioner service, a full range of medicines is available free of cost upon presentation of a doctor's prescription.

Persons eligible for the pensioner medical service are those receiving an age, invalid, widows' or service pension, and persons receiving a tuberculosis allowance. Dependent wives and children are also entitled to the benefits of the pensioner medical service.

## Pensioner Medical and Pharmaceutical Benefits: South Australia

| Year          | Number of Pensioners and Dependants (a) | Commonwealth Payments for Services |                |       |
|---------------|---|------------------------------------|----------------|-------|
|               |   | Medical                            | Pharmaceutical | Total |
|               | '000                                    | £'000                              | £'000          | £'000 |
| 1959-60 ..... | 65                                      | 362                                | 331            | 693   |
| 1960-61 ..... | 68                                      | 367                                | 662            | 1,029 |
| 1961-62 ..... | 72                                      | 390                                | 829            | 1,219 |
| 1962-63 ..... | 75                                      | 422                                | 920            | 1,342 |
| 1963-64 ..... | 77                                      | 448                                | 954            | 1,402 |

(a) At end of year.

## Pharmaceutical Benefits

Under the Pharmaceutical Benefits Scheme certain medicines, when prescribed by a doctor are made available to the general public upon the payment of a 5s. fee and to pensioners free of cost. The drugs and medicinal preparations available as pharmaceutical benefits are determined on the advice of the Pharmaceutical Benefits Advisory Committee which also recommends the maximum quantities that can be prescribed. Pharmaceutical benefits are normally obtained through registered pharmacists but most public hospitals may also supply pharmaceutical benefits, as may doctors and certain recognized organizations in isolated areas.

Pharmaceutical Benefits<sup>(a)</sup>: South Australia

| Year          | Number of Benefit Prescriptions | Cost of Benefit Prescriptions |                         |                          |
|---------------|---------------------------------|-------------------------------|-------------------------|--------------------------|
|               |                                 | Total Cost                    | Patients' Contributions | Net Cost to Commonwealth |
|               | '000                            | £'000                         | £'000                   | £'000                    |
| 1959-60 ..... | 1,482                           | 1,606                         | (b)84                   | 1,522                    |
| 1960-61 ..... | 1,938                           | 1,983                         | 484                     | 1,499                    |
| 1961-62 ..... | 2,364                           | 2,523                         | 590                     | 1,933                    |
| 1962-63 ..... | 2,774                           | 2,806                         | 693                     | 2,113                    |
| 1963-64 ..... | n.a.                            | 2,830                         | 740                     | 2,090                    |

(a) Excludes pensioner benefits.

(b) No fee chargeable to patients prior to 1st March 1960.

n.a.—Not available.

## Anti-Tuberculosis Campaign

Since 1948 the Commonwealth has paid for all additional capital expenditure on tuberculosis clinics and hospitals and for any increase in the cost of diagnosis, treatment, and control of tuberculosis.

The Commonwealth also pays allowances to people suffering from tuberculosis to encourage them to give up work and undergo treatment. The allowances are subject to a means test on income. The maximum income permitted before allowances are affected is £3 10s. per week for a single person and £7 for a married person.

At 30th June 1965 the allowance for a married person with dependent wife was £12 12s. 6d. plus 15s. for each dependent child under 16 years. A single person without dependants, if not hospitalized, received £7 12s. 6d. or if receiving hospital treatment free of charge £6.

#### Anti-Tuberculosis Campaign: South Australia

| Commonwealth Expenditure             | 1959-60        | 1960-61        | 1961-62        | 1962-63        | 1963-64        |
|--------------------------------------|----------------|----------------|----------------|----------------|----------------|
|                                      | £              |                |                |                |                |
| Allowances paid to sufferers . . . . | 123,343        | 89,836         | 82,805         | 69,837         | 64,230         |
| Maintenance expenditure (a) . . . .  | 634,967        | 412,218        | 357,956        | 389,070        | 368,241        |
| Capital expenditure (b) . . . . .    | 89,816         | 30,656         | 46,227         | 13,333         | 14,885         |
| <b>Total . . . . .</b>               | <b>848,126</b> | <b>532,710</b> | <b>486,988</b> | <b>472,240</b> | <b>447,356</b> |

(a) Includes administrative expenses not paid from National Welfare Fund.

(b) Paid from Commonwealth Consolidated Revenue Fund.

#### Free Milk for School Children

A commonwealth reimbursement to the State Government permits the free distribution of one third of a pint of milk daily to school children attending public and private primary schools, kindergartens, creches and Aboriginal missions.

The State Government administers the scheme and the Commonwealth meets the cost of milk and incidental expenditures and half the cost of approved capital expenditure.

#### Free Milk for School Children: South Australia

| Year              | Approximate Number of Children Eligible at End of Year | Payments |
|-------------------|--|----------|
|                   |  | £        |
| 1959-60 . . . . . | 170,000  | 275,000  |
| 1960-61 . . . . . | 175,000  | 281,173  |
| 1961-62 . . . . . | 180,000  | 331,701  |
| 1962-63 . . . . . | 195,000  | 355,447  |
| 1963-64 . . . . . | 195,000  | 352,708  |

#### REPATRIATION BENEFITS

##### War Pensions

War pensions are paid by way of compensation to ex-servicemen and women who have suffered incapacity due to war service and to their eligible dependants, and to the dependants of those who have died due to war service.

There are three main classes of war pensions.

The special (T.P.I.) rate (£14 5s. at 30th June 1965) is payable to those who are deemed totally and permanently incapacitated.

The general rate is payable to those who suffered war-caused disabilities but still retain some earning capacity. The pension payable depends on the degree of incapacity, the maximum at 30th June 1965 being £6 per week. Pensions are also payable for a wife and each child under 16 years of age under both special and general pensions.

The widows' rate is payable to widows of ex-servicemen who died as a result of war service, and to any children under 16 years of age. An additional domestic allowance is payable to certain classes of widows. At 30th June 1965 the widows' rate was £6 and the domestic allowance £3 2s. 6d.

**War Pensions<sup>(a)</sup>: South Australia<sup>(b)</sup>**

| Year       | Pensions in Force at End of Year |   |                                      |        | Expenditure |
|------------|----------------------------------|---|--------------------------------------|--------|-------------|
|            | Incapacitated Ex-Servicemen      | Dependants of Incapacitated Ex-Servicemen | Dependants of Deceased Ex-Servicemen | Total  |             |
|            | Number                           |   |                                      |        | £'000       |
| 1959-60 .. | 20,413                           | 42,759                                    | 4,525                                | 67,697 | 5,052       |
| 1960-61 .. | 20,491                           | 42,373                                    | 4,620                                | 67,484 | 5,686       |
| 1961-62 .. | 20,961                           | 42,459                                    | 4,821                                | 68,241 | 5,579       |
| 1962-63 .. | 21,037                           | 40,657                                    | 4,871                                | 66,565 | 6,174       |
| 1963-64 .. | 21,106                           | 39,462                                    | 5,033                                | 65,601 | 6,750       |

(a) Excludes pensions payable under Seaman's War Pensions and Allowance Act, Interim Forces Benefits Act, Native Forces Benefits Act; and various Cabinet decisions.

(b) Includes Northern Territory.

**Service Pensions**

Service pensions are payable to ex-servicemen who served in a theatre of war and have reached the age of 60 years (55 for women) or who are permanently unemployable. They are also paid to ex-servicemen suffering from pulmonary tuberculosis. The service pension is equivalent in amount to the social services age and invalid pensions and is subject to the same means test. It also confers eligibility for a full range of medical and dental treatment. The dependants of permanently unemployable or tuberculosis pensioners may continue to receive their appropriate allowance upon the death of the pensioner.

**Service Pensions: South Australia<sup>(a)</sup>**

| Year       | Pensions in Force at End of Year |                                       |                                   |       | Expenditure |
|------------|----------------------------------|---------------------------------------|-----------------------------------|-------|-------------|
|            | Ex-Servicemen                    | Dependants of Pensioner Ex-Servicemen | Dependants of Deceased Pensioners | Total |             |
|            | Number                           |                                       |                                   |       | £'000       |
| 1959-60 .. | 2,893                            | 1,152                                 | 269                               | 4,314 | 644         |
| 1960-61 .. | 3,746                            | 1,168                                 | 297                               | 5,211 | 763         |
| 1961-62 .. | 4,639                            | 1,262                                 | 312                               | 6,213 | 1,097       |
| 1962-63 .. | 5,028                            | 1,334                                 | 312                               | 6,674 | 1,243       |
| 1963-64 .. | 5,159                            | 1,340                                 | 323                               | 6,822 | 1,345       |

(a) Includes Northern Territory.

**Medical Services**

The Repatriation Department provides in-patient treatment, general practitioner services, certain specialist facilities, pharmaceutical benefits and dental treatment for certain eligible persons. A comprehensive rehabilitation and social worker service is also available.

Medical treatment is provided for all disabilities due to war service and for pulmonary tuberculosis. General medical services are also available to service pensioners, war pensioners receiving the maximum rate, widows and dependants of ex-servicemen (whose death was due to war service), and nurses who served in the 1914-18 war.

In-patient treatment is provided at the Repatriation General Hospital, Springbank. Facilities at the Outpatient Clinic, Keswick, include radiological, pathological, and physiotherapy services in addition to medical specialist examinations. The Repatriation Department also maintains an auxiliary hospital, "Birralee", at Belair, a section of which is set aside for the treatment of tuberculosis patients. The Repatriation Artificial Limb and Appliance Centre, as well as attending to repatriation needs, provides appliances and services for other Government departments and certain philanthropic organizations.

#### Repatriation—Medical Services: South Australia<sup>(a)</sup>

| Year          | In-Patients :<br>Total Treated |          |                    | Out-Patients :<br>Number of Visits |                       |                                       | Pharma-<br>ceutical<br>Benefits |
|---------------|--------------------------------|----------|--------------------|------------------------------------|-----------------------|---------------------------------------|---------------------------------|
|               | Springbank                     | Birralee | Other<br>Hospitals | Keswick<br>Clinic                  | Other<br>Institutions | Visits to or<br>by Medical<br>Officer |                                 |
|               | Number                         |          |                    |                                    |                       |                                       | £                               |
| 1959-60 ..... | 3,600                          | 101      | 294                | 36,339                             | <i>n.a.</i>           | 127,147                               | 207,630                         |
| 1960-61 ..... | 4,277                          | 126      | 416                | 38,697                             | <i>n.a.</i>           | 148,860                               | 262,550                         |
| 1961-62 ..... | 4,669                          | 102      | 604                | 47,442                             | 5,663                 | 162,079                               | 347,847                         |
| 1962-63 ..... | 4,478                          | 134      | 767                | 46,056                             | 7,833                 | 197,171                               | 440,974                         |
| 1963-64 ..... | 4,748                          | 138      | 696                | 45,060                             | 15,651                | 198,559                               | 440,113                         |

(a) Includes Northern Territory.

*n.a.*—Not available.

#### Education and Training

Assistance in education and training is provided, through the Repatriation Department, for children of ex-servicemen whose death, blindness or total and permanent incapacity was the result of war service. The Soldiers' Children Education Board guides and supervises the progress of children receiving such assistance (see page 142).

In certain circumstances vocational training is also provided for disabled ex-servicemen and widows of ex-servicemen.

Assistance is generally through the payment of allowances and fees, and the provision of books and equipment.

#### Other Services

Other assistance, through the Repatriation Department, includes gift cars for certain disabled ex-servicemen, aids for blinded ex-servicemen, tools-of-trade grants for trainees and business re-establishment loans. Funeral grants of £25 are paid upon the death of certain ex-servicemen and dependants.

### STATE WELFARE SERVICES

#### EXPENDITURE

The following table shows expenditure by the State on welfare services. This expenditure includes the work of the Department of Social Welfare and the Department of Aboriginal Affairs, the provision of transport concessions, and grants made to private welfare organizations.

**State Expenditure on Welfare Services: South Australia**  
*Net Cost of Services including Works, Buildings, Etc.*

| Service                              | 1959-60        | 1960-61          | 1961-62          | 1962-63          | 1963-64          |
|--------------------------------------|----------------|------------------|------------------|------------------|------------------|
|                                      | £              |                  |                  |                  |                  |
| Relief of destitute, aged, etc. .... | 347,423        | 405,029          | 436,814          | 413,285          | 415,983          |
| Child welfare—                       |                |                  |                  |                  |                  |
| Institutions (a) ...                 | 125,252        | 140,320          | 207,791          | 207,239          | 254,526          |
| Other .....                          | 142,238        | 164,161          | 183,966          | 183,850          | 205,455          |
| Care of Aborigines ..                | 307,654        | 358,740          | 444,727          | 448,283          | 504,028          |
| Other .....                          | 30,976         | 32,015           | 37,944           | 59,494           | 60,659           |
| <b>Total .....</b>                   | <b>953,543</b> | <b>1,100,265</b> | <b>1,311,242</b> | <b>1,312,151</b> | <b>1,440,651</b> |

(a) Excludes reformatories.

### CHILD WELFARE AND PUBLIC RELIEF

The first official activity for the social welfare of children and adults was taken soon after colonization. The early State immigration authorities cared for new arrivals, and sometimes immigrants were accommodated temporarily in tents on the parklands. A more permanent solution of the problems of the destitute came with the first Destitute Persons Relief Act in 1842. In 1867 a Destitute Board was formally appointed. This body assumed responsibility for the welfare of both children and adults. In 1886 a State Children's Council was formed to deal with children, whilst the Destitute Board continued with its other work. The Children's Welfare and Public Relief Board was created by the Maintenance Act, 1926, to do the work of both these earlier authorities.

The Chairman of the Board was the permanent head of the Children's Welfare and Public Relief Department. In 1965 a new portfolio of Minister of Social Welfare was created. Subsequently the Children's Welfare and Public Relief Board was abolished under the Social Welfare Act, 1926-1965, and its powers and functions vested in the Minister of Social Welfare, a body corporate under the Act. The department is now the Department of Social Welfare with the Director of Social Welfare as the permanent head.

In addition to its head office at Adelaide, the department maintains district offices at Port Adelaide, Port Augusta, Mount Gambier, and Elizabeth. Field officers work throughout the State.

#### Care and Supervision of Children

One of the major functions of the department is the care and supervision of State children, these being children committed to the department, either directly to a departmental institution or generally to the control of the Minister. A child up to 18 years may be charged with an offence or with being a neglected or uncontrolled child. In any of these cases he may be made a State child. In most cases the committal is until 18 years but a child between 16 and 18 years may be committed for any period between one year and two years provided that period does not expire before he reaches 18 years. Where it is for the child's benefit committal may be extended until 21 years or, in special cases for girls, beyond 21 years. Delinquent children may receive training in one of the reformatories; neglected children may be cared for temporarily at other institutions. Uncontrolled children may be placed in reformatories or other institutions depending on the circumstances.

The boys' reformatory at Magill and a reformatory for junior boys at Campbelltown are at present the only proclaimed reformatories for boys in South

Australia. A new reformatory is under construction at the Magill site. There are two proclaimed reformatories for girls. One is Vaughan House at Enfield, where a new building with modern accommodation and training facilities for approximately 70 girls was completed in 1965. This is the general reformatory for girls and is controlled and operated departmentally. The other girls' reformatory is the Home of the Good Shepherd at Plympton, which is a proclaimed private reformatory controlled by the Minister but conducted by the Sisters of the Good Shepherd Congregation for the training and rehabilitation of delinquent girls belonging to the Roman Catholic Church.

Neglected boys may be committed to the Glandore Children's Home while girls and babes and toddlers of both sexes are accommodated at Seaforth Home, Somerton Park. Children may be transferred to other departmental homes or institutions for care and training. Altogether the department has 20 official reformatories, other institutions and homes for children. These include Lochiel Park, a training centre for retarded boys, Struan Farm, a rural training centre at Naracoorte, two boys' hostels and two girls' hostels for selected older children attending school and six cottage homes where small groups of children of both sexes live in a family-like atmosphere. A new remand home at Glandore is used to accommodate delinquent and neglected children of both sexes in four separate sections.

It is the policy of the department to place children out of institutions as soon as possible. They may be allowed to live in their own homes under supervision or be placed in approved foster homes. In the larger institutions for neglected children and in the reformatories, departmental placing committees consider the circumstances of each child regularly and make recommendations regarding action to be taken for the child's benefit and welfare.

Details of the number of children committed to the department in recent years are given in the table below. Of the 655 children committed during 1963-64, 192 were girls, of which all but 38 were neglected or uncontrolled. Girls constituted approximately one third of all State children at 30th June 1964.

#### State Children<sup>(a)</sup>: South Australia

| Particulars   | 1959-60 | 1960-61 | 1961-62 | 1962-63 | 1963-64 |
|---|---------|---------|---------|---------|---------|
| Number of children newly committed during the year— |         |         |         |         |         |
| Convicted of offences .....                         | 218     | 302     | 276     | 362     | 371     |
| Neglected .....                                     | 170     | 155     | 138     | 126     | 192     |
| Uncontrolled .....                                  | 60      | 70      | 76      | 67      | 72      |
| Truant.....   | 6       | 10      | 9       | 14      | 20      |
| Total .....   | 454     | 537     | 499     | 569     | 655     |
| Number of State children at 30th June—              |         |         |         |         |         |
| Children in departmental institutions.....          | 361     | 405     | 400     | 426     | 515     |
| Children not in institutions .                      | 1,388   | 1,541   | 1,686   | 1,840   | 1,972   |
| Total .....   | 1,749   | 1,946   | 2,086   | 2,266   | 2,487   |

(a) Excludes children on remand, not committed (677 remanded during 1963-64).

The department has a field staff of welfare officers and probation officers to supervise children living in the community. Welfare officers



investigate allegations that children are neglected, ill-treated or uncontrolled. Family casework is carried out with a view to improving the circumstances of children and their parents. The homes of illegitimate children under twelve years of age and other children of that age not living with near relatives are visited. In addition to supervising committed delinquent children, probation officers also supervise children placed by Juvenile Courts on bonds where supervision is ordered. Children may be placed voluntarily by their parents or guardians under the supervision of departmental probation officers.

During 1963-64, in addition to State children 398 children were placed on bonds requiring supervision by departmental officers; the total number of such children under supervision at 30th June 1964 being 614. A total of 288 children was under voluntary supervision. In addition to the above, 3,355 other children were subject to visitation by officers of the department.

Welfare officers and probation officers are also appointed as attendance officers under the Education Act to assist in the detection and prevention of school truancy. Medical and other specialists including psychologists are employed within the department.

#### Licensing of Maternity Homes, Foster Parents, and Children's Homes

Every foster parent caring for a child under 12 years of age for gain or reward must be licensed by the department. The children who are fostered are visited by departmental officers. Maternity homes must also be licensed. Under the Social Welfare Act, 1926-1965, every children's home providing permanent care for children under 12 years of age must also be licensed by the department.

#### Adoptions

Orders for the adoption of children under 21 years may be granted only by an Adoption Court, but inquiries as to the suitability of adoption applicants are made by the department. The Courts are required to notify the Director of all applications received, and he is empowered to tender evidence and address the court in the interests of the child. In practice most adoption cases in the State are dealt with directly by the department. Where the identity of either or both of the parties is not to be disclosed, preliminary arrangements for the adoption must be made through the Director.

#### Number of Adoptions: South Australia

| Age of Child                    | 1959-60 | 1960-61 | 1961-62 | 1962-63 | 1963-64 |
|---------------------------------|---------|---------|---------|---------|---------|
| Under one year .....            | 328     | 373     | 351     | 404     | 400     |
| One year and under two .....    | 39      | 30      | 29      | 37      | 27      |
| Two years and under seven ..... | 107     | 92      | 103     | 119     | 107     |
| Seven years and over .....      | 97      | 99      | 108     | 84      | 85      |
| Total .....                     | 571     | 594     | 591     | 644     | 619     |

#### Immigrant Children

The department makes inquiries regarding accommodation and supervision of proposed migrants under 21 years of age, who will not be living with a parent or near relative. Under the Commonwealth Immigration (Guardianship of Children) Act, the Minister becomes guardian of these children who numbered 34 at 30th June 1964.

**Legal Services**

Prosecutions for neglected, ill-treated and uncontrolled cases are carried out by departmental officers who may also appear in Court where State children are involved. The department assists the Courts by providing reports on the circumstances of children whose cases are considered by the Courts.

The department assists deserted wives and others to obtain maintenance from their husbands. When negotiations fail, legal proceedings may be instituted to obtain Court orders for protection, separation, custody of children and maintenance. The department collects and pays to deserted wives about 1,000 separate amounts weekly. Assistance is given to mothers of illegitimate children in affiliation cases.

**Public Relief**

The department issues relief to those in destitute circumstances. This relief is issued mainly in cash, although occasionally an order for accommodation or food may be issued. During 1963-64 relief was issued to 2,007 applicants, representing 6,840 persons. Deserted wives accounted for 36% of the total cases issued with relief.

The department maintains a home at Magill for destitute or necessitous adults, mostly pensioners. The daily average occupancy of the Magill home was 189 during 1963-64.

To deal with cases of emergency the department has a staff of housekeepers who are provided for full-time service in homes where there are children and the mother is temporarily sick or incapacitated. A charge is made for this service.

**Expenditure**

Details of expenditure by the department in its various functions are given in the following table.

**Department of Social Welfare**  
*Net Cost to Consolidated Revenue.*

| Particulars                              | 1959-60 | 1960-61 | 1961-62   | 1962-63 | 1963-64   |
|--|---------|---------|-----------|---------|-----------|
|  |         |         | £         |         |           |
| <i>Payments:</i>                         |         |         |           |         |           |
| General administration .....             | 47,088  | 52,863  | 56,869    | 61,949  | 70,475    |
| Supervision and maintenance of children— |         |         |           |         |           |
| In institutions .....                    | 237,682 | 281,394 | 353,294   | 359,719 | 396,471   |
| Placed out .....                         | 103,416 | 123,849 | 136,650   | 143,174 | 156,904   |
| Outdoor relief .....                     | 158,215 | 174,386 | 215,234   | 165,831 | 162,444   |
| Indoor relief at Magill home ..          | 151,875 | 160,355 | 161,195   | 166,000 | 171,219   |
| Other .....                              | 68,036  | 70,658  | 81,804    | 85,415  | 103,284   |
| Total .....                              | 766,312 | 863,505 | 1,005,046 | 982,088 | 1,060,797 |
| <i>Receipts</i> .....                    | 116,357 | 121,251 | 149,055   | 174,110 | 186,217   |
| Net cost to Consolidated Revenue         | 649,955 | 742,254 | 855,991   | 807,978 | 874,580   |

**ABORIGINAL WELFARE**

Aboriginal welfare in South Australia is administered by the Minister of Aboriginal Affairs, under legislation provided in the Aboriginal Affairs Act, 1962. This Act aims at promoting the welfare of full-blood Aboriginals and other persons with Aboriginal blood by providing facilities for guidance in all matters—

business, domestic or social—and in some instances by providing financial assistance.

Although all Aborigines and persons of Aboriginal blood are entitled to assistance, they are not obliged to accept it and may if they desire continue to live according to age-old customs.

Training in manual skills is provided and when an appropriate stage of development has been reached, employment is found in urban or country districts. If necessary, houses are built and let at a rental appropriate to the tenant's means.

When it is desirable for purposes of education, or because of the home environment, contributions are made towards the cost of maintenance of children placed in foster homes or institutions. Secondary education is encouraged and financial assistance is given where required.

Relief either in the form of money or goods is made available—

- (a) to supplement food of the near primitive people residing in pastoral areas, and
- (b) to unemployed, sick, infirm, widowed, or aged, where social service benefits are not available.

Aborigines are eligible to receive Commonwealth social service benefits and assistance is given in lodging applications and in the proper use of funds so provided.

The Department of Aboriginal Affairs maintains reserves at Point Pearce, Point McLeay, Gerard, Coober Pedy, North-West Reserve, Koonibba and Port Augusta, and financial assistance is granted to church missions assisting Aboriginal people. A home for Aboriginal women is conducted by the department at North Adelaide.

#### Aboriginal Welfare: Cost of Services: South Australia, 1963-64

| Item   | General | Campbell House Farm School | Reserves     |              |            |             |        |          | Total          |
|--|---------|----------------------------|--------------|--------------|------------|-------------|--------|----------|----------------|
|  |         |                            | Point Pearce | Point McLeay | North-West | Coober Pedy | Gerard | Koonibba |                |
|  |         |                            | £            |              |            |             |        |          |                |
| <i>Payments:</i>   |         |                            |              |              |            |             |        |          |                |
| Food, clothing, medical, educational, etc. . . .                       | 49,986  | 66                         | 3,315        | 3,218        | 1,984      | 1,935       | 3,706  | 2,229    | 66,439         |
| Employment of Aborigines . .   | 7,770   | 1,007                      | 21,387       | 14,981       | 3,360      | 3,474       | 14,107 | 16,199   | 82,285         |
| Maintenance of Children in homes and institutions . .                  | 43,052  | —                          | —            | —            | —          | —           | —      | —        | 43,052         |
| Grants to non-departmental missions . . . . .                          | 23,789  | —                          | —            | —            | —          | —           | —      | —        | 23,789         |
| Purchases of land, buildings, plant and equipment                      | 70,006  | 8                          | 17,035       | 11,390       | 7,661      | 2,839       | 18,136 | 64,632   | 191,707        |
| Salaries of administrative, welfare and supervising officers . . . . . | 58,506  | 1,210                      | 8,538        | 8,702        | 3,814      | 2,253       | 6,228  | 7,218    | 96,469         |
| Other . . . . .  | 40,816  | 1,323                      | 17,265       | 13,269       | 8,735      | 4,113       | 8,390  | 12,908   | 106,819        |
| Total . . . . .  | 293,925 | 3,614                      | 67,540       | 51,560       | 25,554     | 14,614      | 50,567 | 103,186  | 610,560        |
| <i>Receipts</i> . . . . .  | 46,296  | 2,365                      | 38,568       | 7,684        | 50         | 17          | 2,777  | 2,720    | 100,477        |
| Net cost to State Government . . . . .                                 | 247,629 | 1,249                      | 28,972       | 43,876       | 25,504     | 14,597      | 47,790 | 100,466  | 510,083<br>(a) |

(a) Total cost varies from that shown in the table on page 196 by the inclusion of expenditure on payroll tax and superannuation.

At the 1961 Census there were 2,147 persons of predominantly Aboriginal blood resident in South Australia and a further 2,737 persons of half Aboriginal blood. Persons of less than half-blood were not enumerated as such, but it is estimated that there are currently in excess of 6,000 persons in this State who have at least some Aboriginal blood.

#### OTHER WELFARE ACTIVITIES

The State Government has an agreement with various transport authorities for the carriage of certain disabled persons, pensioners and ex-servicemen on public transport either free of charge or at a reduced fare. The cost to the Government of this service in 1964-65 was £236,600, which included fare concessions of £136,200 to pensioners, £10,000 to blind persons, and £83,600 to blind and incapacitated ex-servicemen.

The Government through the Chief Secretary also makes annual grants to various charitable agencies and institutions. In 1964-65 these included £37,300 to the Royal Institution for the Blind, £18,000 to the Institution for the Blind, Deaf and Dumb, £24,967 for Meals on Wheels and £29,991 for Aged Homes Assistance.

#### PRIVATE WELFARE SERVICES

There are numerous charitable and benevolent organizations working within South Australia. A large proportion of these derive at least part of their revenue from regular donations, subscriptions and income from bequests; nearly all derive revenue from special functions. A number also receive Commonwealth, State or local government grants.

The Collections for Charitable Purposes Act, 1939-1947, requires the registration of charitable organizations before they may actively solicit funds.

Organizations which have a wide range of activities include the Australian Red Cross Society, the welfare bureaux and missions of the various churches, and organizations catering for ex-servicemen and their dependants. Most of such agencies maintain full-time staff and generally employ professional social workers. Other organizations cater for more specific needs, covering a wide range of physical and sociological disabilities. This includes the care of physically and mentally handicapped persons such as crippled children, the blind, deaf-mutes and alcoholics; also of specific groups such as aged persons, Aborigines and migrants. Many of these organizations depend largely or entirely on voluntary aid.

For details of the numerous bodies concerned with social welfare, reference should be made to the *Directory of Social Agencies* published jointly by the South Australian Council of Social Services and the Department of Public Health.

For those in need, the Citizens' Advice Bureau advises on how to benefit from and how to use wisely the many services provided by the Commonwealth and State Governments and the various voluntary organizations.

#### REGISTERED MEDICAL AND HOSPITAL ORGANIZATIONS

Commonwealth medical benefits and certain hospital benefits operate on the principle of Commonwealth support of voluntary insurance towards meeting medical and hospital expenses. For access to these benefits persons must be insured with a registered organization. These are non-profit organizations and include a number of Friendly Societies. In most cases both medical and hospital benefits are provided by the one organization.

For hospital benefits the contributions (premiums) depend on the scale of fund benefits required, with separate rates for single persons and for married persons and their dependants.

**Registered Hospital Organizations: South Australia**

| Particulars                     | Unit  | 1959-60 | 1960-61 | 1961-62 | 1962-63 | 1963-64 |
|---------------------------------|-------|---------|---------|---------|---------|---------|
| Registered organizations (a) .. | No.   | 14      | 14      | 13      | 13      | 13      |
| Membership (a) .....            | '000  | 294     | 315     | 336     | 350     | 367     |
| Estimated persons covered (a)   | '000  | 706     | 740     | 786     | 822     | 877     |
| Fund benefits paid .....        | £'000 | 1,136   | 1,493   | 1,910   | 2,197   | 2,275   |

(a) At end of period.

Although a number of different scales of benefit are available from registered medical organizations, there is one scale which is used predominantly; at 1st January 1966 this provided benefits (to which Commonwealth benefits were added) ranging from 8s. for a general practitioner consultation to £45 for certain major operations. Contributions can be made to give either individual or family cover.

Details of registered medical organizations are given below. The number of members has increased steadily over the past 10 years from 152,000 at 30th June 1954 to 330,000 in 1964. In this period the number of professional services per member has more than doubled from 3.55 in 1953-54 to 8.35 in 1963-64 with most of this increase occurring in the mid 1950's.

**Registered Medical Organizations: South Australia**

| Particulars                                    | Unit  | 1959-60 | 1960-61 | 1961-62 | 1962-63 | 1963-64 |
|--|-------|---------|---------|---------|---------|---------|
| Registered organizations (a) ..                | No.   | 9       | 9       | 8       | 8       | 8       |
| Membership (a) .....                           | '000  | 263     | 274     | 291     | 309     | 330     |
| Estimated persons covered (a)                  | '000  | 653     | 687     | 707     | 769     | 819     |
| Cost of medical services—                      |       |         |         |         |         |         |
| Met by fund benefit (b) ....                   | £'000 | 1,179   | 1,356   | 1,496   | 1,697   | 1,829   |
| Met by Commonwealth benefit (b) .....          | £'000 | 984     | 1,039   | 1,173   | 1,304   | 1,391   |
| Met by insured member....                      | £'000 | 880     | 1,159   | 1,248   | 1,408   | 1,547   |
| Total .....                                    | £'000 | 3,043   | 3,554   | 3,917   | 4,409   | 4,767   |
| Fund benefits for ancillary services (c) ..... | £'000 | 36      | 40      | 67      | 50      | 54      |
| Professional services per member—              |       |         |         |         |         |         |
| General practitioner ....                      | No.   | 6.04    | 5.95    | 5.84    | 6.20    | 6.05    |
| Other .....                                    | No.   | 1.98    | 2.14    | 2.28    | 2.52    | 2.30    |
| Total .....                                    | No.   | 8.02    | 8.09    | 8.12    | 8.72    | 8.35    |

(a) At end of period.

(b) The Commonwealth figure excludes amounts paid to special account deficits (these being reimbursements to registered benefit organizations for losses incurred on chronic or pre-existing ailments and long-term illness). Such amounts have been included under cost to fund.

(c) Services for which Commonwealth benefits are not provided.

**FRIENDLY SOCIETIES**

Friendly Societies are mutual organizations paying medical, hospital and other benefits to members and dependants in time of need.

These societies are required to register under the Friendly Societies Act, 1919-1961. The Act is administered by the Chief Secretary through the Public Actuary who approves the table of contributions, the level of benefits and generally sees that the societies' rules and practices are in accordance with the law.

A number of Friendly Societies are registered to pay Commonwealth medical and hospital benefits (see previous section), while others re-insure such benefits through a society created for this purpose.

Other benefits offered by the societies include sickness, funeral, pharmaceutical and physiotherapy benefits; endowment assurance is also available. The Friendly Societies Act requires that separate funds be maintained for each of these benefits and members may contribute either for full benefits or for medical and hospital benefits only.

The level of benefits paid varies between societies, with sickness benefits generally on a declining scale as the period of illness lengthens. The Friendly Societies Act limits to £2,000 any payment for endowment or funeral benefits and to £10 10s. any weekly payment to members for sickness or superannuation.

The Friendly Societies Medical Association operates 26 pharmacies in the metropolitan area and Port Pirie where medicines are dispensed for Friendly Society members at concession prices.

The Friendly Societies Act also prescribes the nature of assets which societies may hold. Their most important investment is in property mortgages and in particular in housing loans to members. They may also invest in governmental securities, and a number of societies own valuable city freeholds.

#### Friendly Societies: South Australia

| Particulars                                  | 1959-60 | 1960-61 | 1961-62 | 1962-63 | 1963-64 |
|--|---------|---------|---------|---------|---------|
| Number of registered societies (a)           | 14      | 14      | 14      | 14      | 14      |
| Number of members (a) (b) . . . . .          | 52,239  | 51,551  | 51,198  | 50,765  | 50,946  |
|  | £'000   |         |         |         |         |
| <i>Revenue : (c)</i>                         |         |         |         |         |         |
| Contributions and levies . . . .             | 1,226   | 1,446   | 1,523   | 1,766   | 2,006   |
| Interest, dividends and rent . .             | 254     | 271     | 297     | 311     | 321     |
| Other . . . . .                              | 63      | 137     | 415     | 188     | 185     |
| Total revenue . . . . .                      | 1,543   | 1,854   | 2,235   | 2,264   | 2,512   |
| <i>Expenditure : (c)</i>                     |         |         |         |         |         |
| Sick pay . . . . .                           | 79      | 76      | 83      | 85      | 89      |
| Medical attendance and<br>medicine . . . . . | 506     | 567     | 618     | 706     | 784     |
| Sums payable at death . . . . .              | 55      | 57      | 53      | 59      | 64      |
| Hospital benefits . . . . .                  | 408     | 510     | 632     | 725     | 761     |
| Administration . . . . .                     | 254     | 280     | 304     | 330     | 376     |
| Other . . . . .                              | 43      | 64      | 102     | 102     | 117     |
| Total revenue . . . . .                      | 1,345   | 1,554   | 1,792   | 2,007   | 2,191   |
| Total funds . . . . .                        | 5,175   | 5,474   | 5,916   | 6,173   | 6,494   |

(a) At 30th June.

(b) Full benefit members : does not include those who contribute to medical and hospital benefits only.

(c) Receipts and payments of Commonwealth medical and hospital benefit subsidies excluded.

## 6.8. MARRIAGE

Registration of marriage has been compulsory in South Australia since 1842 when Acts "for regulating Marriages in the Province of South Australia" and "for registering Births, Deaths and Marriages in the Province of South Australia" were passed. The present law relating to marriages is contained in the Commonwealth *Marriage Act* 1961 which was assented to on 6th May 1961. This Act, which applies to all the States, the two mainland Territories and Norfolk Island, came into full operation on 1st September 1963, some of its minor provisions having been in operation from the date of assent. The South Australian Act superseded by the Commonwealth legislation was the *Marriages Act, 1936-1957*.

The Principal Registrar of Births, Deaths and Marriages in South Australia carries out the statutory duties under the Act and has supervision over ministers of religion (as regards their duties under the Marriage Act) and other officers empowered to perform marriages. Only the Principal Registrar, the Deputy Registrar, District Registrars appointed to the 22 registration districts and those ministers of religion registered for the purpose by the Principal Registrar may celebrate marriages.

After the marriage, celebrants are required to forward the official certificate of marriage to the Principal Registrar, who maintains at his office a register of all marriages in South Australia. In addition, a copy of the marriage certificate is prepared and forwarded by the office of the Principal Registrar to the District Registrar of the district in which the marriage was celebrated and each District Registrar maintains a register of the marriages performed in his district.

The average annual number of marriages and the rates per 1,000 of mean population in five-yearly periods since 1901 and numbers and rates for each of the years 1953 to 1964 are shown in the following table.

**Marriages: South Australia, 1901 to 1964**

| Five-Year Period | Average Annual Number of Marriages | Rate per 1,000 of Mean Population | Year      | Number of Marriages | Rate per 1,000 of Mean Population |
|------------------|------------------------------------|-----------------------------------|-----------|---------------------|-----------------------------------|
| 1901-05 .....    | 2,412                              | 6.75                              | 1953..... | 6,149               | 7.92                              |
| 1906-10 .....    | 3,159                              | 8.34                              | 1954..... | 6,190               | 7.77                              |
| 1911-15 .....    | 4,032                              | 9.31                              | 1955..... | 6,226               | 7.59                              |
| 1916-20 .....    | 3,756                              | 8.20                              | 1956..... | 6,277               | 7.40                              |
| 1921-25 .....    | 4,200                              | 8.13                              | 1957..... | 6,581               | 7.53                              |
| 1926-30 .....    | 4,036                              | 7.12                              | 1958..... | 6,505               | 7.25                              |
| 1931-35 .....    | 3,967                              | 6.83                              | 1959..... | 6,614               | 7.18                              |
| 1936-40 .....    | 5,726                              | 9.65                              | 1960..... | 6,607               | 6.99                              |
| 1941-45 .....    | 6,517                              | 10.61                             | 1961..... | 6,804               | 7.02                              |
| 1946-50 .....    | 6,581                              | 9.87                              | 1962..... | 7,021               | 7.10                              |
| 1951-55 .....    | 6,290                              | 8.10                              | 1963..... | 7,302               | 7.24                              |
| 1956-60 .....    | 6,517                              | 7.26                              | 1964..... | 7,765               | 7.53                              |

During the period from 1852 to 1858 the marriage rate varied between about 10 and 13 per 1,000 of mean population, then fluctuated but gradually declined to a figure of 5.55 in 1897. It then rose steadily to 9.80 in 1911, fluctuated considerably during the First World War then levelled to about 8 in the 1920's. The conditions in the period leading up to and during the depression of the

early 1930's brought about a marked decline to 5.33 in 1932. By 1938 the rate had risen to 9.25 and during the subsequent war years of 1939 to 1945 it rose to 13.34 in 1942, the highest ever recorded, then fell to 8.49 in 1945. Following the return and demobilization of servicemen the rate rose to over 10 in the years 1946 to 1948 then fell steadily to 6.99 in 1960, since when there has been a slight steady rise. The decline to 1960 in the marriage rate is related to the effect of the low birth rate of the depression years on the number of persons reaching the normal marrying age during this period.

Particulars relating to first marriages and remarriages annually since 1955 are shown in the following table.

### Conjugal Condition of Persons Marrying: South Australia

| Year      | Bridegrooms |          |          | Brides    |        |          | Percentage of Total Married |          |          |           |        |          |
|-----------|-------------|----------|----------|-----------|--------|----------|-----------------------------|----------|----------|-----------|--------|----------|
|           | Bachelors   | Widowers | Divorced | Spinsters | Widows | Divorced | Bridegrooms                 |          |          | Brides    |        |          |
|           |             |          |          |           |        |          | Bachelors                   | Widowers | Divorced | Spinsters | Widows | Divorced |
| 1955..... | 5,471       | 352      | 403      | 5,362     | 355    | 509      | 87.9                        | 5.6      | 6.5      | 86.1      | 5.7    | 8.2      |
| 1956..... | 5,631       | 286      | 360      | 5,494     | 311    | 472      | 89.7                        | 4.6      | 5.7      | 87.5      | 5.0    | 7.5      |
| 1957..... | 5,915       | 287      | 379      | 5,795     | 341    | 445      | 89.9                        | 4.4      | 5.7      | 88.0      | 5.2    | 6.8      |
| 1958..... | 5,830       | 317      | 358      | 5,753     | 319    | 433      | 89.6                        | 4.9      | 5.5      | 88.4      | 4.9    | 6.7      |
| 1959..... | 5,937       | 310      | 367      | 5,853     | 352    | 409      | 89.8                        | 4.7      | 5.5      | 88.5      | 5.3    | 6.2      |
| 1960..... | 5,966       | 289      | 352      | 5,870     | 323    | 414      | 90.3                        | 4.4      | 5.3      | 88.8      | 4.9    | 6.3      |
| 1961..... | 6,085       | 295      | 424      | 6,006     | 336    | 462      | 89.4                        | 4.4      | 6.2      | 88.3      | 4.9    | 6.8      |
| 1962..... | 6,318       | 268      | 435      | 6,284     | 302    | 435      | 90.0                        | 3.8      | 6.2      | 89.5      | 4.3    | 6.2      |
| 1963..... | 6,611       | 277      | 414      | 6,516     | 305    | 481      | 90.5                        | 3.8      | 5.7      | 89.2      | 4.2    | 6.6      |
| 1964..... | 7,052       | 285      | 428      | 7,034     | 282    | 449      | 90.8                        | 3.7      | 5.5      | 90.6      | 3.6    | 5.8      |

Prior to 1951, in each year except 1946, the number of widowers remarrying exceeded the number of widows remarrying, but since then the reverse has been the case except for 1964.

More divorced males than divorced females remarried in most years to 1940, but the reverse has been so in 19 of the 24 years since 1940 including all but one of the last 14 years.

The following statement shows age at marriage of bridegrooms and brides who were married during 1964 classified by conjugal condition:—

### Age at Marriage and Conjugal Condition: South Australia, 1964

|                      | Conjugal Condition at Marriage |          |          |       |           |        |          |       |
|----------------------|--------------------------------|----------|----------|-------|-----------|--------|----------|-------|
|                      | Bridegrooms                    |          |          |       | Brides    |        |          |       |
|                      | Bachelors                      | Widowers | Divorced | Total | Spinsters | Widows | Divorced | Total |
| Under 21 years ..... | 982                            | —        | —        | 982   | 3,445     | 2      | 2        | 3,449 |
| 21 to 24 years ..... | 3,422                          | 3        | 8        | 3,433 | 2,679     | 9      | 30       | 2,718 |
| 25 to 29 years ..... | 1,780                          | 7        | 44       | 1,831 | 569       | 8      | 65       | 642   |
| 30 to 34 years ..... | 467                            | 11       | 71       | 549   | 166       | 25     | 84       | 275   |
| 35 to 39 years ..... | 223                            | 19       | 79       | 321   | 65        | 21     | 85       | 171   |
| 40 to 44 years ..... | 93                             | 32       | 78       | 203   | 49        | 46     | 78       | 173   |
| 45 years and over .. | 85                             | 213      | 148      | 446   | 61        | 171    | 105      | 337   |
| All ages....         | 7,052                          | 285      | 428      | 7,765 | 7,034     | 282    | 449      | 7,765 |

In the following table of percentages of bridegrooms and brides in various age-groups the earliest available figures in each sector have been shown together with figures for selected later years.



## Age Distribution of Bridegrooms and Brides: Percentage to Total Marriages

| Year     | Under 21 Years  | 21 to 24 Years | 25 to 29 Years | 30 to 44 Years | 45 Years and Over | Under 21 Years | 21 to 24 Years | 25 to 29 Years | 30 to 44 Years | 45 Years and Over |
|----------|-----------------|----------------|----------------|----------------|-------------------|----------------|----------------|----------------|----------------|-------------------|
|          | ALL BRIDEGROOMS |                |                |                |                   | ALL BRIDES     |                |                |                |                   |
| 1903.... | 2.7             | 27.8           | 35.8           | 28.5           | 5.2               | 19.2           | 37.5           | 26.7           | 14.7           | 1.9               |
| 1911.... | 3.3             | 28.7           | 37.1           | 25.6           | 5.3               | 17.1           | 37.4           | 28.3           | 14.7           | 2.5               |
| 1921.... | 3.2             | 25.6           | 36.8           | 29.0           | 5.4               | 16.1           | 35.9           | 28.2           | 17.0           | 2.9               |
| 1931.... | 6.8             | 30.8           | 33.7           | 22.8           | 5.9               | 25.8           | 37.2           | 21.2           | 12.9           | 2.9               |
| 1941.... | 4.1             | 32.5           | 34.6           | 22.9           | 5.9               | 20.5           | 38.8           | 22.4           | 15.0           | 3.3               |
| 1951.... | 6.2             | 37.3           | 28.1           | 20.6           | 7.8               | 27.8           | 36.6           | 15.8           | 14.6           | 5.2               |
| 1960.... | 9.7             | 41.9           | 24.0           | 17.7           | 6.7               | 40.1           | 34.3           | 10.4           | 10.2           | 5.0               |
| 1961.... | 10.6            | 40.9           | 24.2           | 17.5           | 6.8               | 40.8           | 34.4           | 9.7            | 9.6            | 5.5               |
| 1962.... | 10.8            | 41.3           | 24.2           | 17.0           | 6.7               | 41.7           | 34.2           | 9.1            | 9.4            | 5.6               |
| 1963.... | 11.3            | 44.0           | 23.0           | 15.4           | 6.3               | 42.9           | 34.1           | 9.3            | 8.7            | 5.0               |
| 1964.... | 12.7            | 44.2           | 23.6           | 13.8           | 5.7               | 44.4           | 35.0           | 8.3            | 8.0            | 4.3               |
|          | BACHELORS       |                |                |                |                   | SPINSTERS      |                |                |                |                   |
| 1928.... | 5.8             | 33.4           | 37.4           | 21.1           | 2.3               | 23.9           | 40.5           | 22.5           | 12.1           | 1.0               |
| 1931.... | 7.4             | 33.2           | 35.9           | 21.0           | 2.5               | 27.3           | 39.2           | 21.8           | 10.7           | 1.0               |
| 1941.... | 4.5             | 35.0           | 37.0           | 21.6           | 1.9               | 21.9           | 41.4           | 23.0           | 12.7           | 1.0               |
| 1951.... | 7.1             | 42.5           | 30.9           | 16.9           | 2.6               | 31.8           | 41.5           | 15.8           | 9.2            | 1.7               |
| 1960.... | 10.7            | 46.3           | 26.0           | 15.3           | 1.7               | 45.2           | 38.0           | 10.1           | 5.8            | 0.9               |
| 1961.... | 11.9            | 45.5           | 26.3           | 14.9           | 1.4               | 46.1           | 38.2           | 9.3            | 5.3            | 1.1               |
| 1962.... | 12.0            | 45.8           | 26.3           | 14.4           | 1.5               | 46.6           | 37.7           | 8.9            | 5.5            | 1.3               |
| 1963.... | 12.5            | 48.5           | 24.7           | 12.7           | 1.6               | 47.8           | 37.8           | 8.9            | 4.4            | 0.9               |
| 1964.... | 13.9            | 48.5           | 25.3           | 11.1           | 1.2               | 49.0           | 38.1           | 8.1            | 4.0            | 0.8               |

In 1964, 62.4% of first marriages of men and 87.1% of first marriages of women were of persons who were under 25 years of age. This compares with the 1928 figures of 39.2% and 64.4% respectively.

The following table shows the average age of bridegrooms and brides during the last 10 years. From 1908 to 1955 there was little change in the average age of all bridegrooms and all brides—from 29.4 years to 29.2 years for bridegrooms and from 25.9 to 26.0 for brides, with some minor fluctuations in between which can be related to the two wars and the depression of the early 1930's.

## Average Age at Marriage: South Australia, 1955-1964

| Year      | Bridegrooms |          |          |                 | Brides    |        |          |            |
|-----------|-------------|----------|----------|-----------------|-----------|--------|----------|------------|
|           | Bachelors   | Widowers | Divorced | All Bridegrooms | Spinsters | Widows | Divorced | All Brides |
| 1955..... | 26.7        | 56.8     | 40.1     | 29.2            | 23.6      | 48.1   | 36.2     | 26.0       |
| 1956..... | 26.6        | 56.3     | 40.6     | 28.8            | 23.3      | 48.0   | 36.3     | 25.5       |
| 1957..... | 26.5        | 55.9     | 40.1     | 28.6            | 23.1      | 47.3   | 36.5     | 25.2       |
| 1958..... | 26.3        | 56.3     | 39.9     | 28.5            | 22.9      | 49.5   | 36.6     | 25.1       |
| 1959..... | 26.2        | 57.7     | 40.6     | 28.5            | 22.8      | 48.4   | 37.4     | 25.1       |
| 1960..... | 25.6        | 56.3     | 41.2     | 28.0            | 22.5      | 49.0   | 36.7     | 24.7       |
| 1961..... | 25.8        | 57.1     | 41.2     | 28.1            | 22.4      | 49.1   | 36.9     | 24.7       |
| 1962..... | 25.8        | 56.9     | 42.5     | 28.0            | 22.4      | 49.3   | 38.8     | 24.6       |
| 1963..... | 25.5        | 55.0     | 41.5     | 27.5            | 22.1      | 49.8   | 37.8     | 24.3       |
| 1964..... | 25.2        | 55.6     | 41.9     | 27.2            | 22.0      | 49.2   | 38.6     | 24.0       |

The average age of all bridegrooms and brides rose slightly between 1942 and 1955 but has subsequently fallen. On the other hand, average age of previously unmarried bridegrooms and brides has fallen steadily since 1942, from 27.4 to 25.2 and from 24.6 to 22.0 respectively. This tendency during the last 20 years towards marrying younger is presumably influenced by the availability over that period of employment to married women.

## MARRIAGE OF MINORS

The Commonwealth *Marriage Act* 1961 stipulates the marriageable age to be 18 years or over for a male and 16 years or over for a female. Under exceptional circumstances a magistrate can, upon application by a party who has not attained marriageable age but who is at least 16 in the case of a male or 14 in the case of a female, authorize him or her to marry a particular person who is of marriageable age.

South Australian legislation operative prior to the Commonwealth Act, and proclaimed on 1st March 1958, provided that a marriage between persons either of whom was a boy under the age of 18 years or a girl under the age of 16 years should be void, with further provision, upon application, for the Chief Secretary at his discretion to waive the provisions in relation to males aged 14 to 17 years and females aged 13 to 15 years. Prior to this it had been the practice to apply the provisions of British Common Law prohibiting the marriage of either a male under 14 or a female under 12.

In all cases where a party to a marriage is under 21 years, prior consent must be obtained from either both parents, one parent, a guardian or guardians, or other prescribed authority, according to the circumstances.

Figures for the first year for which information of marriages of minors is available and for certain years since are shown in the following table.

Marriages of Minors: South Australia

| Year               | Age in Years |    |     |     |     |     |       | Total Minors | Percentage of Total Marriages |
|--------------------|--------------|----|-----|-----|-----|-----|-------|--------------|-------------------------------|
|                    | 14 or Less   | 15 | 16  | 17  | 18  | 19  | 20    |              |                               |
| <b>BRIDEGROOMS</b> |              |    |     |     |     |     |       |              |                               |
| 1903.....          | —            | —  | —   | —   | 8   | 14  | 38    | 60           | 2.65                          |
| 1911.....          | —            | —  | —   | 1   | 8   | 44  | 79    | 132          | 3.27                          |
| 1921.....          | —            | —  | 1   | 2   | 16  | 42  | 79    | 140          | 3.19                          |
| 1931.....          | —            | —  | 1   | 10  | 31  | 67  | 101   | 210          | 6.84                          |
| 1941.....          | —            | —  | 1   | 11  | 23  | 93  | 155   | 283          | 4.13                          |
| 1951.....          | —            | —  | 2   | 21  | 44  | 107 | 241   | 415          | 6.24                          |
| 1960.....          | —            | —  | 2   | 18  | 92  | 191 | 334   | 637          | 9.64                          |
| 1961.....          | —            | —  | 1   | 21  | 114 | 208 | 379   | 723          | 10.63                         |
| 1962.....          | —            | —  | 2   | 20  | 132 | 218 | 384   | 756          | 10.77                         |
| 1963.....          | —            | —  | 2   | 25  | 132 | 258 | 409   | 826          | 11.31                         |
| 1964.....          | —            | —  | 2   | 24  | 185 | 305 | 466   | 982          | 12.65                         |
| <b>BRIDES</b>      |              |    |     |     |     |     |       |              |                               |
| 1903.....          | —            | 5  | 12  | 45  | 93  | 135 | 143   | 433          | 19.16                         |
| 1911.....          | 1            | 2  | 25  | 42  | 139 | 222 | 258   | 689          | 17.07                         |
| 1921.....          | 1            | 3  | 20  | 67  | 135 | 235 | 244   | 705          | 16.08                         |
| 1931.....          | 3            | 4  | 38  | 101 | 172 | 230 | 245   | 793          | 25.84                         |
| 1941.....          | —            | 9  | 37  | 119 | 262 | 384 | 592   | 1,403        | 20.47                         |
| 1951.....          | 5            | 12 | 76  | 179 | 337 | 540 | 697   | 1,846        | 27.78                         |
| 1960.....          | —            | 15 | 144 | 302 | 545 | 769 | 876   | 2,651        | 40.12                         |
| 1961.....          | 4            | 15 | 143 | 335 | 559 | 825 | 895   | 2,776        | 40.80                         |
| 1962.....          | —            | 15 | 158 | 344 | 627 | 818 | 968   | 2,930        | 41.73                         |
| 1963.....          | 1            | 8  | 206 | 366 | 641 | 911 | 996   | 3,129        | 42.85                         |
| 1964.....          | 2            | 11 | 178 | 454 | 698 | 970 | 1,132 | 3,445        | 44.36                         |

From 1903 to 1928 the proportion of bridegrooms under 21 remained under 5% with a general upward trend interrupted during and in the years immediately after the First World War. The proportion continued to rise to a figure of 6.84% in 1931 then fell steadily to 3.05% in 1939. From that year there has been a further general upward movement, again with an interruption in the years immediately following the Second World War.

The proportion of brides under 21 has followed a similar pattern, remaining under 20% until 1925, rising to 25.84% in 1931, falling to 16.29% in 1936 and generally maintaining an upward trend from 1939.

For each succeeding year from 1954 for male minors and from 1950 for female minors proportions have been the highest recorded.

### RELIGIOUS DENOMINATION OF MARRIAGES

The number of marriages celebrated in South Australia by ministers of religion in 1964 was 6,897 representing 89% of the total. Civil marriages numbered 868, or 11% of the total. The following table shows the number and proportion of civil marriages and of marriages solemnized according to the rites of the principal religious denominations during the last 4 years.

#### Denomination of Marriage Ceremony: South Australia

| Denomination                             | Number of Marriages |       |       |       | Proportion of Total Marriages |       |       |       |
|--|---------------------|-------|-------|-------|-------------------------------|-------|-------|-------|
|  | 1961                | 1962  | 1963  | 1964  | 1961                          | 1962  | 1963  | 1964  |
|  |                     |       |       |       | %                             | %     | %     | %     |
| Methodist .....                          | 1,645               | 1,634 | 1,798 | 1,844 | 24.2                          | 23.3  | 24.6  | 23.7  |
| Roman Catholic .....                     | 1,420               | 1,456 | 1,520 | 1,612 | 20.9                          | 20.7  | 20.8  | 20.8  |
| Church of England .....                  | 1,350               | 1,433 | 1,436 | 1,603 | 19.8                          | 20.4  | 19.7  | 20.6  |
| Lutheran .....                           | 400                 | 384   | 389   | 437   | 5.9                           | 5.5   | 5.3   | 5.6   |
| Presbyterian .....                       | 260                 | 267   | 291   | 326   | 3.8                           | 3.8   | 4.0   | 4.2   |
| Congregational .....                     | 229                 | 244   | 238   | 278   | 3.4                           | 3.5   | 3.3   | 3.6   |
| Churches of Christ .....                 | 197                 | 208   | 242   | 231   | 2.9                           | 2.9   | 3.3   | 3.0   |
| Orthodox (Greek, Russian,<br>etc.) ..... | 240                 | 300   | 247   | 208   | 3.5                           | 4.3   | 3.4   | 2.7   |
| Baptist .....                            | 167                 | 170   | 176   | 191   | 2.5                           | 2.4   | 2.4   | 2.5   |
| Salvation Army .....                     | 48                  | 42    | 55    | 56    | 0.7                           | 0.6   | 0.7   | 0.7   |
| Other denominations .....                | 77                  | 112   | 100   | 111   | 1.1                           | 1.6   | 1.4   | 1.4   |
| Civil marriages .....                    | 771                 | 771   | 810   | 868   | 11.3                          | 11.0  | 11.1  | 11.2  |
| Total .....                              | 6,804               | 7,021 | 7,302 | 7,765 | 100.0                         | 100.0 | 100.0 | 100.0 |

## 6.9. DIVORCE

### LEGISLATION

The Supreme Court of South Australia has had jurisdiction in divorce from 1st January 1859, the date upon which the Matrimonial Causes Act, 1858 came into operation. The present law is contained in the Commonwealth *Matrimonial Causes Act* 1959 which came into operation on 1st February 1961 and which provides a uniform law throughout Australia for dissolution of marriage and other matrimonial causes and vests the Supreme Courts of the States and Territories with jurisdiction to hear and determine causes under the Act. Its transitional provisions covered matrimonial causes instituted prior to 1st February 1961, and gave petitioners the advantages of the new Act without detracting from their position under the former legislation.

The principal form of relief petitioned for and granted by the Court is dissolution of marriage (commonly known as divorce) with provision also for petitions for nullity of marriage, judicial separation, restitution of conjugal rights and jactitation of marriage.

A decree of dissolution of marriage and in some instances of nullity of marriage is in the first instance a decree nisi. Under the provisions of the current Act, in general a decree nisi automatically becomes absolute at the expiration of 3 months, unless rescinded by the Court, unless an appeal has been instituted or unless there are children of the marriage in respect of whom proper arrangements have not been made for welfare, advancement and education.

Grounds on which petitions for dissolution of marriage could be lodged under the 1858 Act were limited for a husband's petition to adultery and for a wife's

petition to rape, sodomy, bestiality, or adultery qualified as incestuous, with bigamy, with cruelty, or with desertion for 1 year and upwards.

Since this Act came into operation the following changes to the grounds on which a petition could be lodged for dissolution of marriage have been made to State legislation by enactment or amendment:

From 29th May 1919 the qualifications to the ground of adultery on the petition of a wife were removed.

From 1st March 1929 the grounds of desertion for 5 years, habitual drunkenness, imprisonment or frequent convictions, attempted murder, repeated assault or cruelly beating and certified mental deficiency were added.

From 20th March 1930 failure to pay maintenance during the five years prior to petition was added as a ground, habitual cruelty was substituted for repeated assault or cruelly beating and "or inflicting or attempting to inflict grievous bodily harm" was added to the ground of attempted murder.

From 15th February 1939 the ground of 5 years separation pursuant to a Court order granting judicial separation or relief from cohabitation was added and the required period for desertion and failure to pay maintenance was reduced from 5 years to 3 years.

From 26th March 1942 under certain circumstances the Court was empowered to make an order of presumption of death and of dissolution of the marriage.

The grounds on which petitions can be filed for dissolution of marriage under the Commonwealth *Matrimonial Causes Act* 1959 can be briefly described as: adultery; desertion for not less than 2 years; refusal to consummate the marriage; habitual cruelty for not less than 1 year; rape, sodomy or bestiality; habitual drunkenness or habitual intoxication by drugs for 2 years or more; frequent convictions for crime and failure to support (only on petition of wife); imprisonment for at least 3 years of a sentence of at least 5 years; conviction of attempted murder or inflicting or attempting to inflict grievous bodily harm on the petitioner; failure for at least 2 years to pay maintenance; failure for at least 1 year to comply with a decree of restitution of conjugal rights; insanity; separation for at least 5 years; and presumption of death.

The main effects on grounds in South Australia resulting from the Commonwealth legislation were that a petition on the ground of separation for 5 years no longer required a Court order granting judicial separation or relief from co-habitation as a pre-requisite, and the period for desertion to constitute a ground for dissolution of marriage was reduced from 3 to 2 years. In addition, the period of decree nisi is now 3 months, having been 6 months under State legislation.

Assessment of the changes in the time series tables in this section should not be made without consideration of the effects of these changes in legislation. Also, it should be noted that fluctuations from year to year in the number of decrees granted may be independent of fluctuations from year to year in the number of petitions filed.

#### PETITIONS LODGED

Particulars of petitions lodged during the last 10 years are shown in the following table. In each of these years petitions lodged for dissolution by wives outnumbered those lodged by husbands. This pattern has prevailed

for over 50 years, as petitions by husbands have rarely exceeded those by wives except during the two World Wars.

**Dissolution of Marriage and Other Matrimonial Causes:  
Petitions Filed, South Australia**

| Year     | Dissolution of Marriage |          |       | Nullity of Marriage | Judicial Separation | Total Petitions |
|----------|-------------------------|----------|-------|---------------------|---------------------|-----------------|
|          | By Husbands             | By Wives | Total |                     |                     |                 |
| 1955.... | 357                     | 468      | 825   | 9                   | —                   | 834             |
| 1956.... | 303                     | 451      | 754   | 15                  | 1                   | 770             |
| 1957.... | 324                     | 443      | 767   | 11                  | —                   | 778             |
| 1958.... | 342                     | 449      | 791   | 5                   | —                   | 796             |
| 1959.... | 329                     | 460      | 789   | 6                   | 1                   | 796             |
| 1960.... | 313                     | 468      | 781   | 8                   | —                   | 789             |
| 1961.... | 406                     | 459      | 865   | 9                   | 3                   | 877             |
| 1962.... | 368                     | 542      | 910   | 4                   | 1                   | (a) 916         |
| 1963.... | 386                     | 619      | 1,005 | 5                   | 3                   | (a) 1,014       |
| 1964.... | 420                     | 614      | 1,034 | 5                   | 4                   | (b) 1,045       |

(a) Includes one petition lodged for dissolution or nullity.

(b) Includes two petitions lodged for dissolution or nullity.

**DECREES GRANTED**

The following table shows the number of decrees absolute granted for dissolution and nullity of marriage and decrees granted for judicial separation. Whilst no doubt the large increase in decrees absolute granted from 1940 is partly due to the 1939 legislative changes, it also reflects the abnormal conditions experienced during the war and its immediate aftermath.

**Dissolution of Marriage and Other Matrimonial Causes:  
Decrees Absolute Granted, South Australia**

| Period                 | Dissolution of Marriage |          |       | Nullity of Marriage | Judicial Separation |
|------------------------|-------------------------|----------|-------|---------------------|---------------------|
|                        | To Husbands             | To Wives | Total |                     |                     |
| <b>Annual Average—</b> |                         |          |       |                     |                     |
| 1911-15 .....          | 9.0                     | 5.0      | 14.0  | 0.2                 | —                   |
| 1916-20 .....          | 14.8                    | 7.8      | 22.6  | 0.2                 | 0.6                 |
| 1921-25 .....          | 37.2                    | 45.2     | 82.4  | 0.8                 | 0.6                 |
| 1926-30 .....          | 48.0                    | 58.6     | 106.6 | 0.6                 | 0.4                 |
| 1931-35 .....          | 73.0                    | 93.8     | 166.8 | 0.6                 | 0.8                 |
| 1936-40 .....          | 105.0                   | 137.4    | 242.4 | 1.4                 | 1.8                 |
| 1941-45 .....          | 216.2                   | 215.2    | 431.4 | 1.2                 | 1.4                 |
| 1946-50 .....          | 317.0                   | 329.0    | 646.0 | 3.6                 | 1.6                 |
| 1951-55 .....          | 262.8                   | 350.0    | 612.8 | 4.6                 | 1.2                 |
| 1956-60 .....          | 244.2                   | 294.2    | 538.4 | 7.6                 | 1.6                 |
| <b>Year—</b>           |                         |          |       |                     |                     |
| 1960.....              | 284                     | 326      | 610   | 9                   | —                   |
| 1961.....              | (a) 308                 | (a) 411  | 718   | 6                   | —                   |
| 1962.....              | (a) 315                 | (a) 371  | 685   | 6                   | 1                   |
| 1963.....              | 339                     | 426      | 765   | 5                   | —                   |
| 1964.....              | (a) 358                 | (a) 530  | 887   | 3                   | —                   |

(a) Includes one granted to both husband and wife.

A petition can be lodged and a decree granted on more than one ground and for 1961 and subsequent years these combinations have been recorded separately. Prior to 1961 one of the grounds was selected for classification, e.g. "adultery and desertion" was classified as "adultery", and for the purpose of comparison the figures for the years 1961 to 1964 have been similarly shown in the next table, which relates to grounds on which decrees absolute have been granted for dissolution of marriage. Of the 71 decrees absolute granted for dissolution in 1964 on more than one ground 34 for "desertion and separation" have been included in "desertion".

**Dissolution of Marriage: Grounds of Decrees Absolute, South Australia**

| Period                       | Grounds on which Granted |         |           |             |            |        | Total   |
|------------------------------|--------------------------|---------|-----------|-------------|------------|--------|---------|
|                              | Adultery                 | Cruelty | Desertion | Drunkenness | Separation | Other  |         |
| <b>HUSBAND AS PETITIONER</b> |                          |         |           |             |            |        |         |
| Annual Average               |                          |         |           |             |            |        |         |
| 1933-35 ..                   | 45.3                     | —       | 27.3      | 0.3         | —          | 2.7    | 75.6    |
| 1936-40 ..                   | 62.2                     | —       | 40.8      | 0.8         | 0.2        | 1.0    | 105.0   |
| 1941-45 ..                   | 131.2                    | 0.8     | 77.6      | 1.0         | 2.8        | 2.8    | 216.2   |
| 1946-50 ..                   | 179.6                    | 1.6     | 127.0     | 1.4         | 1.6        | 5.8    | 317.0   |
| 1951-55 ..                   | 131.2                    | 5.0     | 120.4     | 0.6         | 1.8        | 3.8    | 262.8   |
| 1956-60 ..                   | 133.4                    | 4.0     | 103.2     | 0.4         | 1.4        | 1.8    | 244.2   |
| Year                         |                          |         |           |             |            |        |         |
| 1960 .....                   | 172                      | 4       | 107       | —           | —          | 1      | 284     |
| 1961 .....                   | 131                      | 5       | 154       | 1           | 14         | (a) 3  | (a) 308 |
| 1962 .....                   | (a) 110                  | 1       | 141       | —           | 60         | 3      | (a) 315 |
| 1963 .....                   | 124                      | 2       | 152       | 1           | 58         | 2      | 339     |
| 1964 .....                   | (a) 146                  | 3       | 128       | 2           | 76         | 3      | (a) 358 |
| <b>WIFE AS PETITIONER</b>    |                          |         |           |             |            |        |         |
| Annual Average               |                          |         |           |             |            |        |         |
| 1933-35 ..                   | 60.0                     | 3.0     | 31.0      | 2.3         | —          | 15.3   | 111.6   |
| 1936-40 ..                   | 65.4                     | 9.2     | 47.0      | 3.4         | 0.4        | 12.0   | 137.4   |
| 1941-45 ..                   | 95.0                     | 17.8    | 79.6      | 4.6         | 6.6        | 11.6   | 215.2   |
| 1946-50 ..                   | 148.4                    | 40.2    | 125.4     | 4.4         | 3.8        | 6.8    | 329.0   |
| 1951-55 ..                   | 100.4                    | 93.6    | 136.6     | 7.8         | 6.4        | 5.2    | 350.0   |
| 1955-60 ..                   | 76.6                     | 93.8    | 106.8     | 7.0         | 4.4        | 5.6    | 294.2   |
| Year                         |                          |         |           |             |            |        |         |
| 1960 .....                   | 102                      | 99      | 108       | 9           | 2          | 6      | 326     |
| 1961 .....                   | 114                      | 135     | 138       | 5           | 9          | (a) 10 | (a) 411 |
| 1962 .....                   | (a) 69                   | 60      | 165       | 3           | 70         | 4      | (a) 371 |
| 1963 .....                   | 85                       | 86      | 138       | 6           | 104        | 7      | 426     |
| 1964 .....                   | (a) 112                  | 109     | 184       | 11          | 104        | 10     | (a) 530 |

(a) Includes one granted to both husband and wife.

Details for grounds were not recorded until 1933, but in all years prior to 1929 adultery was virtually the only ground upon which a divorce could be granted.

A total of 639 of the decrees absolute for dissolution granted in 1961, 198 of those in 1962, 66 of those in 1963 and 49 of those granted in 1964 were for petitions filed prior to February 1961 under the superseded legislation; this should be taken into account when comparing figures for recent years in the preceding table.

The ages at marriage of persons divorced are shown in the following table.

## Dissolution of Marriage: Decrees Absolute—Age at Time of Marriage

| Year     | Age at Marriage |       |       |       |       |       |             |            | Total |
|----------|-----------------|-------|-------|-------|-------|-------|-------------|------------|-------|
|          | Under 20        | 21-24 | 25-29 | 30-34 | 35-39 | 40-44 | 45 and Over | Not Stated |       |
| HUSBANDS |                 |       |       |       |       |       |             |            |       |
| 1960.... | 26              | 268   | 169   | 65    | 28    | 19    | 23          | 12         | 610   |
| 1961.... | 50              | 321   | 197   | 63    | 36    | 21    | 18          | 12         | 718   |
| 1962.... | 38              | 285   | 197   | 68    | 45    | 21    | 18          | 13         | 685   |
| 1963.... | 38              | 352   | 187   | 89    | 43    | 23    | 28          | 5          | 765   |
| 1964.... | 53              | 399   | 245   | 100   | 45    | 20    | 19          | 6          | 887   |
| WIVES    |                 |       |       |       |       |       |             |            |       |
| 1960.... | 166             | 277   | 78    | 40    | 12    | 10    | 15          | 12         | 610   |
| 1961.... | 207             | 309   | 100   | 43    | 21    | 12    | 13          | 13         | 718   |
| 1962.... | 193             | 284   | 95    | 50    | 19    | 16    | 14          | 14         | 685   |
| 1963.... | 218             | 322   | 115   | 42    | 31    | 18    | 14          | 5          | 765   |
| 1964.... | 245             | 392   | 139   | 52    | 27    | 9     | 17          | 6          | 887   |

Information of the relative ages at marriage of husbands and wives for marriages dissolved in 1964 is contained in the following table:—

**Dissolution of Marriage: Decrees Absolute, 1964**  
Relative Ages at Marriage of Husbands and Wives

| Age of Husband at Marriage | Age of Wives at Marriage |       |       |       |       |             |            | Total Husbands |
|----------------------------|--------------------------|-------|-------|-------|-------|-------------|------------|----------------|
|                            | Under 20                 | 20-24 | 25-29 | 30-34 | 35-39 | 40 and Over | Not Stated |                |
| Under 20 .....             | 43                       | 8     | 2     | —     | —     | —           | —          | 53             |
| 20-24 .....                | 132                      | 236   | 28    | 3     | —     | —           | —          | 399            |
| 25-29 .....                | 56                       | 109   | 63    | 10    | 5     | 2           | —          | 245            |
| 30-34 .....                | 12                       | 29    | 33    | 19    | 6     | 1           | —          | 100            |
| 35-39 .....                | 2                        | 7     | 10    | 12    | 9     | 5           | —          | 45             |
| 40 and over .....          | —                        | 3     | 3     | 8     | 7     | 18          | —          | 39             |
| Not stated .....           | —                        | —     | —     | —     | —     | —           | 6          | 6              |
| Total wives ..             | 245                      | 392   | 139   | 52    | 27    | 26          | 6          | 887            |

The following table shows the duration of marriage, *i.e.* the interval between marriage and the date the decree was made absolute, for marriages dissolved in 1946 (the first year so tabulated) and during the last 5 years.

## Dissolution of Marriage: Decrees Absolute—Duration of Marriage

| Year     | Duration of Marriage (Years) |     |       |       |       |       |       |       |             | Total |
|----------|------------------------------|-----|-------|-------|-------|-------|-------|-------|-------------|-------|
|          | 0-4                          | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40 and Over |       |
| 1946.... | 167                          | 197 | 119   | 74    | 48    | 28    | 16    | 5     | —           | 654   |
| 1960.... | 57                           | 180 | 174   | 86    | 64    | 32    | 10    | 4     | 3           | 610   |
| 1961.... | 49                           | 224 | 165   | 118   | 85    | 26    | 29    | 16    | 6           | 718   |
| 1962.... | 45                           | 167 | 172   | 129   | 81    | 47    | 23    | 7     | 14          | 685   |
| 1963.... | 43                           | 202 | 172   | 166   | 90    | 58    | 12    | 10    | 12          | 765   |
| 1964.... | 61                           | 207 | 183   | 185   | 122   | 70    | 32    | 16    | 11          | 887   |

Of the marriages dissolved in 1964, 6.9% were under 5 years duration and 30.2% were under 10 years duration. The corresponding proportions in 1946, when these particulars were first tabulated, were 25% and 55%. The comparatively early "break-up" of marriages which were dissolved in 1946 partly

can be attributed to the abnormal war-time conditions: in each of the next 3 years the proportion of divorces for marriages of less than 10 years duration was 49%, higher than in any year since.

The lower proportions in recent years probably is at least partly due to the steep increase in the number of decrees absolute granted on the ground of separation for 5 years. Prior to the commencement of operation of Commonwealth legislation, a petition for dissolution on the ground of separation required a Court order issued at least 5 years previously. As the result of the removal of this restriction some of the subsequent petitions on this ground almost certainly came from persons who previously had no ground on which to petition, and probably many of them were in the higher marriage duration group. The effect has been a rise in the proportion of dissolved marriages of 10 years duration or more with a consequent fall in the proportion of those under 10 years duration.

The same trend is evident in the following table on age at time of decree absolute which shows that in 1946 nearly 52% of husbands and over 64% of wives were under 35 years of age at the time of dissolution but in 1964 the corresponding proportions were just over 29% of husbands and just under 38% of wives.

**Dissolution of Marriage: Age at Time of Decree Absolute**

| Year            | Age at Time of Decree Absolute |       |       |       |       |       |             | Total |            |
|-----------------|--------------------------------|-------|-------|-------|-------|-------|-------------|-------|------------|
|                 | Under 25                       | 25-29 | 30-34 | 35-39 | 40-44 | 45-49 | 50 and Over |       | Not Stated |
| <b>HUSBANDS</b> |                                |       |       |       |       |       |             |       |            |
| 1946....        | 47                             | 124   | 168   | 116   | 94    | 51    | 54          | —     | 654        |
| 1960....        | 12                             | 82    | 108   | 125   | 92    | 84    | 95          | 12    | 610        |
| 1961....        | 16                             | 72    | 154   | 132   | 113   | 88    | 130         | 13    | 718        |
| 1962....        | 8                              | 71    | 103   | 142   | 105   | 94    | 149         | 13    | 685        |
| 1963....        | 12                             | 80    | 127   | 148   | 137   | 95    | 161         | 5     | 765        |
| 1964....        | 20                             | 91    | 148   | 157   | 137   | 136   | 192         | 6     | 887        |
| <b>WIVES</b>    |                                |       |       |       |       |       |             |       |            |
| 1946....        | 122                            | 149   | 149   | 103   | 53    | 46    | 32          | —     | 654        |
| 1960....        | 58                             | 98    | 129   | 119   | 78    | 69    | 47          | 12    | 610        |
| 1961....        | 57                             | 116   | 154   | 124   | 90    | 68    | 95          | 14    | 718        |
| 1962....        | 48                             | 98    | 124   | 125   | 93    | 79    | 104         | 14    | 685        |
| 1963....        | 48                             | 123   | 124   | 139   | 131   | 101   | 94          | 5     | 765        |
| 1964....        | 70                             | 133   | 133   | 159   | 145   | 110   | 131         | 6     | 887        |

For marriages dissolved in 1964 the following table shows the relative ages of husbands and wives at the time of dissolution.

**Dissolution of Marriage: Decrees Absolute, 1964  
Relative Ages of Husbands and Wives at Time of Dissolution**

| Age of Husbands at Dissolution | Age of Wives at Dissolution |       |       |       |       |             | Total Husbands |            |
|--------------------------------|-----------------------------|-------|-------|-------|-------|-------------|----------------|------------|
|                                | Under 25                    | 25-29 | 30-34 | 35-39 | 40-44 | 45 and Over |                | Not Stated |
| Under 25 .....                 | 16                          | 3     | 1     | —     | —     | —           | —              | 20         |
| 25-29 .....                    | 39                          | 46    | 6     | —     | —     | —           | —              | 91         |
| 30-34 .....                    | 11                          | 59    | 66    | 9     | 3     | —           | —              | 148        |
| 35-39 .....                    | 3                           | 21    | 48    | 65    | 17    | 3           | —              | 157        |
| 40-44 .....                    | 1                           | 4     | 9     | 56    | 52    | 15          | —              | 137        |
| 45 and over .....              | —                           | —     | 3     | 29    | 73    | 223         | —              | 328        |
| Not stated .....               | —                           | —     | —     | —     | —     | —           | 6              | 6          |
| Total wives ...                | 70                          | 133   | 133   | 159   | 145   | 241         | 6              | 887        |



The following table shows particulars of the number of children of marriages dissolved in 1946 and in the last 5 years.

**Dissolution of Marriage: Decrees Absolute, Children of the Marriage**

| Year      | Number of Children at Time of Petition |     |     |     |    |    |            | Total Dissolutions of Marriage | Total Children |
|-----------|--|-----|-----|-----|----|----|------------|--------------------------------|----------------|
|           | 0                                      | 1   | 2   | 3   | 4  | 5  | 6 and Over |                                |                |
| 1946..... | 319                                    | 158 | 117 | 38  | 14 | 6  | 2          | 654                            | 604            |
| 1960..... | 232                                    | 152 | 131 | 60  | 18 | 11 | 6          | 610                            | 760            |
| 1961..... | 292                                    | 165 | 140 | 68  | 31 | 14 | 8          | 718                            | 894            |
| 1962..... | 236                                    | 194 | 140 | 60  | 40 | 11 | 4          | 685                            | 893            |
| 1963..... | 243                                    | 199 | 166 | 94  | 51 | 6  | 6          | 765                            | 1,085          |
| 1964..... | 260                                    | 227 | 205 | 118 | 48 | 21 | 8          | 887                            | 1,340          |

Information collected for petitions filed under State legislation covered only living "issue" under 16 years of age; information collected for petitions filed under Commonwealth legislation covers living "children of the marriage" under 21 years of age, which, as defined in the Act, includes also adopted children, children of the husband and wife born before marriage and children of either the husband or the wife if members of the household. As the numbers of orders absolute for dissolution granted in 1961 to 1964 combine those granted under both the old and the new legislation (see comment after the table on "grounds" on page 211 for proportions), the information on children for each of these years is not strictly comparable with that of each previous year.

The next table shows the number of children of marriages related to duration of marriage for decrees absolute for dissolution granted in 1964.

**Dissolution of Marriage: Decrees Absolute, 1964  
Duration of Marriage and Children of the Marriage**

| Duration of Marriage (Years)         | Number of Children at Time of Petition |     |     |     |     |     |            | Total Dissolutions of Marriage | Total Children |
|--------------------------------------|--|-----|-----|-----|-----|-----|------------|--------------------------------|----------------|
|                                      | 0                                      | 1   | 2   | 3   | 4   | 5   | 6 and Over |                                |                |
| Under 5 .....                        | 34                                     | 21  | 4   | 2   | —   | —   | —          | 61                             | 35             |
| 5-9 .....                            | 69                                     | 71  | 42  | 20  | 3   | 2   | —          | 207                            | 237            |
| 10-14 .....                          | 36                                     | 49  | 48  | 33  | 12  | 4   | 1          | 183                            | 318            |
| 15-19 .....                          | 30                                     | 33  | 55  | 40  | 15  | 8   | 4          | 185                            | 389            |
| 20-24 .....                          | 22                                     | 28  | 31  | 17  | 15  | 6   | 3          | 122                            | 251            |
| 25-29 .....                          | 24                                     | 18  | 21  | 5   | 2   | —   | —          | 70                             | 83             |
| 30-34 .....                          | 21                                     | 6   | 2   | 1   | 1   | 1   | —          | 32                             | 22             |
| 5-39 .....                           | 13                                     | 1   | 2   | —   | —   | —   | —          | 16                             | 5              |
| 40 and over .....                    | 11                                     | —   | —   | —   | —   | —   | —          | 11                             | —              |
| Total dissolutions of marriage ..... | 260                                    | 227 | 205 | 118 | 48  | 21  | 8          | 887                            | —              |
| Total children ...                   | —                                      | 227 | 410 | 354 | 192 | 105 | 52         | —                              | 1,340          |

## PART 7

# LABOUR

### 7.1. EMPLOYMENT

#### THE WORK FORCE

Particulars of the number of persons constituting the work force in South Australia are available from periodic population censuses. The work force consists of all persons who are actively engaged in an industry, trade, or service whether as employers, wage and salary earners, helpers not receiving a wage or salary, or persons self-employed. It also includes persons who would normally be engaged in these activities but who were without employment at the time of the census through inability to secure employment, illness, industrial dispute, or for some other reason.

Persons not in the work force include females engaged in home duties and full-time students as well as persons not at work on account of youth, age, or disability.

In the following table persons in the work force at the 1954 and 1961 Censuses are classified by occupational status.

In 1961 females constituted 23.6% of the work force compared with 21.2% at the 1954 Census. Females in the work force represented 18.6% of the total female population as opposed to 17.3% in 1954. On the other hand only 58.4% of the male population was in the work force in 1961 compared with 62.8% in 1954.

**Occupational Status of the Population, South Australia**  
*Censuses 1954 and 1961*

| Occupational Status          | 30th June 1954 |                |                | 30th June 1961 |                |                |
|------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|
|                              | Males          | Females        | Persons        | Males          | Females        | Persons        |
| <b>In work force—</b>        |                |                |                |                |                |                |
| <b>At work—</b>              |                |                |                |                |                |                |
| Employer .....               | 18,921         | 2,441          | 21,362         | 20,132         | 4,081          | 24,213         |
| Self-employed ...            | 35,241         | 4,521          | 39,762         | 35,128         | 5,850          | 40,978         |
| Employee .....               | 195,568        | 59,437         | 255,005        | 223,241        | 75,447         | 298,688        |
| Helper .....                 | 1,535          | 914            | 2,449          | 1,318          | 634            | 1,952          |
| <b>Total at work</b>         | <b>251,265</b> | <b>67,313</b>  | <b>318,578</b> | <b>279,819</b> | <b>86,012</b>  | <b>365,831</b> |
| <b>Not at work .....</b>     | <b>2,020</b>   | <b>765</b>     | <b>2,785</b>   | <b>8,520</b>   | <b>3,210</b>   | <b>11,730</b>  |
| <b>Not stated .....</b>      | <b>282</b>     | <b>104</b>     | <b>386</b>     | <b>(a)</b>     | <b>(a)</b>     | <b>(a)</b>     |
| <b>Total work force</b>      | <b>253,567</b> | <b>68,182</b>  | <b>321,749</b> | <b>288,339</b> | <b>89,222</b>  | <b>377,561</b> |
| <b>Not in work force....</b> | <b>150,336</b> | <b>325,009</b> | <b>475,345</b> | <b>201,886</b> | <b>389,893</b> | <b>591,779</b> |
| <b>Total population.</b>     | <b>403,903</b> | <b>393,191</b> | <b>797,094</b> | <b>490,225</b> | <b>479,115</b> | <b>969,340</b> |

(a) Where "not stated", occupational status has been allocated.

The working population may be classified according to two distinct concepts, the *occupation* which is personal to the individual, and the *industry* in which the individual carries on his occupation.

In the following table the work force at the 1961 Census is classified by occupation, *i.e.*, the kind of work a person normally performs.

**Work Force: Occupation, South Australia, 30th June 1961**

| Occupation Group  | Males          |                     | Females       |                     | Persons        |                     |
|---|----------------|---------------------|---------------|---------------------|----------------|---------------------|
|   | Number         | Proportion of Total | Number        | Proportion of Total | Number         | Proportion of Total |
|   |                | %                   |               | %                   |                | %                   |
| Professional, technical and related workers .....                     | 18,319         | 6.35                | 13,698        | 15.35               | 32,017         | 8.48                |
| Administrative, executive and managerial workers .....                | 22,650         | 7.86                | 3,850         | 4.32                | 26,500         | 7.02                |
| Clerical workers .....  | 21,278         | 7.38                | 24,643        | 27.62               | 45,921         | 12.16               |
| Sales workers .....   | 16,492         | 5.72                | 13,487        | 15.12               | 29,979         | 7.94                |
| Farmers, fishermen, hunters, timber-getters and related workers ..... | 42,127         | 14.61               | 4,076         | 4.57                | 46,203         | 12.24               |
| Miners, quarrymen and related workers .....                           | 1,711          | 0.59                | 2             | 0.00                | 1,713          | 0.46                |
| Workers in transport and communication occupations .....              | 22,257         | 7.72                | 2,288         | 2.56                | 24,545         | 6.50                |
| Craftsmen, production-process workers and labourers (n.e.i.) ...      | 127,582        | 44.25               | 10,949        | 12.27               | 138,531        | 36.69               |
| Service, sport and recreation workers                                 | 10,997         | 3.81                | 14,608        | 16.37               | 25,605         | 6.78                |
| Members of armed services, enlisted personnel .....                   | 2,483          | 0.86                | 59            | 0.07                | 2,542          | 0.67                |
| Occupation inadequately described or not stated .....                 | 2,443          | 0.85                | 1,562         | 1.75                | 4,008          | 1.06                |
| <b>Total work force ....</b>  | <b>288,339</b> | <b>100.00</b>       | <b>89,222</b> | <b>100.00</b>       | <b>377,564</b> | <b>100.00</b>       |

In the table below the numbers of males and females in the work force at the 1961 Census are classified according to industry in conjunction with occupational status. At the 1961 Census 11.9% of persons in the work force were occupied in primary production compared with 14.8% in 1954, 17.8% in 1947, and 23.7% in 1933. In contrast the percentage shown as employed in manufacturing had risen from 16.6% in 1933 to 27.4% in 1961.

## Work Force: Industry and Occupational Status, South Australia

Census 30th June 1961

| Industry Group   | At Work       |               |                |              |                | Not at Work  | Total Work Force |
|--|---------------|---------------|----------------|--------------|----------------|--------------|------------------|
|  | Employer      | Self-Employed | Employee       | Helper       | Total          |              |                  |
| Males  |               |               |                |              |                |              |                  |
| Primary production .....   | 5,462         | 21,657        | 11,935         | 1,125        | 40,179         | 563          | 40,742           |
| Mining and quarrying .....   | 60            | 392           | 2,523          | 7            | 2,982          | 67           | 3,049            |
| Manufacturing .....  | 2,488         | 1,854         | 79,272         | 15           | 83,629         | 2,205        | 85,834           |
| Electricity, gas, water and sanitary services .....                            | 17            | 15            | 8,653          | —            | 8,685          | 78           | 8,763            |
| Building and construction .....  | 2,904         | 3,029         | 24,565         | 13           | 30,511         | 1,379        | 31,890           |
| Transport and storage .....  | 711           | 1,821         | 19,023         | 6            | 21,561         | 422          | 21,983           |
| Communication .....  | 8             | 22            | 6,972          | 2            | 7,004          | 39           | 7,043            |
| Finance and property .....   | 302           | 270           | 7,125          | 9            | 7,706          | 54           | 7,760            |
| Commerce .....   | 5,240         | 4,138         | 31,863         | 58           | 41,299         | 719          | 42,018           |
| Public authority (n.e.i.) and defence services .....                           | —             | —             | 11,122         | —            | 11,122         | 60           | 11,182           |
| Community and business services (including professional) .....                 | 1,550         | 545           | 12,708         | 25           | 14,828         | 75           | 14,903           |
| Amusement, hotels and other accommodation, cafes, personal services, etc. .... | 1,320         | 1,185         | 5,816          | 35           | 8,356          | 293          | 8,649            |
| Other industries .....   | —             | —             | 3              | —            | 3              | 3            | 6                |
| Industry inadequately described or not stated .....                            | 70            | 200           | 1,661          | 23           | 1,954          | 2,563        | 4,517            |
| <b>Total males in work force</b>   | <b>20,132</b> | <b>35,128</b> | <b>223,241</b> | <b>1,318</b> | <b>279,819</b> | <b>8,520</b> | <b>288,339</b>   |
| Females  |               |               |                |              |                |              |                  |
| Primary production .....   | 928           | 2,237         | 814            | —            | 4,238          | 28           | 4,266            |
| Mining and quarrying .....   | 5             | 6             | 94             | —            | 105            | 1            | 106              |
| Manufacturing .....  | 301           | 275           | 16,013         | 25           | 16,614         | 654          | 17,268           |
| Electricity, gas, water and sanitary services .....                            | 3             | —             | 391            | —            | 394            | —            | 394              |
| Building and construction .....  | 130           | 57            | 462            | 3            | 652            | 7            | 659              |
| Transport and storage .....  | 75            | 76            | 1,263          | 5            | 1,419          | 13           | 1,432            |
| Communication .....  | 6             | 11            | 1,722          | 2            | 1,741          | 30           | 1,771            |
| Finance and property .....   | 24            | 17            | 4,308          | 3            | 4,352          | 24           | 4,376            |
| Commerce .....   | 1,604         | 1,704         | 18,908         | 159          | 22,375         | 439          | 22,814           |
| Public authority (n.e.i.) and defence services .....                           | —             | —             | 2,420          | —            | 2,420          | 16           | 2,436            |
| Community and business services (including professional) .....                 | 194           | 264           | 19,891         | 43           | 20,392         | 296          | 20,688           |
| Amusement, hotels and other accommodation, cafes, personal services, etc. .... | 799           | 1,178         | 8,322          | 120          | 10,419         | 376          | 10,795           |
| Other industries .....   | 1             | 1             | 6              | —            | 8              | 1            | 9                |
| Industry inadequately described or not stated .....                            | 11            | 24            | 833            | 15           | 883            | 1,325        | 2,208            |
| <b>Total females in work force</b>   | <b>4,081</b>  | <b>5,850</b>  | <b>75,447</b>  | <b>634</b>   | <b>86,012</b>  | <b>3,210</b> | <b>89,222</b>    |

## Work Force Survey

In addition to the complete census counts, estimates of the civilian work force are prepared each quarter. These estimates are prepared on an Australia-wide basis and separate information is not available for South Australia. The estimates are based on the results of surveys of sample households. The first surveys were conducted in June 1960 and were restricted to the six State capital cities.

More recently the survey programme has been extended to non-metropolitan urban and rural areas; this will enable estimates of the total Australian work force to be published.

Information yielded includes work force participation rates, *i.e.*, the percentage of the total civilian population falling in a particular class who are members of the civilian work force. Work force participation, by age and marital status, is shown below for the surveys of August 1961 and 1965.

Work Force Participation Rates, Six Australian State Capital Cities

| Particulars     | Age Group (Years) |         |                 |         |                 | 65 and Over | Total Civilian Population 14 Years of Age and Over |
|-----------------|-------------------|---------|-----------------|---------|-----------------|-------------|--|
|                 | 14-19             | 20-44   |                 | 45-64   |                 |             |  |
|                 |                   | Married | Not Married (a) | Married | Not Married (a) |             |  |
|                 | Males             |         |                 |         |                 |             |  |
| August, 1961 .. | 57.1              | 98.7    | 91.4            | 93.7    | 81.6            | 23.0        | 82.3   |
| August, 1965 .. | 53.4              | 98.9    | 90.7            | 93.3    | 77.9            | 21.5        | 81.1   |
|                 | Females           |         |                 |         |                 |             |  |
| August, 1961 .. | 55.3              | 31.3    | 86.4            | 23.0    | 45.9            | 3.9         | 34.2   |
| August, 1965 .. | 54.4              | 35.3    | 86.6            | 24.5    | 45.2            | 2.9         | 36.0   |

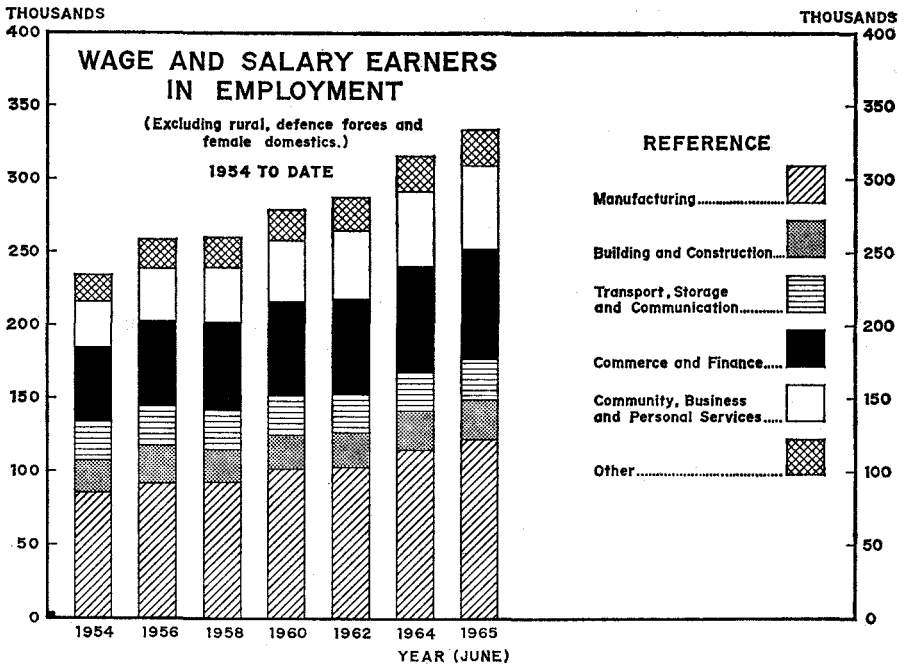
(a) Includes never married, widowed and divorced.

WAGE AND SALARY EARNERS IN EMPLOYMENT

Details of the number of wage and salary earners in civilian employment other than at census dates are available from periodic estimates. These estimates, which exclude employees in rural industry and private domestic service, are based on information obtained at the 1954 and 1961 Censuses, with adjustments being made from certain current information.

The figures relate to wage and salary earners on payrolls or in employment in the latter part of June as distinct from numbers of employees actually working on a specific date. They include some persons working part-time.

An industry distribution of wage and salary earners derived from these estimates, and beginning with the census year 1954, is presented in the following bar chart.



Estimated employment for June in the years 1961 to 1965 classified by industry group, is given in the following table. "Manufacturing" includes employees of manufacturing enterprises who are not directly associated with the productive process, such as sales and distribution personnel. The category "community, business and personal services" covers employees in education, health, amusement, hotels and restaurants, and professional and personal services but excludes female private domestics.

### Wage and Salary Earners in Employment<sup>(a)</sup>, South Australia

| June           | Manufacturing | Building and Construction | Transport, Storage, and Communication | Commerce and Finance | Community, Business and Personal Services | Other | Total Employment |
|----------------|---------------|---------------------------|---------------------------------------|----------------------|---|-------|------------------|
| MALES ('000)   |               |                           |                                       |                      |   |       |                  |
| 1961.....      | 80.8          | 24.2                      | 24.0                                  | 40.6                 | 18.0                                      | 19.9  | 207.5            |
| 1962.....      | 85.4          | 23.8                      | 23.0                                  | 40.4                 | 18.9                                      | 19.7  | 211.2            |
| 1963.....      | 89.7          | 24.1                      | 23.2                                  | 42.6                 | 19.8                                      | 20.2  | 219.6            |
| 1964.....      | 94.5          | 25.5                      | 23.5                                  | 44.0                 | 20.8                                      | 20.8  | 229.1            |
| 1965.....      | 99.6          | 26.6                      | 24.2                                  | 46.1                 | 22.1                                      | 21.1  | 239.7            |
| FEMALES ('000) |               |                           |                                       |                      |   |       |                  |
| 1961.....      | 15.9          | 0.3                       | 3.0                                   | 23.9                 | 26.2                                      | 3.0   | 72.3             |
| 1962.....      | 17.6          | 0.3                       | 3.0                                   | 24.8                 | 28.0                                      | 3.0   | 76.7             |
| 1963.....      | 18.4          | 0.3                       | 3.0                                   | 26.1                 | 29.9                                      | 3.2   | 80.9             |
| 1964.....      | 20.0          | 0.3                       | 3.2                                   | 27.4                 | 31.9                                      | 3.2   | 86.0             |
| 1965.....      | 22.1          | 0.4                       | 3.4                                   | 29.5                 | 34.2                                      | 3.6   | 93.2             |
| PERSONS ('000) |               |                           |                                       |                      |   |       |                  |
| 1961.....      | 96.7          | 24.5                      | 27.0                                  | 64.5                 | 44.2                                      | 22.9  | 279.8            |
| 1962.....      | 103.0         | 24.1                      | 26.0                                  | 65.2                 | 46.9                                      | 22.7  | 287.9            |
| 1963.....      | 108.1         | 24.4                      | 26.2                                  | 68.7                 | 49.7                                      | 23.4  | 300.5            |
| 1964.....      | 114.6         | 25.8                      | 26.7                                  | 71.4                 | 52.7                                      | 24.0  | 315.2            |
| 1965.....      | 121.7         | 27.1                      | 27.6                                  | 75.6                 | 56.3                                      | 24.6  | 332.9            |

(a) Excludes employees in rural industry, female private domestics, and defence forces.

Government and semi-government departments or authorities employ over 25% of total civilian wage and salary earners. The following table shows the distribution of wage and salary earners at June 1964 and June 1965 by type of employer.

### Wage and Salary Earners in Employment<sup>(a)</sup>: Class of Employer, South Australia

| Class of Employer | June 1964 |         |         | June 1965 |         |         |
|-------------------|-----------|---------|---------|-----------|---------|---------|
|                   | Males     | Females | Persons | Males     | Females | Persons |
| Private .....     | 161.6     | 66.0    | 227.7   | 170.9     | 71.9    | 242.8   |
| Government (b)—   |           |         |         |           |         |         |
| Commonwealth .    | 20.6      | 4.4     | 25.0    | 20.8      | 4.9     | 25.7    |
| State .....       | 42.7      | 15.2    | 57.9    | 43.7      | 16.0    | 59.6    |
| Local .....       | 4.2       | 0.4     | 4.6     | 4.3       | 0.5     | 4.8     |
| Total government  | 67.5      | 20.0    | 87.5    | 68.8      | 21.3    | 90.1    |
| Total employment  | 229.1     | 86.0    | 315.2   | 239.7     | 93.2    | 332.9   |

(a) Excludes employees in rural industry, female private domestics and defence forces.

(b) Includes semi-government bodies.

Further information on employment in specific sectors such as factories, rural industries, the building industry, etc., is found in the relevant sections.

## UNEMPLOYMENT

A full count of unemployed persons in South Australia is available only from population censuses. At the three post-war censuses details have been obtained of all persons usually engaged in an industry, business, profession, trade or service but who were without employment at the time of the census, irrespective of whether they were actively seeking employment or not. As the term "unemployment" is normally associated only with those persons available for work and unable to obtain it, persons without employment at the census date are broadly described as "not at work".

The numbers of persons not at work at the 1947, 1954 and 1961 Censuses are given below together with the reasons for being without work. Persons not at work represented 2.05% of the total work force in 1947, 0.87% in 1954, and 3.11% in 1961.

**Members of Work Force Not at Work, South Australia**  
*Censuses 1947, 1954 and 1961*

| Census   | Unable to Secure Employment | Temporarily Laid Off | Sickness or Accident | Changing Jobs | Other and Not Stated (a) | Total  |
|----------|-----------------------------|----------------------|----------------------|---------------|--------------------------|--------|
| MALES    |                             |                      |                      |               |                          |        |
| 1947.... | 903                         | 750                  | 1,219                | 31            | 1,499                    | 4,402  |
| 1954.... | 290                         | 166                  | 816                  | 516           | 232                      | 2,020  |
| 1961.... | 5,649                       | 802                  | 1,184                | 503           | 383                      | 8,521  |
| FEMALES  |                             |                      |                      |               |                          |        |
| 1947.... | 116                         | 141                  | 294                  | 4             | 535                      | 1,090  |
| 1954.... | 160                         | 79                   | 237                  | 189           | 100                      | 765    |
| 1961.... | 2,203                       | 265                  | 361                  | 229           | 152                      | 3,210  |
| PERSONS  |                             |                      |                      |               |                          |        |
| 1947.... | 1,019                       | 891                  | 1,513                | 35            | 2,034                    | 5,492  |
| 1954.... | 450                         | 245                  | 1,053                | 705           | 332                      | 2,785  |
| 1961.... | 7,852                       | 1,067                | 1,545                | 732           | 535                      | 11,731 |

(a) Includes persons resting between jobs or involved in an industrial dispute.

Monthly figures compiled by the Department of Labour and National Service from the operations of the Commonwealth Employment Service provide indicators of movement in the level of unemployment.

The department makes a count of the number of persons, registered with the Employment Service for employment on the Friday nearest the end of the month, who claimed at the time of registering that they were not employed, and who were still recorded as unplaced. Included are persons who have been referred to employers and those who may have obtained employment without notifying the department. Also available is the number of vacancies, registered by employers, which were recorded as unfilled at the end of the month.

In the table below the number of persons and vacancies registered at the end of each month are shown for the years 1960 to 1965. The excess of persons registered over vacancies is also shown. Figures are in thousands correct to one decimal place; any discrepancies between the calculated excess and the components are due to rounding.

Registration with Commonwealth Employment Service, South Australia<sup>(a)</sup>

| Month—    | Jan.   | Feb. | Mar. | April | May  | June | July | Aug. | Sept. | Oct. | Nov. | Dec. |
|-----------|--|------|------|-------|------|------|------|------|-------|------|------|------|
| Year—     | PERSONS REGISTERED FOR EMPLOYMENT (b) ('000) |      |      |       |      |      |      |      |       |      |      |      |
| 1960..... | 4.8  | 4.3  | 4.1  | 4.5   | 4.7  | 4.5  | 4.5  | 4.2  | 3.4   | 3.3  | 3.2  | 3.9  |
| 1961..... | 5.1  | 6.7  | 7.6  | 8.1   | 8.5  | 9.0  | 10.1 | 9.6  | 12.1  | 8.2  | 7.5  | 8.6  |
| 1962..... | 10.3   | 8.1  | 7.2  | 7.4   | 6.9  | 6.9  | 6.7  | 6.1  | 5.4   | 5.0  | 4.9  | 6.5  |
| 1963..... | 7.4  | 6.6  | 6.0  | 6.0   | 6.5  | 6.5  | 6.3  | 5.2  | 4.7   | 4.6  | 3.9  | 5.4  |
| 1964..... | 6.5  | 5.3  | 4.5  | 4.5   | 4.4  | 4.3  | 4.2  | 3.5  | 3.1   | 5.7  | 2.9  | 4.8  |
| 1965..... | 5.5  | 4.6  | 3.4  | 3.3   | 3.4  | 3.5  | 3.6  | 3.4  |       |      |      |      |
|           | VACANCIES REGISTERED ('000)                  |      |      |       |      |      |      |      |       |      |      |      |
| 1960..... | 2.1  | 2.1  | 2.0  | 1.8   | 1.7  | 1.5  | 1.6  | 1.8  | 2.2   | 2.8  | 2.9  | 2.7  |
| 1961..... | 2.4  | 2.0  | 1.6  | 1.2   | 1.0  | 0.8  | 0.9  | 0.9  | 1.1   | 1.2  | 1.4  | 1.4  |
| 1962..... | 1.3  | 1.5  | 1.5  | 1.5   | 1.5  | 1.5  | 1.5  | 2.1  | 2.2   | 2.4  | 2.5  | 2.6  |
| 1963..... | 2.6  | 2.5  | 2.4  | 2.1   | 2.0  | 2.0  | 2.0  | 2.5  | 2.7   | 3.4  | 3.9  | 4.0  |
| 1964..... | 4.0  | 4.3  | 4.2  | 3.9   | 3.7  | 3.4  | 3.3  | 3.9  | 4.7   | 5.3  | 6.0  | 6.0  |
| 1965..... | 5.8  | 5.7  | 5.0  | 4.6   | 4.1  | 4.4  | 4.0  | 3.8  |       |      |      |      |
|           | EXCESS OF PERSONS OVER VACANCIES ('000)      |      |      |       |      |      |      |      |       |      |      |      |
| 1960..... | 2.6  | 2.1  | 2.2  | 2.7   | 3.0  | 3.1  | 2.9  | 2.4  | 1.2   | 0.5  | 0.3  | 1.2  |
| 1961..... | 2.7  | 4.6  | 6.1  | 6.9   | 7.5  | 8.3  | 9.2  | 8.8  | 11.1  | 7.0  | 6.1  | 7.2  |
| 1962..... | 8.9  | 6.7  | 5.7  | 5.9   | 5.4  | 5.4  | 5.2  | 4.0  | 3.2   | 2.6  | 2.3  | 3.8  |
| 1963..... | 4.8  | 4.1  | 3.7  | 3.9   | 4.6  | 4.5  | 4.3  | 2.8  | 2.0   | 1.2  | 0.0  | 1.4  |
| 1964..... | 2.5  | 1.0  | 0.3  | 0.6   | 0.8  | 0.9  | 0.8  | -0.3 | -1.7  | 0.4  | -3.1 | -1.2 |
| 1965..... | -0.3   | -1.1 | -1.6 | -1.3  | -0.7 | -0.8 | -0.4 | -0.4 |       |      |      |      |

(a) Includes Northern Territory.

(b) Persons who claimed they were unemployed.

Applications for unemployment benefit are received by the Commonwealth Employment Service acting on behalf of the Department of Social Services. Statistics of the number of persons receiving unemployment benefits are given on page 188.

One of the primary functions of the Work Force Survey (see page 217) is to provide regular and detailed information on unemployment in Australia. Separate details for South Australia are not available and published estimates to date have been restricted to the six State capital cities.

In the table below unemployment rates are shown by industry group for the six capitals from 1961 to 1965. The unemployment rate is that percentage of the civilian work force aged 14 years and over who are currently unemployed and looking for work or who are laid off without pay.

Unemployment Rates<sup>(a)</sup>, Six Australian State Capital Cities

| Industry Group in which Last Employed  | August |      |      |      |      |
|--|--------|------|------|------|------|
|  | 1961   | 1962 | 1963 | 1964 | 1965 |
| Manufacturing.....   | 3.8    | 1.7  | 1.6  | 0.9  | 1.1  |
| Building and construction.....   | 5.6    | 2.2  | 1.8  | 0.8  | 0.8  |
| Transport, storage and communication.....  | 1.6    | 0.8  | 1.0  | 0.9  | 0.8  |
| Commerce.....  | 2.6    | 1.4  | 1.4  | 0.9  | 1.2  |
| Public authority (n.e.i.), community and business services (including professional)..... | 1.1    | 0.8  | 1.1  | 0.6  | 0.6  |
| Amusements, hotels and other accommodation, cafes, etc., personal services, etc.....     | 4.8    | 2.4  | 1.6  | 1.6  | 1.8  |
| Other industries.....  | 1.4    | 1.5  | 1.5  | 0.6  | 0.7  |
| All industries combined.....   | 3.0    | 1.5  | 1.4  | 0.9  | 1.0  |

(a) EXCLUDES unemployed persons who had not previously been employed.



Of the persons found to be unemployed in August 1965, 60.7% had been unemployed for less than 1 month. Only 12.5% had been unemployed for at least 3 months, this figure contrasting with 24.4% in August 1964 and 36.5% in August 1963.

In the following table unemployment rates are shown according to age and marital status.

Unemployment Rates<sup>(a)</sup>, Six Australian State Capital Cities

| August    | Age Group (Years) |         |                 |         |                 |     | 65 and Over | Total Civilian Population 14 Years of Age and Over |
|-----------|-------------------|---------|-----------------|---------|-----------------|-----|-------------|--|
|           | 14-19             | 20-44   |                 | 45-64   |                 |     |             |  |
|           |                   | Married | Not Married (b) | Married | Not Married (b) |     |             |  |
|           |                   |         |                 | Males   |                 |     |             |  |
| 1961..... | 5.8               | 1.6     | 5.8             | 2.0     | 6.8             | 3.0 | 3.1         |  |
| 1962..... | 2.8               | 1.0     | 2.1             | 1.3     | 3.2             | 0.7 | 1.5         |  |
| 1963..... | 2.1               | 0.6     | 2.0             | 1.0     | 4.6             | 1.5 | 1.3         |  |
| 1964..... | 1.5               | 0.4     | 1.2             | 0.3     | 1.7             | 1.3 | 0.7         |  |
| 1965..... | 1.9               | 0.7     | 0.9             | 0.7     | 1.4             | 2.1 | 0.9         |  |
|           |                   |         |                 | Females |                 |     |             |  |
| 1961..... | 4.2               | 3.2     | 3.4             | 2.7     | 2.3             | 1.7 | 3.2         |  |
| 1962..... | 2.8               | 2.2     | 2.1             | 0.9     | 1.0             | ..  | 2.0         |  |
| 1963..... | 3.3               | 2.5     | 1.6             | 1.1     | 1.6             | ..  | 2.2         |  |
| 1964..... | 1.7               | 2.3     | 0.9             | 1.0     | 0.7             | 2.4 | 1.5         |  |
| 1965..... | 1.9               | 2.2     | 0.8             | 1.2     | 0.4             | ..  | 1.5         |  |

(a) INCLUDES unemployed persons who had not previously been employed.

(b) Includes never married, widowed, and divorced.

### EMPLOYMENT SERVICES

Prior to 1946 the assisting of persons seeking employment and of private employers seeking labour was the responsibility of the South Australian Government Labour Exchange, which also acted as the employer of State Government labour. The central office of the Exchange was in Adelaide, with a branch office at Port Adelaide, and with police stations acting as local agents elsewhere.

The Commonwealth Employment Service commenced operations in South Australia in May 1946, superseding the State Exchange. The main functions of the Employment Service are to assist people seeking employment to obtain positions best suited to their training, experience, abilities and qualifications; and to assist employers seeking labour to obtain employees best suited to the demands of the employers' particular class of work.

Specialized facilities are provided for young people, persons with physical and mental handicaps, ex-members of the defence forces, migrants, rural workers, and persons with professional and technical qualifications. Vocational guidance is provided without charge by a staff of qualified psychologists. It is available to any person, but is provided particularly for young people and handicapped persons.

The Commonwealth Employment Service is responsible for placing in employment migrant workers sponsored by the Commonwealth under the Commonwealth Nomination and similar schemes. This includes arranging for them to move to their initial employment and for their admission, if necessary, to Commonwealth migrant hostels. Experts for overseas service under technical aid programmes are recruited by the Employment Service.

Persons seeking unemployment benefit must register with the Employment Service, which is responsible for certifying that suitable employment is not available before benefits can be paid.

In association with placement activities, regular surveys of the labour market are carried out, and information supplied to interested parties.

The Commonwealth Employment Service operates 5 district or branch offices in the metropolitan area, and has district offices at Elizabeth, Gawler, Mount Gambier, Port Augusta, Port Lincoln, Port Pirie, and Renmark. A part-time office is maintained at Whyalla, and agents of the Employment Service are located in other centres. The South Australian Regional Office is also responsible for district offices at Alice Springs and Darwin in the Northern Territory. A Higher Appointments Office in Adelaide specializes in placement of the more highly qualified and professional applicants.

There are also a number of private employment agencies, specializing largely in office and domestic staff, and farm and station employees. Private employment agencies are required to register with the State Department of Labour and Industry; there were 18 such agencies licensed by the department at 31st December 1964.

## 7.2. ARBITRATION AND INDUSTRIAL ORGANIZATIONS

### INDUSTRIAL ARBITRATION

In Australia a unique system of conciliation and arbitration by Government-established tribunals has been developed, with the Commonwealth Parliament and the State Parliaments each passing its own industrial legislation.

Under Section 51 of the Commonwealth Constitution the Commonwealth Parliament may make laws in relation to "conciliation and arbitration for the prevention and settlement of industrial disputes extending beyond the limits of any one State". In addition the Commonwealth may legislate under certain industrial powers for the stevedoring and maritime industries, the Commonwealth Public Service, and certain Commonwealth projects.

Commonwealth arbitration binds only the parties to a dispute, and decisions need not be of general application to an industry. Employees not specifically covered by Commonwealth awards are subject to State industrial jurisdiction. Where an award or determination of a State industrial tribunal is in conflict with an award of a Commonwealth tribunal, the latter prevails.

Although constitutionally limited, Commonwealth jurisdiction has been assisted by interstate ties of industry and trade unions, and is today the predominant influence in employer-employee relations.

#### Commonwealth Industrial Tribunals

Under the Commonwealth *Conciliation and Arbitration Act* 1904-1956, a Court of Conciliation and Arbitration was responsible for the prevention and settlement of industrial disputes extending beyond the limits of any one State. The Court consisted of a Chief Judge, six other Judges, and a number of Conciliation Commissioners.

In 1956 substantial amendments were made to the Conciliation and Arbitration Act with a view to separating the judicial and arbitral functions of the Court. Amendments provided for the establishment of a Commonwealth Industrial Court and a Conciliation and Arbitration Commission.

The Industrial Court performs the judicial functions of the former Arbitration Court. It interprets and enforces awards, and passes judgment on questions of law. The Court is composed of a Chief Judge and four other Judges. Jurisdiction is exercised by a single Judge when dealing with dismissal or injury of an employee on account of industrial action, interpretation of awards, questions concerning membership of an organization, disputes between an organization and its members, and a prescribed matter of practice or procedure. In all other cases jurisdiction is exercised by not less than two Judges. Acts and judicial proceedings of the Court are recorded, and the Court has power to punish contempt of its authority. In general, decisions of the Industrial Court are final, however, an appeal may be made to the High Court when it grants leave to appeal.

The Commonwealth Conciliation and Arbitration Commission at present comprises a President, 5 Deputy Presidents, a Senior Commissioner, 10 Commissioners, and 3 Conciliators. Inquiries into basic wages, standard hours, and long service leave must be dealt with by the Commission in Presidential Session, *i.e.*, constituted by at least 3 presidential members. Other matters are generally dealt with by individual Commissioners who are assigned to particular industries or industry groups. A presidential member of the Commission deals with matters in the maritime and stevedoring industries. Conciliators assist in the reaching of agreement but have no power to impose compulsory arbitration.

When an industrial dispute occurs or is considered likely to occur, a Commissioner allocated to the industry takes steps for the prompt settlement of the dispute by conciliation or, if in his opinion conciliation is unlikely to succeed or has failed, by arbitration. In seeking agreement he may obtain the services of a Conciliator, and must obtain such assistance when requested by one of the parties. If agreement is reached, the terms of the agreement are recorded and may be certified by the Commission. A certified (or registered) agreement has the same effect as an award made by a Commissioner. Upon application by one of the parties, the President may, if he considers it in the public interest, direct the Commission constituted by not less than 3 members, one of who shall be a presidential member, to hear the matter in dispute.

An appeal may be lodged against the decision of a Commissioner and, provided the Commission considers the hearing of the appeal necessary as a matter of public interest, is heard by not less than 3 members including at least 2 presidential members.

Conditions in the Commonwealth Public Service are normally regulated by the Public Service Arbitrator. However, where the Arbitrator refrains from hearing or determining a claim, or gives his consent to such action, a claim on behalf of Commonwealth employees may be submitted to the Commission.

### **State Industrial Tribunals**

South Australia was a pioneer in State intervention in industrial relations. "A Bill to Facilitate the Settlement of Industrial Disputes" was introduced in State Parliament in 1890. It was, however, 4 years before a modified version setting up Boards of Conciliation was enacted. An Industrial Court was established in 1912 and was later incorporated in the system of tribunals created by the Industrial Code of 1920 which, as the Industrial Code, 1920-1965, is the basis of current arbitration provisions.

The Code provides for the Industrial Court, a Board of Industry, and for the setting up of industrial boards.

The Industrial Court usually has a President and a Deputy President, each of whom is appointed from legal practitioners of 10 years' standing. Normally the Court is constituted by one of these officers, but certain matters are traditionally determined by a full court comprising both officers. When a dispute is under consideration, the President or Deputy President may be assisted by two assessors nominated by the parties before the Court.

The function of the Court is to make awards concerning wages and conditions of employment for workers who are outside the jurisdiction of industrial boards. It has authority to adjudicate in cases of strikes or lockouts and may summon persons to a compulsory conference and hear appeals from determinations of industrial boards. In making an award the Court may appoint or provide for a board of reference to deal with matters covered by the award, with a right of appeal to the Court against a decision of the board.

The Board of Industry comprises the President or Deputy President of the Industrial Court and 4 Commissioners. One of the Commissioners is nominated by the South Australian Employers' Federation, one by the South Australian Chamber of Manufactures, and two by the United Trades and Labour Council of South Australia. The functions of the Board of Industry are to recommend the creation or dissolution of industrial boards and to determine their ambit; to adjudicate on demarcation disputes; and to fix prices of commodities under the *Fair Prices Act, 1924*, if some monopolistic control is shown. Prior to 1950 the Board of Industry also conducted periodic inquiries to fix a State "living wage", but subsequently the wage has been fixed by government proclamation.

Industrial boards are set up by the Minister of Labour and Industry upon recommendation of the Board of Industry. Industrial boards consist of a chairman and 4, 6, or 8 members, being an equal number of employer and employee representatives. Members are required, with one exception on each side, to be actual employers or employees in the industry group concerned, and are selected by the Industrial Court after calling for nominations. The chairman, who is in practice a legal practitioner, is elected by members, or failing agreement, is nominated by the Court.

Each industrial board makes determinations concerning wages and conditions of employment for workers within its particular industry group. The jurisdiction of most industrial boards is confined to the metropolitan area; however, in the case of government and local government employees determinations of industrial boards apply to the whole State.

From a decision of a board an appeal lies to the Industrial Court, but in other respects the jurisdiction of the Court and that of the boards are mutually exclusive. At present there are over 60 industrial boards.

Proceedings against persons or organizations breaching an award are heard in a Court of Summary Jurisdiction although where a question of law is involved the matter may be referred to the Industrial Court.

#### EMPLOYEE ORGANIZATIONS

Early employee organizations in South Australia included the Progressive Society of Carpenters and Joiners, formed in the mid 1840's, and the Adelaide Branch of the Amalgamated Society of Engineers, founded some 20 years later in 1864. These societies were basically craft unions and it was not until 1870 that an industrial union open to all members in an industry, viz., the Railway

Service Mutual Association, was formed. Associations of waterfront employees, shop assistants, blacksmiths and saddlers emerged in 1873, and general acceptance of the eight-hour day was secured in the same year.

One of the problems facing early unions was the absence of legal recognition but in 1876 South Australia became the first State to legislate in this field. The Trade Union Act, 1876, recognized unions as lawful bodies capable of holding property.

The Adelaide Trades and Labour Council, the first delegates' society, held its inaugural meeting in January 1884 and in the following year reported 11 incorporated societies. At the beginning of 1890, 29 unions were recorded in South Australia. The maritime strike and other labour unrest of the early 1890's led to the establishing of a further 28 known unions in the three years 1890 to 1892.

There are today over 139 separate unions operating in South Australia. Although a number of unions exist only in this State, branches of interstate or federated unions account for the majority of total membership. Some of these are bound under a system of unification with centralized control while others are practically independent and self-governing, the federal bond existing only for limited specified purposes.

The central labour organization for the State is the Trades and Labour Council of South Australia, and combined union councils exist for Mount Gambier, Peterborough, Port Augusta, Port Lincoln, the Upper Murray and Whyalla. These central organizations, together with individual unions are affiliated with the Australian Council of Trade Unions. All major unions, with the exception of the Australian Workers Union, are affiliated with the council, which was founded at an All-Australian Trade Union Congress in 1927. The Trades and Labour Council is the State branch of the A.C.T.U. and has the right to appoint one representative to act on the executive of the council.

The following table gives particulars of the number of separate unions and union membership for the years 1960 to 1964. The table includes estimated percentages of trade union members to total wage and salary earners in employment. The estimates of total wage and salary earners have been calculated by adding estimates of rural and private domestic employees based on census results to estimates of wage and salary earners which normally exclude rural and private domestic employees. For this reason and because trade union membership includes some persons not in employment, the percentages shown in the table must be regarded as approximations.

### Trade Unions, South Australia

At 31st December

| Year      | Separate Unions | Members |         |         | Proportion of Members to Total Wage and Salary Earners |         |         |
|-----------|-----------------|---------|---------|---------|--|---------|---------|
|           |                 | Males   | Females | Persons | Males  | Females | Persons |
|           | No.             | '000    | '000    | '000    | %  | %       | %       |
| 1960..... | 136             | 130.2   | 23.3    | 153.5   | 62   | 31      | 54      |
| 1961..... | 134             | 128.8   | 22.7    | 151.5   | 62   | 31      | 53      |
| 1962..... | 133             | 136.5   | 23.9    | 160.4   | 61   | 29      | 52      |
| 1963..... | 134             | 136.6   | 24.5    | 161.1   | 58   | 28      | 50      |
| 1964..... | 137             | 141.4   | 25.5    | 166.9   | 58   | 27      | 50      |

In the next table unions and membership have been classified under broad industrial groupings. Where the members of a union are employed in a number of industries they have been classified to the predominant industry. The classification "other" includes rural industry, mining and quarrying, banking, insurance and clerical, wholesale and retail trade, amusement, hotels and community and business services.

**Trade Unions: Industry Groups, South Australia**  
*At 31st December*

| Year                      | Manu-<br>facturing | Building<br>and<br>Con-<br>struction | Transport | Public<br>Authority<br>(n.e.i.) | Other | Total |
|---------------------------|--------------------|--------------------------------------|-----------|---------------------------------|-------|-------|
| NUMBER OF SEPARATE UNIONS |                    |                                      |           |                                 |       |       |
| 1960....                  | 41                 | 7                                    | 19        | 38                              | 31    | 136   |
| 1961....                  | 41                 | 7                                    | 19        | 37                              | 30    | 134   |
| 1962....                  | 41                 | 7                                    | 19        | 36                              | 30    | 133   |
| 1963....                  | 41                 | 7                                    | 18        | 37                              | 31    | 134   |
| 1964....                  | 42                 | 7                                    | 20        | 38                              | 30    | 137   |
| NUMBER OF MEMBERS ('000)  |                    |                                      |           |                                 |       |       |
| 1960....                  | 56.1               | 11.6                                 | 17.1      | 34.6                            | 34.1  | 153.5 |
| 1961....                  | 53.9               | 12.1                                 | 17.5      | 34.2                            | 33.8  | 151.5 |
| 1962....                  | 54.6               | 12.3                                 | 19.4      | 37.8                            | 36.3  | 160.4 |
| 1963....                  | 59.9               | 10.7                                 | 19.0      | 35.7                            | 35.8  | 161.1 |
| 1964....                  | 60.8               | 11.7                                 | 18.9      | 37.4                            | 38.1  | 166.9 |

### EMPLOYER ORGANIZATIONS

The oldest employer organization in South Australia is the Adelaide Chamber of Commerce, founded in 1839. The activities of the Chamber of Commerce, and of other employer associations, however, enter many fields not directly related to industrial issues.

From the point of view of industrial matters, the South Australian Employers' Federation, founded in 1889, and the South Australian Chamber of Manufactures, established 20 years earlier in 1869, are the dominant organizations. These two organizations provide industrial services for the great majority of South Australian employers and employer groups.

The Employers' Federation is an incorporated body being largely a federation of employer associations, although provision is made for individual membership. In 1964 there were 37 affiliated associations encompassing some 6,000 employers, and approximately 1,000 individual members. The federation is maintained by fees paid by members, together with charges made for industrial actions, and from secretarial charges from member associations for which the federation acts as secretariat. A council, which contains a representative from each of the member associations, is elected annually, and an executive is elected by the council. Services provided include the negotiating and drafting of industrial

agreements, and the preparation and presentation of cases before Commonwealth and State industrial tribunals. Advice is provided on existing awards and determinations, and on various aspects of industrial legislation.

The Chamber of Manufactures, formed originally to promote the products of South Australia, established an industrial department in 1940-41, and has since accepted increasing responsibility for representing employers' interests in the fixing of wages and the determination of employment conditions, both in State and Commonwealth jurisdictions.

The chamber has over 2,800 members organized, where possible, into nearly 50 trade sections. Administration is by a council of some 130 members representative of industry groups and trade sections, which in turn elects an executive of 6 members. In addition to industrial matters, the chamber secretariat draws attention to proposals before the State and Commonwealth Parliaments, proposals of local government authorities, matters before the Tariff Board, and regulations of government departments and instrumentalities which could or do affect member companies.

### INDUSTRIAL DISPUTES

Details of the number and extent of industrial disputes occurring in South Australia are shown below. Effects on other establishments because of lack of materials, disruption of transport services, power cuts, etc., are not included in these statistics.

Particulars of all disputes in progress during the year are included in the annual figures. Consequently, details of the number of disputes and of workers involved in the disputes which commenced in any year, and were still in progress during the following year, are included in the figures for both years. Working days and wages lost are included in the appropriate year. Workers involved in more than one dispute during the year are counted once for each dispute.

#### Industrial Disputes<sup>(a)</sup>, South Australia

| Period           | Disputes | Workers Involved |                |        | Working Days Lost | Estimated Loss in Wages |
|------------------|----------|------------------|----------------|--------|-------------------|-------------------------|
|                  |          | Directly         | Indirectly (b) | Total  |                   |                         |
|                  |          |                  |                |        |                   | £'000                   |
| Annual Averages— |          |                  |                |        |                   |                         |
| 1946-50 .....    | 21       | 7,853            | 761            | 8,614  | 50,758            | 89.8                    |
| 1951-55 .....    | 30       | 17,376           | 402            | 17,778 | 50,472            | 155.0                   |
| 1955-60 .....    | 24       | 12,820           | 16             | 12,836 | 22,352            | 78.7                    |
| Year—            |          |                  |                |        |                   |                         |
| 1961 .....       | 26       | 17,012           | 321            | 17,333 | 17,256            | 66.8                    |
| 1962 .....       | 31       | 11,748           | 100            | 11,848 | 14,599            | 59.4                    |
| 1963 .....       | 35       | 11,938           | 107            | 12,045 | 8,957             | 41.0                    |
| 1964 .....       | 55       | 22,851           | 189            | 23,040 | 63,785            | 292.6                   |

(a) Disputes involving a stoppage of work of 10 man-days or more.

(b) Persons thrown out of work at the establishment where the stoppages occurred but not themselves parties to the dispute.

In the following table industrial disputes occurring during 1963 and 1964 are classified by industry groups. A dispute involving workers in more than one industry group is counted once only and is included in the industry group which has the largest number of workers involved. Other details are allocated to their respective industry groups.

Industrial Disputes<sup>(a)</sup>: Industry Groups, South Australia

| Industry Group                           | 1963     |                      |                   |                                  | 1964     |                      |                   |                                  |
|--|----------|----------------------|-------------------|----------------------------------|----------|----------------------|-------------------|----------------------------------|
|  | Disputes | Workers Involved (b) | Working Days Lost | Estimated Loss in Wages<br>£'000 | Disputes | Workers Involved (b) | Working Days Lost | Estimated Loss in Wages<br>£'000 |
| Agriculture, grazing, etc.....           | 1        | 109                  | 400               | 1.7                              | —        | —                    | —                 | —                                |
| Engineering, metals, vehicles, etc. .... | 14       | 1,033                | 1,367             | 6.0                              | 22       | 8,632                | 54,803            | 253.9                            |
| Food, drink and tobacco .....            | 2        | 1,729                | 1,214             | 4.8                              | 4        | 1,107                | 464               | 1.5                              |
| Sawmilling, furniture, etc.....          | —        | —                    | —                 | —                                | 1        | 258                  | 60                | 0.2                              |
| Other manufacturing                      | 3        | 245                  | 200               | 0.8                              | 7        | 749                  | 1,287             | 6.2                              |
| Building and construction ....           | 4        | 325                  | 1,135             | 6.4                              | 4        | 322                  | 123               | 0.6                              |
| Railway and tramway services.            | 4        | 1,118                | 878               | 4.7                              | —        | —                    | —                 | —                                |
| Road and air transport.....              | —        | —                    | —                 | —                                | 1        | 12                   | 60                | 0.3                              |
| Stevedoring .....                        | 7        | 7,486                | 3,763             | 16.6                             | 16       | 11,960               | 5,988             | 29.9                             |
| Total ....                               | 35       | 12,045               | 8,957             | 41.0                             | 55       | 23,040               | 62,785            | 292.6                            |

(a) Disputes involving a stoppage of work of 10 man-days or more.

(b) Includes workers indirectly involved.

## 7.3. WAGES AND HOURS

## WAGES

Wages as determined by the Commonwealth and State industrial authorities consist of two elements—

- (a) A *basic* or *living wage* which is common to all wage earners and is the minimum payable to an unskilled worker. It is referred to as the “basic wage” in Commonwealth awards and the “living wage” in State awards.
- (b) A *secondary wage*, comprising margins and loadings, which differentiates between employees according to various features of their work.

The basic and secondary wages together form the *award wage*. This is simply the minimum wage payable; the *average weekly earnings* of an employee may include over-award and bonus payments.

## Commonwealth Basic Wage

The *Conciliation and Arbitration Act 1904-1964* gives the Conciliation and Arbitration Commission power to make an award or to certify an agreement “altering the basic wage for adult males (or females) (that is to say, that wage, or that part of a wage, which is just and reasonable for an adult male [or female], without regard to any circumstance pertaining to the work upon which, or the industry in which, he is employed) or the principles upon which it is computed”. The Commission holds basic wage inquiries from time to time with its findings applicable to industrial awards within its jurisdiction.

Although the basic wage was originally interpreted as the minimum wage necessary to maintain an employee and his family, it is now generally accepted “that the wage should be fixed at the highest amount which the economy can



sustain and that the 'dominant factor' is the capacity of the community to carry the resultant wage levels"<sup>(1)</sup>.

The first basic wage judgment was given in 1907. The rate declared, in what became known as the Harvester Judgment, was 42s. per week for Melbourne; the amount being considered reasonable for a "family of about five". This award remained largely unaltered until 1913 when the Court of Conciliation and Arbitration, as it then was, took notice of a retail price index prepared the year before by the Commonwealth Statistician. At intervals thereafter, as awards came before it for review, the Court usually revised the basic wage rate in line with variations in the retail price index.

Following considerable criticism of retention of the "Harvester" standard, a royal commission was appointed in 1919 to inquire into the cost of maintaining a family of husband, wife, and three children under 14 years of age in a reasonable standard of comfort, and further, into how the basic wage might be automatically adjusted to retain its purchasing power. The Court felt unable to authorize the considerable increases in the basic wage recommended by the royal commission, being unsure of the ability of industry to pay such rates. On the other hand automatic adjustments, varying the basic wage in direct ratio to variations in the retail price index, were introduced in 1921.

No further change was made in the method of fixing or adjusting the basic wage until the depression years. In 1930 applications were made to the Court for a greater reduction in wages than was resulting from automatic adjustments for falling retail prices. The Court, while declining to make any change in the existing method of calculating the basic wage, in 1931 reduced all wage rates under its jurisdiction by 10%. The male basic wage for Adelaide which had been 88s. 6d. per week in December 1929 was down to 58s. 1d. in December 1931. The Court in 1933 adopted a new series of retail price index numbers with a reduced influence on wages.

The "Harvester" standard, adjusted to retail price variations, continued to be the theoretical basis of the basic wage until 1934. In that year new wage rates were declared on the basis of the "C" Series retail price index, with provision for automatic quarterly adjustments in line with the index. At the same time the 10% special reduction was abandoned, and at the end of 1934 the male basic wage for Adelaide was 63s. per week. The Court also fixed a separate wage for provincial towns, the wage for South Australian towns being 3s. less than that for Adelaide.

A new concept known as "prosperity" loadings was introduced in 1937. In this judgment the wage assessed on the 1934 basis was designated as the "needs" portion of the total wage and was to be adjusted to a new Court Price Index. To this was added a prosperity loading, which was independent of price movements. The first prosperity loading for Adelaide was 4s., with separate loadings for provincial towns.

A further increase in the basic wage was sought in 1940; however, due to the uncertain economic conditions in war-time, no alteration was made and the application held over for a later decision. It was not until 1946 that the hearing was resumed. In its judgment the Court granted an increase of 7s. in the needs portion of the wage and introduced a revised Court index for automatic quarterly adjustments.

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(1) Commonwealth Arbitration Reports, Vol. 77, p. 494.

The next adjustment to the basic wage came in 1949-50 when the adult male wage was increased by 20s. At the same time the prosperity loading was standardized at 5s. and made adjustable with the rest of the wage, resulting in a rise in the basic wage for Adelaide of 21s. per week. The female rate, which had been 54% of the male rate, was set at 75% of the male basic wage.

In 1953 the Court granted an employers' application for the deletion of quarterly adjustments, the last automatic adjustment being made in August of that year. A move was made for the restoration of quarterly adjustments in 1956, but the Court ruled that as the basic wage was based on capacity of the economy to pay it would be wrong to tie wage increases to price movements which were not necessarily related to capacity to pay. It was suggested instead that the basic wage be reviewed every 12 months. The ruling basic wage was increased by 10s.

Hearings were held in 1957, 1958, 1959, and 1960 with the unions on each occasion seeking the restoration of quarterly adjustments and an increase in the basic wage. The new authority, the Conciliation and Arbitration Commission, refused to restore quarterly adjustments but granted increases of 10s., 5s. and 15s. respectively at the first three hearings and ruled against an increase in 1960.

An inquiry into basic wage differentials was held in the latter part of 1960. as a result of which the 3s. country differential was eliminated.

In 1961 the unions applied for an increase in the basic wage and once again sought restoration of automatic adjustments. A wage increase of 12s. was granted. On this occasion the Commission, while refusing to grant automatic adjustments, agreed that where possible periodic allowances should be made for price fluctuations. It was accordingly proposed that the basic wage be reviewed annually in the light of the Consumer Price Index which had replaced the outdated "C" Series index. Unless persuaded otherwise the Commission would each year adjust the wage level to price movements, but such adjustments should always be at the discretion of the Commission and not automatic. In addition to the annual review of price movements, it was proposed that a general review of the economy, and in particular of productivity increases, be conducted approximately every 3 to 4 years.

Following the 1961 decision inquiries were held at the beginning of 1962 and 1963, with the Commission deciding on each occasion in favour of no increase in the basic wage. In 1964 the Commission awarded a 20s. increase in the basic wage, while rejecting a further request for quarterly adjustments. An application from the employers to have the basic wage provisions deleted in favour of a combined total wage was also rejected.

In June 1965 the Commission decided to abandon the established practice of making separate adjustments to the basic wage and margins, in favour of a simultaneous annual review of basic wage and margins together. The Commission rejected a union claim for an increase in the basic wage, deciding instead to increase the marginal component of wages by  $1\frac{1}{2}\%$  of the award rate, or more precisely, of the total of the 6 capital cities combined basic wage and the current margin of the employee. They reaffirmed that wage increases should be based on the ability of the economy to pay, and introduced price stability as a prime objective. In contrast to the 1961 decision the Commission rejected the relevance of the Consumer Price Index to their deliberations.

### **State Living Wage**

The minimum weekly wage payable to an unskilled adult worker covered by an award or determination of a State industrial tribunal is known as the "living wage".

Although living wages of 42s. and 48s. per week were recorded in 1908 and 1913 respectively, these were of limited application, being restricted to the two awards in which they appeared. The first living wage with general application was awarded by the Industrial Court in the Living Wage (Tinsmiths) Case of 1916, when a wage of 54s. per week was fixed for adult males. An increase to 63s. was awarded in 1918, and a female wage of 27s. 6d. declared the same year.

Under the Industrial Code, 1920, responsibility for declaring a living wage passed to the Board of Industry. The Board was to conduct public inquiries into the average cost of living and to declare a living wage accordingly. The first such declaration was made in 1921 when weekly rates of 79s. 6d. for males and 35s. for females were fixed.

The male rate reached 85s. 6d. in 1925 and then fell to 63s. in the depression years.

Although the Board of Industry was given power to differentiate between localities, all wage declarations prior to May 1947 applied to the State as a whole. At that stage the Board decided that the living wage at Whyalla and Iron Knob should be 5s. in excess of that payable in Adelaide, to compensate for a higher cost of living. This loading is still in operation.

One of the provisions of the Industrial Code prohibited the Board of Industry from holding a new hearing within 6 months of a previous determination. Having made a determination in September 1946 the Board of Industry was therefore unable to adjust the living wage when the Commonwealth basic wage was increased in December of that year. A substantial disparity between the two wage rates appeared, resulting in provision being made under the Economic Stability Act, 1946, for the proclamation of a living wage based on the basic wage for Adelaide. The Board of Industry retained the power to declare a living wage which would supersede any declared by proclamation. An initial proclamation and two adjustments were made to the wage prior to the expiration of the Act at the end of 1947.

The Board of Industry awarded two further living wage increases before an amendment to the Industrial Code in 1949 provided for a quarterly adjustment of the living wage in accordance with variations in the basic wage for Adelaide. This provision resulted in the living wage and the basic wage being virtually synonymous from February 1950.

When the Commonwealth Court of Conciliation and Arbitration, late in 1950, increased the male basic wage by 20s. and the female rate to 75% of the male wage, State Parliament promptly amended the Industrial Code to make permanent provision for the declaration of the living wage by proclamation.

Quarterly cost-of-living adjustments to the living wage ceased in 1953 following the decision of the Court of Conciliation and Arbitration to abandon such adjustments for the basic wage.

Although the Board of Industry has retained the power to amend the living wage, it has not done so since 1949, all subsequent variations having been made by proclamation following basic wage judgments.

Adjustments to the living wage since 1920 are illustrated in the graph on page 238.

Basic wage and living wage rates applicable at 31st December each year since 1950 are recorded in the following table. The basic wage and the living wage

have been the same since February 1950 except in "other country districts" where the 3s. differential operating until 1961 applied to the basic wage only.

### Commonwealth Basic Wage and State Living Wage, South Australia

At 31st December

| Year      | Adelaide     |              | Whyalla and<br>Iron Knob | Other Country<br>Districts (a) |
|-----------|--------------|--------------|--------------------------|--------------------------------|
|           | Males        | Females      | Males                    | Males                          |
|           | <i>s. d.</i> | <i>s. d.</i> | <i>s. d.</i>             | <i>s. d.</i>                   |
| 1950..... | 158 0        | 118 6        | 163 0                    | 155 0                          |
| 1951..... | 195 0        | 146 0        | 200 0                    | 192 0                          |
| 1952..... | 229 0        | 171 6        | 234 0                    | 226 0                          |
| 1953..... | 231 0        | 173 0        | 236 0                    | 228 0                          |
| 1954..... | 231 0        | 173 0        | 236 0                    | 228 0                          |
| 1955..... | 231 0        | 173 0        | 236 0                    | 228 0                          |
| 1956..... | 241 0        | 180 6        | 246 0                    | 238 0                          |
| 1957..... | 251 0        | 188 0        | 256 0                    | 248 0                          |
| 1958..... | 256 0        | 192 0        | 261 0                    | 253 0                          |
| 1959..... | 271 0        | 203 0        | 276 0                    | 268 0                          |
| 1960..... | 271 0        | 203 0        | 276 0                    | 268 0                          |
| 1961..... | 283 0        | 212 0        | 288 0                    | 283 0                          |
| 1962..... | 283 0        | 212 0        | 288 0                    | 283 0                          |
| 1963..... | 283 0        | 212 0        | 288 0                    | 283 0                          |
| 1964..... | 303 0        | 227 0        | 308 0                    | 303 0                          |
| 1965..... | 303 0        | 227 0        | 308 0                    | 303 0                          |

(a) Commonwealth basic wage only. State living wage was same as Adelaide.

In a small number of Commonwealth awards a basic wage known as the "five towns" rate is used. This rate is a weighted average of the basic wage for Adelaide and of special rates declared for certain provincial towns. At 31st December 1965 the "five towns" rate for males was 302s.

### Secondary Wages

Secondary wages constitute that part of award wages in excess of the basic wage, and are divisible into "margins" and "loadings".

Margins are rates awarded to particular classifications of employees in recognition of certain skills acquired, or as compensation for disabilities encountered in the general nature of their employment. Amounts provided under an award and applicable only to specific industries, tasks, or conditions, and not to classes of employees as a whole, are known as loadings. Loadings are payable for adverse features of particular industries, and for fares and travelling time, casual work, lack of amenities, working at heights, in confined spaces, under dirty or uncomfortable conditions, etc. As can be seen from the table on page 235 margins form the bulk of secondary wages.

The minimum margins and loadings payable are determined by an award of a Commonwealth tribunal or the State Industrial Court, by a determination of a State Industrial Board, or may be written into an agreement registered with either Commonwealth or State authorities.

Under Commonwealth legislation, the marginal rate of pay for any specific occupation is usually determined by the Conciliation Commissioner for the industry concerned. However, determinations of Commissioners are subject to appeal to a presidential bench of the Conciliation and Arbitration Commission with the result that determinations of general principles are normally referred immediately to the Commission. In practice, therefore, the Commission makes general determinations in respect of wage margins which the Conciliation Commissioners follow in making individual awards. Furthermore, the State Industrial Court and Industrial Boards have chosen also to follow general Commonwealth margins decisions.

Although general principles of marginal wage fixation had been enunciated by the Commonwealth Court of Conciliation and Arbitration as early as 1924, it was not until 1954 that the first major margins determination was made. The case involved an application for an increase in margins for all workers covered by the Metal Trades Award. In its judgment the Court increased the current margin payable in respect of each occupation covered by the award to two and a half times the margin payable in 1937, provided that where this amount was less than that currently payable no alteration was to be made. In effect, the decision provided considerable increases for the skilled occupations, *e.g.*, the margin of the fitter rose from 52s. to 75s., while making no increase in the margins of the unskilled.

At the same time the Court indicated that the rates prescribed could be taken as a guide by all Commonwealth arbitration authorities whose determinations were subject to appeal to the Court, and increases in margins were duly awarded in respect of corresponding occupations in other industries.

The next general increase in wage margins took place in 1959 when the Conciliation and Arbitration Commission began hearing a number of applications for increases in marginal rates. The applications related in the main to metal trades, although there was also an application in respect of the salaries of bank officers. The Commission increased margins under the Metal Trades Award by 28%, thus increasing the margin of the fitter from 75s. to 96s. per week. Increases were also granted under other awards to miners, to graduates and diplomates in engineering and science, and to bank officers.

In 1963 the Conciliation and Arbitration Commission heard a further application by the metal trades unions for increased margins. It agreed to an increase to compensate for the loss of purchasing power since 1959, and further concluded that the economy could sustain an increase in the real value of margins, duly awarding a total increase of 10%. The margin of the fitter rose to 106s. On this occasion the Commission ruled that the decision would relate to the Metal Trades Award only, however, in practice it was extended to other awards.

As mentioned earlier the Commission, in 1965, decided in favour of a combined annual review of the basic wage and margins. It was decided on that occasion to leave the basic wage unaltered and to increase margins. However, the increase was to be based on the total basic wage plus margin and not on the margin only as in previous decisions. The 1½% granted represented an increase in the margin of the fitter of 6s. per week, giving a new weekly total margin of 112s.

**Award Wages**

The minimum weekly amounts provided in awards, determinations, and registered agreements under Commonwealth and State jurisdiction are known as award rates.

The amounts shown in the following tables are a weighted average of minimum weekly wage rates payable to adult males and females in South Australia. Generally these are award rates; however, in a few cases where registered agreements are dominant in a particular industry, rates prescribed therein are used. The amounts shown should not be regarded as actual current averages, but rather as indexes expressed in money terms.

The minimum rates used are for representative occupations within each industry, the weights for each occupation and industry being based on sample surveys conducted in 1954, with allowance made where necessary for subsequent changes in the industrial structure. Because of coverage difficulties rural industries are excluded.

The statistics are designed to show movements in minimum wages as distinct from salaries, with the result that those awards, etc., which relate solely or mainly to salary earners have been excluded.

The first table shows a dissection of weighted average minimum weekly wage rates for adult males into the three components of the total minimum wage—basic wage, margin and loading. Separate details are shown for employees covered by awards, etc., within Commonwealth and State jurisdictions. Classified as Commonwealth are awards of, or agreements registered with, the Commonwealth Conciliation and Arbitration Commission and determinations of the Commonwealth Public Service Arbitrator. Incorporated under the State heading are awards or determinations of, or agreements registered with, State industrial tribunals, together with any unregistered agreements used in the computations.

**Minimum Weekly Wage Rates<sup>(a)</sup>: Adult Males, South Australia***At 31st December*

| Year     | Commonwealth Awards, Determinations and Agreements Registered |              |              |              | State Awards, Determinations and Agreements Registered |              |              |              | All Awards, Etc. |
|----------|---|--------------|--------------|--------------|--|--------------|--------------|--------------|------------------|
|          | Basic Wage  | Margin       | Loading      | Total Wage   | Living Wage  | Margin       | Loading      | Total Wage   | Total Wage       |
|          | <i>s. d.</i>  | <i>s. d.</i> | <i>s. d.</i> | <i>s. d.</i> | <i>s. d.</i>   | <i>s. d.</i> | <i>s. d.</i> | <i>s. d.</i> | <i>s. d.</i>     |
| 1940.... | 80 0  | 17 11        | 0 8          | 98 7         | 83 11  | 12 11        | 1 7          | 98 5         | 98 6             |
| 1945.... | 93 5  | 19 7         | 4 7          | 117 7        | 94 0   | 15 3         | 3 4          | 112 7        | 116 0            |
| 1950.... | 158 6   | 35 9         | 4 7          | 198 10       | 158 1  | 30 6         | 7 3          | 195 10       | 197 11           |
| 1955.... | 231 7   | 54 11        | 1 3          | 287 9        | 231 1  | 41 2         | 7 0          | 279 3        | 285 0            |
| 1960.... | 271 6   | 72 7         | 1 4          | 345 5        | 271 1  | 55 10        | 7 11         | 334 10       | 342 2            |
| 1961.... | 283 6   | 72 10        | 1 5          | 357 9        | 283 1  | 56 9         | 7 10         | 347 8        | 354 7            |
| 1962.... | 283 6   | 74 1         | 2 9          | 360 4        | 283 1  | 57 2         | 7 9          | 348 0        | 356 6            |
| 1963.... | 283 6   | 81 10        | 2 9          | 368 1        | 283 1  | 62 11        | 8 9          | 354 9        | 364 0            |
| 1964.... | 303 6   | 83 6         | 3 0          | 390 0        | 303 1  | 64 2         | 11 11        | 379 2        | 386 8            |

(a) For details of coverage see text above.

In the next table weighted average minimum weekly wage rates for males and females are shown for individual industrial groups.

**Minimum Weekly Wage Rates<sup>(a)</sup>: Industrial Groups, South Australia**  
*At 31st December*

| Industrial Group  | 1960      |           | 1961      |           | 1962      |           | 1963      |           | 1964      |           |
|---|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
|   | <i>s.</i> | <i>d.</i> | <i>s.</i> | <i>d.</i> | <i>s.</i> | <i>d.</i> | <i>s.</i> | <i>d.</i> | <i>s.</i> | <i>d.</i> |
| <b>ADULT MALES</b>  |           |           |           |           |           |           |           |           |           |           |
| All industrial groups .....                                       | 342       | 2         | 354       | 7         | 356       | 6         | 364       | 0         | 386       | 8         |
| Mining and quarrying .....  | 336       | 6         | 347       | 4         | 353       | 7         | 360       | 6         | 384       | 0         |
| All manufacturing groups .....                                    | 343       | 3         | 355       | 7         | 356       | 6         | 363       | 7         | 385       | 8         |
| Engineering, metal works, etc. ...                                | 345       | 8         | 357       | 10        | 358       | 4         | 365       | 10        | 387       | 8         |
| Textiles, clothing and footwear ..                                | 328       | 3         | 340       | 3         | 340       | 3         | 346       | 9         | 367       | 4         |
| Food, drink and tobacco .....                                     | 336       | 9         | 348       | 8         | 348       | 8         | 354       | 2         | 374       | 10        |
| Sawmilling, furniture, etc. ....                                  | 340       | 8         | 353       | 10        | 353       | 10        | 360       | 10        | 380       | 10        |
| Paper, printing, etc. ....  | 368       | 6         | 381       | 2         | 383       | 10        | 393       | 0         | 415       | 0         |
| Other manufacturing .....   | 338       | 0         | 350       | 5         | 353       | 4         | 359       | 10        | 384       | 8         |
| Building and construction .....                                   | 341       | 6         | 353       | 9         | 360       | 7         | 368       | 5         | 392       | 10        |
| Railway services .....  | 329       | 10        | 342       | 0         | 347       | 2         | 354       | 9         | 375       | 3         |
| Road and air transport .....                                      | 335       | 11        | 347       | 11        | 347       | 11        | 355       | 6         | 376       | 3         |
| Shipping and stevedoring .....                                    | 343       | 3         | 355       | 3         | 355       | 3         | 367       | 1         | 388       | 1         |
| Communication .....   | 381       | 6         | 393       | 6         | 393       | 6         | 408       | 10        | 441       | 0         |
| Wholesale and retail trade .....                                  | 341       | 7         | 355       | 3         | 355       | 9         | 361       | 9         | 384       | 7         |
| Public authority (n.e.i.) and community and business services ... | 327       | 0         | 339       | 3         | 341       | 11        | 349       | 10        | 372       | 6         |
| Amusement, hotels, personal services, etc. ....                   | 326       | 9         | 339       | 0         | 340       | 2         | 345       | 9         | 365       | 9         |
| <b>ADULT FEMALES</b>  |           |           |           |           |           |           |           |           |           |           |
| All industrial groups .....                                       | 242       | 11        | 252       | 0         | 252       | 4         | 255       | 2         | 272       | 8         |
| All manufacturing groups .....                                    | 238       | 8         | 247       | 8         | 247       | 8         | 249       | 11        | 266       | 9         |
| Engineering, metal works, etc. ...                                | 238       | 5         | 247       | 5         | 247       | 5         | 248       | 10        | 265       | 1         |
| Textiles, clothing and footwear ..                                | 241       | 2         | 250       | 2         | 250       | 2         | 253       | 6         | 269       | 2         |
| Food, drink and tobacco .....                                     | 237       | 3         | 246       | 3         | 246       | 3         | 248       | 1         | 265       | 1         |
| Other manufacturing .....   | 237       | 2         | 246       | 4         | 246       | 4         | 248       | 5         | 266       | 2         |
| Transport and communication ..                                    | 254       | 3         | 263       | 6         | 263       | 6         | 268       | 6         | 288       | 6         |
| Wholesale and retail trade .....                                  | 249       | 8         | 258       | 8         | 258       | 9         | 262       | 3         | 280       | 2         |
| Public authority (n.e.i.) and community and business services ... | 245       | 0         | 253       | 11        | 257       | 10        | 260       | 1         | 279       | 6         |
| Amusement, hotels, personal service, etc. ....                    | 229       | 7         | 238       | 11        | 238       | 11        | 241       | 5         | 257       | 3         |

(a) For details of coverage see text above.

In May 1963 a survey was conducted to estimate the proportion of employees affected by awards, determinations, and registered agreements. The following table indicates the approximate proportions found to be affected under Commonwealth and State jurisdiction respectively. Also shown are the proportions of employees whose rates of pay and working conditions were not affected by awards, determinations or registered agreements including those working under unregistered agreements. Employees in rural industry and in private domestic service were excluded altogether from the survey.

## Incidence of Awards, Determinations, and Registered Agreements

South Australia, May 1963

| Employees     | Represented<br>in Estimates | Affected by<br>Commonwealth<br>Awards, Etc. | Affected by<br>State Awards,<br>Etc. | Not Affected<br>by Awards,<br>Etc. |
|---------------|-----------------------------|---|--------------------------------------|------------------------------------|
|               | '000                        | %   | %                                    | %                                  |
| Males .....   | 194                         | 55.7  | 29.0                                 | 15.3                               |
| Females ..... | 64                          | 23.7  | 62.3                                 | 14.0                               |

## EARNINGS

Figures given in this section relate to actual average weekly earnings (including award wages, salaries, overtime earnings, over-award and bonus payments and prepayments) of all wage earners and salaried employees, whether adult or junior, full-time, part-time, or casual. Payments to members of the defence forces are excluded.

Particulars of wages and salaries are not available for males and females separately and average earnings have therefore been calculated by dividing total civilian employment expressed in terms of "male units". Male units represent total male employment plus a proportion of female employment based on the approximate ratio of female to male earnings.

As quarterly figures are affected by seasonal influences, comparisons for trends should be made by relating complete years or corresponding quarters. From December quarter 1963, comparisons with corresponding quarters of earlier years are affected by additional prepayments arising from extensions of annual leave from two to three weeks. Due to variations in coverage, etc., these figures cannot be related to the minimum weekly wage rates shown in the preceding section.

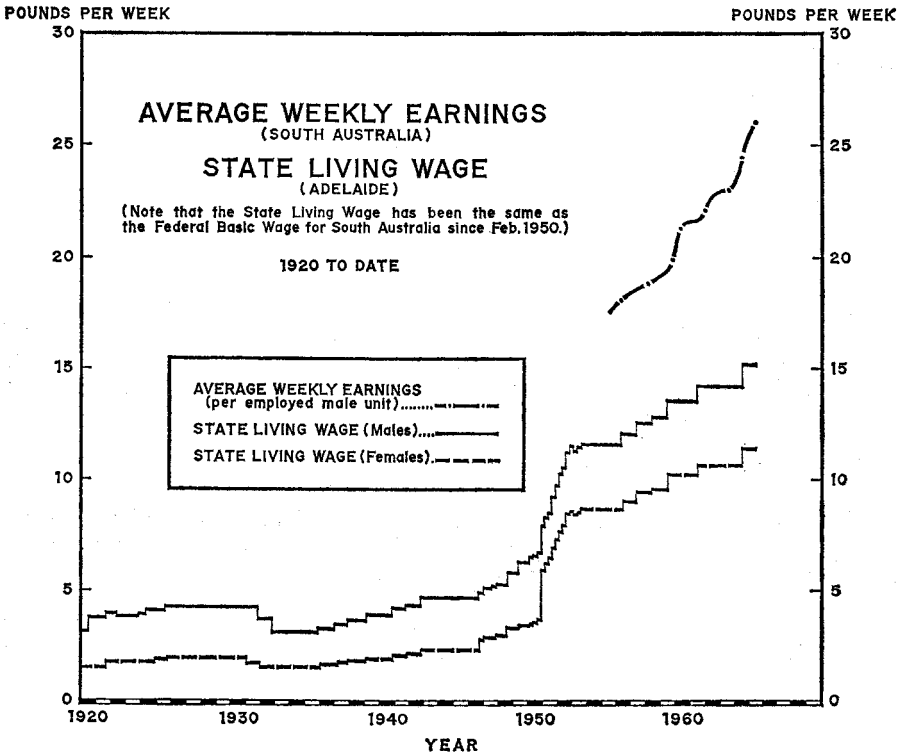
Average Weekly Earnings per Employed Male Unit, South Australia<sup>(a)</sup>

| Year       | September<br>Quarter | December<br>Quarter | March<br>Quarter | June<br>Quarter | Year  |
|------------|----------------------|---------------------|------------------|-----------------|-------|
|            |                      |                     | £                |                 |       |
| 1955-56 .. | 17.91                | 18.32               | 17.22            | 18.29           | 17.93 |
| 1956-57 .. | 18.32                | 18.88               | 17.58            | 18.58           | 18.34 |
| 1957-58 .. | 18.82                | 19.43               | 18.17            | 18.96           | 18.84 |
| 1958-59 .. | 19.35                | 20.09               | 18.32            | 19.41           | 19.29 |
| 1959-60 .. | 20.60                | 21.12               | 20.38            | 21.52           | 20.91 |
| 1960-61 .. | 21.66                | 22.40               | 20.99            | 21.66           | 21.68 |
| 1961-62 .. | 22.02                | 22.90               | 21.72            | 22.85           | 22.37 |
| 1962-63 .. | 22.64                | 23.69               | 22.25            | 23.00           | 22.89 |
| 1963-64 .. | 23.33                | 25.12               | 23.21            | 24.52           | 24.05 |
| 1964-65 .. | 25.93                | 26.56               | 24.92            | 26.08           | 25.86 |

(a) Includes Northern Territory.



Trends in average weekly earnings are expressed in the following graph, together with adjustments to the State living wage. The living wage and the Commonwealth basic wage have been the same over the period for which the average weekly earnings are shown.



Separate estimates of the average weekly earnings of males and females, and of adults and juniors, have been obtained from sample surveys conducted in the last pay-periods of October 1962, 1963 and 1964.

These surveys were based on a sample selection of private employers subject to pay-roll tax. Consequently employees of government and semi-government authorities and of religious, benevolent, and similar organizations exempt from pay-roll tax are excluded. Also specifically excluded are employees in rural industry and private domestic service, and casual waterside workers.

Employers selected gave details of all employees (other than part-time) whose hours of work were known and who were not involved in managerial, executive, professional, or higher supervisory functions.

Summarized results of the three surveys are given in the following table.

## Average Earnings, South Australia

| Particulars  | Average Weekly Earnings |              |              | Average Hourly Earnings |              |              |
|--------------|-------------------------|--------------|--------------|-------------------------|--------------|--------------|
|              | October 1962            | October 1963 | October 1964 | October 1962            | October 1963 | October 1964 |
|              | £                       | £            | £            | s. d.                   | s. d.        | s. d.        |
| Males—       |                         |              |              |                         |              |              |
| Adult .....  | 23.52                   | 24.63        | 26.79        | 11 2                    | 11 6         | 12 5         |
| Junior ..... | 10.60                   | 11.25        | 12.40        | 5 3                     | 5 6          | 6 1          |
| Females—     |                         |              |              |                         |              |              |
| Adult .....  | 14.29                   | 14.25        | 15.53        | 7 3                     | 7 1          | 7 9          |
| Junior ..... | 9.01                    | 9.08         | 10.05        | 4 7                     | 4 7          | 5 1          |

A similar survey was conducted in 1961 to determine the distribution of employees at various levels of earnings. On this occasion the survey was restricted to adult male employees, with managerial, executive, professional, and higher supervisory staff being included. Part-time and casual employees were again excluded.

## Adult Male Employees: Level of Earnings, South Australia, October 1961

| Earnings Per Week           | Manufacturing       | Non-manufacturing | Total |
|-----------------------------|---------------------|-------------------|-------|
|                             | Percentage of Total |                   |       |
| Less than £14 (a) .....     | 1.1                 | 0.5               | 0.8   |
| £14 and less than £16 ..... | 2.2                 | 2.0               | 2.1   |
| £16 and less than £18 ..... | 10.6                | 12.1              | 11.2  |
| £18 and less than £20 ..... | 17.5                | 17.7              | 17.6  |
| £20 and less than £22 ..... | 17.2                | 16.8              | 17.0  |
| £22 and less than £24 ..... | 13.1                | 11.8              | 12.6  |
| £24 and less than £26 ..... | 10.0                | 9.1               | 9.6   |
| £26 and less than £30 ..... | 12.3                | 12.0              | 12.2  |
| £30 and less than £35 ..... | 9.0                 | 8.7               | 8.9   |
| £35 and over .....          | 7.0                 | 9.3               | 8.0   |
| Total .....                 | 100.0               | 100.0             | 100.0 |

(a) The majority in this group did not work a full week through absenteeism, changing jobs, etc.; others were working short time.

More recent information will be available when the results of a further survey conducted in October 1965 have been processed.

## HOURS OF WORK

In 1914 in South Australia the average working time per week excluding overtime was in excess of 48 hours for males and 49 hours for females. By 1921 the average working week was about 47 and 46 hours respectively.

In 1927 the Commonwealth Court of Conciliation and Arbitration granted a standard working week of 44 hours to the Amalgamated Engineering Union, and intimated that this reduction would be extended to other industries operating under similar conditions. In the same year the first 44-hour week under a State award was granted. The extension of the 44-hour week was delayed, however, by the onset of the depression, and the average working week (excluding overtime) for males was only slightly less than 47 hours at the end of 1931. Throughout World War II the average working week was between 44 and 45 hours.

At the end of the war applications were made to the Commonwealth Court of Conciliation and Arbitration for a 40-hour week. Following an extensive hearing, the Court granted the reduction to 40 hours in September 1947. In the following month the State Industrial Court, after hearing applications by unions, approved the incorporation of the 40-hour standard week into State awards. In general, the 40-hour week operated from the first pay-period in 1948.

In 1952 the employers approached the Commonwealth Court of Conciliation and Arbitration for an increase in the standard working week, but the application was rejected. A further application was made to the Commonwealth Conciliation and Arbitration Commission in 1961, this time seeking a temporary increase in the working week to 42 hours with an accompanying increase in wages. This application was also rejected.

Today the 40-hour week is the standard working week for employees under Commonwealth and State awards; however, the number of hours constituting a full week's work varies between occupations. Certain Commonwealth awards covering rural industries prescribe hours in excess of 40, while other occupations by tradition work less than 40 hours, although 40 hours is generally retained in their awards.

The weighted average standard hours (excluding overtime) prescribed in awards, determinations, and agreements for a full working week for adult male employees in all industries in South Australia, except rural, shipping, and stevedoring, was 39.96 hours at 31st December 1964. This compared with 44.62 hours at 31st March 1939 and 43.83 hours at 30th September 1947, immediately prior to the introduction of the 40-hour week. The weighted average for female employees at 31st December 1964 was 39.77 hours.

The normal working day is of 8 hours duration, and employees working beyond these hours are paid penalty rates. Award overtime rates are generally on the basis of time-and-a-half for the first four hours, with double-time thereafter. Double-time generally applies also to Saturday afternoon and Sunday work. Provision usually restricts overtime so that the employee has a break of at least 8 hours before resuming duty. Awards in certain industries provide for broken time and shift work. Employees on shift work normally rotate between shifts, receiving a loading for the working of afternoon and evening shifts.

The following table shows the relative distribution of employed civilian wage and salary earners for the six Australian State capital cities according to the number of hours worked in a specified week, as recorded in the August Work Force Surveys for years 1961 to 1965. The distribution is based on actual hours worked, not hours paid for, and is therefore affected by public holidays, leave, absenteeism, temporary absence from work due to sickness, accident and industrial disputes, and work stoppages due to plant breakdowns and weather.

Distribution of Hours Worked<sup>(a)</sup>, Six Australian State Capital Cities

| Period    | Proportion who Worked the Following Hours<br>in the Specified Week |       |       |       |       |       |         | Total |
|-----------|--|-------|-------|-------|-------|-------|---------|-------|
|           | 0-14   | 15-24 | 25-34 | 35-40 | 41-44 | 45-48 | Over 48 |       |
|           | Per Cent   |       |       |       |       |       |         |       |
| August—   |  |       |       |       |       |       |         |       |
| 1961..... | 5.8  | 3.2   | 7.2   | 71.6  | 5.0   | 3.5   | 3.7     | 100.0 |
| 1962..... | 4.3  | 2.1   | 4.3   | 76.5  | 4.7   | 4.6   | 3.5     | 100.0 |
| 1963..... | 3.7  | 1.9   | 6.0   | 74.3  | 5.1   | 5.2   | 3.8     | 100.0 |
| 1964..... | 4.0  | 2.2   | 4.4   | 71.2  | 5.7   | 6.6   | 5.9     | 100.0 |
| 1965..... | 4.0  | 2.1   | 4.5   | 69.5  | 5.7   | 7.6   | 6.6     | 100.0 |

(a) Employed wage and salary earners, 14 years of age and over.

## HOLIDAYS AND LEAVE

**Public Holidays**

A number of days are observed each year throughout the State as public holidays and additional days may be proclaimed from time to time either on a State-wide basis or applicable to particular localities. Employees required to work on public holidays normally receive an extra day's pay and are paid at penalty rates.

The traditional public holidays are—New Year's Day (first week-day in January), Australia Day (first Monday after 25th January), Good Friday, Easter Saturday, Easter Monday, Anzac Day (25th April or the following day if 25th a Sunday), Queen's Birthday (by proclamation), Eight Hours Day (second Monday in October), Christmas Day (a holiday may be proclaimed for the following Monday if Christmas Day falls on Saturday or Sunday), and Proclamation Day (28th December or the following Monday if 28th falls on Saturday or Sunday).

**Annual Leave**

Prior to 1936 the granting by Commonwealth tribunals of annual leave on full pay was restricted to exceptional cases. However, in that year the Commonwealth Court of Conciliation and Arbitration granted one week's annual leave to employees in the printing industry. Thereafter annual leave was gradually introduced into other awards.

In 1945 the Court was approached for an extension of annual leave to 2 weeks. Although delineating the principles to be followed in considering applications for 2 weeks' leave, the Court chose to leave the question of altering any particular awards to the discretion of the single Judges hearing the applications.

An approach for 3 weeks' annual leave was made to the Commonwealth Conciliation and Arbitration Commission in 1960 by unions covered by the Metal Trades Award. In its judgment the Commission rejected the general application of 3 weeks' annual leave on economic grounds, but at the same time envisaged special cases where leave greater than 2 weeks would be justified. A further application for the general adoption of 3 weeks' leave was made in 1962 but the Commission was still not satisfied with the ability of the economy to cope with such an increase. In April 1963 the Commission granted 3 weeks' annual leave to employees under the Metal Trades Award who had completed

12 months' continuous service. Provision was also made for holiday pay on a proportionate basis for employees who had completed one month's service but whose employment was terminated before 12 months. Application of the new standard to other awards was left to individual Commissioners.

In May of the same year the State Industrial Court announced an increased standard of annual leave for employees under State awards, adopting for this purpose the Commonwealth standard.

At present the majority of employees receive at least 3 weeks' paid annual leave.

In addition to recreation leave most Commonwealth and State awards provide a sick leave entitlement. Generally employees are entitled to at least one week's sick leave on full pay during each year of service, with varying provisions for the accumulation of unused leave.

### Long Service Leave

Legislative provision for the granting of long service leave to employees was introduced in the Long Service Leave Act of 1957. This State legislation applied also to employees under Commonwealth awards, as the Commonwealth Conciliation and Arbitration Commission had refrained from determining disputes concerning long service leave. The Act provided for one week's leave in the eighth and each subsequent year of continuous service. Exempted from the State legislation are employers bound by an award or agreement to provide long service leave and who extend these provisions to all employees, and employers providing long service leave, superannuation benefits or other similar benefits considered to be not less favourable than entitlement under the Act.

Later in 1957 employer organizations in a majority of industries signed agreements adopting a "Federal Code of Long Service Leave" providing for 13 weeks' leave after 20 years' service. The attraction of the Federal Code was that it recognized service dating back to 1937, whereas the Long Service Leave Act did not recognize service prior to 1950. The majority of South Australian employees are entitled to long service leave under the Federal Code.

Employees under a number of awards introduced since 1964 are entitled, at least in relation to future service, to 13 weeks' leave after 15 years. In that year the Commonwealth Conciliation and Arbitration Commission provided for the first time for the inclusion of long service leave provisions in a Commonwealth award, granting employees in the graphic arts and metal trades industries leave on the basis of 13 weeks for 20 years' service, in respect of employment prior to the decision, and 13 weeks for 15 years in respect of future service. These provisions have been extended to certain other Commonwealth awards. In a limited number of other cases, registered agreements provide for 13 weeks' leave after 15 years' service.

State and local government employees are in general entitled to 13 weeks' leave after 10 years' service, and Commonwealth Government employees to 4½ months after 15 years' service.

The various long service leave arrangements provide for additional *pro rata* periods of leave for service in excess of the minimum, and for *pro rata* payments for employees who have completed a specified term of service but who, through the termination of their services or through death, do not complete the full entitlement period.

## 7.4. INDUSTRIAL SAFETY

### SAFETY REGULATIONS AND INSPECTION

Most of the legislation directed at industrial safety is administered by the Department of Labour and Industry, although other authorities hold responsibilities in certain fields.

#### *Department of Labour and Industry*

The general working conditions in factories, shops, offices and warehouses are regulated by the Industrial Code, 1920-1963, and the Country Factories Act, 1945. Inspections are made by departmental officers to ensure that the requirements of these Acts with respect to safeguarding of machinery, safety of processes, cleanliness and general working conditions in factories are being observed.

The registration and inspection of steam boilers and other pressure vessels is provided for under the Steam Boilers and Enginedrivers Act, 1935-1952. The Lifts Act, 1960, regulates the use of lifts, escalators, cranes and hoists, with the department required to approve new installations and regularly inspect existing lift equipment. The safety of scaffolding, associated gear, and hoisting appliances on buildings under construction or being demolished is provided for under the Scaffolding Inspection Act, 1934-1963. The Inflammable Liquids Act, 1961, and the Liquefied Petroleum Gas Act, 1960, regulate the storage and carriage of these products.

#### *Department of Mines*

Regulations under the Mines and Works Inspection Act, 1920-1964, provide for the health and safety of persons engaged in mining or quarrying and for the protection of the general public. Mining sites must be maintained in safe conditions with specific attention given to ventilation, sanitation, and the use of explosives. Officers of the department inspect mines and quarries, check old workings, and investigate mining accidents.

#### *Department of Public Health*

Health aspects of industrial safety are the responsibility of the Occupational Health Section of the Department of Public Health. The department investigates health hazards resulting from the presence of toxic and noxious substances in industry, both on its own initiative and on reference from employers, unions, other authorities, and individuals. Investigations are carried out where radioactive and irradiating apparatus is in use for industrial, scientific, or medical purposes.

#### *Chemistry Department*

The Explosives Act, 1936-1963, regulates the importation, manufacture, carriage, storage, and sale of explosives. The Chemistry Department is responsible for the maintenance of government magazines and the licensing and inspection of private magazines. Vehicles used in the carriage of explosives are also licensed. Almost all commercial explosives, including fireworks, entering the State are inspected by the department.

#### *Electricity Trust of South Australia*

Electrical installations are required to conform to the service rules of the Electricity Trust and the wiring rules of the Standards Association of Australia, and are subject to inspection by Electricity Trust officers.

## WORKMEN'S COMPENSATION

**Legislation**

The first Workmen's Compensation Act was passed in 1900. Covering factories and certain industries considered as offering hazards to employees, the Act set out a scale of compensation to be paid in the event of an accident without negligence by the employer having to be proved. Considerable amending legislation followed this early Act, and new Acts were passed in 1911 and 1932, gradually broadening the scope of the legislation as to persons covered, contingencies included, and the scale of benefits.

Current legislation, the Workmen's Compensation Act, 1932-1965, covers workmen whose average weekly earnings do not exceed £55 against personal injury arising out of or in the course of their employment. The coverage extends to recess periods, travelling to or from work, travelling to or from or attending a trade or technical school, and travelling for medical treatment while on compensation. Diseases due to the nature of the employment are treated as injury, and special provision is made for silicosis and for certain industrial diseases contracted at Port Pirie.

Excluded from the scope of the Act are casual workers, outworkers, service personnel and Commonwealth employees; the last-named being covered by the *Commonwealth Employees' Compensation Act 1930-1964*.

Where death results from the injury, provision is made for compensation to be paid to the workman's family. In the case of dependants who are wholly dependent, the Act provides for a maximum payment of a lump sum based on 4 years' earnings plus £110 for each dependent child under 16 years, with a minimum payment of £1,100 and a maximum of £6,000 plus the dependent child allowance. Proportionate payments are made to partial dependants, and where there are no dependants medical and funeral expenses are met.

Where the accident results in total incapacity, the worker receives a weekly payment of between £6 and £11 plus allowances for spouse and dependent children, with a maximum payment of £16 5s. or average weekly earnings, whichever is the less. Payment in relation to loss of earning capacity is made in the case of partial incapacity.

Provision is made for lump sum payments in lieu of weekly payments. Such payments are arranged by agreement; or after six months, by arbitration on application of either employer or employee. The total liability of the employer is limited to £6,000 in the case of total incapacity and £4,500 for partial incapacity, in addition to weekly payments already made. Lump sum compensation is also provided for certain specified injuries, e.g., loss of limbs.

In addition to other compensation reasonable medical, hospital, nursing, and ambulance expenses are paid and compensation to £30 is provided for damaged clothing.

The Minister responsible for administering workmen's compensation is the Treasurer, with the Treasury responsible for surveillance of the Workmen's Compensation Act and Regulations.

**Workmen's Compensation Insurance**

The Workmen's Compensation Act requires every employer, unless specifically exempted, to obtain from a licensed insurance company a policy which fully covers his liability under the Act. The exemptions are the State Government which provides its own cover through the Government Accident Insurance Office,

the South Australian Railways Commissioner, and any employer who can satisfy the Minister of his ability to meet all probable claims and who is accordingly issued with a certificate of exemption.

Details of workmen's compensation claims met by insurance companies and self-insurers during the last three years are as follows.

**Workmen's Compensation Claims,  
South Australia**

| Year          | Number of<br>Claims | Compensation<br>Payments |
|---------------|---------------------|--------------------------|
|               |                     | £                        |
| 1962-63 ..... | 48,000              | 1,776,000                |
| 1963-64 ..... | 51,350              | 1,933,000                |
| 1964-65 ..... | 55,600              | 2,153,000                |

**INDUSTRIAL ACCIDENTS**

Detailed information on industrial accidents in South Australia was first collected in 1961. Statistics are compiled from reports of workmen's compensation claims submitted by insurance companies, self-insurers, and State Government departments through the South Australian Department of Labour and Industry.

The collection is restricted to fatal accidents and to accidents causing an absence from work of one week or more. Cases involving travelling to or from place of employment, occurring during a recess period, or involving diseases are excluded. Accidents included in the statistics represent between 20% and 25% of total compensated accidents, and associated payments constitute between 60% and 70% of total payments.

Particulars of the number of industrial accidents, of time lost, and compensation paid are given below for the years 1961-62 to 1964-65. The figures for any one year relate to claims closed during the year and to unclosed claims at the end of the year which have been outstanding for three years.

**Industrial Accidents, South Australia**

| Particulars                       | Unit  | 1961-62 | 1962-63 | 1963-64 | 1964-65 |
|-----------------------------------|-------|---------|---------|---------|---------|
| Accidents—                        |       |         |         |         |         |
| Fatal .....                       | No.   | 20      | 25      | 20      | 17      |
| Non fatal .....                   | No.   | 8,971   | 10,498  | 11,098  | 11,809  |
| Time lost—                        |       |         |         |         |         |
| Total .....                       | week  | 37,782  | 40,959  | 43,867  | 43,376  |
| Average per accident .....        | week  | 4.2     | 3.9     | 4.0     | 3.7     |
| Amount Paid (a)—                  |       |         |         |         |         |
| Fatal accidents .....             | £'000 | 42.5    | 67.6    | 64.8    | 51.7    |
| Non-fatal accidents .....         | £'000 | 904.8   | 1,018.7 | 1,174.2 | 1,252.1 |
| Total .....                       | £'000 | 947.3   | 1,086.3 | 1,239.0 | 1,303.8 |
| Average per non-fatal accident... | £     | 101     | 97      | 106     | 106     |

(a) Compensation for wages lost, hospital and medical expenses, and lump sum settlements.

Of the 11,809 non-fatal accidents in 1964-65, 1,044 involved females. No accident resulting in the death of a female has been reported since statistics have been compiled.



Industrial accidents for 1964-65 are classified below by industry group. As the statistics are based on workmen's compensation claims, persons outside the scope of the South Australian Workmen's Compensation Act are excluded. Notable exclusions are self-employed persons and all Commonwealth Government employees. Thus persons employed within some industry groups, e.g., defence services and communications, are not covered at all while coverage is reduced in other groups, particularly in commerce and primary production.

### Industrial Accidents: Industry Groups, South Australia, 1964-65

| Industry Group  | Fatal Accidents |                 | Non-fatal Accidents |                     |               |                 |
|---|-----------------|-----------------|---------------------|---------------------|---------------|-----------------|
|   | Number          | Amount Paid (a) | Number              | Proportion of Total | Time Lost     | Amount Paid (a) |
|   |                 | £'000           |                     | %                   | Weeks         | £'000           |
| Primary production .....  | —               | —               | 896                 | 7.6                 | 3,618         | 86.9            |
| Mining and quarrying .....  | 1               | 3.7             | 90                  | 0.8                 | 460           | 29.6            |
| Manufacturing .....   | 5               | 13.1            | 5,478               | 46.4                | 18,760        | 565.9           |
| Electricity, gas, water, and sanitary services .....                | —               | —               | 494                 | 4.2                 | 1,981         | 63.0            |
| Building and construction ..  | 5               | 21.3            | 1,857               | 15.7                | 7,099         | 227.6           |
| Transport and storage .....   | —               | —               | 876                 | 7.4                 | 3,505         | 82.4            |
| Finance and property .....  | —               | —               | 24                  | 0.2                 | 197           | 2.9             |
| Commerce .....  | 3               | 8.0             | 1,380               | 11.7                | 4,474         | 115.8           |
| Public authority (n.e.i.) and community and business services ..... | 3               | 5.6             | 369                 | 3.1                 | 1,799         | 45.7            |
| Amusement, hotels, accommodation, cafes, etc. ....                  | —               | —               | 345                 | 2.9                 | 1,483         | 32.3            |
| <b>Total .....</b>  | <b>17</b>       | <b>51.7</b>     | <b>11,809</b>       | <b>100.0</b>        | <b>43,376</b> | <b>1,252.1</b>  |

(a) Compensation for wages lost, hospital and medical expenses, and lump sum settlements.

Most of the non-fatal accidents in 1964-65 involved injuries to the arm or hand (4,381), the leg or foot (3,156) or the trunk (3,087). Other accidents resulted in 333 eye injuries, 404 head injuries and 395 injuries to the neck or spine.

In the following table industrial accidents are allocated to an accident factor, this being the underlying agency, other than human failing, which appeared to contribute most materially to the accident.

### Industrial Accidents: Accident Factor, South Australia

| Accident Factor                                       | 1961-62      | 1962-63       | 1963-64       | 1964-65       |
|---|--------------|---------------|---------------|---------------|
| Machinery .....                                       | 918          | 1,219         | 1,403         | 1,316         |
| Vehicles .....  | 401          | 601           | 593           | 533           |
| Electricity, explosions, flames, hot substances ..... | 277          | 292           | 256           | 345           |
| Harmful substances .....                              | 56           | 54            | 49            | 69            |
| Falling, slipping, stumbling, etc. ...                | 1,852        | 2,162         | 2,360         | 2,445         |
| Striking against, stepping on, etc. ...               | 511          | 566           | 518           | 640           |
| Struck by moving or falling objects.                  | 1,614        | 1,746         | 1,725         | 2,258         |
| Strain in handling .....                              | 1,683        | 1,858         | 2,050         | 2,279         |
| Handling sharp objects .....                          | 420          | 383           | 379           | 394           |
| Other handling .....                                  | 98           | 87            | 111           | 71            |
| Hand tools .....                                      | 773          | 1,035         | 1,101         | 950           |
| Miscellaneous .....                                   | 388          | 520           | 573           | 526           |
| <b>Total .....</b>                                    | <b>8,991</b> | <b>10,523</b> | <b>11,118</b> | <b>11,826</b> |

Falling, slipping, stumbling, etc., caused 20.7% of accidents in 1964-65. The majority of these resulted in sprains, bruising, and superficial injury, although 429 cases involved actual fractures or dislocations.

There were 82 fatal accidents in the four years 1961-62 to 1964-65. Of these 5 were attributed to machinery, 35 to vehicles, 9 to electricity, explosions, etc., 13 to falling, slipping, stumbling, etc., 11 to moving or falling objects, and 9 to other factors.

**PART 8—**

**PHYSICAL DEVELOPMENT**

**8.1. WATER SUPPLY**

With 96% of the State receiving less than 20 inches of rain per annum, and high evaporation increasing the demand for water and causing heavy losses from reservoirs, water conservation is of vital importance to South Australia.

Water supplies, other than in irrigation areas, are under the control of the Engineering and Water Supply Department through the Waterworks Act, 1932-1962, and the Water Conservation Act, 1936.

**METROPOLITAN WATER SUPPLY**

From 1836 to 1860 the inhabitants of Adelaide and the surrounding plains obtained their water from the River Torrens and other streams, from springs and shallow wells, or by collecting the water shed from roofs.

Growth of population caused the primitive methods of supply and distribution to become inadequate and in December 1860 Adelaide received its first supply under pressure from Thorndon Park Reservoir. This early reservoir situated seven miles north-east of Adelaide is filled from a diversion weir on the Torrens Gorge. A second reservoir—Hope Valley—completed in 1872, is also filled from the River Torrens. These reservoirs are of a low altitude and residents of the eastern foothills still had to rely on local creeks, or on water pumped into storage tanks, for their supply.

In 1888 a Royal Commission recommended the construction of a reservoir to be fed from the River Onkaparinga, Happy Valley Reservoir being completed in 1896. The next major development was the completion of the Millbrook Reservoir in 1918 on the Chain of Ponds Creek, its intake coming from the River Torrens through a mile long tunnel. Mount Bold, completed in 1938, differs from the earlier reservoirs in that it does not lead directly into a reticulation system. Built on the Onkaparinga it functions as a storage for the Happy Valley Reservoir. With the construction of Mount Bold Reservoir the only catchment areas in immediate proximity to Adelaide, namely the Torrens and Onkaparinga areas, had been harnessed.

Continued population growth, however, necessitated increased supply and in 1945 over 50 boreholes were drilled in the Adelaide Artesian Basin, a basin of approximately 30 square miles to the north and west of the city. These bores can be brought into operation at short notice and yields vary from 500 to 25,000 gallons per hour.

The feasibility of Adelaide augmenting its water supply by means of a pipeline from the River Murray had been considered on a number of occasions, and in 1949 the project was commenced. The first Murray water reached the metropolitan system in 1954. The water is drawn from the river at Mannum, being 41½ miles in a direct line from Adelaide, and is raised by three pumping stations a total of 1,490 feet to a 30 million gallon summit storage near Tungkillo. At first the water flowed into the Torrens and Onkaparinga Rivers and hence into the metropolitan system; later the pipeline was extended to a terminal storage near Modbury. The Mannum-Adelaide Pipeline is also connected to the Warren Reservoir on the South Para River and branches serve many country areas *en route*.

With the growing demand for water in Adelaide and areas immediately to the north, investigations were focused on a site on the South Para River, the potentiality of this site having been recognized as far back as 1878. The South Para Reservoir was completed in 1958 and supplies water, *via* the Barossa Reservoir, to the metropolitan area, Elizabeth and the Lower North. In 1960 the capacity of the South Para Reservoir was increased.

There was also considerable development taking place in areas to the south of the metropolitan area, and in 1958 a dam was commenced on the Myponga River 34 miles south of Adelaide. The Myponga Reservoir, completed in 1962, supplies surrounding districts and areas to the south of Adelaide, surplus water being fed into the Happy Valley Reservoir.

1962 also saw the raising of the Mount Bold dam, increasing the capacity of the reservoir by over 50%.

A new reservoir to be known as the Kangaroo Creek Reservoir is currently under construction in the Torrens Gorge downstream from the Millbrook diversion.

### COUNTRY WATER SUPPLY

Early settlement was confined mainly to localities in which water supplies, considered to be permanent, were available in the form of springs, soaks or running streams. Settlement gradually extended further from the sources of supply, and many sources previously considered permanent failed under prolonged periods of drought.

Water was required for domestic use and for stock and was obtained from tanks excavated on the properties, wells (in areas with sub-surface water), streams and water conservation works provided by the State. The Water Conservation Act of 1886 was passed to enable the State to provide and control necessary water supplies. Works constructed or acquired under this Act comprised approximately 340 bores, 460 wells and 550 dams, tanks or rain-sheds, costing nearly £1,500,000.

These small water conservation schemes, while of immense value eventually proved to be inadequate.

#### **Reticulated Supplies**

The first large country water conservation and distribution scheme, the Beetaloo system, was completed in 1890. The Beetaloo Reservoir, 10 miles east of Port

Pirie, was the first of three major reservoirs in the Flinders Ranges, each interconnected and serving the farming areas of the Mid-North. The subsequent reservoirs were the Bundaleer between Gulnare and Spalding completed in 1902, and the Baroota 19 miles north of Port Pirie completed in 1922. Nectar Brook Reservoir, serving the Port Augusta district, was completed in 1899.

Reticulation in the Lower North began with the construction of the Barossa Reservoir on the South Para River in 1902. The Warren Reservoir, the most elevated in the State, followed in 1916, and the recently completed South Para Reservoir, as well as serving the metropolitan area, caters for an area extending as far north as Port Wakefield.

Water reticulation schemes on Eyre Peninsula date from 1912 when, under the Yeldulknie Scheme, three reservoirs were constructed across intermittently flowing creeks in the hilly country west of Franklin Harbor. In 1922 a reservoir was completed on the Tod River and a pipeline to Port Lincoln, approximately 17 miles away connected in 1927. The Tod River Reservoir was later connected to the Yeldulknie system. In addition 9 bores have been sunk in the Uley-Wanilla Basin to the north-west of Port Lincoln the water being piped to Port Lincoln and surrounding districts as well as into the Tod River Reservoir.

With the growth of Whyalla, local supply became inadequate, and in 1940 work commenced on a pipeline from the River Murray. The Morgan-Whyalla Pipeline, completed in 1944, includes four pumping stations which lift the water 1,558 feet over a distance of 57 miles from Morgan to a summit storage at Hanson. From here the water gravitates 166 miles *via* Port Augusta to Whyalla. Branch lines have been laid to Woomera (110 miles) and other country centres. The Morgan-Whyalla Pipeline, being an additional source of supply for the Bundaleer system, has permitted reticulation over most of Yorke Peninsula. A second main, which will more than double the capacity of the pipeline, is currently under construction. This main, rather than skirt the gulf at Port Augusta, will be laid on the sea bed for a distance of 7 miles between Mount Mambray and Douglas Point.

The Encounter Bay area has been supplied from a reservoir in the Hindmarsh Valley since 1917, this supply being augmented more recently by water pumped from the River Murray at Goolwa.

### Local Water Schemes

In addition to the extensive reticulated schemes there are many local water supply schemes. Mount Gambier has drawn water from the Blue Lake since 1883 and many towns have small reservoirs serving their needs. Towns along the River Murray are supplied from the river and river water is reticulated to adjacent farm lands.

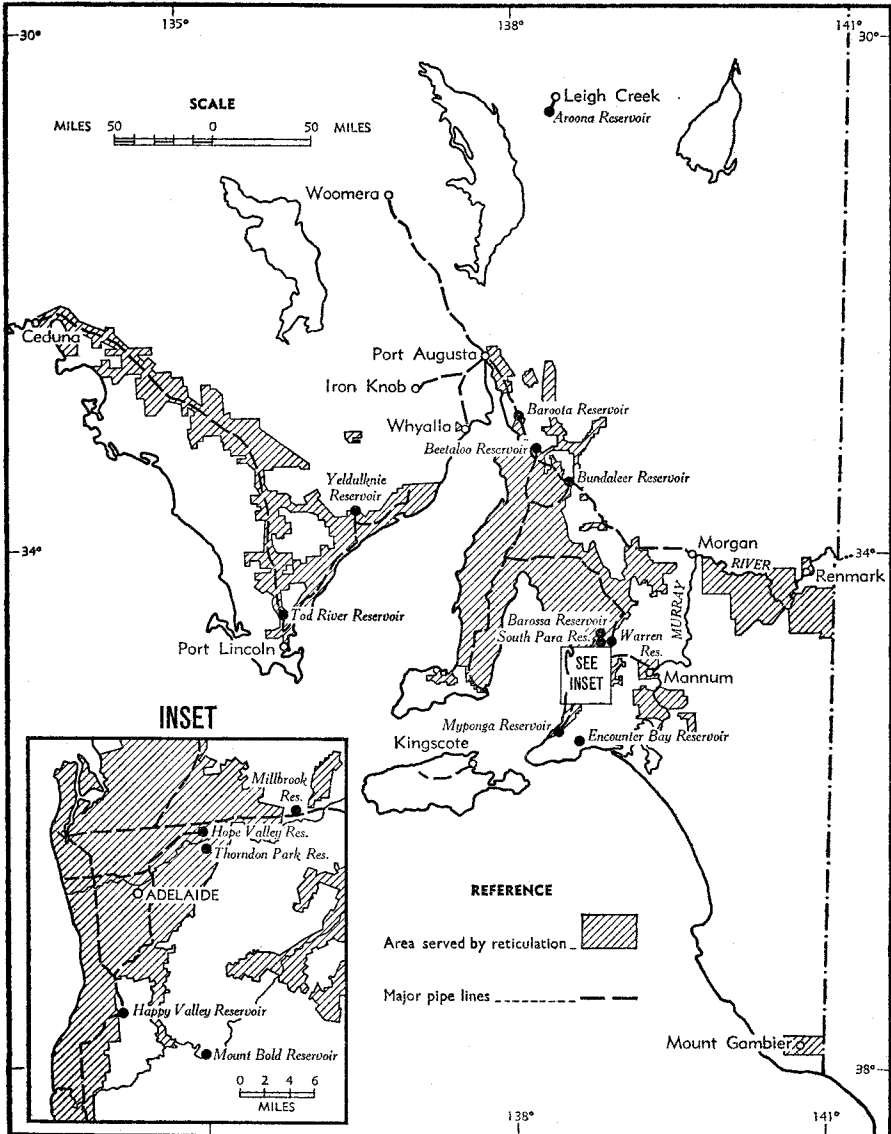
### Underground Water

Underground water-bearing areas occur in many parts of the State, and without these resources the development of extensive areas remote from surface waters would have been impracticable.

The Great Artesian Basin extends over the far northern and north-eastern portion of the State. Many bores have been sunk in this basin including several along the stock route from Birdsville in Queensland to Marree. The daily flow from approximately 160 Government bores is 13 million gallons.

In addition to the Adelaide and Uley-Wanilla Basins other underground sources from which considerable supplies are obtained include the Robinson Basin supplying Streaky Bay, and the Murray Basin which is essential to settlement in the Murray Mallee country and in the south-east of the State. More recently the Lincoln and Poldas Basins have been developed to further augment Eyre Peninsula supplies.

PORTION OF STH. AUSTRALIA  
WATER SUPPLIES



MAP 9

Water Supplies<sup>(a)</sup>, South Australia

| At 30th June | Area of Works | Storage Capacity (b) | Length of Mains | Capital Cost to Date (c) |
|--------------|---------------|----------------------|-----------------|--------------------------|
|              | Sq. Miles     | Acre ft.             | Miles           | £'000                    |
| 1881.....    | <i>n.a.</i>   | 3,986                | 408             | 994                      |
| 1891.....    | (d)2,167      | 6,825                | 976             | 1,785                    |
| 1901.....    | 2,279         | 18,554               | 1,577           | 2,982                    |
| 1911.....    | 4,383         | 28,079               | 2,793           | 4,548                    |
| 1921.....    | 7,740         | 46,924               | 4,126           | 6,938                    |
| 1931.....    | 18,677        | 62,229               | 6,030           | 13,068                   |
| 1941.....    | 18,544        | 87,774               | 6,450           | 15,609                   |
| 1951.....    | 18,701        | 88,244               | 7,203           | 25,190                   |
| 1961.....    | 20,498        | 130,488              | 9,292           | 71,052                   |
| 1962.....    | 20,553        | 166,241              | 9,634           | 79,571                   |
| 1963.....    | 20,761        | 166,079              | 9,996           | 87,906                   |
| 1964.....    | 20,895        | 166,490              | 10,469          | 93,954                   |

(a) Controlled by Engineering and Water Supply Department and preceding State authorities.

(b) Includes Morgan-Whyalla pipeline storage tanks.

(c) Total original cost of assets.

(d) 1892.

*n.a.*—Not available.

## Water Storage and Consumption, South Australia

| Particulars                               | 1959-60   | 1960-61 | 1961-62 | 1962-63 | 1963-64 |
|---|-----------|---------|---------|---------|---------|
|   | Acre-feet |         |         |         |         |
| Water storage: (capacity at end of year)— |           |         |         |         |         |
| Adelaide Water District (a) .....         | 53,688    | 53,802  | 89,570  | 89,596  | 89,623  |
| Country water districts (b) .....         | 71,460    | 76,686  | 76,671  | 76,483  | 76,867  |
| Water consumption—                        |           |         |         |         |         |
| Adelaide Water District (a) .....         | 85,174    | 81,016  | 96,433  | 88,786  | 99,658  |
| Country water districts .....             | 33,616    | 34,342  | 38,330  | 39,885  | 39,546  |
| Pumped from River Murray—                 |           |         |         |         |         |
| Mannum-Adelaide pipeline .....            | 55,125    | 12,774  | 53,983  | 30,576  | 18,667  |
| Morgan-Whyalla pipeline .....             | 10,755    | 7,135   | 11,680  | 11,764  | 10,309  |

(a) Gazetted area plus areas supplied directly from the Mannum-Adelaide pipeline and the Myponga reservoir.

(b) Includes South Para reservoir.

Major Reservoirs<sup>(a)</sup>, South Australia

As at 31st December 1964

| Reservoir         | Capacity | Area at Full Supply Level | Catchment Area |
|-------------------|----------|---------------------------|----------------|
|                   | Acre-ft. | Acres                     | Sq. Miles      |
| South Para .....  | 41,647   | 1,096                     | 88             |
| Mount Bold .....  | 38,477   | 762                       | 150            |
| Myponga .....     | 21,763   | 693                       | 48             |
| Millbrook .....   | 13,441   | 440                       | 90             |
| Happy Valley..... | 10,334   | 465                       | 174            |
| Tod River .....   | 9,196    | 330                       | 76             |
| Bundaleer .....   | 5,163    | 210                       | 605            |
| Warren .....      | 5,163    | 338                       | 46             |

(a) All reservoirs with a capacity in excess of 5,000 acre-feet.

## 8.2. IRRIGATION AND DRAINAGE

### IRRIGATION

The development of irrigation areas in South Australia has been carried out by both Government authorities and private interests. Since 1930 the controlling authority for Government irrigation areas has been the Department of Lands with the Engineer-in-Chief the constructing authority for the Minister of Irrigation.

Irrigation areas are confined almost exclusively to the Murray Valley. Details of the production of these areas are given in Part 9, pages 314-315.

These areas can be classified into two groups—highland areas requiring the pumping of water, and reclaimed lands watered by gravitation.

#### Highland Areas

With the major exception of the Mypolonga Irrigation Area, highland irrigation is located in the hot and dry zone along the River Murray between Morgan and the Victorian border.

Although a few private settlers had earlier practised the art of artificial watering, large scale irrigation dates from the Chaffey Bros Irrigation Works Act of 1887. The two Chaffey brothers had come from America to assist in irrigation development and undertook to establish irrigation works at Renmark in return for certain land concessions. In 1893, with the departure of the Chaffeyes, the Renmark Irrigation Trust was formed. This trust administered the Renmark Irrigation Area as a local governing body until 1960, when it became responsible solely for irrigation matters.

In 1894, during a period of unemployment, the Government authorized the formation of eleven village settlements along the River Murray to be run on community lines. These were not successful and in 1899 a system of independent holdings with a co-operative water supply was substituted. Only the Lyrup Village Association remains today.

The preparation of irrigated land for fruitgrowing was first undertaken by the Government in 1909. Steady progress with development and settlement continued until 1918 when the Government decided that all future allotments were to be reserved for returned soldiers, and greatly accelerated development. However, following a heavy decline in prices, development ceased in 1923 and it was not until the end of the second World War that the area under irrigation showed any marked increase. Here again development was stimulated by the need to rehabilitate ex-service personnel, and between 1946 and 1954, approximately 8,000 acres of irrigable land were developed under the War Service Land Settlement Scheme, the largest settlement being at Loxton (approximately 6,500 acres). Since 1954 there has been no further large-scale development by the Government, and the authorities have been devoting their attention to the maintenance and improvement of existing schemes and in particular to the complete electrification of pumping plants.

A number of private schemes have also been developed in the post war period.

Highland areas are largely devoted to vineyards and citrus and stone fruit orchards which are irrigated by water pumped from the river in open concrete-lined channels or pipes. Many of the recently developed areas use a system of sprays for watering the blocks in preference to the traditional surface reticulation. Sprays are also being used to increase the acreage in a number of the older areas by bringing in land too high for reticulated watering. Landholders pay an annual rate for routine irrigation and a charge is made for additional water.



Irrigation systems must also provide for the removal of surplus water which accumulates beneath the surface of the land. Blocks have internal drainage systems leading initially to shafts and bores, and later, when these become inoperative, to comprehensive drainage systems which convey the water to evaporation basins.

### Reclaimed Areas

On the lower Murray between Mannum and Wellington is a series of swamp and overflow areas which have been reclaimed by Government and private agencies.

The first such reclamation was made in 1881 by Sir W. F. D. Jervois, then Governor of the State, and was followed by other large holdings being reclaimed by private enterprise. This successful conversion of almost waste land to highly productive areas led, in 1904, to the inclusion of the reclamation and subdivision of the remaining swamp areas in the State's policy of land settlement. In 1929 most of the areas which were suitable for settlement and which were not being developed privately had been reclaimed and settled.

Although these reclaimed areas contain some orchards, vineyards, and market gardens they are devoted principally to the growing of green fodder for dairy herds and sheep flocks. These lands are watered by gravitation and surplus water is run into main drains from which it is pumped into the river. In many reclaimed areas the adjacent highlands have also been developed for the production of fodder crops through the use of spray irrigation.

### THE RIVER MURRAY AGREEMENT

In the earlier years there were great variations in the flows of the River Murray and its tributaries resulting from extremely variable rainfall in the catchment areas. The resulting droughts and floods were a considerable impediment to the proper functioning of the irrigation areas.

In 1915 the River Murray Waters Act was passed by the Parliaments of the Commonwealth and the States of New South Wales, Victoria and South Australia. The River Murray Agreement provided for the construction of works and for the allocation of water between the three States concerned.

Works, to regulate the flow and control of the level of the River Murray, have included the construction of a number of storage areas and the erection of a series of locks and weirs. By 1928 Lake Victoria, in New South Wales adjacent to the South Australian border, had been converted into a large storage area supplying water for the South Australian irrigation settlements. The major storage area, the Hume Reservoir above Albury, was completed in 1936. Further works, the last being completed in 1961, have doubled the original capacity to 2½ million acre-feet. Except for that held in various lock pools, no water from the Murray is stored in South Australia. However in 1962 agreement was reached for the construction of a reservoir of approximately 4½ million acre-feet with its dam at Chowilla, just inside the State border. This reservoir, which will cover an area of over 400 square miles is due for completion in 1967, with a further two years being required for it to fill.

Between 1922 and 1930 six locks and weirs were erected between Blanchetown and the Victorian border. In addition five barrages have been placed at the Murray mouth to prevent the ingress of salt water from the sea and to maintain a higher level in the River for the use of the reclaimed areas. The barrages were completed in 1940. During 1963-64, 235,780 acre-feet of water were diverted from the River Murray in South Australia for irrigation purposes.

## Irrigation Areas, South Australia

| Area Irrigated                             | 1961-62 | 1962-63 | 1963-64 |
|--|---------|---------|---------|
|  | Acres   |         |         |
| Government controlled—                     |         |         |         |
| War Service schemes (World War II) .....   | 8,029   | 8,051   | 8,068   |
| Other .....                                | 29,998  | 30,341  | 30,508  |
| Non-Government—                            |         |         |         |
| Border-Mannum—                             |         |         |         |
| Trusts, boards and association areas ..... | 10,672  | 10,675  | 10,881  |
| Private schemes .....                      | 15,104  | 15,247  | 17,899  |
| Mannum-Barrages .....                      | 7,833   | n.a.    | n.a.    |

n.a.—Not available.

Further details of the 38,576 acres irrigated in Government-controlled schemes in the year 1963-64 are as follows—

| Area Irrigated                     | Highland Areas       |                  | Reclaimed Areas | Total  |
|------------------------------------|----------------------|------------------|-----------------|--------|
|                                    | Surface Reticulation | Spray Irrigation |                 |        |
|                                    | Acres                |                  |                 |        |
| War Service schemes (World War II) | 4,204                | 3,864            | —               | 8,068  |
| Other .....                        | 19,019               | 2,609            | 8,880           | 30,508 |
| Total .....                        | 23,223               | 6,473            | 8,880           | 38,576 |

## DRAINAGE

With the exception of the reclaimed areas along the lower Murray, already discussed in the previous section, and certain works associated with metropolitan development, drainage schemes in South Australia are confined to the south-east corner of the State.

The topography of this area reveals a series of fertile valleys or flats interspersed by low infertile ranges running parallel to the sea and thus preventing the natural drainage of the land. In consequence considerable sums of money have been expended in constructing drainage schemes to reclaim these areas.

The first major drainage scheme was commenced in 1863 and completed in 1885. This scheme, the Millicent Drainage System, reclaimed 100,000 acres of land at a cost of £150,000, this cost subsequently being included in the land allotment price. This system is maintained by the Millicent Drainage Trust from rates levied on landholders.

Following this early success the Government undertook the construction of further drains during the next sixty years. These drains were constructed under three sets of conditions—*national drains* were constructed at Government expense, the cost being absorbed in the price of the land when sold; *petition drains* were constructed on requests from landholders who agreed to repay the full cost to the Government over a period of 42 years; *scheme Act drains*, commenced in 1908,

provided for the Government and the landholders to share the cost, the landholders share being repayable over 42 years. After the Scheme Act Drains had been completed it was found that the cost exceeded the benefit derived, and subsequently following a Royal Commission, the landholders' liability was reduced.

Legislation in 1948 marked a new stage in the development of South-Eastern drainage. Previously attention had been devoted to the construction of a system of drains removing large quantities of water from general areas and providing above all for the rapid removal of floodwaters. By 1948, 430 miles of drains had been constructed at a capital cost of £720,876. However in 1948, with the establishment of the Western Division Drainage Scheme, emphasis was placed on a complete drainage programme as achieved by the earlier Millicent scheme. The Western Division Drainage Scheme, which aimed at the comprehensive drainage of 400,000 acres of land between the Millicent and Kingston districts, has now, with the exception of some work in the northern region, been completed.

In 1960 the Eastern Division Drainage Scheme, for the drainage of 727,000 acres of flats lying between Kalangadoo and 40 miles north of Lucindale, was commenced.

Under the schemes introduced since 1948 landholders are required to repay an amount based on a "betterment assessment" of their property. As in the other schemes this amount can be repaid over 42 years.

At 30th June 1963, 745 miles of drains (excluding the Millicent scheme) had been constructed at a capital cost of £7,060,000. These drains vary considerably in size from only a few feet to over 200 feet bottom width.

In addition to new construction, continual attention must be paid to the prevention of silting and of weed growth and to the upkeep of over 500 bridges, rates being levied on landholders to meet the costs of such maintenance. The closer settlement resulting from the drainage schemes has, in many areas, necessitated the construction of new bridges.

The system is administered by the South-Eastern Drainage Board under the South-Eastern Drainage Act, 1931-1959.

### 8.3. ROADS AND BRIDGES

Roads in South Australia are officially classified as either main roads, being those proclaimed as such under the provisions of the Highways Act, or district roads.

Main and district roads within local government areas are vested in the various local governing authorities who primarily are responsible for construction and maintenance works within their respective areas. However, there is provision in the Highways Act for the Commissioner of Highways to construct, reconstruct, and maintain important roads after due notice has been given, and in practice most of the more heavily trafficked roads are constructed and maintained by the Highways and Local Government Department.

In areas outside the control of local government authorities road works are carried out by State Government departments. Until July 1961 almost all of this work was performed by the Engineering and Water Supply Department, using equipment already in those areas, but the Highways and Local Government Department now constructs and maintains roads in the Western Division including the Eyre Highway to the Western Australian border.

Funds used for road works in South Australia are derived from three main sources, viz., the net proceeds of fees imposed by the State Government for the registration of motor vehicles and the licensing of drivers, grants from the Commonwealth Government, and rates levied by local government authorities.

Commonwealth legislation stipulates that not less than 40% of the Commonwealth aid roads grants shall be expended on roads in rural areas other than highways, main roads and trunk roads. State funds also are made available to local government authorities for construction and maintenance works generally and particularly for work on the more important district roads. In approved cases the Highways and Local Government Department assists by way of interest-free loans the purchase, by local authorities, of road-making equipment. Some local government authorities, having adequate resources of manpower and equipment, undertake specific works on behalf of, and financed by, the Highways and Local Government Department. The department provides technical advice when requested by a local government authority.

The following table shows the length of main and district roads according to type of surface at 30th June 1964 as advised by the Highways and Local Government Department.

**Main and District Roads: Type of Surface, South Australia**  
*At 30th June 1964*

| Type of Surface               | Main Roads   | District Roads | Total         |
|-------------------------------|--------------|----------------|---------------|
|                               | Miles        |                |               |
| Bitumen .....                 | 3,818        | 3,271          | 7,089         |
| Gravel or crushed stone ..... | 3,111        | 8,659          | 11,770        |
| Formed only .....             | 1,115        | 9,265          | 10,380        |
| Unformed .....                | 112          | 57,965         | 58,077        |
| <b>Total .....</b>            | <b>8,156</b> | <b>79,160</b>  | <b>87,316</b> |

The unformed roads shown above include approximately 24,500 miles of tracks in localities outside of local government areas, mainly routes to and between station homesteads and not on land reserved for roads.

In closely settled areas, particularly in the metropolitan area and country towns, most roads are surfaced with bituminous concrete or by bituminous penetration of a macadam base. In rural districts where traffic is light roads may be formed of natural materials or be only lightly gravelled but the more important country roads are constructed of gravel or crushed rock and are improved, as traffic warrants, by the addition of a bituminous seal.

## HISTORY

A feature of the development of South Australia during the early years of settlement was the comparatively easy access to good land on the Adelaide plains and to the north. The absence of major rivers, the extensive plains, and the relative ease with which the range of hills could be penetrated facilitated transportation by bullock drays and horse-drawn vehicles without elaborate road and bridge construction.

### **Bridges and Ferries**

The biggest single barrier on the east was the River Murray but this could be forded at a number of places during the summer months. In 1848, however, a Government ferry was established at Wellington. Substantial tolls, increased in 1854, were charged and the ferry was let by two-year contract, the successful tenderer being responsible for maintenance of the ferry. From 1859 the tolls were greatly reduced and ferry maintenance was carried out by the authority responsible for main road works in the area. Government ferries were subsequently established at Blanchetown, which was then the crossing point for coaches from Wentworth, New South Wales, and at Mannum. The Ferries Act of 1888 transferred Government ferries to the respective district councils and provided that local government authorities might install and operate ferries where roads were intersected or bounded by navigable waterways: this general provision still obtains under the present Local Government Act but the State Government has usually met most of the costs associated with the installation and maintenance of ferries which now operate at fourteen points from Goolwa to Lyrup. Primary producers were exempted from tolls from January 1946 and all tolls were abolished in November 1961.

The first bridge across the River Murray in South Australia was constructed at Murray Bridge and was opened for road traffic on 26th March 1879. Rail tracks were subsequently laid across this bridge and it served both road and rail traffic from May 1886 until November 1925 when the present railway bridge was opened and the original bridge reverted to road traffic only. In January 1927 a combined road-rail bridge was opened at Renmark and a road bridge at Blanchetown was opened to traffic on 24th April 1964.

### **Roads**

The first road built in South Australia was constructed by the South Australian Company between Adelaide and Port Adelaide. It was formally opened by Governor Gawler on 26th May 1839.

In the original Survey of Adelaide no provision for roads was made beyond the vicinity of Glen Osmond. The track to Mount Barker and the South East ran through private property to the present site of Crafers but by 1841 the increase in traffic over this track and its importance as a means of communication made the construction of a road imperative. The province being almost bankrupt at the time, the Legislative Council on the 4th June 1841 passed an authorization ordinance under which a road was to be constructed by private interests. The ordinance empowered the trustees in whom management of the road was vested to levy tolls and to borrow money on the credit thereof for the purpose of repaying advances made by the Government after the date of the ordinance, and also for completing and keeping the road in repair.

The first portion of the road up the Glen Osmond Valley was completed in October 1841 and a toll-gate put into operation at Glen Osmond. Although the Act was to have remained in force for fourteen years the powers and duties of the trustees were transferred to the Surveyor-General in 1844 and in October of that year the Government called tenders for renting the tolls. The practice of the successful tenderer to retain the tolls and pay a fixed annual sum to the Government as rental continued until November 1847 when the toll-bar was abolished because the construction of other roads not subject to tolls had made its existence anomalous. The hexagonal building which was the residence of the toll-bar keeper still stands today in the median strip of a four-lane highway.

In 1849 an ordinance vested all main roads in a Central Board of Main Roads consisting of 6 members. The Northern, Southern, Eastern, Western, and Port Roads were designated the great main lines of roads. The same legislation provided for the appointment, for each hundred, of a District Board of Roads of 5 members to be responsible for the control, management, and repair of district roads.

An Act passed in 1852 provided that each local government authority should have sole control over all district roads within its area and with the general establishment of district councils in 1853 the District Boards of Roads went out of existence.

Main roads continued to be controlled by the Central Board of Main Roads, with additional boards established at Mount Gambier, Port Augusta, and Port Lincoln. In 1874 the whole colony was divided into eight Main Roads Boards districts and these divisions continued until 1887. During their existence the Main Roads Boards formulated the main road system and constructed over 2,000 miles of metalled roads.

When Main Roads Boards were abolished in 1887 control of main roads within local government areas passed to the local government authorities. Roads in unincorporated areas were the responsibility of a branch of the Crown Lands Office. From 1889 when floods destroyed many important bridges, State Government assistance to local authorities increased in frequency. Until the formation of the Local Government Department in 1917 this assistance was administered by the Crown Lands Office.

The development of rail transport caused a marked decrease in long distance road travel during the latter portion of the 19th century and for a considerable time roads were of local rather than State or national importance. Since the end of World War I, however, and particularly since the mid-1920's, there has been a persistent and increasing demand, arising out of the nature and volume of motor transport, for roads with better surfaces and greater capacity. This demand led to both financial and administrative changes.

State and local government funds available for road construction were inadequate and Federal assistance became necessary. Limited Federal grants were made from 1923 to 1925 for the reconditioning of certain main roads. Federal assistance was greatly increased from 1926 through the negotiation of the Federal Aid Roads Agreement, and Federal aid roads grants continue to be made annually, with periodic review. Further details of these grants are given under the heading of Road Finance, on page 261.

Administrative changes were brought about by the passage, in 1926, of the Highways Act which established a Highways Fund and provided for the appointment of a Commissioner of Highways with general responsibility for main roads. The general scheme of the Act was for the establishment of the system of co-operation between State and local government authorities which now operates.

After the passing of the Highways Act and the negotiation of the Federal Aid Roads Agreement a programme was initiated for the bituminous reconstruction of arterial highways within a 50 mile radius of Adelaide. Bituminous surfacing of other main roads and important district roads has since been carried out as finance, equipment, manpower, and materials have permitted. By 1953, in spite of the difficulties created by the economic depression of the 1930's and the second world war, more than 3,000 miles of roads had been surfaced with bitumen, either by bituminous penetration or by the application of bituminous concrete.

Since World War II the tremendous increase in road traffic has necessitated the reconstruction and widening of many major roads, particularly those in and near the metropolitan area of Adelaide. Major examples of this type of work are the main south-east road from Glen Osmond to Crafers, completed several years ago, the Main North Road to Gawler and the main South Road. In addition to this work and extensive road construction in new housing areas many country roads have been greatly improved and during the ten years to 30th June 1963 the length of bitumen roads was increased by approximately 3,000 miles.

#### FUTURE DEVELOPMENT

The Town Planning Committee of South Australia, appointed by Parliament in 1955, presented its report in 1962 covering various aspects of the anticipated development of metropolitan Adelaide to the year 1991. The report contained alternative proposals but favoured the improvement of public road and rail transport and the construction of a limited number of freeways to relieve congestion on existing major roads by catering for a large volume of fast "through" traffic including express buses.

Freeways are roads without frontage access and with cross traffic carried under or over the through traffic by means of bridges. Access to such roads is permitted only at "interchanges".

The committee recommended the following six freeways totalling slightly less than 100 miles—

- (1) Central North-South Freeway from Gawler to the Yankalilla road east of Maslin Beach.
- (2) Freeway around the city of Adelaide.
- (3) City of Adelaide to Port Adelaide.
- (4) City of Adelaide to Modbury.
- (5) Modbury to Port Adelaide.
- (6) Crafers to Bridgewater.

Construction of the Crafers to Bridgewater freeway has commenced. This road will link with the existing four-lane highway from Glen Osmond to Crafers and form portion of the highway to Melbourne. Although the exact routes of other freeways have not been determined the Highways Commissioner is acquiring land along some probable routes where such action is necessary to prevent development which might make the subsequent construction of freeways economically impracticable.

The extent and exact routing of future freeways will be largely dependent upon the findings of a Metropolitan Adelaide Transportation Study, for the planning and conduct of which the South Australian Government has established a Joint Steering Committee. The purpose of the study is the co-ordination of the plans and activities of various authorities to secure the integrated development of transport facilities for the metropolitan area. Authorities represented on the committee are the Highways Department, the Town Planner, Adelaide City Council, Municipal Tramways Trust, and South Australian Railways. A two year study, under the direction of expert consultants, began in 1964.

Recent studies indicate that road traffic is increasing at an approximate rate of 7% per year which is roughly equivalent to a 100% increase during a ten-year period. The Commissioner of Highways has estimated that to meet fully the requirements of increasing traffic, the following works would be necessary from 1964 to 1974.

|  |              |
|--|--------------|
| Construction of freeways . . . . .                                   | 35 miles     |
| Duplication of pavements . . . . .                                   | 140 miles    |
| Reconstruction and improvement of existing sealed pavement . . . . . | 4,100 miles  |
| Extension of bituminous surfacing . . . . .                          | 4,750 miles  |
| Metalling or gravelling formed roads . . . . .                       | 9,000 miles  |
| Clearing and forming of roads . . . . .                              | 12,000 miles |
| Construction of new and replacement bridges . . . . .                | 190 units    |

These figures represent an assessment of "needs" and do not constitute a programme of works, which would be conditioned by the findings of the Transportation Study as well as by the availability of finance, materials, manpower and equipment.

### RESEARCH

Because of the great area of South Australia climatic and soil conditions vary enormously, particularly from north to south. Special sections of the Highways and Local Government Department are engaged in constant investigation and testing of soils, materials and construction methods to ensure that a high standard of road construction is maintained and that methods are adapted to the needs of particular areas.

South Australia contributes to Australian road development through its active participation in the National Association of Australian State Road Authorities. Specialist committees of the association deal with bridge design, materials research, traffic engineering, bituminous pavements, plants and equipment, and advance planning. The association in 1960 established the Australian Road Research Board whose functions include the co-ordination and organization of road research.

### ROAD FINANCE

As indicated earlier, the three main sources of road finance are—

- (1) State motor vehicle taxation and drivers' licence fees.
- (2) Commonwealth grants.
- (3) Property rates and other levies imposed by municipal and district councils.

Finance received from the first two sources is controlled by the Commissioner of Highways. The Highways Act provides that fees received for vehicle registrations and drivers' licences, less cost of collection, should be credited to the Highways Fund. The fund is credited also with hawkers' licence fees collected under the Hawkers Act, 1934-1948, interest on and repayments of advances made to local government authorities for roadworks and drainage schemes and for the purchase of machinery, special contributions from the Municipal Tramways Trust under the Highways Act, contributions from local government authorities towards the cost of lighting Anzac Highway and Port Road, and other minor sundry receipts.

The Local Government Act provides for grants-in-aid to be paid from the Highways Fund to local government authorities for expenditure on roads, other than main roads, and related works.

From 1923 to 1930 Commonwealth road grants were conditional upon *pro rata* expenditure by the States and work was subject to Commonwealth inspection. From 1931 to 1958 the total amount of Commonwealth aid road grants to the States was determined as a proportion, varied from time to time, of Commonwealth petrol taxation. From 1959 these grants have borne no direct relationship to any particular item of revenue.



For conditions and details of the method of dividing total Commonwealth road grants between the States from 1923 to 1963-64 reference should be made to Commonwealth Year Book No. 38 pp. 787-788, No. 41 p. 621, No. 46 p. 838 and No. 49 p. 934.

Proposed Commonwealth aid roads grants for the five years commencing in July 1964 were announced in March 1964. During the five year period South Australia is likely to receive slightly more than £43,000,000, or approximately 11.5% of the total grants which will be distributed as follows—5% to Tasmania and the remaining 95% to the mainland States,  $\frac{1}{3}$  according to population,  $\frac{1}{3}$  according to area and  $\frac{1}{3}$  proportionately to the number of motor vehicles registered. Portion of the grants is subject to matching expenditure by the States.

### Highways and Local Government Department, South Australia

#### Receipts and Payments

| Particulars  | 1959-60      | 1960-61      | 1961-62       | 1962-63       | 1963-64       |
|--|--------------|--------------|---------------|---------------|---------------|
| <b>Receipts (£000's)</b>   |              |              |               |               |               |
| Motor vehicle registrations, licences, fees, fines, etc. ....            | 3,942        | 4,112        | 4,293         | 4,537         | 4,989         |
| Commonwealth Aid Roads Grants—   |              |              |               |               |               |
| For rural roads .....  | 1,969        | 2,147        | 2,452         | 2,773         | 3,636         |
| For other roads .....  | 2,954        | 2,981        | 3,300         | 3,427         | 3,032         |
| Special assistance .....   | —            | —            | —             | —             | —             |
| Loans from State Government .....  | 85           | 90           | 200           | 290           | 475           |
| Repayments of, and interest on, advances to local authorities .....      | 331          | 338          | 416           | 461           | 496           |
| Other .....  | 115          | 111          | 118           | 122           | 110           |
| <b>Total .....</b>   | <b>9,396</b> | <b>9,779</b> | <b>10,779</b> | <b>11,610</b> | <b>12,738</b> |
| <b>Payments (£000's)</b>   |              |              |               |               |               |
| Construction and reconstruction of roads, bridges, etc. ....             | 6,113        | 6,466        | 7,308         | 7,679         | 9,758         |
| Maintenance of roads, bridges, etc. ....                                 | 2,183        | 2,095        | 2,337         | 2,488         | 2,792         |
| Interest, debt redemption, etc. ....                                     | 214          | 215          | 227           | 243           | 256           |
| Advances to local authorities .....                                      | 302          | 703          | 420           | 581           | 825           |
| Net purchases of land, buildings, plant, equipment, materials, etc. .... | 632          | 347          | 242           | Cr. 109       | 401           |
| Other (a) .....  | Cr.192       | 148          | 165           | 37            | Cr.131        |
| <b>Total .....</b>   | <b>9,252</b> | <b>9,974</b> | <b>10,699</b> | <b>10,919</b> | <b>13,901</b> |

(a) This item includes provision for leave and for plant overhauls which may be a negative figure in some years.

Exact figures are not available for total expenditure in South Australia on the construction, reconstruction, and maintenance of roads, streets, bridges, and associated works: during recent years approximate total expenditure by State and local government authorities has been—1959-60, £13.0 million; 1960-61, £14.6 million; 1961-62, £16.0 million; 1962-63, £17.3 million; 1963-64, £19.9 million.

These figures include the cost of land purchased for new roads including future freeways and for road widening, and charges for depreciation of plant and machinery. Local Government figures used to derive the totals include expenditure which is subsequently recouped from the public and expenditure on foot-path maintenance and stormwater drainage.

The greatest deficiency in total figures is the cost of work carried out under the provisions of the Town Planning Act which requires persons and authorities (including the South Australian Housing Trust) who subdivide land for housing to provide roads to a certain specification. The actual work is sometimes performed by local government authorities at the expense of the subdividers: in such cases the costs of construction are included in the figures above, but when such roads are constructed by private contractors or by direct employees of the subdivider few details are available. However, direct expenditure by the South Australian Housing Trust on street construction, mainly in new subdivisions, was estimated to be approximately £480,000 for 1962-63 and £400,000 for 1963-64.

## 8.4. RAILWAYS

### OWNERSHIP AND CONTROL

Both the State and Commonwealth Governments operate railway systems in South Australia.

In 1851 a "Board of Undertakers" was appointed in connection with the construction of the Adelaide to Port Adelaide railway. In 1856 a Board of Railway Commissioners was appointed to control South Australian railway operations. This board was abolished in 1859 and from then until 1887 control was vested in the Commissioner of Public Works. The South Australian Railways Commissioners Act of 1887 gave almost complete authority for management and administration to three Railways Commissioners, reserving (as in the past) financial control to Parliament. The powers of the three Commissioners passed to one Commissioner in 1892. Many of the provisions of the 1887 Act, including those for financial control, have been incorporated in the present South Australian Railways Commissioners Act, 1936-1950, under which the Commissioner is appointed for a period of seven years.

Management of all Commonwealth Railways is vested in a Commonwealth Railways Commissioner.

In South Australia the only private railways open to general traffic are the lines from Iron Knob and Iron Baron to Whyalla (51 miles), owned by the Broken Hill Proprietary Co. Ltd and used predominantly for the carriage of iron ore.

### HISTORICAL SURVEY

The first railway in South Australia owed its foundation to an inquiry in 1850 directed towards determining "what sheltered part of Encounter Bay could be most conveniently and at least cost connected by canal or rail with the River Murray so as to open up the navigation of that river to the sea".

Port Elliot was selected as the most suitable place for a harbor and it was recommended that a railway for animal traction be constructed between Goolwa and Port Elliot, a distance of seven miles. Despite opposition, the scheme was proceeded with, and early in 1854 the railway was brought into operation. The vehicles were of coach-like construction mounted on railway wheels and drawn by a horse. For many years after they had ceased to be used for their original purpose, these vehicles were used to take tourists across the causeway between Victor Harbor and Granite Island.

During the early years of the colony's existence several unsuccessful attempts were made by company promoters to undertake the construction of a railway from Adelaide to Port Adelaide and it was not until October 1851 that the Government assumed financial responsibility. Construction commenced in 1853 and in April 1856 the 5ft. 3in. line was opened as the first steam operated railway in the State.

The construction of the Adelaide to Port Adelaide railway significantly influenced subsequent railway development in South Australia. The principle of government ownership and operation of steam-traction railways was established, although a few years later the then existing lines (Port Adelaide and Gawler) were unsuccessfully offered for sale or lease and later still two "horse tramways" were leased for two years. In approving the principle of government ownership the British Parliament envisaged that it would enable the Government to plan the main lines of communication in the best interests of the State generally and would preclude multiplicity of gauges which had developed in England under a free enterprise system.

The British Parliament had earlier recommended 5ft. 3in. gauge for adoption in Australia and all colonies had agreed, although New South Wales soon indicated a preference for 4ft. 8½in. An 1850 Bill (subsequently repealed) had stipulated 4ft. 8½in. for the Port Adelaide line but a Select Committee in 1853 recommended 5ft. 3in. because Victoria had adopted that gauge.

After completion of the Port Adelaide railway a northern line to Gawler was constructed in 1857 and extended to Kapunda, then a copper mining town, in 1860. From Roseworthy the main northern railway was extended through wheat and sheep producing areas to reach Burra, another copper mining centre, in 1870 and Terowie ten years later. Terowie is still the most northern point of the 5ft. 3in. gauge system but the line from Terowie north to Peterborough is listed for conversion to 5ft. 3in. in conjunction with the standardization of the Port Pirie-Cockburn line which passes through Peterborough.

During the 1870's a number of comparatively short 3ft. 6in. gauge railways were constructed. The first of these covered the 28 miles from Port Wakefield to Hoyleton: the Bill authorizing the construction of this line originally stipulated 5ft. 3in. gauge but an Upper House amendment, accepted by the Lower House, changed the gauge to 3ft. 6in. mainly on grounds of economy. Lines of that gauge were later built inland from Port Pirie, Port Augusta, Port Broughton, Kingston, and Beachport to provide outlets to the sea for their respective hinterlands. Several of these lines were planned for horse traction and documents recording discussions which occurred at the time indicate the existence of a body of opinion to the effect that they would never be linked with the main arterial system of railways.

The subsequent extension of these narrow gauge lines and of the 5ft. 3in. system created breaks of gauge at Terowie, Hamley Bridge and Wolseley. In his 1887 report the Commissioner of Public Works stated that "the inconvenience (of two gauges) is now felt so acutely that the Government is anxiously considering the best means of overcoming the evil".

[In 1927 the conversion from 3ft. 6in. to 5ft. 3in. gauge of the route from Hamley Bridge to Gladstone and the connecting lines from Balaklava and Brinkworth eliminated the break of gauge at Hamley Bridge but created one at Gladstone. The break at Wolseley was eliminated by the conversion, completed in 1959, of the South-East system to 5ft. 3in. gauge.]

The 3ft. 6in. railway from Port Pirie had been extended to Peterborough by 1881 and its further extension to the N.S.W. border at Cockburn was authorized

in 1884. By 1887 this railway was completed and in January 1888 the line beyond Cockburn owned by the Silverton Tramways Company linked Broken Hill by rail with Port Pirie and Adelaide. The creation of this rail link so early in the life of the Broken Hill mines was one of the factors which led to the opening, in 1889, of smelting works at Port Pirie.

The construction of the 3ft. 6in. railway from Mount Gambier to Naracoorte completed, in 1887, the linking of previously isolated systems with the main railway network.

The main northern railway, with the break of gauge at Terowie, reached Quorn by 1882 and was gradually extended to Oodnadatta, 688 miles from Adelaide, by January 1891. It was on this railway, for several years from 1884, that direct employees of the South Australian Railways were first used for track laying work. Although the experiment was considered to be successful most new railways continued to be constructed by contract. During recent years, however, the usual practice (for new work and conversion) has been to let contracts for earthworks and bridges and to use departmental employees for ballasting and track laying.

The original Goolwa railway referred to earlier, after being extended to Victor Harbor in 1864 and Strathalbyn in 1869, eventually became part of the Adelaide to Victor Harbor Railway over which locomotives first ran right through to Victor Harbor in 1885.

The extension of the Kapunda line to Morgan in 1878, completing the first steam operated railway to tap the Murray in South Australia, virtually ended any prospect that might have existed for establishing Victor Harbor as a port for overseas ships.

Another important development towards the end of a period of rapid railway development was the linking of Adelaide and Melbourne by rail in 1886 using the bridge at Murray Bridge which had then been open to road traffic for seven years.

To make possible the development of large areas of country a start was made early in the present century to build railways out into the mallee lands east and south of the River Murray (5ft. 3in. gauge) and also from Port Lincoln (3ft. 6in. gauge) on Eyre Peninsula. Most of these lines were open by 1915 but in both areas some lines were constructed during the 1920's. The opening of Paringa Bridge across the River Murray in 1927 provided the irrigation areas of Renmark, and in the following year Berri and Barmera with a rail service. The Eyre Peninsula system is not connected with any other railway but has shipping outlets at Port Lincoln and Thevenard. The construction of a 38 mile line from Kevin to Thevenard to replace part of the existing route is nearing completion; this will shorten by 26 miles the distance over which gypsum from Lake MacDonnell must be hauled for shipment.

Brief mention has already been made of the operations of Commonwealth Railways in South Australia. In 1911 the 3ft. 6in. railway from Port Augusta through Quorn to Oodnadatta was transferred to the Commonwealth under the terms of the Northern Territory Surrender Act and was extended to Alice Springs during the period 1923 to 1929. Further developments concerning this route will be mentioned under the heading "Standardization of Rail Gauges".

Construction of the Commonwealth Railways standard gauge (4ft. 8½in.) line from Port Augusta to Kalgoorlie commenced in 1913. The route was opened on 22nd October 1917, giving Perth rail communication with Adelaide and the eastern States.

The South Australian Railways 5ft. 3in. gauge line which had been constructed as far as Red Hill by 1925 was extended to Port Pirie in 1937. In the same year a 4ft. 8½in. gauge line from Port Augusta to Port Pirie was opened by the Commonwealth Railways. Rail traffic between Adelaide and Perth, which previously had passed through Peterborough and Quorn, subsequently followed this shorter route to Port Augusta *via* Port Pirie.

A bogie exchange centre at Port Pirie was opened in November 1965 to facilitate the straight-through railing of interstate freight over the change of gauge without transshipment. Transfer by bogie exchange can be effected in approximately one twelfth of the time required to tranship manually. The exchange centre has a planned capacity of 32 vehicles per eight hour shift.

Only a small portion of the Adelaide metropolitan area is served by railways. The main trunk routes pass through northern and southern suburbs; the line to Willunga, although closed to passenger traffic beyond Hallett Cove, serves south-western suburbs; the Port Adelaide line, its extensions to Semaphore and Outer Harbor, the branch line to Grange, and spur lines to industrial establishments provide better coverage in north-western suburbs than is achieved elsewhere in Adelaide. For many years two railways linked Adelaide and Glenelg: in 1929 the route *via* North Terrace and Richmond was closed and the South Terrace route was converted to its present use as a tramway.

#### *Summary*

Much of the basic work of establishing the railway network which serves South Australia was concentrated in two comparatively brief periods, from about 1877 to 1887 when approximately 1,200 miles of lines were constructed, and from 1910 to 1917 when about 1,500 miles were added.

Before 1877 a number of scattered lines totalling roughly 300 miles had been constructed.

During the eleven years to 1887 rail communication with the eastern States was established, the rich ore deposits at Broken Hill were tapped, a line was built through northern pastoral areas toward the Northern Territory, and railways from outports to their hinterlands (predominantly agricultural but more pastoral in the South East) were extended and linked with arterial services centred on Adelaide.

During the following 22 years only 200 miles of new lines were opened. Then in an eight-year period railways were constructed to facilitate the agricultural development of Eyre Peninsula and the Murray Mallee lands, and the Commonwealth Railways built a line to Western Australia.

Since 1917 route mileage open has increased by about 600 miles only. The emphasis during recent years has been upon conversion of 3ft. 6in. lines either direct to 4ft. 8½in. or to 5ft. 3in. as an interim to possible ultimate conversion to the standard gauge.

The table which follows shows route mileage of railways open for traffic for every fifth year from 1856.

**State and Commonwealth Government Railways**  
*Gauges, Route-mileage open in South Australia*

| Date                  | 5ft. 3in.<br>Gauge | 4ft. 8½in.<br>Gauge | 3ft. 6in.<br>Gauge | Total |
|-----------------------|--------------------|---------------------|--------------------|-------|
| <b>31st December—</b> |                    |                     |                    |       |
| 1856.....             | 7                  | —                   | —                  | 7     |
| 1861.....             | 56                 | —                   | —                  | 56    |
| 1866.....             | 56                 | —                   | —                  | 56    |
| 1871.....             | 105                | —                   | 28                 | 133   |
| 1876.....             | 133                | —                   | 137                | 270   |
| 1881.....             | 251                | —                   | 549                | 800   |
| 1886.....             | 495                | —                   | 716                | 1,211 |
| 1891.....             | 504                | —                   | 1,162              | 1,666 |
| 1896.....             | 493                | —                   | 1,229              | 1,722 |
| 1901.....             | 507                | —                   | 1,229              | 1,736 |
| 1906.....             | 594                | —                   | 1,238              | 1,832 |
| 1911.....             | 622                | —                   | 1,313              | 1,935 |
| <b>30th June—</b>     |                    |                     |                    |       |
| 1916.....             | 977                | 361                 | 1,688              | 3,026 |
| 1921.....             | 1,122              | 598                 | 1,688              | 3,408 |
| 1926.....             | 1,238              | 598                 | 1,739              | 3,575 |
| 1931.....             | 1,451              | 598                 | 1,676              | 3,725 |
| 1936.....             | 1,451              | 598                 | 1,676              | 3,725 |
| 1941.....             | 1,480              | 654                 | 1,675              | 3,809 |
| 1946.....             | 1,480              | 654                 | 1,665              | 3,799 |
| 1951.....             | 1,530              | 654                 | 1,621              | 3,805 |
| 1956.....             | 1,622              | 654                 | 1,540              | 3,816 |
| 1961.....             | 1,673              | 871                 | 1,291              | 3,835 |
| 1963.....             | 1,676              | 871                 | 1,291              | 3,838 |
| 1964.....             | 1,655              | 871                 | 1,291              | 3,817 |

Mileage of the Goolwa-Port Elliot line which was completed in 1854, and its extensions to Victor Harbor (1864) and Strathalbyn (1869) has been excluded from the above table for years prior to 1884-85, when the route was converted from horse to locomotive traction.

### STANDARDIZATION OF RAIL GAUGES

The existence in South Australia of 3ft. 6in., 4ft. 8½in., and 5ft. 3in. systems has already been noted.

For many years railway administrators have been greatly concerned about the increased costs and decreased efficiency associated with the transshipment of goods and passengers and with the provision, maintenance and operation of different sets of rolling stock. During recent years with the rapid development of road and air transport facilities there has been increasing pressure for standardization of rail gauges in the interests of efficiency and economy of operation of transport services as a whole.

In 1946 an agreement was signed between the Commonwealth Government and the States of N.S.W., Victoria, and South Australia regarding the standardization of railway gauges in their respective States. This agreement was subsequently ratified by the Governments of the Commonwealth, Victoria and South Australia but not by the N.S.W. Government. After some time had elapsed and New South Wales had failed to ratify the agreement, the Commonwealth Government decided to enter into a separate agreement with South Australia and the necessary legislation was enacted in 1949 by each Government concerned.

It was agreed that the whole of the South Australian Railways system, except the 3ft. 6in. gauge lines on Eyre Peninsula, be converted to the standard 4ft. 8½in. gauge and the Commonwealth would provide a standard gauge railway from Port Augusta to Darwin. The Commonwealth agreed to meet the full cost of work on Commonwealth Railways and to provide all finance (of which South Australia must repay 30% over a period of years) for the conversion of State railways.

By an amendment to this agreement the conversion of the South-East system from 3ft. 6in. to 5ft. 3in. completed in 1959 at a cost of £5 million was accepted as an interim to final conversion to 4ft. 8½in. Lines from Beachport to Millicent and Wandilo to Glencoe were closed in 1956 and 1957 respectively as traffic did not justify conversion.

As part of the agreement and at a cost of £12.2 million, the Commonwealth has built a 4ft. 8½in. line from Stirling North to Marree to replace that portion of the old railway to Alice Springs. From Stirling North to Brachina this standard gauge line follows a new route: the old railway has been closed from Hawker to Brachina but from Stirling North through Quorn to Hawker, still as a Commonwealth line, it remains open for occasional goods traffic.

In March 1956 a committee of members of the Federal Parliament was formed to consider whether it was desirable to confine standardization to the main trunk routes. In October 1956 the committee recommended that 4ft. 8½in. lines be provided from Wodonga on the Victorian-N.S.W. border to Melbourne, from Broken Hill to Adelaide *via* Port Pirie, and from Kalgoorlie to Fremantle. Conversion of the Victorian line for dual gauge operation (both 5ft. 3in. and 4ft. 8½in.) was completed in 1962 and in that year work commenced on the Western Australian sections.

In 1963 the Commonwealth Government decided to proceed with the standardization of the Port Pirie-Broken Hill railway as part of the 1949 agreement. By the end of 1965 almost £4 million had been spent on this project, and work was proceeding towards a target of completion by December 1968. As previously indicated the line from Terowie to Peterborough is to be converted from 3ft. 6in. to 5ft. 3in. gauge, thus preventing an increase in the number of places at which breaks of gauge occur.

Specific Commonwealth approval is necessary before any standardization work can be commenced under existing agreements. No such approval has been announced for works in South Australia other than those mentioned above.

## 8.5—HARBORS

The State of South Australia has a coastline more than 2,400 miles in length including Kangaroo Island; the eastern portion of the mainland has three great indentations—Encounter Bay, Gulf St. Vincent, and Spencer Gulf. Although the gulfs were a barrier to transport overland, especially to Eyre Peninsula, they offered many harbors for shipping and it was by this means that early settlers were able to receive their supplies and send their products to market.

Although there are many seaports in South Australia, at present only 38 are classified as actively engaged in meeting the requirements of shipping interests. Of these harbors, 30 have State-owned wharves or jetties and 8 privately owned wharves or jetties. The Broken Hill Pty. Co. Ltd. owns and operates bulk handling facilities, etc., at Ardrossan, Rapid Bay and Whyalla, and the Broken Hill Associated Smelters Pty. Ltd. a jetty at Wardang Island, whilst the Colonial Sugar Refining Co. Ltd. owns and operates a bulk loading installation at Ballast Head, Kangaroo Island. The Commonwealth Railways operates the wharf at Port Augusta on behalf of the Commonwealth Government, and the Electricity Trust of South Australia has built a jetty at Curlew Point, Port Augusta. The Port Stanvac oil terminal commenced operations in December 1962 and is owned by Petroleum Refineries (Aust.) Pty Ltd.

There are five deep-sea ports operated by the State, viz Port Adelaide, Port Pirie, Port Lincoln, Thevenard, and Wallaroo, whilst overseas vessels are also accommodated at Whyalla. Proposals for a deep-sea port in the South-East at Cape Jaffa have not been carried any further. In addition to the five deep-sea ports and the privately owned wharves and jetties, there are 25 other shipping ports and 45 fishing and promenade wharves and jetties. A boat haven has been established on Lake Butler at Robe whilst slipways have been provided at some of the fishing ports.

### CONTROL OF HARBORS

In earlier days, many of the wharf frontages of the State were alienated from the Crown. This attracted general attention, and opinion was aroused to the necessity of re-establishing public control as far back as 1880. As the result of a report by a Royal Commission in 1911, the Harbors Act of 1913 was enacted. It provided mainly for the acquisition by the Crown of wharves, water frontages and other properties; the creation of a board called The South Australian Harbors Board; for vesting in this board the wharves, water frontages, and other properties acquired by or vested in the Crown. The board appointed consisted of three members called Harbors Commissioners, who held office for a term of five years.

Under the Harbors Act, 1936-1962, the board has the control and management of all harbors in the State and of navigation therein, and of all harbor works which are not private property; also of all navigation lights, buoys and other sea marks which are not vested in the Commonwealth. Subject to ministerial control in certain cases, the board is responsible for the construction, improvement, maintenance, and repair of harbor works within its jurisdiction, and for the deepening of channels.

Accommodation constructed by the Harbors Board for fishing boats pursuant to the Fisheries Act Amendment Act, 1956, is under the control of the board.

The tonnages handled in the ports operated by the board in 1963-64 were 7,821,000 tons or 48 per cent of the total tonnage of 16,278,000 tons passing through all the ports in South Australia; the balance being handled by the privately owned wharves. The total funds employed at 30th June 1964 were £20,675,000, including £364,000 for fishing havens.



**The South Australian Harbors Board**  
**Funds Employed, Revenue and Expenditure**

| Year          | Funds Employed | Revenue | Expenditure from Revenue |          |       | Surplus (+) or Deficit (-) |
|---------------|----------------|---------|--------------------------|----------|-------|----------------------------|
|               |                |         | Working Expenses         | Interest | Total |                            |
| £'000         |                |         |                          |          |       |                            |
| 1959-60 ..... | 16,611         | 2,315   | 1,575                    | 612      | 2,187 | +128                       |
| 1960-61 ..... | 17,762         | 2,715   | 1,685                    | 658      | 2,343 | +372                       |
| 1961-62 ..... | 18,942         | 2,576   | 1,676                    | 701      | 2,377 | +199                       |
| 1962-63 ..... | 19,667         | 2,549   | 1,672                    | 766      | 2,438 | +111                       |
| 1963-64 ..... | 20,675         | 3,057   | 1,795                    | 791      | 2,586 | +471                       |

### HISTORICAL

#### DEVELOPMENT IN THE NINETEENTH CENTURY

The use of Port Adelaide as a port began with the first settlement in December 1836 when Colonel Light sailed into "Barker's Inlet" on 18th December and decided that it was a suitable harbor for the new colony. To establish a suitable landing, the first settlers had to dig a large ditch through 400 yards of mangroves which intervened between solid land and the river at its southern extremity. The first port was a failure because of the difficulties in navigation and loading and unloading cargoes of the windjammers. It earned the name Port Misery.

On 25th May 1839 construction was begun on a road to connect the Port River with the solid ground of Alberton; the building of a new port had started. The road was 92 chains in length, 35 feet in width and raised one foot above the highest tide measured since the establishment of the colony, and at its termination a substantial wharf was erected and named the McLaren wharf. The whole undertaking was carried out by the South Australian Company and completed by October 1840. The Port was connected to Adelaide by railway in 1856.

Other early ports were at Port Elliot, Port Wakefield and Robe; records of 1854 shows imports and exports from these harbors. In 1851 the Government of South Australia offered a bonus of £4,000 to any person who would give a practical demonstration of the navigability of the River Murray. The first river-borne wool was conveyed on the *Lady Augusta* to Goolwa on 14th October 1853. The Goolwa to Port Elliot railway, opened in 1854, was extended to Victor Harbor in 1864 and the latter port replaced Port Elliot as a shipping harbor. The timber causeway of a length of 2,260 feet between the mainland and Granite Island, Victor Harbor, portion of which had been constructed as a jetty and wharf in 1862, was completed in 1883.

By the 1870's ports had been established as far north as Port Augusta and as far south as Port MacDonnell whilst river trade was recorded at Morgan. At that time, the greatest number of vessels were at Port Adelaide, Port Pirie, Goolwa, and Morgan although the greatest tonnage of shipping was at Port Adelaide and Glenelg. The limited depth of the Port River (9 feet over the inner and outer sandbars) was suitable for the early sailing ships, but as vessels increased in size dredging became necessary. Even so, the channel was not deep enough for some vessels, and the first English mail-steamer to visit South Australian waters in 1874 had to anchor off Glenelg in Holdfast Bay. This continued to be the calling place for such steamers until 1888. By then a jetty had been constructed at Largs Bay and the landing of mails was transferred to it.

The ships anchored at the Semaphore anchorage and passengers and mails were lightered to the jetty; the cargo was transported by lighter to Port Adelaide. A further improvement at Port Adelaide about this time was the replacement of an old wooden bridge, from the Copper Company's wharf to the peninsula, by the iron swing Jervois Bridge in 1878. Construction of an outer harbor in the gulf itself at the mouth of the Port River commenced in 1903; the first vessel to make use of this deeper accommodation arrived in 1907.

The building of wharves at Port Adelaide had been mainly a private venture and by 1880 there were privately-owned wharves measuring 10,193 feet whilst Government-owned wharves measured 2,740 feet.

### Northern Ports

Early attempts at settlement in the drier areas of the State failed but a depot for imports and exports of the fertile country north of Mount Remarkable was necessary by 1852. The site at the head of Spencer Gulf was chosen and named Port Augusta. Records show that in 1854 the first wool shipment of 24 bales was sent to Port Adelaide by a small vessel the *Daphne*. By 1860 the quantity of wool lifted was about 10,000 bales. In 1857 the South Australian Parliament made a grant of £1,000 for a steamer to Port Lincoln and Port Augusta, and the *Marion* began a fortnightly communication between Port Adelaide and these ports. Port Augusta became an important shipping centre by 1862 and in that year the first direct cargo arrived there from England. In these years the town became the centre of the great northern pastoral district.

Port Pirie on the eastern side of Spencer Gulf began as a harbor with the erection of a Government wharf in 1876. Other wharves were erected by commercial interests in the next few years. After the mineral discoveries at Broken Hill, Port Pirie was chosen as the site for the smelting of lead ores and export of lead and ore concentrates. The smelters began operating in 1889 and Port Pirie became the main port in Australia for the export of these minerals. A new north Government wharf was leased to the mining company. Wharves were commenced in 1884 on the site of several small jetties and completed in 1887. By 1899, Port Pirie had three Government-owned wharves, and four wharves which were privately-owned. The length of all wharves at Port Pirie was about 5,200 feet. At Port Augusta in 1882 there were two Government-owned and seven privately-owned jetties. Of interest, was the jetty built at Port Germein in 1881 and extended in 1884 to its present length of 5,459 feet. It remains the longest jetty in South Australia although it ceased to be used for commercial shipping in 1948.

### South Eastern Ports

South Eastern ports were established at Kingston, Beachport, and Port MacDonnell, in addition to the early port of Robe, named after Governor Robe. Mount Gambier had become the centre of a settlement in this higher rainfall area by 1861. Railways of 3ft. 6in. gauge were built from Kingston and Beachport in the 1870's to provide improved transport to these seaports from the hinterlands.

### Eyre Peninsula Ports

As early as 1857 a jetty was constructed at Port Lincoln. The Port Lincoln harbor was discovered by Matthew Flinders in 1802 and named by him in honour of "my native province". Settlement was slow and jetties were not constructed at harbors along the coast of Eyre Peninsula until some years later, for instance jetties were constructed at Tumby Bay in 1874, Elliston 1881, Streaky Bay 1892, and Fowlers Bay in 1896. The latter harbor is the farthest

west of South Australian ports. Shipping from these ports was intra-state and outward cargoes, wheat or wool from the settlements beyond the ports, were shipped to Port Adelaide for transshipment interstate or overseas.

With the construction of the railway from Port Lincoln to Cummins, the erection in Port Lincoln of a new jetty at a more suitable site became necessary. This jetty was erected at Kirton Point in 1906; it had a maximum depth of 25 feet and could accommodate overseas vessels. Port Lincoln now assumed a new importance as a port and vessels from other Eyre Peninsula ports unloaded their cargoes there for transshipment. In addition, a further increase in trade resulted from the transport of produce by rail, especially after the line was extended to Thevenard in 1915.

A port which handled a different type of cargo was Hummock Hill, to the north on the east coast of Eyre Peninsula. About the turn of the century exploitation of mineral ore deposits at Iron Knob and Iron Monarch, some 33 miles inland was commenced by the Broken Hill Pty. Co. Ltd. The iron ore was first transported by wagons to Port Augusta and thence by rail to Port Pirie. As this procedure proved uneconomical the company sought, and in 1900 was granted, authority by Parliament to construct a railway from Iron Knob to Hummock Hill. The construction of a railway and a jetty enabled the ore to be transferred to barges and shipped across the Gulf to Port Pirie. Between 1900 and 1911 over 600,000 tons of ore were shipped in this way. In 1914 the name of the town was changed to Whyalla. With the establishment in 1915 of the steelworks at Newcastle, New South Wales, ore crushing facilities were installed at Whyalla, the jetty was extended and a conveyor belt loading system was installed. The extension of the jetty allowed for the berthing of deep draft vessels which transported the ore direct to Newcastle.

### **Yorke Peninsula Ports**

Settlement of Yorke Peninsula also had a slow beginning. The discovery of copper at Wallaroo and Moonta in 1859 and 1861 led to mines being opened and settlement in this northerly part of the Peninsula. Jetties were erected at both these seaports about 1880. The mining and smelting company closed down in the early 1920's but the surrounding countryside had earlier developed into a grain and pastoral economy and Wallaroo harbor remained one of the main grain exporting ports.

Many other harbors were utilized by the erection of jetties after settlements had been made further south on Yorke Peninsula. Jetties were erected at Edithburgh in 1872, at Stansbury and Ardrossan in 1877, and at Port Victoria in 1878. Shipping from these ports and others not mentioned was mainly intrastate.

### **Kangaroo Island Ports**

The first vessel for South Australia, the *John Pirie*, left London for this State on 22nd February 1836, arriving at Kangaroo Island on 16th August. Even earlier, sealers and whalers had camps on the otherwise uninhabited Kangaroo Island. However, once Colonel Light had decided against Nepean Bay as a suitable harbor for the future capital of the State, development on Kangaroo Island was relatively small. A jetty was built at Kingscote in 1886 and this was replaced by an improved timber structure in 1910. A jetty was also erected at Hog Bay in 1902.

## DEVELOPMENT IN THE TWENTIETH CENTURY

As shipping increased through increased trade, many outport jetties were strengthened or replaced by better structures; in some cases new jetties were built nearby and the old jetties remained for fishermen. As the size and draft of vessels increased jetties were lengthened into deeper waters. Many new jetties were erected in the early part of the new century, e.g., Murat Bay, Smoky Bay and Thevenard on the West Coast. In the 1930's some of the wooden wharves at Port Adelaide were replaced by concrete and sheet steel piling structures. At Port Pirie the Baltic wharf was reconstructed during 1938-1940. Coal handling facilities were installed at Osborne, Port Adelaide. Deepening or clearing of channels and deepening of berths was carried out by dredging over the years to keep most harbors open to shipping and to be able to accommodate larger and larger vessels. The opening of the Birkenhead Bridge in 1940 marked a further stage of development at Port Adelaide. Coastal shipping flourished in the pre-war period with regular services to the Gulf ports, West Coast and Kangaroo Island. Ketch traffic went to the main ports, carrying grain from the smaller outports for loading oversides into interstate or overseas vessels.

A change in the pattern of intrastate shipping has occurred with the erection of bulk-handling facilities for grain at major ports in recent years. These facilities are now available at Port Adelaide, Port Pirie, Wallaroo, Port Lincoln and Thevenard and wheat and barley are being loaded at Ardrossan under agreement with the private owner. Grain is being carted overland to silos and loaded aboard overseas vessels by means of conveyors, so eliminating ketch trade from the smaller ports.

With no alternate means of transport and new soldier settlements in the 1950's, shipping trade to and from Kangaroo Island has increased. At the port of Kingscote the existing jetty has been widened and lengthened since May 1955. Additional harbor facilities were made with the provision of a trailership berth for the roll-on roll-off vessel m.v. *Troubridge* which went into service in November 1961. Trailership berths were also built at Port Adelaide and Port Lincoln.

## Decline in the Use of Harbors

In 1950 the Harbors Commissioners reported that the majority of the numerous ports established over the years along the coastline of South Australia and along the River Murray were operated at a loss. When these outport jetties and wharves were constructed, sea or river transport was practically the only means available to the settler on the land. However, the advent of motor transport and improved roads, and in some cases a preference for railways, meant that much of the water-borne trade had been diverted. Many of the numerous outports which once served the outback trade of the State were not used at all, whilst others were used for cargoes which could not be conveniently or more cheaply handled by other transport.

At one time it was thought that shipping along the River Murray would play an important role in South Australia's commercial transport system. However, the development of railway systems in New South Wales and Victoria and South Australia and the erection of the first bridge at Murray Bridge in 1879 took the trade away from the river steamers and the commercial use of South Australian river ports quickly declined. By the time of Federation in 1901 the importance of the Murray as a medium of commercial transportation had largely ceased.

Of more recent origin, is the decline in the use of some outports due to the introduction of silos at railway sites and major ports and the erection of bulk-handling facilities for grain as mentioned earlier.

### FUTURE DEVELOPMENT

The competition from road and rail transport intrastate has affected the larger ports as well, so that very little general cargo is carried between ports in this State. To decrease the delay in the turn round of vessels (especially overseas and interstate vessels) port facilities in the major harbors have been improved or are to be improved, *e.g.*, reconstruction of wharves and deepening of berths and channels, installation of overhead cranes, increased storage sheds, etc.

The Greater Port Adelaide Plan was published in 1949 and embraced some twenty projects which the Harbors Board believed possible of completion before the end of the century. Amongst other projects the plan included:

- (1) The provision of adequate and up-to-date berths for shipping, new docks and an additional marshalling yard.
- (2) The rehabilitation of the board's dockyard at Glanville.
- (3) The deepening of the Port River.
- (4) The extension of the Osborne coal handling installation.
- (5) Provision of an oil dock.

Some phases of this plan have been completed whilst others are still to be carried out. In April 1964, approval was given for a start on a three stage plan, over six or seven years to widen and deepen the Port River at a cost of £3.3 million. The stages include widening of river bends, deepening and widening between Outer Harbor and Osborne, and deepening and widening the inner basin at Port Adelaide. Widened bends will enable bigger ships to negotiate the Port River.

A proposal for a new passenger terminal at Outer Harbor at a cost of nearly £600,000 was made in June 1964. It was stated that South Australia needed "a front entrance" of which it could be proud. The proposal included a filtered water supply for passenger ships.

### TIDES AND WATER DEPTH

Tides—the daily ebb and flow of the waters of the ocean—are due to gravitational effect of the sun and moon. Spring and neap tides are associated with phases of the moon, *i.e.*, spring tides with the new moon and full moon, and neap tides with the first quarter and last quarter of the moon.

All around the Australian coast there is a well-marked "diurnal inequality", as it is termed; that is the forenoon and afternoon tides are not of equal height, but one may be much higher than the other. The mean tide rises in the following table are shown as higher high water and lower high water, rather than as high water springs and neaps. This is the method of measuring tides which have this "diurnal inequality", found in nearly all South Australian ports.

## Tides and Water Depth, South Australian Ports, 1st January, 1965

| Port                                 | Maximum Depth<br>(Low Water,<br>Ordinary<br>Spring<br>Tides)<br>(a) | Tides           |                         |                        |
|--------------------------------------|---|-----------------|-------------------------|------------------------|
|                                      |   | At              | Mean Rise               |                        |
|                                      |   |                 | Higher<br>High<br>Water | Lower<br>High<br>Water |
|                                      | Ft. In.   |                 | Ft. In.                 | Ft. In.                |
| Outer Harbor—                        |   |                 |                         |                        |
| Channel .....                        | 33 0  | Wharf           | 7 11                    | 6 5                    |
| Wharves .....                        | 35 0  |                 |                         |                        |
| Port Adelaide—                       |   |                 |                         |                        |
| Channel .....                        | 27 0  | Wharf           | 8 0                     | 6 6                    |
| Wharves .....                        | 32 0  |                 |                         |                        |
| Ardrossan—                           |   |                 |                         |                        |
| Channel .....                        | (b)   | Jetty           | 8 10                    | 7 0                    |
| Wharves (B.H.P. Jetty) .....         | 27 0  |                 |                         |                        |
| Port Augusta—                        |   |                 |                         |                        |
| Channel .....                        | 16 0  | Wharf           | 9 2                     | 7 4                    |
| Wharf .....                          | 20 0  |                 |                         |                        |
| Port Lincoln—                        |   |                 |                         |                        |
| Channel .....                        | (c)   | Jetty           | 4 11                    | 3 6                    |
| Wharves (Bulk Loading) .....         | 32 0  |                 |                         |                        |
| Port Pirie—                          |   |                 |                         |                        |
| Channel (Harbor) .....               | 21 0  | Wharves         | 8 4                     | 5 11                   |
| Wharves (Berths 2, 5, 6 and 7) ..... | 27 0  |                 |                         |                        |
| Port Stanvac—                        |   |                 |                         |                        |
| Channel .....                        | (b)   | Wharf           | 6 1                     | 4 7                    |
| Wharf .....                          | 35 0  |                 |                         |                        |
| Thevenard—                           |   |                 |                         |                        |
| Channel .....                        | 23 9  | Jetty           | 5 0                     | 3 7                    |
| Wharf .....                          | 27 0  |                 |                         |                        |
| Wallaroo—                            |   |                 |                         |                        |
| Channel .....                        | 25 0  | Jetty           | 4 10                    | 2 11                   |
| Wharves .....                        | 28 0  |                 |                         |                        |
| Whyalla—                             |   |                 |                         |                        |
| Channel (Ore Jetty) .....            | 25 0  | Jetty and Wharf | 8 1                     | 6 0                    |
| Wharves (Ore Jetty) .....            | 26 0  |                 |                         |                        |

(a) The depth shown against wharves is the greatest at present available and may be found at one berth only at the wharf or jetty concerned.

(b) No approach channel.

(c) Deep water gradually shoaling to depth at wharf.

## 8.6. AERODROMES

There are 636 civil aerodromes in Australia including Papua-New Guinea and of these 125 are owned and operated by the Commonwealth Government and 511 are licensed aerodromes owned and operated by local authorities or private interests. In addition there are some hundreds of authorized landing grounds which are fields prepared for the operation of aircraft but not open to public use. These fields meet Civil Aviation Department specifications less exacting than those used in the development of government owned or licensed aerodromes.

In South Australia at 1st January 1966 there were 12 government and 13 licensed aerodromes as set out below:

*Government owned*

Adelaide  
Ceduna  
Cleve  
Cowell  
Kingscote  
Leigh Creek  
Mount Gambier  
Oodnadatta  
Parafield  
Port Lincoln  
Renmark  
Whyalla

*Licensed*

Cordillo Downs  
De Rose Hill  
Ernabella Mission  
Innamincka  
Kimba  
Millicent  
Minnipa  
Mount Dare  
Musgrave Park  
Naracoorte  
Port Pirie  
Tieyon  
Tintinara

About half of the licensed aerodromes are on stations, missions, etc. in the northern part of the State. Apart from civil aerodromes, there are major aerodromes at Salisbury (Edinburgh Airfield) and Woomera controlled by the Department of Supply through the Weapons Research Establishment. These are used by aircraft associated with trials operations, and by civil charter aircraft carrying passengers and freight.

The main air terminal in South Australia is the Adelaide Airport at West Beach, and although not an international airport, it can be used by international aircraft when required. It is on the scheduled flights of interstate services from Sydney, Melbourne, Perth and Darwin and is the terminus of intrastate services. As part of the Civil Aviation Department's aerodrome development programme to provide improved airport facilities for new types of aircraft, construction was commenced at West Beach in 1947 and the aerodrome was opened to commercial aircraft in February 1955. The primary runway is 6,850 feet long by 200 feet wide and the secondary runway measures 5,420 feet by 150 feet. In addition to radio navigational aid systems and equipment there are modern hangars and a terminal building. The terminal building, opened in 1957 at a cost of approximately £300,000, has a passenger lounge, modern baggage handling facilities, observation decks and incorporates the department's airways operations centre and airport control tower. Of note at the airport is the memorial to the late Sir Ross and Sir Keith Smith and their mechanics Bennett and Shiers to commemorate their flight from England to Australia in 1919. The Vickers Vimy aeroplane is housed in the memorial building together with equipment used on the flight and other souvenirs.

Since the opening of the Adelaide Airport the aerodrome at Parafield, about 11 miles north of Adelaide, has been restricted principally to use by lighter aircraft as operated by air taxi and crop dusting companies, private planes used for business or pleasure, and aircraft belonging to the Royal Aero Club of South Australia whose headquarters remained at Parafield.

Other aerodromes are situated near the larger towns, *e.g.* Mount Gambier, Whyalla, Port Pirie and Port Lincoln and in all cases these aerodromes have replaced the landing fields used by the smaller planes of the first airline companies.

### Control of Aerodromes

At a conference of Commonwealth Ministers and State Premiers in May 1920, it was agreed that the Commonwealth should introduce a Bill to give effect to the Convention for the Regulation of Air Navigation signed in Paris on 13th October 1919. The Air Navigation Act was passed in December 1920 and a Controller of Civil Aviation was appointed as head of the Civil Aviation Branch which came under the jurisdiction of the Department of Defence.

The Act had three main objects:

- (1) Generally to regulate civil aviation activities in Australia.
- (2) To carry out the provisions of the Convention on Air Navigation signed in Paris.
- (3) To apply the principles of the Convention to domestic as well as international flying operations.

Regulations were drawn up under this Act to provide, inter alia, for the registration and periodical inspection of aircraft, licensing of aerodromes, examination and licensing of personnel engaged in flying and in upkeep of machines, prohibition of trick flying, rules of the air, etc.

The South Australian Parliament passed the Commonwealth Powers (Air Navigation) Act, 1921 wherein it referred to the Commonwealth powers to make regulations in connection with international and interstate air navigation. The Air Navigation Act, 1937 provided for the application of the Commonwealth Air Navigation Regulations to and in relation to air navigation within the State of South Australia and repealed the earlier Act.

The Commonwealth civil aviation legislation at present includes the *Air Navigation Act 1920-1963*, the *Australian National Airlines Act 1945-1961* and several other Acts, whilst the State legislation in South Australia includes the 1937 Act and the Civil Aviation (Carriers' Liability) Act, 1962.

Since 1939 Civil Aviation Administration has been a separate department under the Minister for Civil Aviation.

### Early Aerodromes in South Australia

Although Parafield was opened as South Australia's main airport in 1927 other aerodromes had been in use in the metropolitan area for some years. When Parafield became an airport the Miller Aviation Co. and Australian Aerial Service Ltd. moved from the old aerodrome at Albert Park. The other early aerodrome of note was at Northfield near the site of the present Infectious Diseases Hospital. This aerodrome was the headquarters of the Butler and Kauper Aviation Co. Ltd.; Capt. Harry Butler piloted his Bristol monoplane "Red Devil" to Minlaton on 6th August 1919 to carry the first mail by air in South Australia. This field was also used by Sir Ross and Sir Keith Smith following their epic flight in 1919. Other landing fields were also used by the early aviators who were able to land their small aircraft in fields on the outskirts of towns. In 1928, Mr. Bert Hinkler landed his plane at the Morphettville Race-course, and so did Miss Amy Johnson in 1930.

By 1938 the pattern of South Australian air services and the location of aerodromes had been established and Parafield, the focal point of these services, was regarded as one of the busiest and most important airports in the Commonwealth. It was also among the best equipped—radio direction finding, regular meteorological broadcasts, and two-way wireless communication with planes were among the more recent innovations installed or to be installed for the safety



of air travel; a far cry from the wind sock or smudge fire to indicate wind direction.

During the Second World War Parafield was used as a R.A.A.F. training centre and extensive improvements were made before the R.A.A.F. base closed in 1947. After the war a cinder runway 5,400 feet long and 150 feet wide was laid down and many of the newest aircraft began to arrive at Parafield.

### **Recent Developments**

Tintinara aerodrome became a licensed aerodrome during the year ended 30th June 1961 when it was taken over by the District Council of Coonalpyn Downs under the local ownership plan. Port Pirie aerodrome was handed over to the Port Pirie District Council under the plan on 1st December 1961. The local ownership plan provides for the ownership and operation of community aerodromes to be vested in local authorities with assistance towards their future maintenance and development by the Commonwealth Government.

Runways at Port Lincoln and Kingscote were improved to permit the introduction of Convair aircraft services, and more recently the Port Lincoln aerodrome was equipped with permanent low intensity runway and taxiway lighting and the navigational needs for night operations.

In May 1963 a new aerodrome at Musgrave Park in the far north-west of the State was licensed for the Department of Aboriginal Affairs.

In his 1959 report the Minister for Civil Aviation described the Adelaide Airport as having runways and other pavements designed for heavy aircraft, and being capable of expansion to cope with any aircraft types likely to serve Adelaide in the foreseeable future. This statement was proved to be correct with the introduction of Boeing 727 aircraft in November 1964.

## **8.7. ELECTRICITY AND GAS**

### **ELECTRICITY**

In examining the history of electricity production in South Australia, two distinct periods emerge. The period prior to 1946 saw the development of generating capacity by private enterprise and local authorities, with a dominant private company setting the pace from the turn of the century. It was also a period of almost complete dependence on imported fuels. By contrast the post-war era has been one of extremely rapid development under a semi-government authority and has seen the rapid exploitation of local fuel supplies.

### **EARLY DEVELOPMENT**

Electricity production in South Australia is usually traced to the formation, in 1895, of the South Australian Electric Light & Motive Power Co. Ltd. Numerous small generators had, however, been operating prior to this date. In 1897 an Act of Parliament gave this company a franchise over power supply to Port Adelaide and (subject to a poll of ratepayers) to the City of Adelaide and all corporate towns, and also provided for certain public control over its actions.

After some changes of ownership the Adelaide Electric Supply Co., which was to operate the enterprise for the next 40 years, acquired the South Australian interests of the company, including the franchise, in 1904.

The first power station situated at Port Adelaide and with a capacity of 150 kilowatts became operative in 1899. The Grenfell Street power station of approximately 400 kilowatt capacity was completed soon after and supplied the city. As these stations at first generated only direct current the area served was extremely limited. Alternating current was introduced in 1902 and in 1907 the Port Adelaide station closed, with all production being at the Grenfell Street plant.

Electric power for the Municipal Tramways Trust was generated at the trust's own station at Port Adelaide from 1911. The initial capacity of this station was 4,500 kilowatts.

The Grenfell Street power station, which had an installed capacity of 7,250 kilowatts by 1917, was dependent on coal imported from New South Wales and brought by rail or road from Port Adelaide, and on water drawn from the mains. Thus as output grew the city site became increasingly impracticable and a new station was planned at Osborne where coal could be unloaded directly from ships and plentiful water was available for cooling. The Osborne power station was brought into operation in 1923 with an initial installed capacity of 15,500 kilowatts. With the closing of the Grenfell Street power station in 1925 all the company's production activities were centred at Osborne. The Osborne station was later expanded, reaching a maximum capacity of 79,000 kilowatts in 1942.

Considerable expansion of services followed the erection of the Osborne station, particularly into country areas. In 1922 the Act of 1897 had been amended to allow the Adelaide Electric Supply Co. to operate in all parts of the State. Subject to a successful poll of local ratepayers, the company could supply any district and could acquire any local undertaking, replacing local generation with transmission from Osborne.

The trademark of electricity transmission and distribution in South Australia, the steel and concrete 'Stobie pole', was developed in 1925.

The munitions industries of the Second World War, resulting in an increased call on power supplies, served to highlight the disadvantage of almost complete dependence on an imported fuel, viz. New South Wales coal. Following a reappraisal of local coal deposits the Government undertook development of deposits at Leigh Creek, 360 miles north of Adelaide and 160 miles from the sea at Port Augusta. Development has included the creation of an entire township at Leigh Creek and the construction, by the Commonwealth, of a standard gauge railway link from Port Augusta.

The first output from Leigh Creek coal field was available in 1944 with the Adelaide Electric Supply Co. a major consumer.

Of the total installed capacity of power stations in South Australia in 1946 the Osborne plant of the Adelaide Electric Supply Co. accounted for 55%. A further 24% was represented by the plants of local authorities, the majority of this being accounted for by the Municipal Tramways Trust, and the remainder being the property of various municipal and district councils and the Renmark Irrigation Trust. Other plant was in stations, the property of private individuals and firms generating power for sale, or firms generating for their own use and in addition supplying domestic consumers.

#### POST WAR DEVELOPMENT

In 1943 an inquiry was conducted into the general need for expansion of power supplies and in particular on a possible site for a new power station. Following this inquiry the South Australian Electricity Commission was established as a permanent investigating body.

This process of inquiry into the activities of the Adelaide Electric Supply Co. culminated in 1944 with the appointment of a royal commission of inquiry. The commissioners made no criticism of the operating efficiency and general conduct of the company. They were concerned, however, that the pattern of supply and distribution of electric power considered most desirable in the public interest was likely to become increasingly in conflict with the private profit motive guiding the actions of the company. In consequence the commission recommended, and in 1946 the Government approved, the acquisition by the State of the Adelaide Electric Supply Co. and the establishing of a semi-governmental generating authority.

The assets of the Adelaide Electric Supply Co. were vested in the Electricity Trust of South Australia on 1st September 1946 and with them went the added responsibility for co-ordinating and investigating the supply of electricity to all parts of the State.

The trust inherited the 'A' section of the Osborne power station, the first installations of the 'B' section, plans for which were initially prepared in 1938, and a transmission system which included lines extending to Wirrabara, Morgan, Mannum, Strathalbyn and Rapid Bay. These facilities catered for approximately 118,000 consumers.

The post-war period in general has been one of rapid industrial expansion. The Electricity Trust has therefore, since its inception, been concerned not only with expanding the coverage of its services, but also with keeping pace with the rapidly increasing demands of an industrialized society.

#### **Power Generation**

The Osborne 'B' section began generating in 1947 with three boilers designed to burn New South Wales coal. Later installations accommodated either New South Wales or Leigh Creek coal and a number of the boilers at Osborne were subsequently modified to burn oil.

The Trust decided that the next major power station would burn Leigh Creek coal exclusively and as electricity could be carried more cheaply than its coal equivalent it was decided to establish a station at Port Augusta, this being the nearest site to the coal field with a plentiful water supply. Work began at the Port Augusta site in 1948 and the first power was generated in 1954. This station, the Thomas Playford Power Station, had a designed capacity of 90,000 kilowatts. The proving of further coal deposits at Leigh Creek led to the construction of the second power station at Port Augusta and the Thomas Playford 'B' section of 240,000 kilowatt capacity was completed in 1964.

While development was going on at Port Augusta facilities at Osborne were also expanding. By 1957 the 'B' section had an installed capacity of 180,000 kilowatts and a further 60,000 kilowatt turbo-alternator was commissioned in April 1965.

During the 1950's the Electricity Trust acquired and developed installations at Port Lincoln and Mount Gambier, both areas being at that time remote from the central network. Control of electric power at Port Lincoln passed from the Government Produce Department in 1950 and subsequent development included the commissioning of a new oil fired steam power station in 1957. The diesel power station, operated by the Mount Gambier City Council, was acquired in 1956. Later that year a new steam powered station was commissioned. This station normally uses wood as a fuel, obtaining supplies from local sources including an adjacent Woods and Forests Department mill.

Other post war developments have included increased private installations at Whyalla and the erection for the Woods and Forests Department of a wood fired station at Nangwarry in 1961. Following its decision to abandon electric traction the Municipal Tramways Trust closed its Port Adelaide station in 1956.

The rapid growth of generating plant since 1946 can be seen from the following table.

### Electricity Generation, South Australia

#### Installed Capacity of Generating Plant in Power Stations at 30th June<sup>(a)</sup>

| Power Stations                 | 1946      | 1949    | 1952    | 1955    | 1958      | 1961    | 1964    |
|--------------------------------|-----------|---------|---------|---------|-----------|---------|---------|
|                                | Kilowatts |         |         |         |           |         |         |
| Electricity Trust—             |           |         |         |         |           |         |         |
| Osborne .....                  | 79,000    | 142,000 | 172,000 | 204,000 | 264,000   | 264,000 | 264,025 |
| Port Augusta .....             | —         | —       | —       | 60,000  | 92,500    | 212,500 | 332,720 |
| Mount Gambier .....            | —         | —       | —       | —       | 14,200    | 19,200  | 22,230  |
| Port Lincoln .....             | —         | —       | —       | —       | 5,000     | 6,933   | 6,890   |
| Other .....                    | —         | 3,290   | 3,500   | 2,135   | —         | —       | —       |
| Total E.T.S.A. ....            | 79,000    | 145,290 | 175,500 | 266,135 | 375,700   | 502,633 | 625,865 |
| Other government authorities . | 205       | 205     | 205     | 777     | 731       | 4,741   | 3,372   |
| Local authorities .....        | 33,401    | 34,594  | 34,808  | 36,541  | (b) 5,067 | 4,675   | 6,561   |
| Private .....                  | 29,855    | 28,806  | 28,162  | 26,825  | 18,600    | 33,537  | 33,109  |
| Total .....                    | 142,461   | 208,895 | 238,675 | 330,278 | 400,098   | 545,586 | 668,907 |

(a) Includes house plants used for emergency generation.

(b) Municipal Tramways Trust ceased generating in 1956.

At the 30th June 1964 steam generating plants represented 98% of total capacity, the remainder being internal combustion plants.

### Fuels

The development and use of Leigh Creek coal in post war power production and the subsequent decline in the consumption of New South Wales coal has already been referred to.

Another fuel which has emerged in this period is oil. The construction of refineries in Australia has resulted in residual oil being available at a price competitive with coal and increasing quantities of this fuel are being consumed in power generation. The majority of the boilers at Osborne are now oil burning.

Wood has also been used since the construction of the Mount Gambier and Nangwarry power stations. Its future as a fuel is, however, uncertain and depends on alternative uses of waste wood, particularly in the pulp industry.

Leigh Creek coal is currently a more economical fuel than imported coal or oil, and where possible power for the central network is generated at Port Augusta with the Osborne station being used primarily to meet peak loads.

The following table shows the quantities of various fuels consumed by the Electricity Trust in selected years since 1946 and illustrates the considerable movement in their relative importance.

## Electricity Trust of S.A., Fuels Consumed in Steam Power Stations

| Year              | N.S.W.<br>Coal | Leigh Creek<br>Coal | Oil     | Wood    | Coke   |
|-------------------|----------------|---------------------|---------|---------|--------|
|                   | Tons           |                     |         |         |        |
| 1945-46 (a) ..... | 190,889        | 15,101              | —       | —       | —      |
| 1948-49 .....     | 219,416        | 95,001              | 4,591   | —       | —      |
| 1951-52 .....     | (b)345,849     | 154,381             | 6,284   | —       | —      |
| 1954-55 .....     | 343,861        | 394,214             | 6,696   | —       | 2,156  |
| 1957-58 .....     | 328,214        | 668,128             | 47,019  | 61,032  | 14,268 |
| 1960-61 .....     | 185,043        | 938,532             | 98,216  | 110,304 | 12,627 |
| 1963-64 .....     | 72,253         | 1,566,986           | 110,165 | 166,735 | 1,818  |

(a) Consumed by Adelaide Electric Supply Co.

(b) Includes 32,884 tons of overseas coal.

## Transmission and Distribution

The Electricity Trust was specifically charged with the responsibility of expanding its services into country areas. In the immediate post war years shortages of materials somewhat handicapped the rate of extension; however, a vigorous expansion of services in general has taken place as is illustrated in the following table.

## Electricity Trust of S.A., Transmission Lines

At 30th June

| Rated Voltage                | 1946  | 1949  | 1952  | 1955  | 1958  | 1961  | 1964   |
|------------------------------|-------|-------|-------|-------|-------|-------|--------|
|                              | Miles |       |       |       |       |       |        |
| 275,000 volt .....           | —     | —     | —     | —     | —     | 370   | 370    |
| 132,000 volt .....           | —     | —     | 177   | 642   | 642   | 642   | 1,043  |
| 66,000 volt .....            | 105   | 107   | 222   | 277   | 335   | 375   | 430    |
| 33,000 volt .....            | 477   | 502   | 631   | 854   | 1,131 | 1,344 | 1,774  |
| 19,000 (SWER) (a) volt ..... | —     | —     | —     | —     | 26    | 1,877 | 5,065  |
| 11,000 and 7,600 volt .....  | 564   | 756   | 1,041 | 1,728 | 2,537 | 3,303 | 4,627  |
| Total mileage.....           | 1,146 | 1,365 | 2,071 | 3,501 | 4,671 | 7,911 | 13,309 |

(a) Single wire earth return system.

Electric power is transmitted over considerable distances at very high voltages and is stepped down at sub stations and distribution centres.

The most important transmission lines are those connecting the major production centre, Port Augusta, with the metropolitan area. The initial link between these centres was made with two 132,000 volt lines. These lines follow similar routes to Bungama, near Port Pirie, where a sub-station serves the mid-north area. From Bungama the lines diverge, one passing through South Hummocks where a major sub-station supplies Yorke Peninsula, and the other running via Waterloo where a sub-station serves the Upper Murray.

Further lines linking Port Augusta and Adelaide were brought into use in 1960 and 1961. These lines of 275,000 volts are not tapped at intermediate points.

Major transmission lines also extend from the central network, to Woomera (Commonwealth line), Berri (completed 1954-55), Leigh Creek (1961-62), Mount Gambier (1962-63) and Whyalla (1963-64). There is also a line to Radium Hill but this has not been used since the cessation of mining activities. A submarine cable linking Kangaroo Island with the mainland was laid in 1965 and a 132,000 volt line from Whyalla to Port Lincoln is due for completion in 1966.

In recent years extensive use of the single wire earth return system (see table above) has resulted in the supplying of electricity to areas where consumers are so scattered that supply by conventional methods would have been impracticable.

**Electricity Trust of S.A., Number of Consumers**  
**At 30th June**

| Consumers               | 1946 (a)       | 1949           | 1952           | 1955           | 1958           | 1961           | 1964           |
|-------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Residential .....       |                |                | 143,040        | 171,757        | 203,321        | 239,446        | 277,399        |
| Commercial .....        |                |                | 19,664         | 22,955         | 28,275         | 32,615         | 35,477         |
| Industrial .....        |                | Not available  | 2,851          | 4,790          | 6,665          | 10,670         | 15,579         |
| Bulk and traction ..... |                |                | 7              | 16             | 15             | 15             | 10             |
| <b>Total .....</b>      | <b>118,262</b> | <b>136,815</b> | <b>165,562</b> | <b>199,518</b> | <b>238,276</b> | <b>282,746</b> | <b>328,465</b> |

(a) At 31st August.

### FUTURE DEVELOPMENT

A new oil-fired power station is currently under construction on Torrens Island. Two 120,000 kilowatt turbo-alternators have been ordered and it is planned that the first of these will come into operation early in 1967. The possibility of being able to use natural gas as a fuel in electricity generation in this State has been taken into account in the planning of this station.

The Electricity Trust has closely followed development in atomic power production at a number of overseas centres. Such studies are important because the only known large coal deposits in this State are due to be exhausted by about 1995.

### GAS

Gas was generated at three works in South Australia during 1964—two in the metropolitan area and one at Port Pirie. All production was by the South Australian Gas Company, a privately owned company regulated by State legislation. Until recently gas had also been produced at Mount Gambier, and prior to World War I gas works were operated at Gawler, Kapunda and Strathalbyn.

The South Australian Gas Company was incorporated by Act of Parliament in 1861 to supply gas to Adelaide and surrounding villages. The first gas was produced at Brompton in 1863 and subsequent plants were opened at Port Adelaide in 1866 and Glenelg in 1875.

An Act authorizing a second company, the Provincial Gas Company, was assented to in 1869. This company established a metropolitan works at Thebarton in 1871 and country works were opened at Gawler, Kapunda and Strathalbyn. In 1878 this undertaking was absorbed by the South Australian Gas Company and manufacturing at the Thebarton plant ceased. The country works were kept in operation until 1917. Gas was first produced at Port Pirie in 1892.

Following the development of high pressure distribution facilities the South Australian Gas Company was able to centralise its metropolitan production at Brompton with the Port Adelaide and Glenelg plants ceasing production in 1922 and 1923. These plants together with the earlier Thebarton works were retained as holder stations.

In 1928 a new gas works was opened adjacent to the Port River at Osborne. The Osborne works were closed for several years during the 1930's depression.

Since World War II a considerable expansion of manufacturing capacity and distribution facilities has taken place.

## South Australian Gas Co., Capital, Consumers, and Mains

At 30th June

| Particulars                 | 1940   | 1950   | 1960    | 1965    |
|-----------------------------|--------|--------|---------|---------|
| Capital employed (£m) ..... | 2.7    | 3.0    | 9.7     | 14.8    |
| Number of consumers .....   | 61,207 | 84,629 | 121,720 | 160,337 |
| Miles of mains .....        | 904    | 1,042  | 1,569   | 1,895   |

Details of the present day capacity of plant by the type of gas produced are given in the following table.

## South Australian Gas Co., Plant Capacity

At 30th June 1965

| Location         | Coal Gas                | Carburetted<br>Water Gas | Reformed<br>Gas (a) | Liquefied<br>Petroleum<br>Gas (b) | Total  |
|------------------|-------------------------|--------------------------|---------------------|-----------------------------------|--------|
|                  | '000 Cubic Feet per Day |                          |                     |                                   |        |
| Brompton .....   | —                       | 4,000                    | 11,000              | 700                               | 15,700 |
| Osborne .....    | 6,250                   | 700                      | —                   | 700                               | 7,650  |
| Port Pirie ..... | —                       | 250                      | 500                 | —                                 | 750    |
| Total .....      | 6,250                   | 4,950                    | 11,500              | 1,400                             | 24,100 |

(a) Using refinery gas and light virgin naphtha as feedstock.

(b) Mixed with other gases for distribution through the main laying network.

The manufacture of gas by the carbonization of black coal imported from New South Wales was the conventional method of production until the end of World War II. Under this process large quantities of coke and tar are produced as by-products and a declining market for these residuals together with the development of alternative production methods has resulted in less emphasis in recent years on this method of production. During 1964 the company carbonized 184,401 tons of coal at its metropolitan plants and a further 5,737 tons at Port Pirie.

In 1948 and 1950 the company installed plant at Osborne and Brompton for the manufacture of carburetted water gas from oil distillate and coke. This plant was introduced to help meet peak winter loads and can be brought into production much more rapidly than carbonizing retorts.

Liquefied petroleum gas has been available in South Australia since 1957. This gas is largely distributed in portable cylinders although a small quantity is converted for mains distribution when refinery gas is not available, and is also injected directly into the mains during periods of peak winter demand.

Refinery gas from the Port Stanvac oil refinery is piped to the Brompton works where a new reforming plant converts it for domestic use, and a second plant has been installed which will initially use light virgin naphtha as a feedstock. However, both plants will be capable of reforming petroleum products, refinery gas and natural gas. A similar plant is in use at Port Pirie for the reforming of light virgin naphtha.

Gas from the various works is reticulated through most of the metropolitan area and Port Pirie. In addition liquefied petroleum gas is distributed by reticulation at Mount Gambier by the Mount Gambier Gas Company Ltd, at Christies Beach and Reynella by the South Australian Gas Company, and is available elsewhere as bottled gas.

An inter-connected system of high pressure mains traverses the metropolitan area from the Brompton and Osborne works and mains extend south to Darlington, north-east to Tea Tree Gully and north to Elizabeth. The Elizabeth main was first laid for industrial use but now serves over 5,000 domestic consumers including 1,500 in the Elizabeth area. The pressure in these mains is reduced at district governors for distribution through smaller pipes to consumers.

At 31st December 1964 the company was maintaining 1,809 miles of mains from its metropolitan works and supplying over 150,000 consumers. Approximately 80% of the gas supplied was used in domestic dwellings. The Port Pirie system involved 49 miles of mains.

Variations during the day in the demand for gas necessitates the storage of considerable quantities and gas holders with a combined capacity of 10 million cubic feet are situated in a number of suburbs. Facilities exist at Port Pirie for the storage of 340,000 cubic feet of gas.

## 8.8. HOUSING AND BUILDING

### HOUSING

Features of housing development in South Australia have been the high proportion of stone houses built in earlier years, and of brick houses in more recent years. The familiar old-style stone houses are still to be seen in most settled parts of the State, especially in rural areas. The 1947 Census was in fact the first at which houses with outer walls of brick outnumbered those with walls of stone.

The building materials used have largely been determined by the availability of building stone and deposits of clay suitable for brickmaking, and by the relative lack of natural timbers suitable for houses. Recently brick veneer homes have become more popular, particularly in the metropolitan area, but this is partly due to the poor building soil in some of the metropolitan and near-metropolitan areas.

### DWELLINGS: CENSUS DATA

Information on housing is obtained mainly from particulars of dwellings collected at each Census of the population. Tables in this section give details for the latest Census in 1961, together with some comparisons with previous Censuses. For the purpose of the 1961 Census a 'dwelling' was any habitation occupied by a household group living together as a domestic unit, whether comprising the whole or only part of a building. The term 'dwelling' included houses and flats, and in addition habitations ranging from a single-roomed shack to a multi-roomed hotel or institution.

Dwellings have been classified as 'private' or 'other than private'. Private dwellings include private houses, shares of private houses, flats and other private dwellings; other than private dwellings include hotels, motels, boarding



houses, lodging houses and hostels, educational, religious and charitable institutions, hospitals, defence and penal establishments, police and fire stations, clubs, staff barracks and quarters, etc.

Dwelling counts at the 1961 Census and five earlier Censuses are shown below; figures exclude dwellings occupied solely by full-blood Aborigines.

#### Dwellings in South Australia, Censuses 1911 to 1961

| Census    | Occupied |                       |         | Unoccupied<br>(a) | Total<br>Dwellings |
|-----------|----------|-----------------------|---------|-------------------|--------------------|
|           | Private  | Other than<br>Private | Total   |                   |                    |
| 1911..... | 82,108   | 2,035                 | 84,143  | 3,062             | 87,205             |
| 1921..... | 104,295  | 3,619                 | 107,914 | 4,431             | 112,345            |
| 1933..... | 136,611  | 2,663                 | 139,274 | 5,353             | 144,627            |
| 1947..... | 166,118  | 2,420                 | 168,538 | 3,547             | 172,085            |
| 1954..... | 212,095  | 3,206                 | 215,301 | 8,524             | 223,825            |
| 1961..... | 259,344  | 2,564                 | 261,908 | 17,061            | 278,969            |

(a) Includes week-enders, holiday houses and other dwellings whose usual occupants were temporarily absent on Census night.

Total dwellings increased more than threefold in the fifty years to 1961, with the greatest increase (about 107,000 out of a total of 192,000) occurring subsequent to the 1947 census.

It is estimated that there were 306,000 dwellings (including unoccupied dwellings) in South Australia as at 30th June 1964. This is about 27,000 above the 1961 Census figure, and indicates that the post-war growth rate is being maintained.

Dwellings in South Australia were classified as being located in urban or rural areas at the 1961 Census.

#### Dwellings in South Australia, Census 30th June 1961

| Division     | Occupied |                       |         |                        | Unoccupied |                        |
|--------------|----------|-----------------------|---------|------------------------|------------|------------------------|
|              | Private  | Other than<br>Private | Total   |                        | Number     | Proportion<br>of Total |
|              |          |                       | Number  | Proportion<br>of Total |            |                        |
|              |          |                       | Number  | Per Cent               | Number     | Per Cent               |
| Urban—       |          |                       |         |                        |            |                        |
| Metropolitan | 162,551  | 1,349                 | 163,900 | 62.58                  | 5,595      | 32.80                  |
| Other.....   | 45,673   | 516                   | 46,189  | 17.64                  | 3,273      | 19.18                  |
| Rural.....   | 51,120   | 699                   | 51,819  | 19.78                  | 8,193      | 48.02                  |
| Total ..     | 259,344  | 2,564                 | 261,908 | 100.00                 | 17,061     | 100.00                 |

For the Census 'other urban' included all municipalities outside the metropolitan area (except municipalities of less than 1,000 persons) and non-municipal towns of 1,000 persons or more. The table shows that slightly less than 20% of all occupied dwellings were in rural areas. The high proportion of occupied dwellings shown as urban reflects the tendency of South Australians to reside in the metropolitan area and other towns.

The next table gives details of occupied dwellings only, according to the type of dwelling. Private dwellings were classified into the following four categories—

*Private House*—includes houses, sheds, huts, garages, etc. used for dwelling purposes, and shared private houses for which only one householder's schedule was received.

*Share of Private House*—is a portion of a shared private house which is occupied separately and for which portion a separate householder's schedule was received.

*Flat*—is a part of a house or other building which can be completely closed off and which has its own cooking and bathing facilities.

*Other Private Dwelling*—includes private dwellings such as rooms, apartments, etc. which are parts of buildings but are not self-contained units.

### Occupied Dwellings by Class, South Australia, Censuses 1954 and 1961

| Class of Occupied Dwelling                           | 30th June 1954 |               |                | 30th June 1961 |               |                |
|--|----------------|---------------|----------------|----------------|---------------|----------------|
|  | Metro-politan  | Country       | Total          | Metro-politan  | Country       | Total          |
| <b>Private dwellings—</b>                            |                |               |                |                |               |                |
| <b>Private house—</b>                                |                |               |                |                |               |                |
| House .....  | 114,247        | 75,274        | 189,521        | 140,113        | 91,527        | 231,640        |
| Shed, hut, etc. ....                                 | 894            | 1,451         | 2,345          | 931            | 1,956         | 2,887          |
| Share of private house .                             | 9,848          | 2,208         | 12,056         | 7,276          | 1,258         | 8,534          |
| Flat .....   | 4,994          | 680           | 5,674          | 12,239         | 1,855         | 14,094         |
| Other .....  | 2,305          | 194           | 2,499          | 1,992          | 197           | 2,189          |
| <b>Total private dwellings..</b>                     | <b>132,288</b> | <b>79,807</b> | <b>212,095</b> | <b>162,551</b> | <b>96,793</b> | <b>259,344</b> |
| <b>Other than private dwellings—</b>                 |                |               |                |                |               |                |
| Licensed hotel .....                                 | 206            | 371           | 577            | 206            | 371           | 577            |
| Motel, boarding house,<br>etc. ....                  | 1,261          | 324           | 1,585          | 838            | 328           | 1,166          |
| Educational and religious<br>institutions .....      | 68             | 34            | 102            | 84             | 45            | 129            |
| Hospital .....                                       | 81             | 89            | 170            | 95             | 85            | 180            |
| Charitable institutions ..                           | 44             | 12            | 56             | 36             | 8             | 44             |
| Other .....  | (a) 155        | (a) 561       | (a) 716        | 90             | 378           | 468            |
| <b>Total other than private<br/>  dwellings.....</b> | <b>1,815</b>   | <b>1,391</b>  | <b>3,206</b>   | <b>1,349</b>   | <b>1,215</b>  | <b>2,564</b>   |
| <b>Total occupied dwellings</b>                      | <b>134,103</b> | <b>81,198</b> | <b>215,301</b> | <b>163,900</b> | <b>98,008</b> | <b>261,908</b> |

(a) Includes caretakers' quarters classified as 'private dwellings' in 1961.

During the seven year period, the number of houses increased by 22% and flats increased by nearly 150%. The number of flats in the metropolitan area increased by more than 7,000. Shares of private houses decreased as more houses and flats were built. The number of boarding houses, lodging houses, etc. in the metropolitan area decreased by approximately one third.

### Classification of Occupied Private Dwellings

The following tables in this section give details of occupied private dwellings only, classified by material of outer walls, number of rooms, number of inmates, nature of occupancy and (for tenanted private dwellings) weekly rent payable.

### Occupied Private Dwellings by Material of Outer Walls, South Australia Censuses 1954 and 1961

| Material of Outer Walls        | 30th June 1954    |         |         | 30th June 1961    |         |         |
|--------------------------------|-------------------|---------|---------|-------------------|---------|---------|
|                                | Metro-<br>politan | Country | Total   | Metro-<br>politan | Country | Total   |
| Brick (including brick veneer) | 83,185            | 9,609   | 92,794  | 109,451           | 21,578  | 131,029 |
| Stone                          | 25,147            | 41,058  | 66,205  | 23,431            | 40,586  | 64,017  |
| Concrete                       | 6,558             | 5,869   | 12,427  | 10,538            | 7,930   | 18,468  |
| Wood                           | 6,602             | 7,257   | 13,859  | 6,660             | 6,647   | 13,307  |
| Iron                           | 2,959             | 7,275   | 10,234  | 2,578             | 6,912   | 9,490   |
| Fibro-cement                   | 6,905             | 7,437   | 14,342  | 9,320             | 12,172  | 21,492  |
| Other and not stated           | 932               | 1,302   | 2,234   | 573               | 968     | 1,541   |
| Total                          | 132,288           | 79,807  | 212,095 | 162,551           | 96,793  | 259,344 |

In 1961 the number of dwellings with outer walls of brick represented 50.5% of all occupied private dwellings. This was a considerable increase over the 1954 proportion of 43.7% and was well above the overall Australian figure of 34.3% in 1961. Dwellings with stone walls which had decreased from 38.7% in 1947 to 31.2% in 1954, fell further to 24.7% in 1961. Despite this falling proportion, almost 80% of all stone houses in Australia in 1961 were located in this State.

In Australia 41.5% of occupied private dwellings had outer walls of wood, but in South Australia the proportion was only 5.1%.

The proportion of occupied private dwellings with outer walls of brick was particularly high in the Adelaide metropolitan area, increasing from 62.9% in 1954 to 67.3% in 1961.

### Occupied Private Dwellings by Number of Rooms, South Australia Censuses 1954 and 1961

| Number of Rooms<br>per Dwelling                    | 30th June 1954   |                              |       |                               | 30th June 1961   |                              |        |                               |
|--|------------------|------------------------------|-------|-------------------------------|------------------|------------------------------|--------|-------------------------------|
|  | Private<br>House | Share of<br>Private<br>House | Flat  | Total<br>(including<br>Other) | Private<br>House | Share of<br>Private<br>House | Flat   | Total<br>(including<br>Other) |
| 1  | 1,241            | 1,125                        | 18    | 3,064                         | 1,088            | 586                          | 94     | 2,278                         |
| 2  | 4,006            | 2,545                        | 374   | 7,739                         | 1,944            | 1,786                        | 1,265  | 5,721                         |
| 3  | 9,197            | 3,068                        | 1,635 | 14,430                        | 6,298            | 2,519                        | 4,869  | 14,251                        |
| 4  | 33,778           | 2,295                        | 1,970 | 38,280                        | 31,901           | 1,901                        | 4,680  | 38,699                        |
| 5  | 74,288           | 1,435                        | 1,068 | 76,874                        | 104,476          | 1,241                        | 2,066  | 107,849                       |
| 6  | 46,569           | 875                          | 395   | 47,898                        | 59,292           | 199                          | 702    | 60,207                        |
| 7  | 14,320           | 307                          | 111   | 14,755                        | 18,817           | 46                           | 226    | 19,092                        |
| 8  | 4,969            | 128                          | 42    | 5,150                         | 6,211            | 20                           | 99     | 6,333                         |
| 9  | 1,678            | 44                           | 24    | 1,754                         | 2,172            | 7                            | 33     | 2,213                         |
| 10 and over  | 1,588            | 46                           | 17    | 1,660                         | 1,924            | 12                           | 13     | 1,951                         |
| Not stated   | 232              | 188                          | 20    | 491                           | 404              | 217                          | 47     | 750                           |
| Total  | 191,866          | 12,056                       | 5,674 | 212,095                       | 234,527          | 8,534                        | 14,094 | 259,344                       |
| Average number of<br>rooms per private<br>dwelling | 5.20             | 3.46                         | 4.03  | 5.04                          | 5.35             | 3.29                         | 3.80   | 5.17                          |

Note—For definitions of private house, share of private house, and flat, see page 287.

The number of rooms includes kitchen and enclosed sleep-out, but does not include bathroom, pantry, laundry or storehouse. The largest increases in the seven year period were in 5 and 6 roomed dwellings. In 1961, 5 roomed dwellings were 41.6% of all occupied dwellings; 6 roomed dwellings were 23.2%. The total increase in private houses was approximately 43,000 and over 30,000 of these were 5 roomed private houses.

### Occupied Private Dwellings by Number of Inmates, South Australia Censuses 1954 and 1961

| Number of Inmates<br>per Dwelling                                   | 30th June 1954   |                              |               |                               | 30th June 1961   |                              |               |                               |
|---|------------------|------------------------------|---------------|-------------------------------|------------------|------------------------------|---------------|-------------------------------|
|   | Private<br>House | Share of<br>Private<br>House | Flat          | Total<br>(including<br>Other) | Private<br>House | Share of<br>Private<br>House | Flat          | Total<br>(including<br>Other) |
| 1.....  | 12,712           | 2,840                        | 1,078         | 17,586                        | 18,339           | 2,285                        | 3,345         | 25,007                        |
| 2.....  | 44,168           | 4,322                        | 2,382         | 51,657                        | 53,596           | 2,444                        | 5,491         | 62,128                        |
| 3.....  | 41,888           | 2,444                        | 1,197         | 45,958                        | 44,946           | 1,588                        | 2,493         | 49,312                        |
| 4.....  | 42,784           | 1,368                        | 638           | 44,992                        | 50,188           | 1,156                        | 1,543         | 53,034                        |
| 5.....  | 26,864           | 611                          | 250           | 27,809                        | 34,430           | 549                          | 726           | 35,779                        |
| 6.....  | 13,370           | 268                          | 80            | 13,740                        | 18,452           | 284                          | 282           | 19,050                        |
| 7.....  | 5,731            | 131                          | 32            | 5,906                         | 8,342            | 127                          | 144           | 8,625                         |
| 8.....  | 2,590            | 57                           | 11            | 2,663                         | 3,715            | 70                           | 52            | 3,840                         |
| 9.....  | 982              | 11                           | 5             | 1,001                         | 1,422            | 19                           | 14            | 1,456                         |
| 10 and over .....   | 777              | 4                            | 1             | 783                           | 1,097            | 12                           | 4             | 1,113                         |
| <b>Total ....</b>   | <b>191,866</b>   | <b>12,056</b>                | <b>5,674</b>  | <b>212,095</b>                | <b>234,527</b>   | <b>8,534</b>                 | <b>14,094</b> | <b>259,344</b>                |
| <b>Total inmates..</b>  | <b>690,542</b>   | <b>30,466</b>                | <b>14,082</b> | <b>740,424</b>                | <b>856,767</b>   | <b>22,758</b>                | <b>34,894</b> | <b>918,773</b>                |
| <b>Average number of<br/>inmates per private<br/>dwelling .....</b> | <b>3.60</b>      | <b>2.53</b>                  | <b>2.48</b>   | <b>3.49</b>                   | <b>3.65</b>      | <b>2.67</b>                  | <b>2.48</b>   | <b>3.54</b>                   |

Note—For definitions of private house, share of private house, and flat, see page 287.

The slight increase in average number of occupants per occupied private dwelling reversed a trend which had persisted for a long time. The figure fell from 4.02 in 1933 to 3.65 in 1947 and 3.49 in 1954, before rising to the 1961 figure of 3.54.

### Occupied Private Dwellings by Nature of Occupancy, South Australia Censuses 1954 and 1961

| Nature of<br>Occupancy              | 30th June 1954   |                              |              |                               | 30th June 1961   |                              |               |                               |
|-------------------------------------|------------------|------------------------------|--------------|-------------------------------|------------------|------------------------------|---------------|-------------------------------|
|                                     | Private<br>House | Share of<br>Private<br>House | Flat         | Total<br>(including<br>Other) | Private<br>House | Share of<br>Private<br>House | Flat          | Total<br>(including<br>Other) |
| Owner .....                         | 96,528           | 3,664                        | 1,212        | 101,588                       | 115,860          | 2,689                        | 2,555         | 121,266                       |
| Purchaser by instal-<br>ments ..... | 36,584           | 931                          | 173          | 37,741                        | 58,578           | 871                          | 525           | 60,022                        |
| Tenant—                             |                  |                              |              |                               |                  |                              |               |                               |
| Government (a)                      | 12,282           | 52                           | 92           | 12,432                        | 20,152           | 29                           | 1,604         | 21,801                        |
| Private .....                       | 41,138           | 7,120                        | 4,127        | 54,601                        | 34,397           | 4,692                        | 9,082         | 50,085                        |
| Caretaker .....                     | 1,716            | 90                           | 32           | 1,862                         | 1,683            | 80                           | 191           | 1,973                         |
| Other occupancy ..                  | 2,750            | 77                           | 22           | 2,858                         | 2,908            | 89                           | 89            | 3,098                         |
| Not stated .....                    | 868              | 122                          | 16           | 1,013                         | 949              | 84                           | 48            | 1,099                         |
| <b>Total ....</b>                   | <b>191,866</b>   | <b>12,056</b>                | <b>5,674</b> | <b>212,095</b>                | <b>234,527</b>   | <b>8,534</b>                 | <b>14,094</b> | <b>259,344</b>                |

(a) "Government tenant" at 1954 Census, "Tenant paying rent to a government authority including South Australian Housing Trust"; at 1961 Census, "Tenant paying rent to South Australian Housing Trust".

Note—For definitions of private house, share of private house, and flat, see page 287.

Owners and purchasers by instalments occupied approximately 70% of all occupied private dwellings at June 1961 whilst tenants occupied about 27%. The increase in the number of dwellings since the 1954 Census was mainly in dwellings occupied by owners and purchasers by instalments. The metropolitan area contained 65.5% of owner (and purchaser) occupied and 58.5% of tenant occupied private dwellings.

**Occupied Tenanted Private Dwellings<sup>(a)</sup> by Weekly Rent (Unfurnished)  
South Australia, Censuses 1954 and 1961**

| Weekly Rent<br>(Unfurnished)                                    | 30th June 1954       |                                  |              |                               | 30th June 1961       |                                  |              |                               |
|---|----------------------|----------------------------------|--------------|-------------------------------|----------------------|----------------------------------|--------------|-------------------------------|
|   | Private<br>House (b) | Share of<br>Private<br>House (b) | Flat<br>(b)  | Total<br>(including<br>Other) | Private<br>House (b) | Share of<br>Private<br>House (b) | Flat<br>(b)  | Total<br>(including<br>Other) |
| Under 10s. ....   | 1,429                | 104                              | 16           | 1,587                         | 420                  | 12                               | 3            | 443                           |
| 10s. and under 20s.   | 6,793                | 671                              | 124          | 7,717                         | 1,921                | 98                               | 114          | 2,212                         |
| 20s. and under 30s.   | 11,529               | 1,214                            | 450          | 13,368                        | 4,602                | 255                              | 300          | 5,221                         |
| 30s. and under 40s.   | 7,661                | 894                              | 748          | 9,485                         | 4,429                | 282                              | 381          | 5,172                         |
| 40s. and under 50s.   | 3,479                | 507                              | 593          | 4,706                         | 4,308                | 372                              | 440          | 5,196                         |
| 50s. and under 60s.   | 1,164                | 195                              | 240          | 1,642                         | 2,833                | 287                              | 347          | 3,539                         |
| 60s. and under 70s.   | 940                  | 112                              | 221          | 1,303                         | 2,209                | 338                              | 495          | 3,125                         |
| 70s. and under 80s.   | 204                  | 47                               | 115          | 376                           | 997                  | 230                              | 377          | 1,663                         |
| 80s. and under 90s.   | 163                  | 20                               | 73           | 260                           | 858                  | 232                              | 426          | 1,556                         |
| 90s. and under 100s.  | 59                   | 4                                | 32           | 99                            | 471                  | 84                               | 293          | 887                           |
| 100s. and over .....  | 154                  | 23                               | 62           | 242                           | 3,192                | 247                              | 1,964        | 5,456                         |
| Not stated (c) .....  | 7,563                | 3,329                            | 1,453        | 13,816                        | 8,157                | 2,255                            | 3,942        | 15,615                        |
| <b>Total .....</b>  | <b>41,138</b>        | <b>7,120</b>                     | <b>4,127</b> | <b>54,601</b>                 | <b>34,397</b>        | <b>4,692</b>                     | <b>9,082</b> | <b>50,085</b>                 |
| Average weekly rent<br>(unfurnished) per<br>private dwelling .. | 28s. 4d.             | 29s. 6d.                         | 42s. 8d.     | 29s. 5d.                      | 51s. 4d.             | 57s. 1d.                         | 82s. 4d.     | 56s. 4d.                      |

(a) Excludes dwellings where tenants were paying rent to a government authority—including South Australian Housing Trust (1954) and to South Australian Housing Trust only (1961).

(b) See definitions on page 287.

(c) Includes dwellings which were let furnished, rent-free dwellings and dwellings attached to shops, etc. at a combined rent.

Average weekly rents for unfurnished private dwellings almost doubled in the seven year period to June 1961. Of all dwellings for which information was obtained, 27.7% were at a rental of 70s. or more per week in 1961, compared with only 2.4% in this range in 1954. There was a corresponding fall in the proportion of dwellings with weekly rental at less than 40s.—from 78.8% in 1954 to 37.9% in 1961.

### Unoccupied Dwellings

There were 17,061 dwellings unoccupied at 30th June 1961, and only 3,386 of these were vacant and for sale or renting. The following table shows unoccupied dwellings classified by reason for being unoccupied.

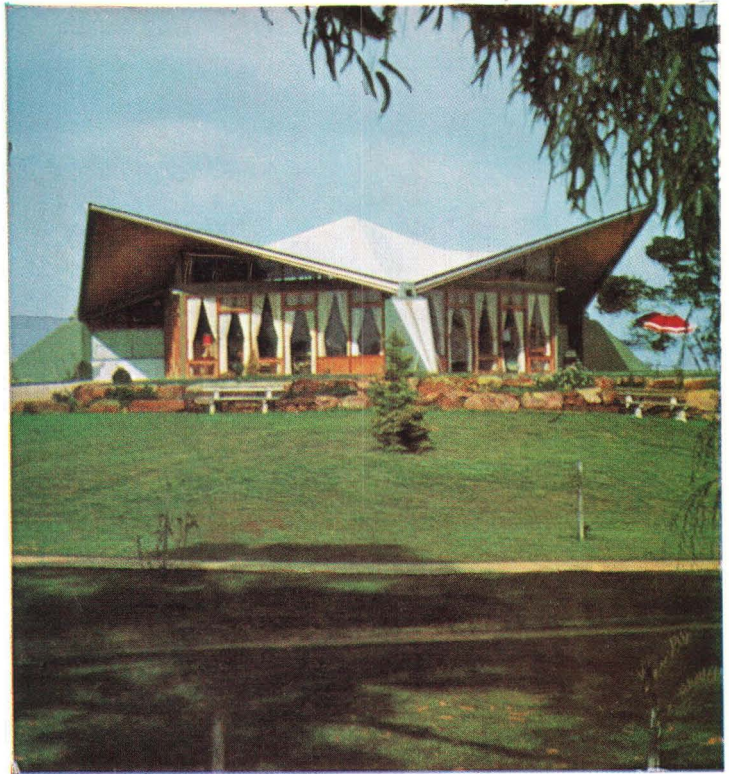
**Unoccupied Dwellings in Statistical Divisions, South Australia  
Census 30th June 1961**

| Division                 | For Sale<br>or Renting | Holiday<br>House,<br>"Weekender",<br>Seasonal<br>Workers'<br>Quarters | Occupants<br>Temporarily<br>Absent | Condemned<br>or to be<br>Demolished | Other and<br>Not Stated | Total         |
|--------------------------|------------------------|---|------------------------------------|-------------------------------------|-------------------------|---------------|
| Metropolitan .....       | 1,673                  | 264   | 2,344                              | 382                                 | 932                     | 5,595         |
| Central .....            | 877                    | 2,596   | 812                                | 119                                 | 1,087                   | 5,491         |
| Lower North .....        | 278                    | 638   | 512                                | 47                                  | 417                     | 1,892         |
| Upper North .....        | 57                     | 54  | 208                                | 4                                   | 103                     | 426           |
| South Eastern .....      | 210                    | 385   | 285                                | 30                                  | 328                     | 1,238         |
| Western .....            | 109                    | 448   | 271                                | 22                                  | 87                      | 937           |
| Murray Mallee .....      | 130                    | 640   | 301                                | 18                                  | 244                     | 1,333         |
| Remainder of State ..... | 52                     | 40  | 34                                 | 3                                   | 20                      | 149           |
| <b>Total .....</b>       | <b>3,386</b>           | <b>5,065</b>  | <b>4,767</b>                       | <b>625</b>                          | <b>3,218</b>            | <b>17,061</b> |

Central Division includes the seaside areas of Victor Harbor, Port Elliot, Port Noarlunga, Christies Beach, Moana and Sellicks Beach; hence the large number of unoccupied holiday houses and weekenders.

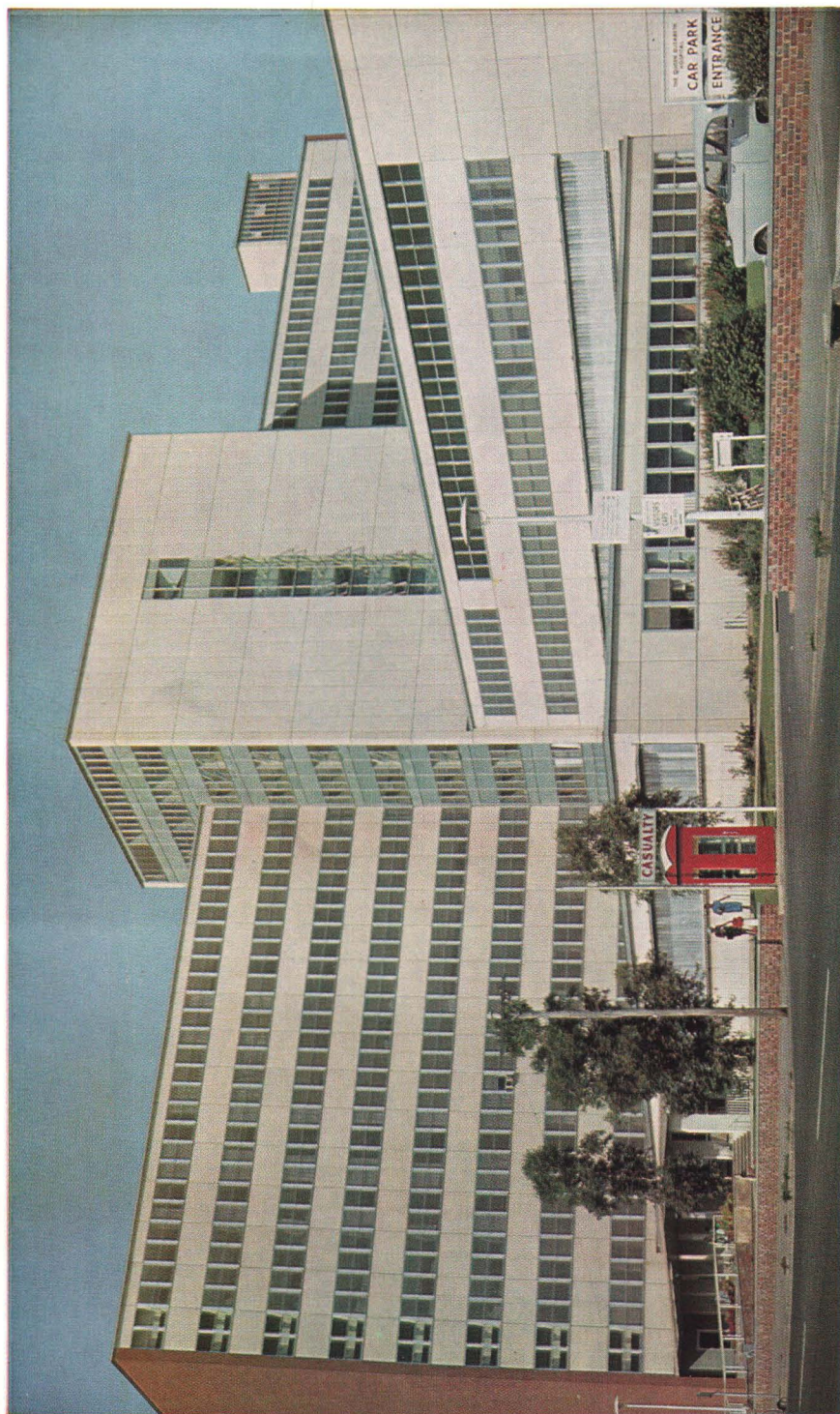


Modern shopping centre at Elizabeth



One of Adelaide's  
restaurants in a park lands  
setting





The Queen Elizabeth Hospital, the most recently completed major hospital in Adelaide

**BUILDING****BUILDING CONTROL**

The Building Act, 1923-1964 gives local government authorities power to control building operations within their municipality or district. This power is not automatic but follows a request from a local government authority for all, or a specified portion of its area, to be brought under the Act. In areas outside the jurisdiction of the Building Act certain building provisions under the Local Government Act, 1934-1964, apply.

Persons erecting or altering buildings on land coming under the Building Act are required to submit to a building surveyor appointed by the local government authority details and plans of the work envisaged and to receive written approval before commencing operations. Authorities concern themselves with such things as the size and location of buildings, the materials used, the height of ceilings and the provision of ventilation and drainage. They have the power to disapprove plans and provisions exist for a right of appeal in such cases.

Following the approval of plans, local government inspectors visit the construction site to inspect foundations and may visit the site at other times to check that council requirements are being met.

In addition to administering the general site and structural requirements of the Act, authorities may effect their own by-laws on certain matters. A by-law may prescribe a higher minimum size for dwelling sites than that provided under the Act or may regulate the positioning of a dwelling on a site. One of the most important by-law powers is that of defining particular areas or zones within which the nature of buildings and their use may be restricted. Thus certain areas may be proclaimed residential areas with industrial and commercial premises, beyond those already in existence, prohibited; other areas are designated as industrial zones.

**BUILDING OPERATIONS**

Details of building operations in South Australia are compiled from returns collected from all builders of new buildings. The statistics relate only to buildings as distinct from other construction activity such as roads, bridges, earthworks and water storage. Additions of £5,000 and over to existing buildings, other than dwellings, are included with new buildings.

All values shown exclude the value of land and unless otherwise stated represent the anticipated or actual value of buildings upon completion.

**Building Approvals**

The following table shows the value of new buildings, and alterations and additions for which approval was given during 1964-65. In addition to information on permits issued to private persons and organizations for building in areas subject to building control, particulars have been included of buildings known to be projected or to have started in areas outside building control and details of contracts let or expenditure authorized by governmental and semi-governmental authorities.

In using approvals as an indicator of building activity it should be noted that certain projects may be cancelled, delayed or altered and resubmitted for approval, that large projects may be spread over a number of years, and that building costs may rise over the period of construction.

Separate details are given for metropolitan and extra-metropolitan areas, but it should be noted that localities such as Elizabeth, Salisbury, Tea Tree Gully and Noarlunga which are urban areas on the fringe of the Statistical Metropolitan Area, are classed as extra-metropolitan.



## Building Approvals, South Australia, 1964-65

| Classification             | New Homes and Flats |        | Other New Buildings<br>(b) | Alterations and Additions<br>(b) | Total Value |
|----------------------------|---------------------|--------|----------------------------|----------------------------------|-------------|
|                            | Number<br>(a)       | Value  |                            |                                  |             |
|                            |                     | £'000  | £'000                      | £'000                            | £'000       |
| Metropolitan area—         |                     |        |                            |                                  |             |
| Private ownership..        | 5,951               | 21,041 | 11,641                     | 6,155                            | 38,837      |
| Government ownership ..... | 761                 | 2,446  | 13,428                     | 420                              | 16,294      |
| Extra-metropolitan area—   |                     |        |                            |                                  |             |
| Private ownership          | 3,826               | 14,486 | 5,257                      | 2,535                            | 22,278      |
| Government ownership ....  | 1,796               | 5,333  | 9,373                      | 533                              | 15,239      |
| Total State ...            | 12,334              | 43,306 | 39,699                     | 9,643                            | 92,648      |

(a) Number of individual dwelling units.

(b) Additions of £5,000 or more to buildings other than dwellings are included with new buildings.

The value of new dwellings approved was made up of houses £36.7 million and flats £6.6 million. Of the £39.7 million allocated to "other new buildings", £7.5 million was for school and other educational buildings, £7.3 million for health premises, £10.2 million for factories and £3.6 million for office premises.

## New Buildings Commenced

A building is recorded as commenced when work on the foundation has begun. In the table below commencements during 1964 have been classified according to ownership at the date of commencement. Almost all houses recorded under the "government" heading were being built for the South Australian Housing Trust, many of them being intended for sale on completion.

## New Buildings Commenced, South Australia

Number and Anticipated Value when Completed of New Buildings Commenced in 1964

| Type of Building                   | Owner-Builders and Private Contractors |        | Government Contractors |        | Total  |        |
|------------------------------------|--|--------|------------------------|--------|--------|--------|
|                                    | Number                                 | Value  | Number                 | Value  | Number | Value  |
|                                    |  | £'000  |                        | £'000  |        | £'000  |
| Houses .....                       | 7,970                                  | 30,493 | 3,554                  | 10,956 | 11,524 | 41,449 |
| Flats (a) .....                    | 1,874                                  | 4,586  | 98                     | 296    | 1,972  | 4,882  |
| Shops .....                        | 99                                     | 1,791  | 3                      | 157    | 102    | 1,948  |
| Hotels, hostels, etc....           | 24                                     | 971    | 1                      | 7      | 25     | 978    |
| Factories .....                    | 197                                    | 8,349  | 11                     | 3,707  | 208    | 12,056 |
| Office premises .....              | 27                                     | 754    | 17                     | 1,397  | 44     | 2,151  |
| Other business premises            | 139                                    | 2,011  | 38                     | 863    | 177    | 2,874  |
| Entertainment and recreation ..... | 46                                     | 515    | 14                     | 395    | 60     | 910    |
| Educational .....                  | 26                                     | 691    | 85                     | 6,007  | 111    | 6,698  |
| Religious .....                    | 45                                     | 1,174  | —                      | —      | 45     | 1,174  |
| Health .....                       | 15                                     | 1,506  | 19                     | 4,323  | 34     | 5,829  |
| Miscellaneous .....                | 32                                     | 791    | 38                     | 1,791  | 70     | 2,582  |
| Total .....                        | 10,494                                 | 53,632 | 3,878                  | 29,899 | 14,372 | 83,531 |

(a) Number of dwelling units ; includes home units.

**New Buildings Completed**

Details of new buildings completed for the years 1955-1964 are given below. A building is regarded as having been completed when the contractor has fulfilled the terms of the contract or in the case of an owner-built house when the dwelling is either completed or occupied, whichever occurs first. However, the value in all cases is that of the building as a finished product.

**New Buildings Completed, South Australia**

| Year      | Number of Dwellings |           | Value of New Buildings |           |        |        |
|-----------|---------------------|-----------|------------------------|-----------|--------|--------|
|           | Houses              | Flats (a) | Houses                 | Flats (a) | Other  | Total  |
|           |                     |           | £'000                  | £'000     | £'000  | £'000  |
| 1955..... | 7,282               | 126       | 21,200                 | 281       | 6,640  | 28,121 |
| 1956..... | 7,673               | 106       | 23,767                 | 265       | 10,797 | 34,829 |
| 1957..... | 7,318               | 316       | 23,539                 | 716       | 12,073 | 36,328 |
| 1958..... | 7,705               | 562       | 25,030                 | 1,342     | 16,272 | 42,644 |
| 1959..... | 8,628               | 591       | 27,983                 | 1,389     | 14,754 | 44,126 |
| 1960..... | 9,379               | 790       | 31,663                 | 2,021     | 18,595 | 52,279 |
| 1961..... | 9,119               | 709       | 31,026                 | 1,862     | 18,904 | 51,792 |
| 1962..... | 9,280               | 583       | 30,983                 | 1,599     | 24,702 | 57,284 |
| 1963..... | 10,316              | 816       | 35,198                 | 2,081     | 22,546 | 59,825 |
| 1964..... | 10,869              | 1,279     | 39,074                 | 3,132     | 27,144 | 69,350 |

(a) Includes home units.

The following table gives further details of dwellings completed over the five years to 1964. During this period there has been a rapid decline in the relative importance of owner-built houses. An owner-built house is one erected by the owner or under the owner's direction by subcontract or day labour but without the services of a contractor who is responsible for the whole job. Owner-built houses accounted for 5.1% of completions in 1964 as opposed to 12.3% in 1960, and represented a continuation of a trend from 1956 when owner-builders were responsible for 35.9% of completions.

**Number of New Dwellings Completed, South Australia**

| Type of Dwelling                   | 1960          | 1961         | 1962         | 1963          | 1964          |
|------------------------------------|---------------|--------------|--------------|---------------|---------------|
| <b>Private—</b>                    |               |              |              |               |               |
| Contract-built houses .....        | 5,420         | 5,070        | 5,797        | 6,854         | 7,380         |
| Owner-built houses .....           | 1,149         | 948          | 674          | 598           | 557           |
| <b>Total houses .....</b>          | <b>6,569</b>  | <b>6,018</b> | <b>6,471</b> | <b>7,452</b>  | <b>7,937</b>  |
| Flats (a) .....                    | 544           | 495          | 455          | 700           | 1,252         |
| <b>Total private dwellings....</b> | <b>7,113</b>  | <b>6,513</b> | <b>6,926</b> | <b>8,152</b>  | <b>9,189</b>  |
| <b>Government—</b>                 |               |              |              |               |               |
| Houses .....                       | 2,810         | 3,101        | 2,809        | 2,864         | 2,932         |
| Flats .....                        | 246           | 214          | 128          | 116           | 27            |
| <b>Total government dwellings</b>  | <b>3,056</b>  | <b>3,315</b> | <b>2,937</b> | <b>2,980</b>  | <b>2,959</b>  |
| <b>Total all dwellings.....</b>    | <b>10,169</b> | <b>9,828</b> | <b>9,863</b> | <b>11,132</b> | <b>12,148</b> |

(a) Includes home units.

The value of buildings, other than dwellings, completed over the same period is shown below. Included under "other business premises" are service-stations, warehouses and communication buildings and under "miscellaneous" are defence establishments, buildings for law and order and certain institutional premises.

**Value of New Buildings Other Than Dwellings Completed<sup>(a)</sup>, South Australia**

| Type of Building                 | 1960          | 1961          | 1962          | 1963          | 1964          |
|----------------------------------|---------------|---------------|---------------|---------------|---------------|
|                                  | £'000         |               |               |               |               |
| Shops .....                      | 1,670         | 1,567         | 4,783         | 3,031         | 1,995         |
| Hotels, hostels, etc. ....       | 1,032         | 924           | 892           | 1,008         | 984           |
| Factories .....                  | 2,972         | 3,396         | 2,396         | 5,256         | 8,764         |
| Office premises .....            | 2,693         | 2,286         | 4,588         | 2,167         | 2,220         |
| Other business premises .....    | 2,433         | 2,167         | 2,396         | 2,220         | 2,616         |
| Entertainment and recreation ... | 607           | 718           | 433           | 515           | 709           |
| Educational .....                | 3,180         | 3,930         | 5,058         | 5,219         | 4,536         |
| Religious .....                  | 377           | 614           | 323           | 686           | 602           |
| Health .....                     | 1,947         | 1,213         | 2,362         | 992           | 2,857         |
| Miscellaneous .....              | 1,684         | 2,089         | 1,471         | 1,452         | 1,861         |
| <b>Total .....</b>               | <b>18,595</b> | <b>18,904</b> | <b>24,702</b> | <b>22,546</b> | <b>27,144</b> |

(a) Includes additions of £5,000 and over to existing buildings.

**Value of Work Done**

The purest measure of building activity is that of value of work done, *i.e.*, of work actually carried out on buildings during the period.

Information on the value of work done on owner-built houses is not collected. However, an estimate based on the value of houses commenced, completed and under construction is calculated for such houses, yielding figures of £2.2 million, £2.0 million, and £2.1 million for 1962, 1963 and 1964 respectively.

**New Buildings: Value of Work Done, South Australia**

| Type of Building                 | 1960          | 1961          | 1962          | 1963          | 1964          |
|----------------------------------|---------------|---------------|---------------|---------------|---------------|
|                                  | £'000         |               |               |               |               |
| Houses (a) .....                 | 28,431        | 26,547        | 29,135        | 33,509        | 37,963        |
| Flats (b) .....                  | 2,135         | 1,542         | 1,768         | 2,111         | 3,771         |
| <b>Total dwellings (a) .....</b> | <b>30,566</b> | <b>28,089</b> | <b>30,903</b> | <b>35,620</b> | <b>41,734</b> |
| <b>Business premises—</b>        |               |               |               |               |               |
| Hotels, etc. ....                | 1,075         | 773           | 989           | 866           | 1,107         |
| Shops .....                      | 1,704         | 3,467         | 3,164         | 2,787         | 3,146         |
| Factories .....                  | 3,146         | 3,634         | 3,139         | 6,195         | 9,414         |
| Office premises .....            | 2,454         | 2,616         | 3,842         | 2,310         | 3,552         |
| Other .....                      | 2,220         | 1,844         | 2,479         | 2,651         | 2,760         |
| Educational .....                | 3,000         | 5,256         | 4,953         | 4,649         | 4,615         |
| Religious .....                  | 471           | 575           | 387           | 664           | 1,182         |
| Health .....                     | 2,108         | 1,001         | 1,647         | 1,912         | 2,350         |
| Entertainment, etc. ....         | 542           | 743           | 383           | 467           | 826           |
| Miscellaneous .....              | 1,424         | 1,782         | 1,446         | 1,594         | 2,350         |
| <b>Total new buildings (a) .</b> | <b>48,710</b> | <b>49,780</b> | <b>53,332</b> | <b>59,715</b> | <b>73,036</b> |

(a) Excludes owner-built houses.

(b) Number of dwelling units; includes home units.

**Buildings Under Construction**

At the end of 1964 new buildings with an anticipated value when completed of £60,387,000 were in the process of construction, with work done on these buildings valued at £24,568,000. There were 5,549 houses and 1,109 flats in the course of construction, having an anticipated value when completed of £22,433,000. The ratio of houses under construction at the end of 1964 to houses completed during that year was 51%, suggesting an average construction period of approximately 6 months. This ratio has shown little variation since 1960; however, in the preceding 5 years from 1955 it fell rapidly from 85%, or an indicated 10-11 months construction period.

**Location of New Dwellings**

In the table below the development of urban areas around the fringe of the metropolitan area is indicated by the number of dwellings completed in the Corporations of Salisbury and Elizabeth, and the District Councils of Munno Para, Noarlunga and Tea Tree Gully. During 1964, 10,228 dwellings (84% of the State total) were completed in or near the metropolitan area; 50.8% inside the metropolitan area and 33.2% in the abovementioned local government areas.

**Location of New Dwellings Completed, South Australia**

| Local Government Area          | 1960          | 1961         | 1962         | 1963          | 1964          |
|--------------------------------|---------------|--------------|--------------|---------------|---------------|
| <b>Metropolitan—</b>           |               |              |              |               |               |
| Brighton .....                 | 280           | 177          | 137          | 204           | 240           |
| Burnside .....                 | 302           | 343          | 272          | 322           | 449           |
| Campbelltown .....             | 750           | 651          | 722          | 657           | 846           |
| Enfield .....                  | 904           | 1,089        | 966          | 713           | 895           |
| Henley and Grange .....        | 295           | 217          | 195          | 157           | 235           |
| Marion .....                   | 919           | 629          | 534          | 634           | 731           |
| Mitcham .....                  | 656           | 471          | 448          | 481           | 583           |
| Payneham .....                 | 182           | 138          | 167          | 138           | 207           |
| Port Adelaide .....            | 234           | 388          | 237          | 363           | 469           |
| West Torrens .....             | 540           | 472          | 489          | 623           | 422           |
| Woodville .....                | 519           | 466          | 424          | 690           | 503           |
| Other metropolitan .....       | 365           | 331          | 240          | 375           | 597           |
| <b>Total metropolitan ....</b> | <b>5,946</b>  | <b>5,372</b> | <b>4,831</b> | <b>5,357</b>  | <b>6,177</b>  |
| <b>Country—</b>                |               |              |              |               |               |
| Salisbury and Elizabeth (a) .  | 1,611         | 1,610        | 1,489        | 1,587         | 2,037         |
| Mount Gambier Corporation      | 168           | 170          | 115          | 151           | 117           |
| Munno Para .....               | 44            | 56           | 320          | 954           | 545           |
| Noarlunga .....                | 115           | 243          | 526          | 547           | 541           |
| Tea Tree Gully .....           | 364           | 487          | 767          | 787           | 917           |
| Whyalla City Commission . .    | 419           | 446          | 409          | 276           | 307           |
| Remainder of State .....       | 1,502         | 1,444        | 1,406        | 1,473         | 1,507         |
| <b>Total country .....</b>     | <b>4,223</b>  | <b>4,456</b> | <b>5,032</b> | <b>5,775</b>  | <b>5,971</b>  |
| <b>Total State .....</b>       | <b>10,169</b> | <b>9,828</b> | <b>9,863</b> | <b>11,132</b> | <b>12,148</b> |

(a) From July 1964 Elizabeth Corporation and Salisbury Corporation separately incorporated: previously combined as Salisbury and Elizabeth District Council and earlier as Salisbury District Council.

### New Houses—Material of Outer Walls

A plentiful supply of clay and building stone together with a paucity of suitable timbers has resulted in the vast majority of South Australian houses being of solid construction. In the table below new houses have been classified by the materials used in the outer walls.

Extensive use of the brick veneer technique in house building is of recent origin. The increasing importance of this form of construction can be seen from the figures for 1964 where brick and stone veneer made up 35% of commencements compared with 19% of completions. Brick veneer construction is used extensively by the South Australian Housing Trust, who accounted for 86% of brick veneer houses commenced in 1964. These houses formed 72% of total commencements by the Trust during that year.

### New Houses: Material of Outer Walls, South Australia

| Year      | Brick, Concrete, Stone |        | Brick Veneer and Stone Veneer |       | Fibro-Cement |       | Other  |       |
|-----------|------------------------|--------|-------------------------------|-------|--------------|-------|--------|-------|
|           | Number                 | Value  | Number                        | Value | Number       | Value | Number | Value |
|           | £'000                  |        | £'000                         |       | £'000        |       | £'000  |       |
|           | Commenced              |        |                               |       |              |       |        |       |
| 1960..... | 8,382                  | 29,063 | (a)                           | (a)   | 1,005        | 2,660 | 86     | 285   |
| 1961..... | 7,549                  | 25,684 | (a)                           | (a)   | 791          | 2,140 | 100    | 298   |
| 1962..... | 7,893                  | 26,954 | 986                           | 2,971 | 639          | 1,719 | 55     | 174   |
| 1963..... | 8,453                  | 30,305 | 1,469                         | 4,680 | 560          | 1,506 | 52     | 175   |
| 1964..... | 7,892                  | 30,146 | 2,985                         | 9,389 | 605          | 1,727 | 42     | 187   |
|           | Completed              |        |                               |       |              |       |        |       |
| 1960..... | 8,175                  | 28,391 | (a)                           | (a)   | 1,112        | 2,970 | 92     | 302   |
| 1961..... | 8,203                  | 28,529 | (a)                           | (a)   | 848          | 2,291 | 68     | 206   |
| 1962..... | 8,513                  | 28,884 | (a)                           | (a)   | 675          | 1,824 | 92     | 275   |
| 1963..... | 8,631                  | 30,242 | 1,068                         | 3,244 | 560          | 1,526 | 57     | 186   |
| 1964..... | 8,475                  | 31,606 | 1,740                         | 5,572 | 614          | 1,725 | 40     | 171   |

(a) Brick and stone veneer included with brick, concrete and stone prior to 1962 for commencements, and prior to 1963 for completions.

### Building Employment

Details of building employment in South Australia are given in the table below. The figures are an average of the number of persons employed on four days in the year, viz at the end of March, June, and September and in mid-December. They include all contractors and sub-contractors, and employees of contractors, sub-contractors and government instrumentalities, who on these four days were engaged on the construction, alteration, repair and maintenance of buildings, but exclude persons working on owner-built houses or for contractors or sub-contractors who undertake only alterations, additions, repairs, and maintenance. Persons "actually engaged" include those temporarily laid off because of weather. Some duplications may occur as a result of frequent movement between jobs or because some persons (such as electricians) may work on several jobs which are under construction simultaneously.

The 14,669 average employment figure for 1964 was made up of 8,210 persons working on new private dwellings, 4,735 working on other new buildings and 1,724 employed on additions, alterations, repairs and maintenance.

## Building Employment, South Australia

| Classification           | 1960            | 1961   | 1962   | 1963   | 1964   |
|--------------------------|-----------------|--------|--------|--------|--------|
|                          | Persons Engaged |        |        |        |        |
| Occupational status—     |                 |        |        |        |        |
| Contractors .....        | 700             | 636    | 647    | 690    | 694    |
| Sub-contractors .....    | 2,725           | 2,309  | 2,498  | 2,959  | 3,469  |
| Wage-earners .....       | 10,157          | 9,489  | 9,499  | 9,852  | 10,506 |
| Trade—                   |                 |        |        |        |        |
| Carpenters .....         | 3,666           | 3,362  | 3,403  | 3,586  | 3,808  |
| Bricklayers .....        | 2,243           | 1,938  | 2,150  | 2,356  | 2,589  |
| Painters .....           | 1,219           | 1,123  | 1,128  | 1,252  | 1,415  |
| Electricians .....       | 686             | 645    | 659    | 748    | 759    |
| Plumbers .....           | 1,152           | 1,097  | 1,109  | 1,202  | 1,315  |
| Builders' labourers .... | 2,221           | 1,969  | 1,922  | 1,884  | 1,997  |
| Other .....              | 2,395           | 2,300  | 2,273  | 2,473  | 2,786  |
| Total .....              | 13,582          | 12,434 | 12,644 | 13,501 | 14,669 |

## THE SOUTH AUSTRALIAN HOUSING TRUST

The South Australian Housing Trust was constituted by Act of Parliament in 1937. It provides houses and flats for rental and houses for sale.

## Rental Dwellings

When the Trust commenced operations in 1937 it was confined to the building of houses for rental only, by legislation which severely restricted the capital cost per house in order to keep the rents within the means of lower paid workers. For this reason the Trust for many years built only the double unit attached type of dwelling although subsequent legislation made possible the building of single unit houses for letting. When the statutory limitations upon the cost and rent of houses were extended, and then removed, larger and better appointed houses were built.

During 1963-64 the Trust completed 972 houses for letting, most of which were of double unit construction.

Since 1952 the Trust has built a number of flats in the metropolitan area and at Elizabeth. Most of these are in two and three storey blocks and let to married couples without young children or to people living alone. At 30th June 1964 1,101 flats had been completed in the metropolitan area and 220 at Elizabeth. In 1953 the Trust began building small groups of cottage flats for elderly people and had completed 1,015 by 30th June 1964; 318 of these had been built for charitable organizations and the remaining 697 were being let by the Trust.

## Sale Houses

The Trust began building houses for sale in 1946.

At first, purchasers were required to pay the purchase price either from their own resources or by obtaining a mortgage from a financial institution. However, in 1952 the Trust established a scheme under which it advances an amount on

second mortgage. At 30th June 1964 there were 7,073 second mortgage arrangements in force. In 1962 a further scheme was introduced whereby certain houses, known as rental-purchase houses, are made available on £50 deposit under agreement for sale and purchase.

A variety of sizes and designs are offered for sale, generally grouped in the metropolitan area, at Elizabeth, or in country towns; however, the Trust will build any of its standard designs on private land anywhere in the State. It also erects houses for primary producers, and between 1946 and 1962 completed 932 houses for settlers under the War Service Land Settlement Scheme. When requested by State Government departments, the Trust erects houses for purchase by these departments for the accommodation of their employees.

Details of dwellings completed by the Trust since its inception, both for rent and for sale, are given in the following table.

**South Australian Housing Trust, Number of Dwellings Completed<sup>(a)</sup>**

| Period          | Houses        |               | Flats         |              | Rural Dwellings including Soldier Settlers | Total         |
|-----------------|---------------|---------------|---------------|--------------|--|---------------|
|                 | Single Units  | Double Units  | Cottage Flats | Other        |  |               |
| 1937-1959 ..    | 17,789        | (b)14,133     | 443           | 741          | 1,174                                      | 34,280        |
| 1959-60 ....    | 1,719         | 1,122         | 139           | 167          | 27   | 3,174         |
| 1960-61 ....    | 1,418         | 1,596         | 108           | 179          | 13   | 3,314         |
| 1961-62 ....    | 1,431         | 1,574         | 113           | 125          | 15   | 3,258         |
| 1962-63 ....    | 1,289         | 1,394         | 126           | 69           | 4  | 2,882         |
| 1963-64 ....    | 1,779         | 942           | 81            | 55           | 1  | 2,858         |
| <b>Total ..</b> | <b>25,425</b> | <b>20,761</b> | <b>1,010</b>  | <b>1,336</b> | <b>1,234</b>                               | <b>49,766</b> |

(a) Excludes emergency and temporary dwellings.

(b) Includes a small number of triple-units.

In its early years the Trust built small groups of houses with rental and sale houses generally in different locations. With the extension of its activities, however, the Trust has had to build much larger housing complexes including what amounts to a complete town at Elizabeth where rental and sale houses are intermixed.

Both because of its emphasis on providing housing for those working in industry and because it has the power, subject to The Industries Development Committee, to erect and lease factories, the Trust has played an important role in the location of industry in South Australia.

Most of the funds used to finance the building operations of the Trust are borrowed either from the State Government under the Commonwealth-State Housing Agreement or from semi-government raisings arranged in conjunction with the State Treasury. Details of funds employed, and of the revenue and expenditure of the Trust in recent years are given on page 479.

#### COMMONWEALTH-STATE HOUSING AGREEMENTS

In July 1953 the State Government became party to an agreement already existing between the Commonwealth and certain other States under which the Commonwealth Government makes substantial loans to the States for the provision of housing. The initial agreement was renewed in 1956 and again in 1961 for a further five years.

Under the present agreement the Commonwealth makes advances to the State for the erection of dwellings by the South Australian Housing Trust and for the provision of finance for home builders by means of loans through the Home Builders Fund, to the State Bank and certain building societies. At least 30% of the funds provided must be channelled through the Home Builders' Fund. The advances with interest are repayable by the State over 53 years.

A total of £63,936,000 had been loaned to the State under these agreements to 30th June 1964, providing for a total of 22,319 dwellings to 30th June 1963.

#### Commonwealth-State Housing Agreement, South Australia

| Particulars               | 1959-60 | 1960-61 | 1961-62 | 1962-63 | 1963-64 |
|---------------------------|---------|---------|---------|---------|---------|
|                           | £'000   |         |         |         |         |
| Advances for year—        |         |         |         |         |         |
| Housing Trust .....       | 3,592   | 4,089   | 4,377   | 5,015   | 4,600   |
| Home Builders Fund .....  | 1,500   | 1,740   | 4,686   | 4,491   | 5,100   |
| Total .....               | 5,092   | 5,829   | 9,063   | 9,506   | 9,700   |
| Liability at end of year— |         |         |         |         |         |
| Housing Trust .....       | 24,131  | 28,017  | 32,163  | 36,918  | 41,228  |
| Home Builders Fund .....  | 4,489   | 6,202   | 10,850  | 15,277  | 20,284  |
| Total .....               | 28,620  | 34,219  | 43,013  | 52,195  | 61,512  |

#### DEPARTMENT OF HOUSING

The Commonwealth Department of Housing was established in January 1964. The principal activities of the department in South Australia are the administration of the War Service Homes Act and the newly created Homes Savings Grant Scheme.

##### War Service Homes

The War Service Homes Division of the Department of Housing originated in the War Service Homes Commission which was set up in 1919 to help provide homes for ex-servicemen and their dependants.

Persons currently eligible for assistance include members of the Australian forces and nursing services who served outside Australia in the 1914-18 war, the 1939-45 war, in Korea or Malaya, or in other areas as specified from time to time by the Commonwealth Government. Also eligible are other British ex-service personnel who were resident in Australia prior to enlistment and certain members of the mercantile marine services. Assistance may be granted to the widow or, in some cases, the widowed mother of an eligible person.

Assistance is given in building a home, in purchasing a new or existing home, and in discharging a mortgage which has been arranged with the prior approval of the Division. In certain circumstances a person who has not received the maximum loan may receive a further loan to undertake certain additions. The maximum loan available at 30th June 1965 was £3,500 and the interest rate 3½%.

Services provided by the Division to persons building a home include the preparation of plans and specifications and the arranging and supervision of construction.



Funds used by the War Service Homes Division are made available from Commonwealth Consolidated Revenue.

**War Service Homes Division, South Australia**

| Year          | Activities During Year |                  | Advances Outstanding at End of Year |        |
|---------------|------------------------|------------------|-------------------------------------|--------|
|               | Homes Provided         | Capital Advanced | Number                              | Amount |
|               |                        | £'000            |                                     | £'000  |
| 1959-60 ..... | 853                    | 2,342            | 13,897                              | 27,234 |
| 1960-61 ..... | 876                    | 2,396            | 14,371                              | 28,753 |
| 1961-62 ..... | 912                    | 2,658            | 14,947                              | 30,510 |
| 1962-63 ..... | 889                    | 3,235            | 15,481                              | 32,735 |
| 1963-64 ..... | 695                    | 2,539            | 15,718                              | 33,950 |

**Homes Savings Grants**

Under the Homes Savings Grant Scheme introduced in 1964, married persons under 36 years of age who have lived and saved in Australia for at least 3 years may become eligible for a grant of £250 to assist them in obtaining a home. To be eligible for the maximum grant a couple must have saved £750 in an acceptable form and have entered into a contract for the purchase or construction of a dwelling on or after 2nd December 1963 or, if an owner-builder, have commenced construction on or after that date. Persons who have saved less than £750 may qualify for a reduced grant. Moneys already expended on the purchase of land or on the purchase or construction of a dwelling may be included in acceptable savings. An application for a grant must be lodged not later than 3 months after signing a contract or commencing to build.

A total of 2,556 homes savings grants had been approved in South Australia to 30th June 1965, the total payment of £573,400 representing an average of £224 per grant.

**OTHER HOME FINANCE SOURCES**

The State Bank of South Australia advances funds provided by the State Government under the Advances for Homes Act, 1928-1958, funds provided from the Home Builders' Fund, and its own funds.

The Savings Bank of South Australia advances its own funds either as Homes Act loans guaranteed by the State Treasurer or on its own terms.

Homes Act loans are also arranged by the South Australian Superannuation Fund, in addition to loans on its own terms.

The Commonwealth Savings Bank and the private savings banks make long-term housing advances.

At 30th June 1965 maximum loans available from the above institutions varied from £2,750 up to £4,500, with differing rates for new and existing houses and for solid and timber frame construction. Interest rates charged ranged from 5% to 6% and periods of repayment from 15 to 40 years.

The private trading banks make overdraft advances, dependent on the credit status of the borrower, for short periods normally not exceeding 5 years. Interest rates on these advances varied between 6% and 7½%.

Life assurance companies make housing loans which are normally collaterally secured by a life assurance policy. Maximum loan limits vary considerably between companies but in general are higher than those offered by the banks. Maximum repayment terms are for up to 30 years and interest rates at 30th June 1965 varied between 6½% and 7¼%.

Another source of housing finance is the building societies, details of which are given on pages 506-507. One such society makes Homes Act loans and together with another society advances moneys made available from the Home Builders' Fund.

## **PART 9**

# **PRODUCTION**

### **9.1. RURAL INDUSTRIES**

Rural statistics are prepared from annual returns collected from every holding of one acre or more, used for the production of agricultural products or the raising of livestock (including poultry) and the production of livestock products.

Returns are collected from some 29,000 holdings in South Australia each year. Particulars relate to rural operations for one complete year ended 31st March but where harvesting of some crops (mainly fruit) has not been completed by that date, returns are collected shortly afterwards.

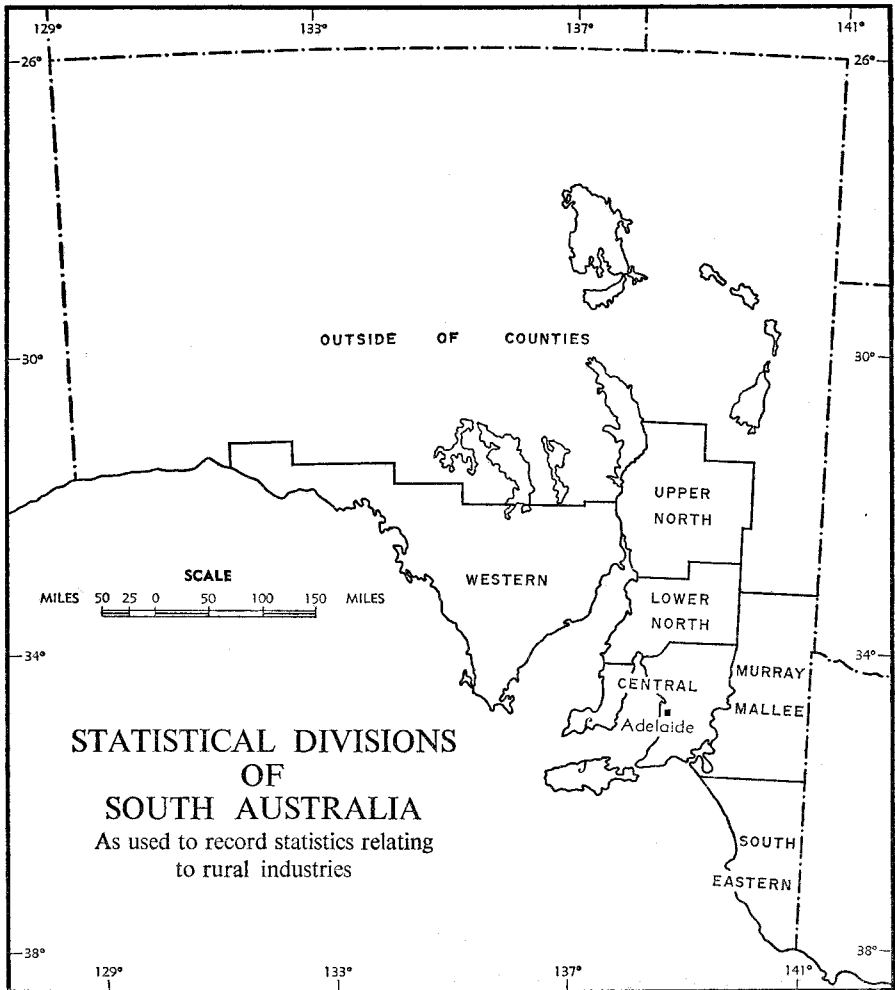
An owner or occupier who works more than one holding is normally required to report details for each holding. However, where the holdings are near to one another and are in effect worked as one farm, a composite return is obtained, and is treated as covering a single holding in the district in which the main farm is situated.

Statistical divisions used for rural production statistics are shown on Map 10 opposite. These divisions are a combination of a number of counties, which are proclaimed areas with immutable boundaries. The area beyond the counties is for all practical purposes treated as a seventh division. These divisions should not be confused with statistical divisions referred to in relation to other statistics; such divisions, as shown in the detailed map inside the back cover, are based on combinations of local government areas.

The number and area of holdings in each division for the past three years are shown in the following table.

Rural Holdings, Statistical Divisions, South Australia

| Statistical Division   | Holdings      |               |               | Area of Holdings |                |                |
|------------------------|---------------|---------------|---------------|------------------|----------------|----------------|
|                        | 1962-63       | 1963-64       | 1964-65       | 1962-63          | 1963-64        | 1964-65        |
|                        | Number        |               |               | '000 Acres       |                |                |
| Central .....          | 12,729        | 12,575        | 12,603        | 5,801            | 5,809          | 5,770          |
| Lower North .....      | 3,336         | 3,295         | 3,252         | 4,990            | 4,989          | 4,953          |
| Upper North .....      | 1,237         | 1,209         | 1,189         | 9,239            | 9,305          | 9,292          |
| South Eastern .....    | 4,269         | 4,278         | 4,285         | 5,416            | 5,397          | 5,429          |
| Western .....          | 2,409         | 2,422         | 2,416         | 18,055           | 18,205         | 18,172         |
| Murray Mallee .....    | 4,795         | 4,783         | 4,856         | 8,016            | 8,180          | 8,251          |
| Outside of Counties .. | 147           | 149           | 153           | 105,180          | 107,020        | 105,087        |
| <b>Total .....</b>     | <b>28,922</b> | <b>28,711</b> | <b>28,754</b> | <b>156,697</b>   | <b>158,905</b> | <b>156,954</b> |



MAP 10

A classification of rural holdings by size and by type of main activity was made in 1960. The following table gives a summary of all rural holdings, those under wheat and barley, and those carrying sheep and cattle classified by area of the holding in 1959-60.

**Classification of Holdings by Size and Principal Activities, South Australia, 1959-60**

| Size of Holding | Total Holdings | Holdings with   |                  |                |        |              |             |
|-----------------|----------------|-----------------|------------------|----------------|--------|--------------|-------------|
|                 |                | Wheat for Grain | Barley for Grain | Oats for Grain | Sheep  | Dairy Cattle | Beef Cattle |
| Acres           |                | Number          |                  |                |        |              |             |
| 1- 99 ...       | 10,078         | 196             | 230              | 128            | 1,294  | 3,682        | 161         |
| 100- 199 ...    | 2,096          | 159             | 198              | 120            | 960    | 1,440        | 163         |
| 200- 499 ...    | 3,328          | 1,031           | 1,042            | 672            | 2,517  | 2,140        | 442         |
| 500- 999 ...    | 4,341          | 2,459           | 2,436            | 1,751          | 3,974  | 2,950        | 778         |
| 1,000-1,999 ... | 4,165          | 2,360           | 2,536            | 2,072          | 3,933  | 2,866        | 841         |
| 2,000-4,999 ... | 2,994          | 1,676           | 1,713            | 1,541          | 2,830  | 1,989        | 588         |
| 5,000 and over. | 1,525          | 635             | 531              | 585            | 1,407  | 884          | 450         |
| Total           | 28,527         | 8,516           | 8,686            | 6,869          | 16,915 | 15,951       | 3,423       |

The classification of holdings by type of main activity is based on estimates of gross receipts of each activity made from data reported on the returns submitted for the year ended 31st March 1960.

The following tables gives a summary of the type of activity of rural holdings in each statistical division.

**Rural Holdings Classified by Type of Activity, South Australia, 1959-60**

| Type of Activity              | Statistical Division |             |             |               |         |               |                     | Total  |
|-------------------------------|----------------------|-------------|-------------|---------------|---------|---------------|---------------------|--------|
|                               | Central              | Lower North | Upper North | South Eastern | Western | Murray Mallee | Outside of Counties |        |
|                               | Number of Holdings   |             |             |               |         |               |                     |        |
| Commercial holdings—          |                      |             |             |               |         |               |                     |        |
| Sheep—Cereal                  |                      |             |             |               |         |               |                     |        |
| grain .....                   | 1,463                | 1,318       | 399         | 351           | 1,701   | 1,109         | —                   | 6,341  |
| Sheep .....                   | 1,464                | 287         | 410         | 2,070         | 232     | 327           | 105                 | 4,895  |
| Cereal grain ..               | 671                  | 900         | 95          | 25            | 164     | 110           | —                   | 1,965  |
| Beef cattle .....             | 31                   | —           | 1           | 45            | —       | 9             | 30                  | 116    |
| Dairying .....                | 1,819                | 77          | 33          | 735           | 12      | 179           | —                   | 2,855  |
| Vineyards .....               | 376                  | 39          | —           | 2             | —       | 1,003         | —                   | 1,420  |
| Fruit (other than vine) ..... | 854                  | 31          | 9           | 13            | —       | 725           | —                   | 1,632  |
| Vegetables—                   |                      |             |             |               |         |               |                     |        |
| Potatoes ..                   | 119                  | —           | —           | 33            | —       | —             | —                   | 152    |
| Other and mixed ..            | 777                  | 32          | 31          | 12            | 1       | 142           | —                   | 995    |
| Poultry .....                 | 432                  | 29          | 10          | 8             | 4       | 32            | —                   | 515    |
| Pigs .....                    | 101                  | 29          | 4           | 19            | 10      | 21            | 1                   | 185    |
| Other .....                   | 82                   | 13          | 5           | 16            | 4       | 20            | —                   | 140    |
| Multi-purpose ..              | 1,238                | 266         | 80          | 129           | 76      | 297           | —                   | 2,086  |
| Total Classified ..           | 9,427                | 3,021       | 1,077       | 3,458         | 2,204   | 3,974         | 136                 | 23,297 |
| Unclassified—                 |                      |             |             |               |         |               |                     |        |
| Sub-commercial                | 2,203                | 320         | 126         | 499           | 92      | 352           | 1                   | 3,593  |
| Unused, special, etc.....     | 963                  | 83          | 52          | 241           | 89      | 203           | 6                   | 1,637  |
| Total holdings                | 12,593               | 3,424       | 1,255       | 4,198         | 2,385   | 4,529         | 143                 | 28,527 |

**HISTORY OF FARMING DEVELOPMENT**

The first moves away from Adelaide occurred very soon after the settlement was established. Delays in having the country surveyed had prevented the

planned occupation of farm lands and some of the more determined settlers made for the country in an attempt to make a living from the land. Because these settlers had come from a green, well-watered land and because the country to the north of Adelaide seemed to be too dry and dusty for cultivation, the first moves were to the hills districts near Mount Barker and the fertile southern areas of Strathalbyn, Willunga and Yankalilla. In these first few years large numbers of sheep and cattle were imported from New South Wales and a considerable part of the present settled area of the State had been occupied for pastoral purposes by 1850. The land was in no way closely settled because the pattern of occupation was determined by the availability of natural grazing and water.

When the demand for grain increased there was a move to farm additional areas. With no equipment other than hand tools, clearing virgin land was a formidable task. Because it carried light bush and little timber and was handy to the port facilities at Adelaide, the plain country centred on Gawler was the next area opened to farming. The production of excellent crops on these plains led to the opening of large tracts of land north as far as Port Augusta. By 1860 farming was established in the South East and had commenced in lower Eyre Peninsula. The sheep population had reached nearly 3 million.

The country in Central, Lower North, Upper North and South Eastern Divisions was being developed and most of the rich wheat areas in Central, Lower North and Upper North had been occupied by 1880. Large areas of this land were heavily timbered with mallee eucalypt which has a large root system, the clearing of which presented a major problem to the farmers. The introduction of the techniques of flattening the scrub with large rollers made from old steam boilers, burning this scrub, sowing a scratch crop and then burning the stubble to kill regrowth enabled this land to be opened up. Two inventions were of importance—the stump-jump plough which made tilling on this land possible and the mechanical reaper which made large-scale farming economical.

By 1900 all but three of the counties had been declared but the settlement on new farming lands between 1880 and 1900 was not significant. However, the next twenty years saw a considerable extension of the cultivated areas, despite a disastrous drought experienced in 1914. In this period the area under crop and lying fallow increased by 50 per cent. The areas developed were mainly the difficult light soils of the Murray Mallee and Eyre Peninsula. The influence of farmers leaving the low rainfall northern counties and taking their experience of farming under marginal conditions to these two areas together with the wide acceptance of the need for artificial fertilizer in cereal farming produced the marked success which followed. In 1901 artificial fertilizer was used on only 37% of the area cropped while in 1920 the figure was 87%.

The very high prices obtained for agricultural products after World War I and the Government drive for greater production resulted in the opening up of extensive areas of mallee lands. The area under cultivation reached a peak of 8 million acres in 1930 but within two or three years of this time it was realized that the type of crop-fallow rotation in general use was seriously damaging the light soils of these "marginal" farming areas and by 1935 the area under cultivation had been reduced to 7.3 million acres. Sheep numbers increased steadily from 6 million to 10 million in the 1930's.

World War II had a very marked effect on the area under cultivation, which fell to 4.5 million acres in 1943-44 and the drought of the following season caused sheep numbers to fall to less than 7 million. From this time, modern

farming techniques were applied. Mixed sheep-cereal farming was rapidly extended, crop-pasture and crop-pasture-fallow rotations were widely adopted, and large areas of marginal mallee lands brought into economic production. Improved strains of cereals were introduced and larger quantities of superphosphate used on cereals and pastures. By these means the area under cultivation today has reached 12 million acres and the number of sheep now exceeds 17 million. The increased production obtained since 1940 has come from adopting better farming methods rather than the opening of new land.

## CHARACTERISTICS OF FARMING AREAS

### GEOGRAPHY AND CLIMATE

Two thirds of the area of the State from the northern boundary down to latitude 32°S is mainly desert and unsuitable for agriculture. The rainfall is low and erratic, coming mainly from thunderstorms, and averages less than 8 inches per annum. High day temperatures during a large part of the year produce a very high rate of evaporation.

South of latitude 32°S is an area where the rainfall is rather more regular and somewhat higher; this land, mostly semi-arid, is transitional between the desert and the agricultural regions. Small areas are planted to cereals and extensive areas adjacent to the River Murray are irrigated from the waters of the river and devoted to horticulture and viticulture.

A third region extending as far as latitude 36°S enjoys an average annual rainfall varying according to locality between 10 and 25 inches per year and has a reliable growing season of 5 months or more. This is the main agricultural region of the State and much of the area is devoted to ley farming, producing wheat, barley, oats, fruit and vegetables and carrying sheep and cattle.

The south-eastern part of the State has a rainfall in excess of 20 inches per year but physiography is not congenial to agriculture, most of the usable area being devoted to grazing and afforestation.

### Average Rainfall Over Agricultural Areas

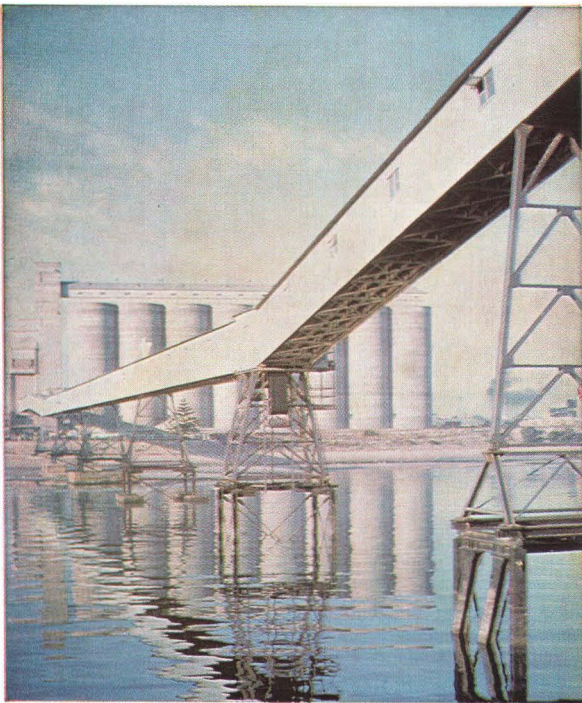
Cereal crops (of which wheat is the most important) are sown following opening rains, which are normally expected in April or May. The growing season varies between districts, but generally can be considered as the eight months April to November, and good rains during this period are vital to the success of the season's harvest. On pages 7, 8 and 10 there are statistics and maps showing probability of receiving good opening, winter and closing rains.

A further calculation of average rainfall for each county in which a significant amount of crops is grown (33 counties at present) is obtained by taking the mean of recordings at a number of stations spread through the area. An overall average, weighted by the area under crop in each county, is then calculated for each statistical division, and the entire agricultural area of the State. Details are given in the next two tables.

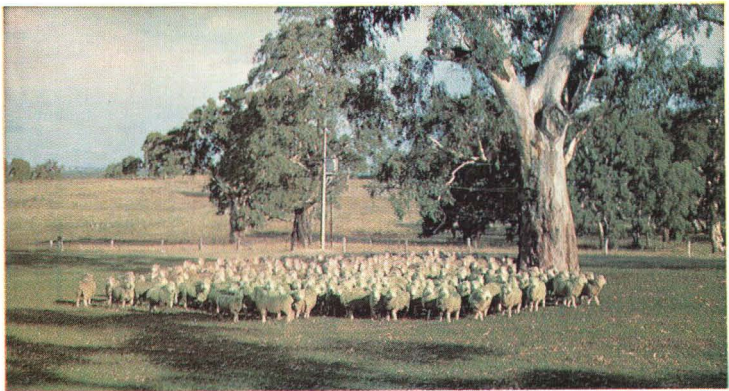
The overall average rainfall for the wheatgrowing season was as low as 6.83 inches in the 1914 drought, and an even lower figure of 6.28 inches was recorded in 1959. In both the Upper North and Murray Mallee Divisions, average falls of under 5 inches have been experienced. The highest average over the growing season was 18.46 inches in 1909, while in the South Eastern Division average falls exceed 20 inches fairly frequently.



Harvesting of grain

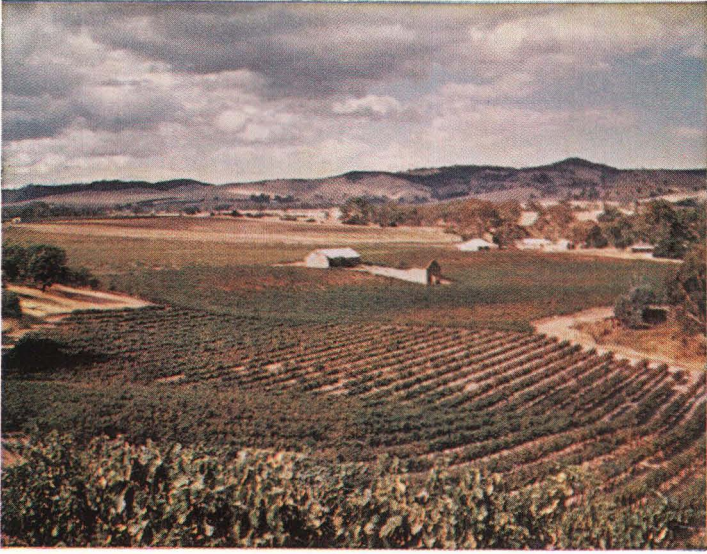


Wheat silos and bulk handling facilities at Port Lincoln



Sheep flock in typical grazing country

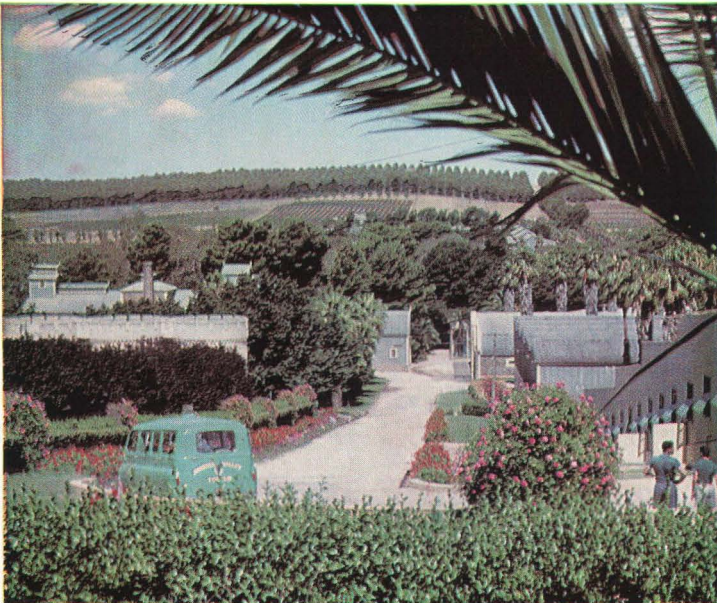




Vineyards in the Barossa Valley

Wine-making is one of South Australia's oldest industries. The Barossa Valley, about 40 miles north of Adelaide, was first occupied and planted to vines in the 1840's. Mainly wine varieties of grapes are grown in this region, which is the largest non-irrigated grape growing area in Australia.

One of the long established wineries in the Barossa Valley



**Average Rainfall Over Agricultural Areas, Statistical Divisions, South Australia**  
*Wheatgrowing Seasons*

| Statistical Division | 1959        | 1960         | 1961         | 1962         | 1963         | 1964         |
|----------------------|-------------|--------------|--------------|--------------|--------------|--------------|
|                      | Inches      |              |              |              |              |              |
| Central .....        | 7.30        | 17.02        | 12.71        | 11.97        | 17.59        | 17.78        |
| Lower North .....    | 6.12        | 17.48        | 13.67        | 9.89         | 16.19        | 14.75        |
| Upper North .....    | 6.02        | 17.78        | 11.26        | 7.46         | 12.98        | 12.89        |
| South Eastern .....  | 8.96        | 21.61        | 14.92        | 19.44        | 15.01        | 25.23        |
| Western .....        | 5.67        | 13.92        | 10.47        | 9.62         | 13.76        | 15.31        |
| Murray Mallee .....  | 5.44        | 11.95        | 11.00        | 7.42         | 12.91        | 13.51        |
| <b>Total .....</b>   | <b>6.28</b> | <b>15.59</b> | <b>11.99</b> | <b>10.24</b> | <b>14.93</b> | <b>15.85</b> |

The next table gives a dissection of the State figures shown above for each of the 8 months of the wheatgrowing season. The absence of opening rains in 1959 is apparent from these figures.

**Average Rainfall Over Agricultural Areas, Monthly, South Australia**  
*Wheatgrowing Seasons*

| Month                                  | 1959        | 1960         | 1961         | 1962         | 1963         | 1964         |
|--|-------------|--------------|--------------|--------------|--------------|--------------|
|  | Inches      |              |              |              |              |              |
| April .....                            | 0.21        | 1.96         | 3.39         | 0.18         | 1.76         | 1.58         |
| May .....                              | 0.47        | 3.95         | 0.66         | 2.67         | 3.04         | 1.31         |
| June .....                             | 0.41        | 1.12         | 1.07         | 1.34         | 2.98         | 1.75         |
| July .....                             | 1.22        | 2.24         | 1.95         | 0.99         | 3.14         | 3.18         |
| August .....                           | 1.04        | 1.66         | 1.79         | 1.64         | 1.93         | 1.45         |
| September .....                        | 1.11        | 3.00         | 1.20         | 0.88         | 0.88         | 2.87         |
| October .....                          | 1.08        | 0.43         | 0.32         | 2.21         | 0.93         | 1.71         |
| November .....                         | 0.74        | 1.23         | 1.61         | 0.33         | 0.27         | 2.00         |
| <b>Total wheatgrowing season .....</b> | <b>6.28</b> | <b>15.59</b> | <b>11.99</b> | <b>10.24</b> | <b>14.93</b> | <b>15.85</b> |

### CHARACTERISTICS OF STATISTICAL DIVISIONS

In this section, some general details are given regarding soil types and natural vegetation in each statistical division.

#### Central Division

This division has an area of nearly 6 million acres in rural holdings. The topography, soils and rainfall vary more than in any other part of the State.

The Kangaroo Island and Yorke Peninsula regions are both relatively flat with shallow brown soils over limestone or sand over clay. These soils are loose and coarse and are generally known as mallee soils. On the southern part of Yorke Peninsula are areas of calcareous sands and in the northern parts of Kangaroo Island there are areas of fertile red-brown earths with some areas of deep acid sands. The central area of the division is dominated by the Mount Lofty hills with leached sandy loam overlying a heavy clay and large areas of rocky outcrops or shallow soil over rock, fertile valleys or deep loam grading to red-brown earths on some slopes.

The elevated areas of the peninsula to the south of Adelaide contain large pockets of acid-grey soils, while the northern and eastern portions of the division comprise mainly mallee type soils and red-brown earths.

Natural vegetation varies from red gums, blue gums, peppermints, sheoaks and many types of shrubs and grasses on the Mount Lofty hills to savannah regions adjacent to the hills area. Mallee type eucalypt, scattered areas of shrub and various species of annual and perennial grasses are native to the remainder of Central Division.

The combination of suitable soils, climate and rainfall and the provision of reticulated water in an area in close proximity to Adelaide has led to the development of vegetable, fruit and dairying industries in the fertile valleys and undulating country associated with the Mount Lofty hills. Yorke Peninsula is the main barley growing area in Australia, and wheat is grown extensively in all areas except Kangaroo Island and the higher rainfall areas near and to the south of Adelaide. Sheep are grazed generally throughout Central Division.

#### **Lower North Division**

This is the smallest of the six divisions with some 5 million acres in rural production. The western and south-western portions are coastal plains, for the most part mallee soils of all types—sandy, grey, loamy and shallow red. The central area is undulating hill country with open valleys and associated flats; the hills have large areas of shallow soils and rock outcrops while the valleys and flats are mostly red-brown earth, sandy and loamy mallee soils with some heavy brown soils. The lightly undulating plains in the eastern section are mainly mallee soils.

The hill or range country was originally open grassland with savannah woodland in the wetter areas. The coastal plains were covered with mallee eucalypt, native shrubs and grasses while the eastern plains carried some low mallee scrub.

Lower North Division produces 20 to 25 per cent of the grain grown in the State. The range country is largely unimproved and is used for grazing sheep on natural grasses. Most of the studs which produce the South Australian type Merino sheep are located in this area.

#### **Upper North Division**

The whole of the division containing 9 million acres in rural holdings is dominated by the Flinders Ranges, grading from precipitous slopes with little if any topsoil in the north, to hill country in the south. This hill country changes through undulating country to the semi-arid plateau of the interior.

Because the rainfall is low and the evaporation rate high most of the area which is not precipitous is used for grazing and cannot be used for agriculture. Only in parts of the south-western quarter is the rainfall sufficient for the growing of wheat.

#### **South Eastern Division**

With over 5 million acres devoted to rural production this is the second smallest division. The area is characterized by many ranges of low hills or dunes, lying parallel to the coast, but merging into the east-west pattern of the dunes further north. Deep sands are often associated with these hills which usually have a limestone base or core. Large areas of copper-deficient and zinc-deficient soils have been made productive by the use of these trace elements in

plant fertilizers. This previously unproductive land is now carrying large numbers of livestock and producing excellent crops. In the southern half of the division, considerable areas of dark soils occupy the plains between the ranges and because the ranges are parallel to the coast with virtually no natural drainage, these areas usually have a high water table. This combination led to considerable submerging of the land in winter and extensive artificial drainage has been needed to control the level of the water table to permit cropping and the cultivation of pastures. Near the coastline extensive sand dune formations of low fertility render large tracts of land completely unproductive.

The natural vegetation of the northern regions is mainly mallee eucalypt with yacca, broombush and banksia. The higher rainfall areas to the south produce red, blue and swamp gums with native grasses, while white tussock and wallaby grass occur in some areas.

The country is mainly devoted to grazing, over 40 per cent of the improved pasture in the State being in the division. Sheep grazing is fairly general throughout, while beef cattle and dairy cattle are concentrated mainly in the southern portion. The area under crop is only about 5 per cent of the total area cropped in the State.

#### **Western Division**

This is by far the largest division with over 18 million acres devoted to rural production. A large part has mallee type soils mixed with small areas of heavier loams. There is a dune system along large tracts of the western coastline grading to limestone inland of the dunes. In the southern extremity of Eyre Peninsula are large areas of sandhills. In the south-eastern section there are considerable areas of red-brown soils, with in many cases ironstone gravel in the topsoil. The north-eastern section of the division is mainly desert relieved only by the Middleback Ranges consisting for the most part of hard sandstone.

The natural vegetation is predominantly mallee eucalypt and sheoak with scattered sugar gums and native pines on the hills. Broombush is found in places on mallee soils. Speargrass and spinifex grow on the coastal sand dunes and the arid north-eastern desert carries scattered mulga with saltbush and bluebush.

Although yields are moderate, the large area under cultivation produces about a quarter of the State's total harvest of cereals, with wheat being the main crop. The major pastoral activity is sheep grazing.

#### **Murray Mallee Division**

This division has 8 million acres used for rural production. A large part of the area is undulating, with sandy rises and firmer sandy or sand-loam flats. The rises run roughly east-west following the direction of the prevailing winds. Near the River Murray there are shallow brown soils over limestone while in the southern parts the soils are mainly mallee types. The natural vegetation is predominantly mallee eucalypt with scattered patches of native pines and sheoaks.

The main crops are wheat and barley with small areas of oats grown for forage and cereal rye for soil stabilization. Because the growing season is short and rainfall light and erratic most of the area cropped in the northern regions is wheat, with most of the barley being grown in the southern section. Irrigation areas are scattered along the River Murray, in many cases extending no further than two or three miles from the river. About one half of the area of orchards and vineyards in the State is concentrated in these irrigated areas.

The division carries about 10% of the sheep and dairy cattle, the sheep being grazed throughout the area and the dairy cattle being concentrated along the flood flats of the Lower Murray.

### Outside of Counties

The whole area is fairly flat with low mountains or mountain ranges intruding in three or four places. The soils are varied in character, sometimes capable of growing vegetation but unproductive in the absence of adequate rainfall. In this region are found the thin red soils of the Nullarbor Plains, the desert sand hills, the gibber deserts, the sand plains and the spinifex areas.

Approximately 75% of the area of the State is "Outside of Counties" and no part of this area receives an average annual rainfall of more than 8 inches. Not only is the rainfall low but it is quite irregular and large areas receive no useful falls for very long periods. High daytime temperatures experienced over a large part of the year cause rapid surface evaporation.

The native vegetation consists of those species which have become adapted to the climatic conditions of the region. The trees are scattered mulga with some native pines on the hills and areas of saltbush and bluebush. The few annual plants which are found have very rapid life cycles, being quick flowering and producing large quantities of seed. Large areas of the north-west and north-east are almost devoid of vegetation, being merely sand or gibber deserts.

The region cannot support any agriculture but an area of more than 100 million acres is leased for pastoral purposes and carries about 100,000 beef cattle and 1 million sheep.

### RURAL POPULATION

The number of persons of all ages residing permanently on rural holdings in South Australia in March during the past ten years is shown in the following table. These figures include those temporarily absent at the time, but exclude visitors, etc. Rural population has increased by only 2 per cent during the ten year period, while the State population has risen by almost 25 per cent.

#### Persons Permanently Resident on Rural Holdings, South Australia

*At 31st March*

| Year     | Males  | Females | Persons | Year      | Males  | Females | Persons |
|----------|--------|---------|---------|-----------|--------|---------|---------|
| 1956.... | 56,968 | 50,025  | 106,993 | 1961..... | 59,098 | 52,245  | 111,343 |
| 1957.... | 57,029 | 49,878  | 106,907 | 1962....  | 59,441 | 52,243  | 111,684 |
| 1958.... | 58,061 | 50,901  | 108,962 | 1963....  | 58,668 | 51,825  | 110,493 |
| 1959.... | 57,989 | 51,087  | 109,076 | 1964....  | 58,510 | 51,854  | 110,364 |
| 1960.... | 58,889 | 52,320  | 111,209 | 1965....  | 58,016 | 51,361  | 109,377 |

### RURAL EMPLOYMENT

In the following table particulars are given of permanent and temporary rural employment and salaries and wages paid during the last 5 years. It should be noted that information for females permanently engaged is not entirely

satisfactory because of the difficulty of distinguishing between domestic duties and rural activities. (Females engaged mainly in domestic duties are excluded from the table.)

### Rural Employment and Wages, South Australia

| At 31st March | Permanent Workers     |                            |           |         | Temporary Workers | Salaries and Wages (a) |                      |
|---------------|-----------------------|----------------------------|-----------|---------|-------------------|------------------------|----------------------|
|               | Owners, Lessees, Etc. | Relatives (Not Paid Wages) | Employees | Total   |                   | To Permanent Workers   | To Temporary Workers |
|               |                       |                            |           |         |                   | £'000                  | £'000                |
|               |                       |                            |           | Males   |                   |                        |                      |
| 1961.....     | 23,403                | 2,626                      | 7,926     | 33,955  | 17,116            | 5,730                  | 4,206                |
| 1962.....     | 24,061                | 1,734                      | 7,947     | 33,742  | 15,140            | 5,863                  | 4,185                |
| 1963.....     | 23,748                | 1,696                      | 7,890     | 33,334  | 14,106            | 6,054                  | 4,366                |
| 1964.....     | 23,553                | 1,396                      | 8,268     | 33,217  | 12,496            | 6,418                  | 4,533                |
| 1965.....     | 23,136                | 1,207                      | 8,247     | 32,590  | 10,984            | 6,746                  | 4,976                |
|               |                       |                            |           | Females |                   |                        |                      |
| 1961.....     | 1,223                 | 522                        | 551       | 2,296   | 4,626             | 235                    | 366                  |
| 1962.....     | 1,122                 | 462                        | 499       | 2,083   | 4,661             | 229                    | 401                  |
| 1963.....     | 1,018                 | 413                        | 460       | 1,891   | 4,715             | 229                    | 417                  |
| 1964.....     | 717                   | 204                        | 501       | 1,422   | 5,339             | 251                    | 476                  |
| 1965.....     | 714                   | 162                        | 456       | 1,332   | 5,310             | 242                    | 579                  |

(a) During year ended 31st March.

### FARM MACHINERY

Particulars of farm machinery on rural holdings in South Australia for each of the last six years, and in each statistical division at 31st March 1965 are given in the next two tables.

#### Farm Machinery on Rural Holdings, South Australia

At 31st March

| Type of Machine                         | 1960   | 1961   | 1962   | 1963   | 1964   | 1965   |
|---|--------|--------|--------|--------|--------|--------|
| Shearing machines—                      |        |        |        |        |        |        |
| Machines .....                          | 13,973 | 14,317 | 14,532 | 14,595 | 14,885 | 15,172 |
| Stands .....                            | 26,049 | 26,568 | 27,278 | 27,528 | 28,149 | 28,844 |
| Milking machines—                       |        |        |        |        |        |        |
| Machines .....                          | 7,575  | 7,589  | 7,707  | 7,553  | 7,438  | 7,328  |
| Units .....                             | 17,920 | 18,235 | 18,831 | 18,836 | 19,057 | 19,135 |
| Rotary hoes and rotary tillers .....    | 4,106  | 4,620  | 4,873  | 4,989  | 5,260  | 5,670  |
| Tractors—                               |        |        |        |        |        |        |
| Wheeled .....                           | 25,774 | 27,269 | 28,289 | 28,497 | 29,841 | 30,772 |
| Crawler .....                           | 3,191  | 3,405  | 3,499  | 3,174  | 3,390  | 3,392  |
| Grain drills—                           |        |        |        |        |        |        |
| Combine .....                           | 14,973 | 14,893 | 15,221 | 15,251 | 15,284 | 15,617 |
| Other .....                             | 4,635  | 4,867  | 4,865  | 5,065  | 5,074  | 5,168  |
| Fertilizer distributors                 | 7,695  | 8,000  | 8,271  | 8,213  | 8,413  | 8,743  |
| Harvesters, headers and strippers ..... | 13,006 | 12,799 | 12,831 | 12,677 | 12,652 | 12,659 |
| Forage harvesters .....                 | (a)    | (a)    | 525    | 645    | 660    | 701    |
| Pick-up bailers .....                   | 2,941  | 3,422  | 3,534  | 3,791  | 4,149  | 4,270  |

(a) Not collected.

**Farm Machinery on Rural Holdings, Statistical Divisions, South Australia**  
*March 1965*

| Type of Machine                   | Statistical Division |             |             |               |             |               | Total  |
|-----------------------------------|----------------------|-------------|-------------|---------------|-------------|---------------|--------|
|                                   | Central              | Lower North | Upper North | South Eastern | Western (a) | Murray Mallee |        |
| Shearing machines—                |                      |             |             |               |             |               |        |
| Machines .....                    | 4,485                | 2,508       | 975         | 2,903         | 2,490       | 1,811         | 15,172 |
| Stands .....                      | 7,630                | 4,773       | 2,032       | 5,819         | 5,316       | 3,274         | 28,844 |
| Milking machines—                 |                      |             |             |               |             |               |        |
| Machines .....                    | 3,725                | 915         | 235         | 1,462         | 384         | 607           | 7,328  |
| Units .....                       | 10,055               | 1,774       | 417         | 4,687         | 593         | 1,609         | 19,135 |
| Rotary hoes and rotary tillers    | 2,874                | 658         | 206         | 567           | 446         | 919           | 5,670  |
| Tractors—                         |                      |             |             |               |             |               |        |
| Wheeled .....                     | 10,733               | 4,132       | 1,209       | 4,343         | 4,416       | 5,939         | 30,772 |
| Crawler .....                     | 1,213                | 281         | 149         | 548           | 806         | 395           | 3,392  |
| Grain drills—                     |                      |             |             |               |             |               |        |
| Combine .....                     | 4,754                | 3,089       | 857         | 1,554         | 2,926       | 2,437         | 15,617 |
| Other .....                       | 1,438                | 523         | 106         | 809           | 1,284       | 1,008         | 5,168  |
| Fertilizer distributors           | 3,788                | 670         | 122         | 2,156         | 880         | 1,127         | 8,743  |
| Harvesters, headers and strippers | 3,741                | 2,463       | 659         | 1,060         | 2,619       | 2,117         | 12,659 |
| Forage harvesters                 | 253                  | 85          | 14          | 160           | 80          | 109           | 701    |
| Pick-up balers                    | 1,609                | 792         | 191         | 936           | 328         | 414           | 4,270  |

(a) Includes Outside of Counties.

### AGRICULTURE

Most of the land area of South Australia is arid or semi-arid and cannot be used for agricultural production. This severe natural limitation means that even with modern farming methods only 12 million of more than 150 million acres in rural holdings are devoted to cropping or permanent improved pasture. The area under crop in recent years has been between 5 and 6 million acres. Most of this area is planted to cereals for the production of grain, hay and forage. About 100,000 acres are used for the production of fruit and vegetables.

The numbers of holdings growing 20 or more acres of the principal cereals and 1 acre or more of the principal fruits and vegetables are shown in the following table.

#### Rural Holdings Growing Principal Crops, South Australia

| Holdings (a)              | 1959-60 | 1960-61 | 1961-62 | 1962-63 | 1963-64 | 1964-65 |
|---------------------------|---------|---------|---------|---------|---------|---------|
|                           | Number  |         |         |         |         |         |
| With 20 acres or more of— |         |         |         |         |         |         |
| Wheat .....               | 7,869   | 8,913   | 9,434   | 9,881   | 9,902   | 9,657   |
| Barley .....              | 8,070   | 8,912   | 7,920   | 7,146   | 7,196   | 6,890   |
| Oats .....                | 5,534   | 6,200   | 4,174   | 4,967   | 5,704   | 5,034   |
| With 1 acre or more of—   |         |         |         |         |         |         |
| Grapes .....              | 2,950   | 2,939   | 2,990   | 3,056   | 3,054   | 3,091   |
| Citrus fruits .....       | 1,470   | 1,472   | 1,566   | 1,653   | 1,686   | 1,704   |
| Other orchard fruits      | 3,302   | 3,300   | 3,344   | 3,288   | 3,280   | 3,302   |
| Potatoes .....            | 837     | 745     | 746     | 850     | 692     | 614     |

(a) Holdings growing more than one of the crops shown are counted for each crop.

The cereals wheat, barley and oats account for about 80% of the total area cropped in South Australia. Hay and green forage exceed 5% and the remainder of the area is devoted mainly to orchards, vineyards and vegetable production. Climatic conditions, particularly the relatively low winter rainfall and the dry

hot summer, favour cereal growing; one advantage being the low incidence of stem rust, a serious disease in the moister areas of the Australian wheat belt.

The area sown to the more important crops during the last five seasons is given in the following table.

Area Sown to Principal Crops, South Australia

| Crop                     | 1960-61    | 1961-62 | 1962-63 | 1963-64 | 1964-65 |
|--------------------------|------------|---------|---------|---------|---------|
|                          | '000 Acres |         |         |         |         |
| Grain—                   |            |         |         |         |         |
| Wheat .....              | 1,969.4    | 2,229.2 | 2,595.1 | 2,802.2 | 2,726.8 |
| Barley .....             | 1,555.7    | 1,270.9 | 1,052.9 | 1,123.1 | 1,094.7 |
| Oats .....               | 512.2      | 323.7   | 415.6   | 500.6   | 443.8   |
| Rye .....                | 46.0       | 32.3    | 29.3    | 31.3    | 43.9    |
| Hay—                     |            |         |         |         |         |
| Oaten .....              | 152.8      | 82.7    | 116.3   | 140.7   | 110.1   |
| Other .....              | 239.8      | 125.9   | 171.1   | 216.9   | 204.2   |
| Green forage .....       | 312.8      | 272.7   | 367.4   | 378.1   | 462.5   |
| Vegetables—              |            |         |         |         |         |
| Potatoes .....           | 5.2        | 5.3     | 5.9     | 5.5     | 5.3     |
| Tomatoes .....           | 1.3        | 1.4     | 1.3     | 1.2     | 1.0     |
| Other .....              | 10.8       | 10.0    | 9.9     | 9.8     | 9.3     |
| Fruit—                   |            |         |         |         |         |
| Grapes .....             | 56.5       | 57.6    | 58.0    | 58.4    | 58.6    |
| Oranges .....            | 11.0       | 13.1    | 15.3    | 16.5    | 17.4    |
| Apples .....             | 5.7        | 5.7     | 5.9     | 5.9     | 6.0     |
| Apricots .....           | 4.5        | 4.5     | 4.5     | 4.5     | 4.7     |
| Other .....              | 16.5       | 15.2    | 14.7    | 14.8    | 14.9    |
| Other crops .....        | 65.9       | 58.4    | 68.8    | 70.3    | 87.3    |
| Total area under crop .. | 4,966.1    | 4,508.6 | 4,932.0 | 5,379.8 | 5,290.5 |

Cereal growing played a significant part in the early development of South Australia. The success of the first crops on the Adelaide plains led to a strong demand for suitable wheat land, but expansion of the cereal industry was halted shortly before 1880 when the downward trend of the average yields brought the realization that the exploitation of the soil had seriously reduced the level of fertility.

Experiments revealed the deficiency of phosphates in South Australian soils and showed that the application of superphosphate, linked with rotation farming, would revive them. The widespread adoption of this practice at the turn of the century resulted in higher yields and a further expansion of the cereal areas. The fallowing technique was also being used to boost yields but its use failed to replace organic matter consumed causing the deterioration of the soil structure. Furthermore farmers were over-tilling and towards the 1930's wind and water so severely eroded the unprotected soil surface that thousands of acres were laid waste. To overcome the erosion problem, soil conservation services were established. The value of contour cultivating and pasture establishment was demonstrated and subsequently adopted by landholders with considerable success. Also demonstrated was the method of stabilizing sandhill drifts by sowing them to cereal rye.

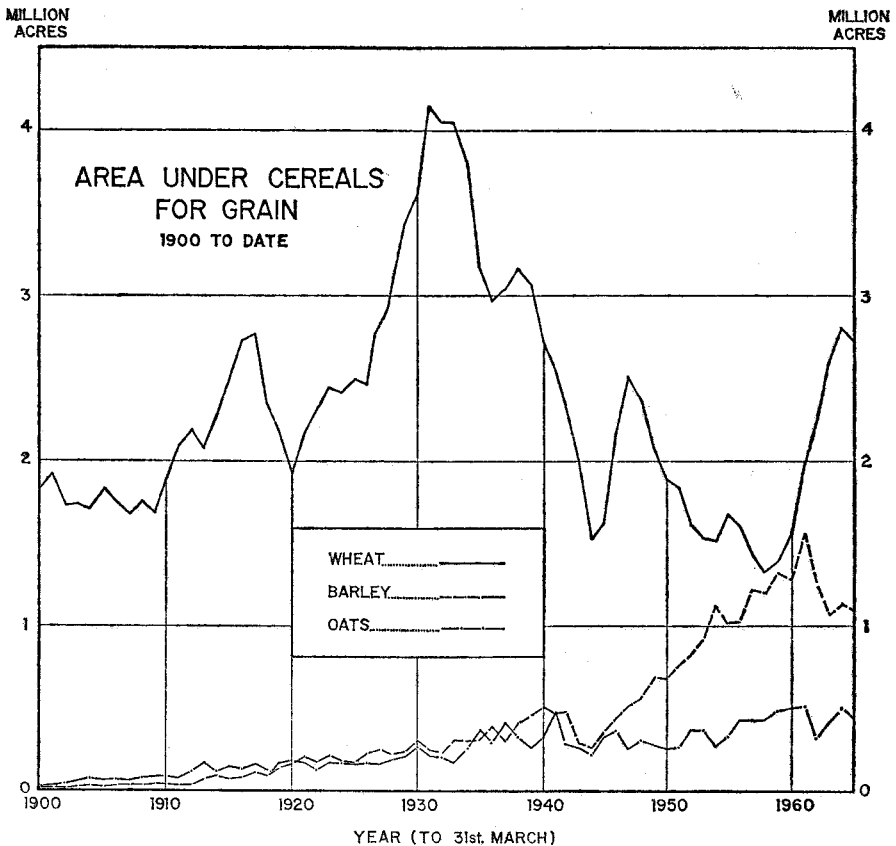
With soil erosion arrested, attention was focused on finding ways of maintaining the natural physical structure of the soil. Research revealed nitrogen as the key factor directly related to soil fertility and this led to the introduction of nitrogen-building legume pastures. Another advance made at this time was the discovery



of trace element deficiencies in certain areas, particularly the manganese deficiency in the soils of Yorke Peninsula and the molybdenum, copper and zinc deficiencies in other parts of the State.

The adoption in recent years of more suitable cropping programmes with the resulting increased yield and profitable association with woolgrowing has firmly established the cereal industry.

The extent of fluctuations since 1900 in the area under the three main cereal crops is illustrated by the following graph—



### IRRIGATED CULTURE

The most important irrigation areas are those located in the Murray Valley. A description of the development and types of irrigation schemes along the River Murray is given in Part 8.2. pages 253-254.

The remainder of the areas under irrigation are located mainly in the Central and South Eastern Divisions where irrigation is applied predominantly to vegetables, hay and green forage crops and to pastures.

The main crops are grapes, citrus fruit and stone fruit in the Upper Murray, and green forage and pastures in the reclaimed swamp areas of the Lower Murray. Details for individual areas in 1963-64 are given below.

**Irrigation Areas<sup>(a)</sup>: Area and Production of Principal Crops, South Australia, 1963-64**

| Name of Area         | Area                         |               |               |               | Production            |                      |                                     |                |              |
|----------------------|------------------------------|---------------|---------------|---------------|-----------------------|----------------------|-------------------------------------|----------------|--------------|
|                      | Green Forage and Pasture (b) | Vines         |               | Orchards      | Vines                 |                      |                                     | Oranges        | Peaches      |
|                      |                              | For Drying    | For Wine      |               | Total Grapes Produced | Grapes Used for Wine | Currants, Sultanas and Raisins Made |                |              |
| Acres                | Acres                        | Acres         | Acres         | Tons          | Tons                  | Tons                 | '000 Bushels                        | '000 Bushels   |              |
| <b>Upper Murray—</b> |                              |               |               |               |                       |                      |                                     |                |              |
| Berri .....          | 216                          | 2,502         | 2,595         | 3,548         | 29,061                | 14,937               | 3,887                               | 347.5          | 130.9        |
| Cadell .....         | 41                           | 398           | 140           | 363           | 2,111                 | 600                  | 429                                 | 35.7           | 4.5          |
| Cobdogla .....       | 222                          | 334           | 768           | 114           | 6,758                 | 4,987                | 504                                 | 5.3            | 2.1          |
| Cooltong .....       | 57                           | 101           | 320           | 893           | 3,036                 | 2,382                | 186                                 | 125.4          | 32.2         |
| Holder .....         | 8                            | 45            | 212           | 537           | 1,285                 | 1,070                | 60                                  | 60.1           | 9.2          |
| Loveday .....        | 308                          | 744           | 1,178         | 429           | 12,851                | 8,175                | 1,310                               | 22.9           | 4.5          |
| Loxton .....         | 222                          | 1,249         | 2,204         | 3,458         | 25,799                | 17,806               | 2,222                               | 379.0          | 127.5        |
| Moorook .....        | 41                           | 137           | 234           | 677           | 2,271                 | 1,433                | 239                                 | 67.9           | 20.2         |
| Nookamka .....       | 11                           | 820           | 980           | 327           | 12,302                | 7,142                | 1,441                               | 20.9           | 3.9          |
| Ral Ral .....        | 209                          | 535           | 247           | 277           | 3,581                 | 1,206                | 674                                 | 1.3            | 9.6          |
| Renmark .....        | 836                          | 3,479         | 1,864         | 3,262         | 25,319                | 9,107                | 4,619                               | 238.9          | 208.5        |
| Sunlands .....       | 1                            | —             | 84            | 1,587         | 51                    | 51                   | —                                   | —              | 0.2          |
| Waikerie .....       | 60                           | 240           | 1,329         | 2,705         | 10,102                | 8,921                | 326                                 | 376.6          | 94.2         |
| Other .....          | 311                          | 543           | 347           | 1,777         | 4,357                 | 1,613                | 779                                 | 113.7          | 130.8        |
| <b>Total .....</b>   | <b>2,543</b>                 | <b>11,127</b> | <b>12,502</b> | <b>19,954</b> | <b>138,884</b>        | <b>79,430</b>        | <b>16,676</b>                       | <b>1,795.2</b> | <b>778.3</b> |
| <b>Lower Murray—</b> |                              |               |               |               |                       |                      |                                     |                |              |
| Cowirra .....        | 787                          | —             | —             | —             | —                     | —                    | —                                   | —              | —            |
| Jervois .....        | 6,212                        | —             | —             | 3             | —                     | —                    | —                                   | 0.1            | —            |
| Monteith .....       | 934                          | —             | —             | —             | —                     | —                    | —                                   | —              | —            |
| Myponga .....        | 1,286                        | —             | 5             | 1,048         | 7                     | 5                    | —                                   | 124.2          | 16.7         |
| Neeta .....          | 764                          | —             | —             | —             | —                     | —                    | —                                   | —              | —            |
| Pompoota .....       | 577                          | —             | —             | —             | —                     | —                    | —                                   | —              | —            |
| Other .....          | 1,409                        | —             | —             | 19            | —                     | —                    | —                                   | 0.8            | 0.1          |
| <b>Total .....</b>   | <b>11,969</b>                | <b>—</b>      | <b>5</b>      | <b>1,070</b>  | <b>7</b>              | <b>5</b>             | <b>—</b>                            | <b>125.1</b>   | <b>16.8</b>  |

(a) Excludes areas and yields of crops grown by irrigation on the River Murray and elsewhere not in the above irrigation areas.

(b) Total within irrigated areas, including non-irrigated forage and pastures.

The following table shows the approximate area of all irrigated culture in South Australia for the seasons 1960-61 to 1964-65. Of the areas shown below, about 75% of orchards, over 90% of vineyards and almost 40% of green forage and pastures are in the River Murray Irrigation Areas listed in the previous table.

**Area Under Irrigated Culture<sup>(a)</sup>, South Australia**

| Season        | Orchards | Vineyards | Vegetables | Green Forage | Other Crops | Pasture | Total   |
|---------------|----------|-----------|------------|--------------|-------------|---------|---------|
|               |          |           |            | Acres        |             |         |         |
| 1960-61 ..... | 22,706   | 26,071    | 10,643     | 4,132        | 8,176       | 30,295  | 102,023 |
| 1961-62 ..... | 25,236   | 27,167    | 11,312     | 3,753        | 9,590       | 31,342  | 108,400 |
| 1962-63 ..... | 26,876   | 27,384    | 11,548     | 3,804        | 10,591      | 32,610  | 112,813 |
| 1963-64 ..... | 28,787   | 27,954    | 10,541     | 4,451        | 12,315      | 33,822  | 117,870 |
| 1964-65 ..... | 30,094   | 28,286    | 9,917      | 4,303        | 14,575      | 35,964  | 123,139 |

(a) Approximations only.

**FERTILIZERS**

Nearly all soils in the agricultural areas of South Australia are deficient in phosphoric acid, and superphosphate is used on both crops and pastures in large quantities to overcome this deficiency. In some areas trace elements, manganese, copper, zinc and molybdenum are added to the superphosphate to rectify the chronic shortage of these elements.

A summary of the area of crops and pastures treated and the quantities of fertilizers used in 1964 is shown in the following table.

### Principal Crops and Pasture Fertilized, South Australia 1964

| Type of Crop                   | Area Fertilized | Fertilizer Used        |                     |               |                |             | Per Acre |
|--------------------------------|-----------------|------------------------|---------------------|---------------|----------------|-------------|----------|
|                                |                 | Superphosphate         |                     | Other         | Total          |             |          |
|                                |                 | Without Trace Elements | With Trace Elements |               |                |             |          |
|                                | '000 Acres      | Tons                   | Tons                | Tons          | Tons           | Cwt.        |          |
| Wheat .....                    | 2,700           | 126,686                | 6,467               | 1,139         | 134,292        | 0.99        |          |
| Barley, oats and rye .....     | 1,884           | 85,487                 | 8,141               | 801           | 94,429         | 1.00        |          |
| Vegetables .....               | 12              | 1,468                  | 1,816               | 3,670         | 6,954          | 11.65       |          |
| Fruit trees and vines .....    | 56              | 2,139                  | 1,961               | 6,577         | 10,677         | 3.81        |          |
| Other and unspecified crops .. | 123             | 6,631                  | 1,021               | 264           | 7,916          | 1.29        |          |
| <b>Total crops</b> .....       | <b>4,775</b>    | <b>222,411</b>         | <b>19,406</b>       | <b>12,451</b> | <b>254,268</b> | <b>1.07</b> |          |
| <b>Pasture</b> .....           | <b>4,714</b>    | <b>225,390</b>         | <b>47,564</b>       | <b>1,604</b>  | <b>274,558</b> | <b>1.16</b> |          |
| <b>Total</b> .....             | <b>9,489</b>    | <b>447,801</b>         | <b>66,970</b>       | <b>14,055</b> | <b>528,826</b> | <b>1.11</b> |          |

The following tables show the area of crops and pastures treated and the quantity of fertilizer used in each division in 1964, and in the State for the years 1955 to 1964.

### Use of Artificial Fertilizers, Statistical Divisions, South Australia 1964

| Statistical Division | Fertilizer Used |                                  |                 |                          |                       |                 |                          |
|----------------------|-----------------|----------------------------------|-----------------|--------------------------|-----------------------|-----------------|--------------------------|
|                      | To Manure Crops |                                  |                 |                          | To Top-dress Pastures |                 |                          |
|                      | Area Fertilized | Proportion of Total Area Cropped | Fertilizer Used | Fertilizer Used per Acre | Area Fertilized       | Fertilizer Used | Fertilizer Used per Acre |
|                      | '000 Acres      | Per Cent                         | Tons            | Cwt.                     | '000 Acres            | Tons            | Cwt.                     |
| Central .....        | 988             | 89.09                            | 62,305          | 1.26                     | 1,093                 | 67,721          | 1.24                     |
| Lower North .....    | 935             | 93.23                            | 44,252          | 0.95                     | 254                   | 11,872          | 0.93                     |
| Upper North .....    | 204             | 90.81                            | 8,466           | 0.83                     | 23                    | 1,096           | 0.95                     |
| South Eastern .....  | 213             | 73.53                            | 12,666          | 1.19                     | 2,484                 | 149,103         | 1.20                     |
| Western (a) .....    | 1,525           | 91.91                            | 77,637          | 1.02                     | 477                   | 24,445          | 1.03                     |
| Murray Mallee .....  | 910             | 90.53                            | 48,942          | 1.08                     | 383                   | 20,321          | 1.06                     |
| <b>Total</b> .....   | <b>4,775</b>    | <b>90.25</b>                     | <b>254,268</b>  | <b>1.07</b>              | <b>4,714</b>          | <b>274,558</b>  | <b>1.16</b>              |

(a) Includes small quantities Outside of Counties.

### Use of Artificial Fertilizers, South Australia

| Year       | Fertilizer Used |                                  |                 |                          |                       |                 |                          |
|------------|-----------------|----------------------------------|-----------------|--------------------------|-----------------------|-----------------|--------------------------|
|            | To Manure Crops |                                  |                 |                          | To Top-dress Pastures |                 |                          |
|            | Area Fertilized | Proportion of Total Area Cropped | Fertilizer Used | Fertilizer Used per Acre | Area Fertilized       | Fertilizer Used | Fertilizer Used per Acre |
|            | '000 Acres      | Per Cent                         | Tons            | Cwt.                     | '000 Acres            | Tons            | Cwt.                     |
| 1955 ..... | 3,405           | 85.74                            | 176,935         | 1.04                     | 3,499                 | 203,847         | 1.17                     |
| 1956 ..... | 3,400           | 85.44                            | 175,350         | 1.03                     | 3,677                 | 214,601         | 1.17                     |
| 1957 ..... | 3,463           | 88.63                            | 182,248         | 1.05                     | 4,005                 | 236,291         | 1.18                     |
| 1958 ..... | 3,692           | 89.03                            | 192,168         | 1.04                     | 3,716                 | 218,728         | 1.18                     |
| 1959 ..... | 3,679           | 90.64                            | 188,733         | 1.03                     | 3,471                 | 202,895         | 1.17                     |
| 1960 ..... | 4,326           | 87.11                            | 209,387         | 0.97                     | 3,300                 | 189,704         | 1.15                     |
| 1961 ..... | 4,063           | 90.11                            | 206,047         | 1.01                     | 3,583                 | 198,186         | 1.11                     |
| 1962 ..... | 4,415           | 89.52                            | 221,011         | 1.00                     | 3,750                 | 209,551         | 1.12                     |
| 1963 ..... | 4,788           | 89.01                            | 238,905         | 1.00                     | 3,993                 | 226,678         | 1.14                     |
| 1964 ..... | 4,775           | 90.25                            | 254,268         | 1.07                     | 4,714                 | 274,558         | 1.16                     |

## PLANTING AND HARVESTING OF CROPS

The main crops of South Australia are normally planted and harvested during periods as listed below.

## Usual Months of Planting and Harvesting, South Australia

| Crop               | Planting           | Harvesting       |
|--------------------|--------------------|------------------|
| <b>Cereals—</b>    |                    |                  |
| Wheat .....        | April-June         | November-January |
| Barley .....       | May-July           | November-January |
| Oats .....         | April-June         | November-January |
| <b>Fruit—</b>      |                    |                  |
| Grapes .....       | ..                 | February-May     |
| Citrus .....       | ..                 | May-February     |
| Apples .....       | ..                 | January-April    |
| Apricots .....     | ..                 | December-January |
| Peaches .....      | ..                 | December-March   |
| Pears .....        | ..                 | January-April    |
| <b>Vegetables—</b> |                    |                  |
| Potatoes .....     | July-January       | November-June    |
| Tomatoes—          |                    |                  |
| Field .....        | September-February | January-June     |
| Glasshouse .....   | March-June         | July-January     |

## WHEAT

Wheat has always been a crop of major importance to the economy of South Australia although in recent years this importance has declined in relation to both the value of agricultural and pastoral production and the value of total State production. For the five-year period 1909-10 to 1913-14 wheat averaged 38% of agricultural and pastoral production and 23% of total State production while for the period 1959-60 to 1963-64 the percentages were 21 and 7 respectively. The increase in woolgrowing in the first instance and the rapid industrialization of the State in the second have been the significant factors in this decline.

The expansion of the wheat industry in the first 50 years of the colony was made possible by the development of the stripper, a machine which considerably reduced the labour and costs of harvesting. For a period South Australia was the largest wheat producing State, but it now ranks fourth in order of importance, and for the 10 harvests ending 1963-64 averaged 15% of Australian wheat production.

The first stage of the development of the wheat industry saw a rapid expansion of the wheat area until 1,970,000 acres were sown in 1886-87, yielding for the first time a 10 million bushel harvest. Smaller acreages were then sown until in 1910-11 a second great surge of development began, culminating in the highest recorded area of 4,180,513 acres in 1930-31.

A complete reversal in the acreage trend occurred after 1933-34 due to the impact on the industry of the economic crisis of the 1930's following immediately in the wake of four severe droughts during 1926-29. About this time it was realised that wheat farming had been extended into areas where the inadequate rainfall and unsuitable land made wheatgrowing uneconomic and a number of these properties on "marginal" lands were abandoned. In 1940 the Marginal Lands Act gave authority for properties to be purchased by the Government and leased to settlers to enlarge their holdings. Grants were made to assist these settlers in making grazing rather than wheatgrowing their major enterprise. Most of the properties were repurchased in the period 1940-1947.

A swing towards barley-growing at the same time exerted a further depressing effect on the area sown to wheat. This trend continued until 1958-59 when the area sown to barley almost equalled the area sown to wheat. However, recently the wheat acreage has increased greatly, to more than double that of barley.

In the past 20 years a feature of the industry has been a steady improvement in average yields, due mainly to improved farming practices including the adoption of nitrogen-building clovers in the rotation. The average yield per acre for the 10 seasons ended 1963-64 was 17.36 bushels, a record of 23.56 bushels being attained in 1960-61.

### Wheatgrowing Districts

Wheatgrowing in South Australia is virtually restricted to the belt between the 8 inch and 18 inch rainfall isohyets for the period April-November inclusive. The principal wheat producing districts are Eyre Peninsula, the Central and Lower North regions and the Murray Mallee. These districts accounted for over 90% of the area sown in 1964-65.

### Wheat Sown for Grain: Area and Yield, Statistical Divisions, South Australia

| Season     | Statistical Division |             |             |               |             |               | Total  |
|------------|----------------------|-------------|-------------|---------------|-------------|---------------|--------|
|            | Central              | Lower North | Upper North | South Eastern | Western (a) | Murray Mallee |        |
|            | Area ('000 Acres)    |             |             |               |             |               |        |
| 1955-56 .. | 278                  | 414         | 96          | 25            | 522         | 274           | 1,609  |
| 1956-57 .. | 232                  | 363         | 94          | 19            | 487         | 243           | 1,438  |
| 1957-58 .. | 202                  | 352         | 91          | 16            | 461         | 209           | 1,331  |
| 1958-59 .. | 220                  | 367         | 90          | 21            | 501         | 208           | 1,407  |
| 1959-60 .. | 230                  | 421         | 111         | 29            | 572         | 187           | 1,550  |
| 1960-61 .. | 310                  | 502         | 130         | 38            | 680         | 309           | 1,969  |
| 1961-62 .. | 346                  | 540         | 138         | 59            | 764         | 382           | 2,229  |
| 1962-63 .. | 399                  | 602         | 170         | 70            | 910         | 444           | 2,595  |
| 1963-64 .. | 417                  | 637         | 180         | 66            | 1,002       | 500           | 2,802  |
| 1964-65 .. | 413                  | 611         | 167         | 60            | 1,037       | 439           | 2,727  |
|            | Yield ('000 Bushels) |             |             |               |             |               |        |
| 1955-56 .. | 5,268                | 9,192       | 1,947       | 555           | 8,852       | 3,077         | 28,891 |
| 1956-57 .. | 5,919                | 10,583      | 2,498       | 318           | 8,298       | 3,816         | 31,432 |
| 1957-58 .. | 2,957                | 5,781       | 948         | 329           | 3,692       | 1,207         | 14,914 |
| 1958-59 .. | 5,490                | 9,766       | 2,136       | 615           | 11,215      | 2,810         | 32,032 |
| 1959-60 .. | 2,621                | 3,861       | 947         | 440           | 2,937       | 1,123         | 11,929 |
| 1960-61 .. | 7,854                | 14,470      | 3,464       | 927           | 14,806      | 4,875         | 46,396 |
| 1961-62 .. | 6,741                | 11,274      | 1,737       | 1,199         | 8,421       | 4,482         | 33,854 |
| 1962-63 .. | 7,156                | 10,876      | 2,106       | 1,699         | 11,951      | 4,551         | 38,339 |
| 1963-64 .. | 9,198                | 15,687      | 3,832       | 1,322         | 17,235      | 6,697         | 53,971 |
| 1964-65 .. | 9,459                | 14,712      | 3,377       | 1,210         | 17,823      | 6,236         | 52,817 |

(a) Includes small plantings Outside of Counties.

### Varieties of Wheat

The early wheatgrowers recognized the need to develop varieties of wheat suitable for South Australia's dry conditions and began by experimenting with varieties obtained from countries with a similar climate. One of these was the variety of Du Toit which was introduced from South Africa and because of its early maturity and moderate resistance to stem rust became very popular. This variety was destined to feature in the pedigree of many prominent wheat varieties of the future.

Although stem rust, which can be a serious problem in other States, is rarely troublesome in South Australia, breeders have still considered rust resistance as

important as other objectives such as yield, baking quality and resistance to other diseases.

Of the varieties sown in the 1964-65 season Insignia, Gabo, Heron, Sabre and Dirk were the five most important. Insignia, the leading variety, accounted for 40% of the total area sown, its main attributes being that it is early maturing, has a short strong straw and is easily threshed at harvest without showing any tendency for the grain to crack. Next in order of importance were Gabo (16%) and Heron (11%), both having very similar features to Insignia.

The similar climatic requirements of the three leading varieties reflect the suitability of this type of wheat for South Australia. The sharp cut-off of spring rains, the short growing season and strong winds have demanded their particular characteristics. The leading varieties of wheat sown for all purposes for the years 1962-63 to 1964-65 are shown in the following table.

**Principal Varieties of Wheat Sown, South Australia**

| Variety         | Area       |         |         | Proportion of Total Area |         |         |
|-----------------|------------|---------|---------|--------------------------|---------|---------|
|                 | 1962-63    | 1963-64 | 1964-65 | 1962-63                  | 1963-64 | 1964-65 |
|                 | '000 Acres |         |         | Per Cent                 |         |         |
| Claymore .....  | 107        | 94      | 61      | 4.0                      | 3.3     | 2.2     |
| Dirk .....      | 299        | 282     | 246     | 11.3                     | 9.9     | 8.9     |
| Gabo .....      | 500        | 536     | 447     | 18.9                     | 18.8    | 16.1    |
| Heron .....     | 25         | 143     | 322     | 1.0                      | 5.0     | 11.6    |
| Insignia .....  | 926        | 1,092   | 1,104   | 35.0                     | 38.3    | 39.8    |
| Pinnacle .....  | 80         | 73      | 64      | 3.0                      | 2.6     | 2.3     |
| Sabre .....     | 354        | 338     | 262     | 13.4                     | 11.9    | 9.5     |
| Wongoondy ..... | 68         | 61      | 50      | 2.6                      | 2.1     | 1.8     |
| Other.....      | 286        | 230     | 216     | 10.8                     | 8.1     | 7.8     |
| Total area...   | 2,645      | 2,849   | 2,772   | 100.0                    | 100.0   | 100.0   |

### Research

Under the *Wheat Tax Act 1957* a tax of one farthing per bushel is levied on all wheat delivered to the Australian Wheat Board. The proceeds are then credited to the Wheat Research Trust Account for use by the respective State Wheat Industry Research Committees.

Each committee allocates the amounts available for research and reports the expenditure approved to the Wheat Industry Research Council. The Commonwealth Government also makes contributions for wheat research, up to an amount equal to the wheat tax levied from the growers. The Wheat Industry Research Council recommends the avenue of research on which this grant should be spent.

Wheat research in South Australia is directed mainly at producing better wheat varieties and improving soil structure.

Roseworthy Agricultural College is engaged in a continuing wheat breeding programme designed to produce new varieties with improved yield, quality and disease resistance. To extend this programme and to assist with varietal recommendations the Department of Agriculture conducts wheat variety trials at various centres, and a wheat quality survey to define areas from which wheat of a certain minimum protein content can be expected.

Scientists at the Waite Agricultural Research Institute are studying organic matter and soil structure in relation to fertility in wheat soils and also the effects of high nitrogen levels on wheat varieties and the subsequent effect of increased growth on the use of soil moisture. Assistance in soil study is being

given by the Department of Agriculture, which is investigating the effects of fallowing on soil moisture, soil nitrogen, grain yields and grain protein. In addition fertilizer trials are being conducted with the object of improving basic knowledge of fertilizers for wheat.

Continuing trials are being conducted to ascertain suitable medics, clovers and lucernes for the wheatgrowing areas.

### Marketing

#### *Australian Wheat Board*

The Board consists of a chairman, a finance member, a person engaged in commerce with experience of the wheat trade, a representative of flour mill owners, a representative of employees and 10 representatives of wheatgrowers (two from each mainland State).

The Board has control over the receipt and disposal of all wheat and wheat products. It also controls the handling, storage and shipment of wheat. Under the stabilization plan, the Board is the sole authority for marketing wheat within Australia and for marketing wheat and flour for export.

In its first full season, 1939-40, the Wheat Board received 195 million bushels. Over the past 6 seasons wheat receipts have increased markedly resulting in a record delivery in excess of 345 million bushels during 1964-65.

#### Deliveries to the Australian Wheat Board

| Season        | South<br>Australia | Australia | Season        | South<br>Australia | Australia |
|---------------|--------------------|-----------|---------------|--------------------|-----------|
|               | '000 Bushels       |           |               | '000 Bushels       |           |
| 1955-56 ..... | 26,107             | 180,762   | 1960-61 ..... | 43,706             | 251,481   |
| 1956-57 ..... | 29,154             | 120,129   | 1961-62 ..... | 30,738             | 224,290   |
| 1957-58 ..... | 12,535             | 81,320    | 1962-63 ..... | 35,121             | 285,722   |
| 1958-59 ..... | 29,549             | 199,417   | 1963-64 ..... | 51,660             | 307,834   |
| 1959-60 ..... | 9,112              | 179,338   | 1964-65 ..... | 49,991             | 346,500   |

During the year ended 30th November 1964 total exports of wheat (including wheat equivalent of flour and wheat products) were a record 253 million bushels. The value of the Wheat Board's sales on both the local and export market is shown below.

#### Australian Wheat Board Sales of Wheat and Wheat Flour

| Crop Year         | Sales        |         | Value  |         |
|-------------------|--------------|---------|--------|---------|
|                   | Local        | Export  | Local  | Export  |
|                   | '000 Bushels |         | £'000  |         |
| 1955-56 .....     | 56,923       | 122,867 | 37,972 | 79,135  |
| 1956-57 .....     | 62,620       | 56,897  | 42,719 | 40,468  |
| 1957-58 .....     | 54,626       | 26,444  | 38,656 | 18,335  |
| 1958-59 .....     | 53,654       | 144,722 | 38,898 | 95,470  |
| 1959-60 .....     | 59,338       | 118,674 | 43,993 | 78,494  |
| 1960-61 .....     | 54,920       | 195,582 | 41,628 | 130,953 |
| 1961-62 .....     | 52,371       | 171,412 | 41,243 | 122,495 |
| 1962-63 .....     | 51,180       | 233,806 | 40,521 | 158,646 |
| 1963-64 (a) ..... | 57,302       | 253,327 | 40,807 | 182,923 |

(a) Preliminary.

**Bulk Handling**

The South Australian Co-operative Bulk Handling Ltd. which was incorporated on 7th December 1954 is the sole bulk grain handling authority in this State and is owned, financed and controlled by the growers. At 30th June 1965 the Co-operative had a storage capacity of 39.8 million bushels (of which 33.6 million bushels was available for wheat) with construction already planned or under way for additional storage capacity of 7 million bushels.

South Australia was the last of the major cereal-growing States to adopt bulk handling methods. However, the success of the first bulk installation at Ardrossan of 1 million bushels capacity, which began operating in 1952, paved the way for rapid development. The Co-operative purchased the Ardrossan silo from the Australian Wheat Board after a Bill had been passed on 7th July 1955 giving the Co-operative the exclusive right to handle bulk grain in South Australia.

Finance for the construction of storages came initially from a bank advance, and in addition growers who were members of the Co-operative were required to pay a toll of 3d. for each bushel delivered to the silo in the first year. Thereafter the toll for members and non-members was 6d. per bushel and 4d. per bushel respectively. After 12 years of membership, members are gradually refunded all tolls paid. From time to time further bank advances have been obtained to accelerate the building programme to meet the increased demand for storage space.

The bulk handling operations of the State have been divided into six divisions—Ardrossan, Wallaroo, Thevenard, Port Lincoln, Port Pirie and Port Adelaide—each of which provides a terminal port as a shipping outlet for the country silos within the division. The bulk capacity of the respective divisions for each of the three major cereals is shown in the following table.

**Bulk Handling Capacity, South Australia  
30th June 1965**

| Division            | Wheat  | Barley       | Oats |
|---------------------|--------|--------------|------|
|                     |        | '000 Bushels |      |
| Port Adelaide ..... | 9,160  | 2,385        | 500  |
| Ardrossan .....     | 2,350  | 440          | —    |
| Wallaroo .....      | 6,045  | 1,040        | —    |
| Port Pirie .....    | 5,372  | —            | —    |
| Port Lincoln .....  | 7,885  | 1,775        | 100  |
| Thevenard .....     | 2,765  | —            | —    |
| Total .....         | 33,577 | 5,640        | 600  |

During the 1964-65 season the Co-operative received a record 46.3 million bushels of bulk wheat representing 93% of total State deliveries, just exceeding the 45 million bushels (87% of total deliveries) of the 1963-64 season.

A certificate showing particulars of the wheat received from a grower is forwarded by the bulk handling authority to the Australian Wheat Board. Payment is then made to the grower by the Wheat Board.

Under the system of pooling wheat, fees for the handling of wheat by the Co-operative are paid by the Wheat Board.

**Grading of Wheat**

The grading of wheat for export is based on a fair average quality standard (f.a.q.). This standard is determined for each of the four main wheat



producing States by a committee of representatives of the Wheat Board, bulk handling authorities, State Departments of Agriculture, farmers, millers and shippers. Samples of wheat from the several wheatgrowing districts are mixed in the proportion grown in the districts and the f.a.q. weight is determined from the sample. These weights are used as a guide in determining standards of wheat deliveries and not to measure quantity.

Since 1957-58 in South Australia, two standards have been fixed in each season except the 1960-61 season when three were fixed. Currently the two standards are known as F.A.Q. and Semi-hard, the latter being used for wheat of a better quality meeting two main requirements—that the type of wheat is one of a number of specified hard varieties and secondly, that it is of a uniform vitreous appearance of which not more than 10% is mottled or bleached. Because of semi-hard wheat's better baking qualities, resulting in a keener overseas demand, growers of this grade receive a premium of 6d. per bushel. Growers delivering inferior wheat (grain containing excessive foreign matter) or lightweight wheat receive reduced payments per bushel.

This method of setting f.a.q. standards for export marketing is peculiar to Australia, as other countries sell to fixed grades or according to sample. The standards adopted in each of the 10 seasons 1955-56 to 1964-65 are shown in the next table.

#### F.A.Q. Standards of Wheat, South Australia

(Weight in lb. of a bushel of wheat)

| Season        | F.A.Q. | Semi-Hard | Season           | F.A.Q. | Semi-Hard |
|---------------|--------|-----------|------------------|--------|-----------|
| 1955-56 ..... | 64     | —         | 1960-61 (a) .... | 64½    | 64        |
| 1956-57 ..... | 65½    | —         | 1961-62 .....    | 63½    | 63        |
| 1957-58 ..... | 65½    | 66        | 1962-63 .....    | 62½    | 63½       |
| 1958-59 ..... | 63½    | 63½       | 1963-64 .....    | 64½    | 64½       |
| 1959-60 ..... | 63½    | 63        | 1964-65 .....    | 62½    | 63        |

(a) A third standard of Soft—64½ lb.—was fixed in 1960-61.

#### Wheat Stabilization Plan

Wheat grown in Australia is marketed under a government stabilization scheme which provides for the fixing of a home consumption price for each season, the pooling of the proceeds of local and overseas sales, the guarantee of a minimum price equal to the estimated cost of production and the operation of a stabilization fund to which are paid the proceeds of a tax on exports.

The first post-war Wheat Stabilization Plan operated between 1948 and 1953. Subsequent stabilization plans were introduced in 1954 (for seasons 1953-54 to 1957-58), 1958 (for seasons 1958-59 to 1962-63) and 1963 (for seasons 1963-64 to 1967-68).

Under the present plan the Commonwealth Government guaranteed to growers a return of 14s. 5d. per bushel in the first year of the plan, on up to 150 million bushels of wheat exported from the crop. The guaranteed return is based on production cost provided by an economic survey of the wheat industry carried out by the Bureau of Agricultural Economics and can be varied in each season of the plan in accordance with movements in an index of the cost of production. In arriving at the home consumption price a loading of 2d. per bushel is added to the guaranteed price to cover the cost of transporting wheat from the mainland States to Tasmania.

Exported wheat is subject to a tax which is equivalent to the excess of returns from export sales over the guaranteed return. The export tax, which is paid into the stabilization fund, is restricted to a maximum rate of 1s. 6d. per bushel. In addition the balance in the stabilization fund may not exceed £30 million, any surplus being returned to the growers.

The stabilization fund is used to make up deficiencies in respect to 150 million bushels from each crop where the average export realization falls below the guaranteed return. In the event of the fund being unable to meet the deficiency the Commonwealth Government is required to meet its obligations under the guarantee.

### International Wheat Agreement

The fifth International Wheat Agreement came into effect on 1st August 1962 and will operate until 31st July 1966. Under this agreement the participating importing countries have undertaken to buy each year from the exporting countries a stated percentage of their total commercial import requirements. Previously, participating exporting countries competed to supply at prices within a prescribed range but under a provision of the latest agreement it is not necessary for a maximum price declaration to be made.

The main objectives of the agreement are—

- (i) to assure supplies of wheat and wheat-flour to importing countries and markets for wheat and wheat-flour to exporting countries at equitable and stable prices;
- (ii) to promote the expansion of the international trade in wheat and wheat-flour and to ensure as free a flow of this trade as possible in the interests of both exporting and importing countries;
- (iii) to overcome the serious hardships caused to producers and consumers by burdensome surpluses and critical shortages of wheat.

### Prices

The table below shows the trend in export and domestic prices of Australian wheat for the years 1954-55 to 1963-64.

**Export and Domestic Prices of Australian Wheat**

| Year          | Export Price<br>per Bushel (a) | Home Price<br>per Bushel (b) |
|---------------|--------------------------------|------------------------------|
|               | <i>s. d.</i>                   | <i>s. d.</i>                 |
| 1954-55 ..... | 14 6                           | 14 1½                        |
| 1955-56 ..... | 13 4.4                         | 13 5½                        |
| 1956-57 ..... | 13 5.7                         | 13 9½                        |
| 1957-58 ..... | 14 6                           | 14 4                         |
| 1958-59 ..... | 13 10                          | 14 8                         |
| 1959-60 ..... | 13 3.8                         | 15 0                         |
| 1960-61 ..... | 13 6.2                         | 15 4                         |
| 1961-62 ..... | 14 5.3                         | 15 10                        |
| 1962-63 ..... | 14 5.2                         | 15 11½                       |
| 1963-64 ..... | 15 3.1                         | 14 7                         |

(a) Average of the twelve monthly prices, year ended July.

(b) Average of the twelve monthly prices, year ended November.

The export prices shown in the table are the basic selling prices for f.a.q. bulk wheat, f.o.b. The home prices are those set by the Wheat Board for bulk wheat (f.o.r.) sold to millers for gristing into flour for consumption in Australia. The

prices charged by the Board for wheat for stock feed in Australia are the same as those charged for wheat for human consumption. Before 1953-54 differential rates were charged in some years.

### BARLEY

#### Production

South Australia is by far the most important barley producing State and in 1963-64 the acreage sown represented more than 50% of the Australian total and yielded 56% of the grain produced. Of the area sown in South Australia, 92.5% was two-row barley for grain, reflecting the suitability of certain areas of the State for the production of high quality malting barley. For malting purposes a plump mellow grain with fine skin coverings can only be obtained when the ripening period is somewhat prolonged by cool conditions, without much high temperature or drying winds.

Although formerly a crop of comparatively minor importance, barley growing increased greatly after the Second World War to the extent that a few years ago it seriously rivalled wheat as the major grain crop. For the three consecutive harvests, 1956-57 to 1958-59, there were more bushels of barley than bushels of wheat produced, but actual weight was less since a bushel of barley weighs only 50 lb. compared with 60 lb. for a bushel of wheat.

#### Area and Yield of Barley for Grain, Statistical Divisions, South Australia

| Season     | Statistical Division |             |             |               |             |               | Total  |
|------------|----------------------|-------------|-------------|---------------|-------------|---------------|--------|
|            | Central              | Lower North | Upper North | South Eastern | Western (a) | Murray Mallee |        |
|            | Area ('000 Acres)    |             |             |               |             |               |        |
| 1955-56 .. | 346                  | 203         | 17          | 24            | 210         | 242           | 1,042  |
| 1956-57 .. | 381                  | 254         | 26          | 23            | 245         | 293           | 1,222  |
| 1957-58 .. | 376                  | 252         | 24          | 23            | 252         | 285           | 1,212  |
| 1958-59 .. | 412                  | 268         | 28          | 28            | 282         | 314           | 1,332  |
| 1959-60 .. | 410                  | 250         | 25          | 38            | 262         | 305           | 1,290  |
| 1960-61 .. | 466                  | 292         | 32          | 51            | 322         | 393           | 1,556  |
| 1961-62 .. | 407                  | 221         | 17          | 37            | 266         | 323           | 1,271  |
| 1962-63 .. | 357                  | 171         | 14          | 25            | 213         | 273           | 1,053  |
| 1963-64 .. | 368                  | 186         | 13          | 26            | 222         | 308           | 1,123  |
| 1964-65 .. | 364                  | 173         | 11          | 27            | 210         | 310           | 1,095  |
|            | Yield ('000 Bushels) |             |             |               |             |               |        |
| 1955-56 .. | 9,384                | 5,599       | 350         | 560           | 4,774       | 3,931         | 24,598 |
| 1956-57 .. | 13,143               | 8,965       | 762         | 464           | 4,612       | 6,057         | 34,003 |
| 1957-58 .. | 7,146                | 3,698       | 219         | 579           | 3,006       | 2,904         | 17,552 |
| 1958-59 .. | 12,929               | 8,685       | 843         | 761           | 7,634       | 6,813         | 37,665 |
| 1959-60 .. | 4,575                | 1,849       | 186         | 512           | 2,168       | 2,567         | 11,857 |
| 1960-61 .. | 14,216               | 9,621       | 859         | 881           | 8,542       | 8,114         | 42,233 |
| 1961-62 .. | 7,177                | 4,154       | 206         | 668           | 3,916       | 5,172         | 21,293 |
| 1962-63 .. | 6,682                | 2,827       | 153         | 708           | 3,600       | 4,035         | 18,005 |
| 1963-64 .. | 9,698                | 4,984       | 266         | 493           | 4,333       | 4,562         | 24,336 |
| 1964-65 .. | 11,326               | 4,647       | 229         | 623           | 4,562       | 5,545         | 26,932 |

(a) Includes small plantings Outside of Counties.

Unlike wheat, barley growing has nearly always been confined to very suitable districts resulting in high and remarkably stable yields. During the period 1901-02 to 1935-36 the highest yield was 20.00 bushels per acre and excepting for the severe drought of 1914-15 the lowest was 13.67 bushels per acre. The subsequent increase in barley growing in districts subject to greater climatic

variations, *e.g.* Murray Mallee and Eyre Peninsula, has been responsible for greater average yield fluctuations since 1936-37 but at the same time the average yield has increased, the record yield being 28.27 bushels per acre in 1958-59.

Yorke Peninsula, reputed to be the best barley growing area in Australia, has been the major producing district in South Australia since World War I. In the 1964-65 season this area contributed just over 40% of the total crop. It has an ideal climate for barley growing as the moisture-laden breezes off the gulfs on either side retard ripening.

More recently, barley growing has become prominent on the red mallee soils of the moister coastal regions of Eyre Peninsula and the lighter soils of the southern Murray Mallee region.

### Varieties

The most widely grown barley variety is Prior, which for the three seasons ended 1964-65 averaged nearly two thirds of the total area sown. This variety, thought to be developed from English Archer malting barley, was first grown by Mr. S. Prior of Brighton, South Australia. Prior is capable of producing grain of very high malting quality under favourable conditions but it suffers from two major deficiencies—it is susceptible to neck break and shattering if strong winds are experienced when the crop is nearly ripe and it is not well adapted to conditions of high soil fertility.

A variety, known as Noyep, is similar to Prior but is earlier maturing and is suitable to areas where a sudden cut-off in spring rainfall is experienced. These characteristics have resulted in a significant switch to this variety from 1% in 1961-62 to 18% of total area sown in 1964-65.

Other varieties of less importance are Maltworthy, which is more resistant to wind damage than Prior but of inferior commercial malting quality and Research, much later maturing than Prior, which is recommended only for the lower South East.

### Research

Because of the inherent similarities, the barley industry has in many instances benefited from the technological advances achieved by the wheat industry, *viz* the use of superphosphate and the inclusion of pastures in rotation, but certain problems peculiar to barley have necessitated the undertaking of extensive research.

The deficiencies of the major variety Prior have been the subject of intensive investigation and research work by the Department of Agriculture. To overcome weaknesses in the straw of Prior which is responsible for the heavy loss of grain when crops are almost ripe, two methods known as windrowing and rolling have been devised. The aim of both methods is to lay the crop down out of the wind at a time when grain formation is completed, but before the straw is dry enough to be brittle.

Another problem causing concern is the unfavourable effect increased soil fertility is having on quality. This has been most noticeable on Yorke Peninsula where the increased use of clover pastures and heavier dressings of superphosphate have greatly increased soil fertility. Excess nitrogen induces rank growth which is detrimental to grain quality.

In experiments at Turretfield and Urania the effects of various fertility levels on different barley varieties are being observed to discover if any variety can approach the ideal of combining high yield with high quality on clover soils.

### Marketing

The marketing of barley is under the control of the Australian Barley Board which operates in South Australia and Victoria and provides an orderly marketing system for barley grown in these States.

In the first season of South Australian and Victorian joint marketing in 1942-43 the Board received 3,810,000 bushels. Since then, barley receipts have increased considerably and in the 1960-61 season the Board received a record total of 44,624,000 bushels.

**Australian Barley Board Receipts, South Australia**

| Season        | Two-Row      |         |        | Six-Row |       | Total  |
|---------------|--------------|---------|--------|---------|-------|--------|
|               | Malting      | Milling | Feed   | Malting | Feed  |        |
|               | '000 Bushels |         |        |         |       |        |
| 1956-57 ..... | 7,012        | 17,095  | 6,870  | 127     | 954   | 32,058 |
| 1957-58 ..... | 1,846        | 5,781   | 5,959  | 6       | 72    | 13,664 |
| 1958-59 ..... | 6,867        | 17,033  | 10,081 | 82      | 960   | 35,023 |
| 1959-60 ..... | 2,563        | 1,940   | 3,233  | 1       | 59    | 7,796  |
| 1960-61 ..... | 8,966        | 15,278  | 12,880 | 79      | 1,177 | 38,380 |
| 1961-62 ..... | 996          | 4,162   | 11,860 | 4       | 204   | 17,226 |
| 1962-63 ..... | 4,210        | 6,318   | 3,328  | 3       | 88    | 13,947 |
| 1963-64 ..... | 5,621        | 8,036   | 6,343  | 12      | 348   | 20,360 |

The Board has been able to dispose of each season's receipts with little difficulty. Major export markets are the United Kingdom, Europe and Japan.

Following recommendations submitted in a report by an investigating committee in October 1963 a bulk handling scheme for barley has been introduced. In 1963-64, the first year of its operation, bulk barley was received direct from growers at terminal ports in South Australia, a total of 1,172,113 bushels being handled. In the following season bulk barley was received for the first time at other than terminal silos. Storage capacity at 30th June 1965 was 5.6 million bushels but plans have been announced for additional construction to raise the capacity to 7 million bushels.

For marketing purposes all barley is classified on sample before delivery. Classification is firstly by row variety and secondly by quality—Malting (No. 1 and No. 2), Milling (No. 3); and Feed (No. 4 and No. 5) for two-row and Malting and Feed (No. 4 and No. 5) for six-row.

The prices paid to growers in the 1963-64 season ranged from 11s. 10.35d. per bushel for two-row bagged barley of Malting No. 1 quality to 8s. 1.35d. per bushel for six-row bagged barley of No. 5 (feed) quality. Growers who delivered barley in bulk received 8.03d. less per bushel.

The payments to the growers are made in a series of four advances, the first of approximately 8s. per bushel for first quality barley being made on delivery.

In 1957 agreement between brewers, maltsters and the Board was reached on a formula for fixing the price of malting barley. Prices of barley for distilling and pearling purposes are determined after the malting price has been fixed and prices for feed are determined monthly.

The home consumption prices determined by the Board for barley for season 1963-64 and preceding years are shown hereunder.

## Price per Bushel of Barley for Home Consumption

| Season        | Two-Row<br>Malting<br>(No. 1) | Distilling   | Pearling     | Two-Row<br>Feed<br>(No. 4) |
|---------------|-------------------------------|--------------|--------------|----------------------------|
|               | <i>s. d.</i>                  | <i>s. d.</i> | <i>s. d.</i> | <i>s. d.</i>               |
| 1957-58 ..... | 12 8                          | 12 3         | 12 3         | 11 6                       |
| 1958-59 ..... | 13 4                          | 12 7         | 12 7         | 9 6                        |
| 1959-60 ..... | 13 2                          | 12 5         | 12 5         | 11 0                       |
| 1960-61 ..... | 13 7                          | 12 10        | 12 10        | 10 0                       |
| 1961-62 ..... | 13 11                         | 13 2         | 13 2         | 10 0                       |
| 1962-63 ..... | 14 1                          | 13 4         | 13 4         | 11 0                       |
| 1963-64 ..... | 13 6                          | 12 9         | 12 9         | 11 0                       |

## OATS

The following table shows the area of oats sown for grain, for hay and for forage and the production of grain and hay in recent years.

## Oats, South Australia

| Season        | Area Sown for |     |        | Total<br>Area | Production      |           |
|---------------|---------------|-----|--------|---------------|-----------------|-----------|
|               | Grain         | Hay | Forage |               | Grain           | Hay       |
|               | '000 Acres    |     |        |               | '000<br>Bushels | '000 Tons |
| 1957-58 ..... | 427           | 101 | 347    | 875           | 3,423           | 90        |
| 1958-59 ..... | 481           | 163 | 201    | 845           | 11,992          | 273       |
| 1959-60 ..... | 505           | 118 | 190    | 813           | 2,504           | 75        |
| 1960-61 ..... | 512           | 153 | 242    | 907           | 11,478          | 243       |
| 1961-62 ..... | 323           | 83  | 224    | 630           | 4,391           | 102       |
| 1962-63 ..... | 416           | 116 | 307    | 839           | 5,770           | 147       |
| 1963-64 ..... | 500           | 141 | 315    | 956           | 9,149           | 185       |
| 1964-65 ..... | 444           | 110 | 397    | 951           | 8,977           | 157       |

The milling qualities of most oats grown in South Australia do not meet the requirements of overseas markets and only a small proportion of the harvest is exported; most of the crop is used as animal fodder.

As is the case with barley, some of the area sown for grain and hay is grazed until June or July then closed to sheep to allow regrowth to a crop. Part of the area sown for forage is left to stand until it is used as dry grazing in autumn, when other fodder is not plentiful.

In 1964-65, 80% of the total area of oats was sown to three varieties—Avon 374,000 acres, Kherson 199,000 acres and Kent 190,000 acres.

## RYE

Rye is one of the minor crops, but there has been development of its use to control sand drift and to help stabilize the light soils of the Murray Mallee in recent years. The sands are deficient in two main nutrients (nitrogen and phosphorus) and rye is sown, with a mixed superphosphate-ammonia fertilizer, early in the season. Its rapid early growth while the ground is still warm and before the strong winds of winter cause sandblast is at present the most effective form of control of drifting sand.

Rye provides early greenfeed and its use as such and the production of a few bushels of grain per acre on some farms are valuable adjuncts to the use for soil stabilization. Although most grain is used for stock feed, varying quantities are exported in different years for milling. Rye hay is poor quality material and only a few hundred tons are produced each year.

In 1964-65, 44,000 acres of rye for grain yielded 262,000 bushels. Record production was 446,000 bushels from 57,000 acres in 1958-59.

### HAY

The quantity of hay produced varies considerably from year to year according to seasonal conditions and the need to replace stocks used during the previous season. The main crops cut for hay in recent years have been oats, clover and meadow hay which together account for considerably more than half of all hay produced. The quantity of lucerne hay produced has increased from a few thousand tons to 80,000 tons in the past 20 years.

**Hay: Area and Production, South Australia**

| Season                 | Oaten | Wheaten | Lucerne | Barley and Rye | Clover and Grass | Total |
|------------------------|-------|---------|---------|----------------|------------------|-------|
| Area ('000 Acres)      |       |         |         |                |                  |       |
| 1957-58 .....          | 101   | 71      | 20      | 27             | 72               | 291   |
| 1958-59 .....          | 163   | 50      | 32      | 17             | 158              | 420   |
| 1959-60 .....          | 118   | 52      | 21      | 18             | 36               | 245   |
| 1960-61 .....          | 153   | 52      | 36      | 15             | 137              | 393   |
| 1961-62 .....          | 83    | 34      | 24      | 9              | 59               | 209   |
| 1962-63 .....          | 116   | 44      | 30      | 15             | 82               | 287   |
| 1963-64 .....          | 141   | 41      | 38      | 15             | 123              | 358   |
| 1964-65 .....          | 110   | 40      | 43      | 11             | 110              | 314   |
| Production ('000 Tons) |       |         |         |                |                  |       |
| 1957-58 .....          | 90    | 72      | 22      | 21             | 99               | 304   |
| 1958-59 .....          | 273   | 85      | 53      | 24             | 236              | 671   |
| 1959-60 .....          | 75    | 43      | 34      | 12             | 42               | 206   |
| 1960-61 .....          | 243   | 88      | 62      | 22             | 201              | 616   |
| 1961-62 .....          | 102   | 46      | 44      | 9              | 85               | 286   |
| 1962-63 .....          | 147   | 55      | 55      | 16             | 134              | 407   |
| 1963-64 .....          | 185   | 57      | 65      | 18             | 163              | 488   |
| 1964-65 .....          | 157   | 60      | 81      | 13             | 176              | 487   |

Between 50,000 and 100,000 tons of silage are produced each year and in certain areas this is an important supplementary stock food.

### VEGETABLES

The market garden industry in South Australia is characterized by a large number of growers, most of whom cultivate a relatively small garden. Many of the gardens form part of a larger enterprise. A large part of the production of the industry comes from properties within easy reach of the Adelaide market.

Of the total area of approximately 17,000 acres devoted to market gardens, districts adjacent to Adelaide account for 11,000 acres producing all types of vegetables, including large quantities of celery and early tomatoes for export. An area of some 2,000 acres in Upper North Division (mainly on the coastal plains near Port Pirie) is devoted to the production of peas, early tomatoes and pumpkins for Adelaide and for export to the Melbourne market. Nearly 3,000 acres along the River Murray are devoted to production of peas, pumpkins and melons

for the Adelaide market, tomatoes for local markets and small areas of most other vegetables.

The following table shows the area and production of the principal vegetables for human consumption in South Australia in 1963-64 and 1964-65.

**Vegetables for Human Consumption, South Australia**

| Vegetable          | Area          |               | Unit of Quantity | Production |           |
|--------------------|---------------|---------------|------------------|------------|-----------|
|                    | 1963-64       | 1964-65       |                  | 1963-64    | 1964-65   |
|                    | Acres         | Acres         |                  |            |           |
| Beans .....        | 286           | 275           | bushel           | 62,014     | 56,765    |
| Cabbages .....     | 366           | 330           | dozen            | 171,855    | 155,473   |
| Carrots .....      | 315           | 318           | ton              | 4,064      | 4,464     |
| Cauliflowers ..... | 484           | 498           | dozen            | 174,741    | 197,246   |
| Celery .....       | 289           | 289           | crate            | 181,600    | 197,658   |
| Lettuce .....      | 425           | 422           | case             | 227,397    | 225,062   |
| Melons .....       | 347           | 257           | ton              | 1,782      | 1,310     |
| Onions .....       | 930           | 1,146         | ton              | 8,736      | 11,061    |
| Peas .....         | 4,851         | 4,333         | bushel           | 345,292    | 301,643   |
| Potatoes .....     | 5,459         | 5,247         | ton              | 51,195     | 48,400    |
| Pumpkins .....     | 871           | 828           | ton              | 5,477      | 5,081     |
| Tomatoes .....     | 1,180         | 956           | half-case        | 1,383,050  | 1,378,075 |
| Turnips .....      | 205           | 197           | ton              | 1,976      | 1,396     |
| Other .....        | 505           | 501           | ..               | ..         | ..        |
| <b>Total .....</b> | <b>16,513</b> | <b>15,597</b> | <b>..</b>        | <b>..</b>  | <b>..</b> |

The bulk of the potato production comes from the central and southern Adelaide hills and from the Mount Gambier area. The average yield has risen progressively from 5½ tons per acre in 1947-48 to 9 tons per acre in recent years. This improvement is largely due to better quality seed, improved fertilizers and to advances in pest and disease control.

The South Australian Potato Board was constituted under authority of the Potato Marketing Act, 1948, to control the sale and delivery of potatoes by growers. It fixes the maximum and minimum prices and the conditions under which potatoes may be sold. Members of the Board are representatives of retail sellers, merchants and growers of potatoes.

Most green peas are grown in the Port Pirie-Mambray Creek area, in the hills to the south of Adelaide, and in the Upper Murray irrigation areas. The crop from the Port Pirie area has a ready market in Melbourne, the supplies being refrigerated and sent by express rail to prevent deterioration of quality.

Celery produced in South Australia meets a steady demand from interstate markets and production has been about 200,000 crates annually for the past few years. Nearly all of the celery is grown on the Adelaide plains adjacent to the city.

The Adelaide plains produce most of the South Australian tomatoes, which are nearly all grown in glass houses. Significant quantities, mostly for canning and juice production in local factories, are now grown in the Upper Murray irrigation areas. In recent years higher yields have resulted from the introduction of better varieties.

## FRUIT

### Orchard Fruit

A large variety of fruit crops is grown in South Australia. The main types of fruit are oranges, peaches and apricots (predominantly grown in the irrigation



## PRODUCTION

settlements of the Upper Murray) and apples (nearly all grown in the Adelaide Hills). The following table relating to 1964-65 production shows the concentration of fruitgrowing in Central and Murray Mallee Divisions.

**Production of Principal Fruit Crops, Statistical Divisions, South Australia  
1964-65**

| Fruit              | Statistical Division |             |               | Other Areas | State   |
|--------------------|----------------------|-------------|---------------|-------------|---------|
|                    | Central              | Lower North | Murray Mallee |             |         |
|                    | '000 Bushels         |             |               |             |         |
| Citrus fruit—      |                      |             |               |             |         |
| Oranges—           |                      |             |               |             |         |
| Navel .....        | 214.8                | 2.6         | 1,209.0       | 1.1         | 1,427.5 |
| Other .....        | 122.4                | 1.2         | 1,698.6       | 0.4         | 1,822.6 |
| Other citrus fruit | 29.3                 | 0.7         | 156.9         | 0.3         | 187.2   |
| Non-citrus fruit—  |                      |             |               |             |         |
| Apples .....       | 1,601.7              | 4.6         | 15.9          | 2.5         | 1,624.7 |
| Apricots .....     | 193.7                | 5.0         | 966.2         | 5.0         | 1,169.9 |
| Peaches .....      | 82.1                 | 2.7         | 1,084.9       | 3.4         | 1,173.1 |
| Pears .....        | 243.6                | 1.9         | 327.9         | 0.8         | 574.2   |
| Plums .....        | 33.2                 | 1.2         | 3.1           | 0.6         | 38.1    |
| Prunes .....       | 54.8                 | 11.2        | 5.3           | 0.2         | 71.5    |

Citrus growing is concentrated in the irrigation settlements of the Upper Murray where nearly 90% of the total crop is produced. The industry has shown its greatest expansion in the last decade; production first reached 1,500,000 bushels in 1955-56 and 2,500,000 bushels in 1962-63 while by 1964-65 a record level of over 3,400,000 bushels was achieved. This increase is due largely to the extensive orange tree plantings in newly-developed irrigation schemes, including those of Sunlands, Golden Heights and Ramco Heights near Waikerie. Another factor has been a considerable change from furrow to overhead sprinkler irrigation for citrus trees planted since 1950. This change, coupled with advances in irrigation timing techniques, has raised the potential yield of recent plantings.

Over 20% of the State's orange production is exported, this being about 60% of total orange exports from Australia.

The following table of citrus trees of bearing age and production during the past 5 seasons shows the predominance of navel and valencia oranges in the State's citrus industry. Other types of oranges, lemons, limes and grapefruit, etc., together represent only about 8% of total citrus production.

**Citrus Fruits: Trees and Production, South Australia**

| Season        | Oranges                     |          |          |       | Lemons and Limes | Grapefruit and Other Citrus | Total Citrus |
|---------------|-----------------------------|----------|----------|-------|------------------|-----------------------------|--------------|
|               | Navel                       | Valencia | Mandarin | Other |                  |                             |              |
|               | Trees of Bearing Age ('000) |          |          |       |                  |                             |              |
| 1960-61 ..... | 312                         | 294      | 12       | 14    | 20               | 27                          | 679          |
| 1961-62 ..... | 320                         | 313      | 13       | 13    | 20               | 28                          | 707          |
| 1962-63 ..... | 330                         | 338      | 16       | 12    | 19               | 28                          | 743          |
| 1963-64 ..... | 332                         | 356      | 17       | 12    | 19               | 29                          | 765          |
| 1964-65 ..... | 348                         | 387      | 21       | 10    | 19               | 28                          | 813          |
|               | Production ('000 Bushels)   |          |          |       |                  |                             |              |
| 1960-61 ..... | 817                         | 686      | 37       | 35    | 39               | 109                         | 1,723        |
| 1961-62 ..... | 892                         | 964      | 34       | 35    | 39               | 122                         | 2,086        |
| 1962-63 ..... | 1,269                       | 1,201    | 57       | 38    | 48               | 163                         | 2,776        |
| 1963-64 ..... | 1,032                       | 1,018    | 41       | 34    | 36               | 159                         | 2,320        |
| 1964-65 ..... | 1,428                       | 1,726    | 62       | 34    | 42               | 145                         | 3,437        |

Apple growing is the principal non-citrus fruit industry. Although the area of apple orchards has decreased by some 50% over the last 40 years, production has gradually increased, partly because of the removal of lower yielding orchards and partly due to the general adoption of supplementary irrigation and lighter pruning practices. The yield per bearing acre, which averaged 197 bushels for the 10 seasons ended 1961-62, had risen to 281 bushels in 1963-64 and to 337 bushels in 1964-65. About 20 to 25% of the crop is exported each year either as fresh, pulped or preserved apples.

Pears are grown in the Adelaide Hills, in the Barossa Valley and on the Murray irrigation settlements. The yield from the 1964-65 harvest was a record 574,000 bushels from 1,664 acres. Pear acreage reached a peak in 1922, then declined gradually until 1952. An expansion of the canned fruit industry has caused a subsequent increase in plantings along the River Murray.

The stone fruits industry is becoming more important following development in the irrigation schemes. Production of peaches has shown the greatest increase: the 1951-52 yield of 157,000 bushels from 2,064 acres was fairly typical for the crop until that time, but by 1964-65 the yield was a record 1,173,000 bushels from 4,707 acres. In the same period, production of apricots has risen from 507,000 to 1,170,000 bushels. South Australia is the major apricot producing State, with over 70% of the crop being dried and much of the remainder being canned.

Cherries, plums and prunes and almonds are the most important of the remaining crops.

#### Non-Citrus Orchard Fruit: Trees and Production, South Australia

| Season        | Apples | Pears | Peaches                     | Apricots | Plums | Prunes | Cherries |
|---------------|--------|-------|-----------------------------|----------|-------|--------|----------|
|               |        |       | Trees of Bearing Age ('000) |          |       |        |          |
| 1960-61 ..... | 555    | 155   | 298                         | 357      | 36    | 73     | 53       |
| 1961-62 ..... | 546    | 165   | 348                         | 364      | 35    | 71     | 52       |
| 1962-63 ..... | 559    | 169   | 366                         | 357      | 33    | 66     | 51       |
| 1963-64 ..... | 544    | 172   | 367                         | 361      | 32    | 63     | 49       |
| 1964-65 ..... | 550    | 174   | 385                         | 366      | 30    | 62     | 49       |
|               |        |       | Production ('000 Bushels)   |          |       |        |          |
| 1960-61 ..... | 1,254  | 337   | 573                         | 756      | 38    | 86     | 46       |
| 1961-62 ..... | 1,276  | 434   | 842                         | 806      | 46    | 58     | 50       |
| 1962-63 ..... | 1,496  | 412   | 841                         | 868      | 38    | 64     | 35       |
| 1963-64 ..... | 1,341  | 524   | 979                         | 929      | 33    | 58     | 54       |
| 1964-65 ..... | 1,625  | 574   | 1,173                       | 1,170    | 38    | 72     | 42       |

South Australia accounts for almost the entire Australian production of dried apricots, peaches, pears, nectarines and figs—mostly in the Upper Murray areas and the Barossa Valley. A relatively small quantity of dried prunes is produced in the Barossa Valley and in the Noarlunga district.

Production in 1963-64 included 49,820 cwt of dried apricots, 17,380 cwt of dried peaches and 6,100 cwt of dried pears.

The Dried Fruits Board, constituted under the Dried Fruits Act, 1934-1941, regulates marketing in South Australia by determining a quota for home sale of dried fruits in each year. By advertising or other means, the Board may encourage the consumption of dried fruits.

#### Grapes

Approximately 43% of Australia's vineyard area is located in South Australia where the bulk of the grapes grown are used for winemaking. In 1963-64 South Australia produced 27.1 million gallons of wine and 17,700 tons of dried vine fruit representing 72% and 17% respectively of total Australian production.

The following table shows the area, production and utilization of grapes for the seasons 1955-56 to 1964-65.

### Area, Production and Utilization of Grapes, South Australia

| Season          | Area of Vines | Total Grape Production (Fresh) | Wine Production (a) | Dried Fruit Production |          |         |
|-----------------|---------------|--------------------------------|---------------------|------------------------|----------|---------|
|                 |               |                                |                     | Currants               | Sultanas | Raisins |
|                 | Acres         | Tons                           | '000 Gallons        | Cwt.                   | Cwt.     | Cwt.    |
| 1955-56 .....   | 59,862        | 159,866                        | 18,403              | 100,180                | 201,680  | 32,300  |
| 1956-57 .....   | 57,409        | 177,406                        | 24,038              | 78,820                 | 181,900  | 12,420  |
| 1957-58 .....   | 57,439        | 199,032                        | 26,400              | 96,480                 | 195,820  | 30,300  |
| 1958-59 .....   | 56,749        | 194,351                        | 25,132              | 90,620                 | 221,400  | 25,060  |
| 1959-60 .....   | 56,853        | 157,275                        | 21,576              | 56,880                 | 128,680  | 55,160  |
| 1960-61 .....   | 56,897        | 178,290                        | 25,061              | 90,860                 | 115,900  | 19,120  |
| 1961-62 .....   | 57,836        | 220,002                        | 30,831              | 54,840                 | 189,020  | 24,460  |
| 1962-63 .....   | 58,266        | 164,808                        | 20,785              | 52,140                 | 187,420  | 32,720  |
| 1963-64 .....   | 58,679        | 211,719                        | 27,102              | 90,660                 | 244,820  | 18,360  |
| 1964-65 (b) ... | 59,000        | 230,000                        | 28,100              | 99,000                 | 265,000  | 52,000  |

(a) Excludes grape spirit added.

(b) Preliminary.

Grapes are grown commercially in South Australia in non-irrigated areas of 19 to 26 inch rainfall, and in much drier areas (frequently with less than a 10 inch rainfall) where irrigation is available.

The expansion of grape growing in the foothills and plains near Adelaide was most pronounced between 1845 and 1860. Some vineyards still remain in the suburbs, but they are gradually disappearing. Main plantings are of wine grapes but some table grapes are also grown.

The Barossa Valley, some 40 miles north of Adelaide, is today the largest non-irrigated grape growing area in Australia. The valley was first occupied and planted to vines in the mid 19th century; the Orlando vineyards were commenced in 1847, Yalumba in 1849 and Seppeltsfield in 1851. Wine varieties predominate in this region although a few currants are grown for drying.

Extensive areas of vineyards are located in the southern districts lying 12 to 25 miles south of Adelaide. Nearness to the sea provides this area with a much more temperate climate than the Barossa Valley which is subject to frosts. The southern districts also are devoted mainly to grapes for winemaking with some currants for drying.

In 1888 the Chaffey brothers founded the irrigation settlements of Mildura (Victoria) and Renmark. After World War I returned soldiers were settled on these irrigated areas and this provided the South Australian vine industry with one of its most significant periods of expansion; the area under vines in the State rose from 31,000 acres in 1918-19 to over 50,000 acres in 1924-25. These settlements now are by far the most important grape growing areas in the State and in 1963-64 accounted for 43% of the area under vines and 67% of grapes produced. Because of the rather harsh climate, and the suitability of the area for production of dried vine fruit, little attention was paid in the early stages to growing grapes for wine. However, in about 1930 it was found that fortified wines and spirits could be produced and since then the area of wine varieties has increased to the extent that it now exceeds the area of drying varieties. The wine industry is now firmly based on irrigated production, and the trend is for a rising proportion of wines produced in these districts.

Other wine growing areas include Langhorne Creek, some 40 miles south-east of Adelaide, an area around Clare and Watervale in the Lower North and

Coonawarra in the South Eastern Division. Coonawarra has a cooler climate than other grape growing areas, resulting in a later vintage, and an underground water table near the surface provides a reserve of water through the summer months. Only wine grapes are grown and the area is renowned for its production of high quality dry red wines.

The following table gives particulars of area of vines and production of grapes in the main statistical divisions in 1963-64.

**Area and Production of Vines, Statistical Divisions, South Australia  
1963-64**

| Statistical Division             | Area   |       |        | Production of Fresh Grapes |       |        |         |
|----------------------------------|--------|-------|--------|----------------------------|-------|--------|---------|
|                                  | Wine   | Table | Drying | Wine Making                | Table | Drying | Total   |
|                                  | Acres  |       |        | Tons                       |       |        |         |
| Central . . . . .                | 28,738 | 75    | 774    | 57,679                     | 157   | 1,534  | 59,370  |
| Lower North . . . . .            | 2,521  | 3     | 390    | 4,501                      | 3     | 725    | 5,229   |
| South Eastern . . . . .          | 516    | —     | —      | 745                        | —     | —      | 745     |
| Murray Mallee . . . . .          | 14,115 | 206   | 11,337 | 85,903                     | 808   | 59,663 | 146,374 |
| Remainder of Divisions . . . . . | —      | 4     | —      | —                          | 1     | —      | 1       |
| Total State                      | 45,890 | 288   | 12,501 | 148,828                    | 969   | 61,922 | 211,719 |

The production of dried vine fruits—sultanas, currants, raisins and lexias—is confined mainly to the irrigation districts of the Upper Murray, particularly the Renmark, Berri, Loxton and Cobdogla irrigation areas. Sultanas represent almost 70% of the total quantity of dried vine fruit.

#### OTHER CROPS

Other crops cultivated in South Australia include field peas, nursery products, cut flowers, pasture seeds, vegetable seeds, chicory and linseed.

In 1964-65, 34,000 acres of field peas were grown for grain yielding 496,000 bushels, virtually all of this area being located in the cereal growing districts north of Adelaide. Field peas are grown mainly as a livestock fodder, or for processing into split peas.

Most of the lucerne and other pasture seeds are grown in the cooler, moist regions, particularly in the South East. During the 1964-65 season the South East produced 10,000 of the State's 22,000 bags of lucerne seed.

A considerable portion of the area devoted to nurseries is found in the vicinity of Adelaide. In addition there are several fruit tree nurseries in the horticultural districts of the River Murray.

#### VALUE AND PRICES OF CROPS

The estimated gross value of agricultural production for South Australia in the 1963-64 season was £82,817,000. Gross value is defined as the value placed on recorded production at wholesale prices realized in principal markets. Where products are absorbed at a local point or become raw material for a secondary industry the value in each case is presumed to be the value at the principal market.

In the following table gross values of principal crops for the seasons 1958-59 to 1963-64 are shown.

## Gross Value of Principal Crops, South Australia

| Crop                            | 1958-59       | 1959-60       | 1960-61       | 1961-62       | 1962-63       | 1963-64       |
|---------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|
|                                 | £'000         |               |               |               |               |               |
| <b>Cereals—</b>                 |               |               |               |               |               |               |
| Wheat .....                     | 21,896        | 8,248         | 34,000        | 25,757        | 28,143        | 38,830        |
| Barley .....                    | 19,944        | 5,500         | 18,988        | 11,476        | 9,576         | 13,199        |
| Oats .....                      | 3,497         | 1,061         | 2,809         | 1,313         | 1,969         | 2,609         |
| Rye .....                       | 194           | 74            | 107           | 93            | 85            | 100           |
| <b>Grass seeds .....</b>        | <b>658</b>    | <b>551</b>    | <b>559</b>    | <b>393</b>    | <b>619</b>    | <b>978</b>    |
| Hay .....                       | 5,792         | 3,403         | 4,623         | 2,214         | 3,517         | 4,207         |
| Green fodder .....              | 904           | 869           | 907           | 701           | 1,102         | 1,094         |
| Field peas .....                | 453           | 86            | 370           | 261           | 355           | 445           |
| <b>Orchard and berry fruit—</b> |               |               |               |               |               |               |
| Citrus .....                    | 2,719         | 2,092         | 2,578         | 2,764         | 2,722         | 2,789         |
| Apples .....                    | 1,512         | 1,496         | 1,711         | 1,591         | 1,972         | 1,544         |
| Apricots .....                  | 972           | 880           | 967           | 1,092         | 1,207         | 1,375         |
| Peaches .....                   | 609           | 658           | 718           | 778           | 869           | 906           |
| Other .....                     | 1,130         | 1,279         | 1,291         | 1,238         | 1,223         | 1,386         |
| <b>Vine fruit—</b>              |               |               |               |               |               |               |
| Wine grapes ....                | 2,712         | 2,644         | 3,358         | 4,188         | 2,833         | 3,944         |
| Table grapes ....               | 72            | 84            | 92            | 75            | 90            | 89            |
| Currants, raisins,<br>etc.....  | 2,266         | 1,564         | 1,548         | 1,799         | 2,012         | 2,751         |
| <b>Vegetables—</b>              |               |               |               |               |               |               |
| Potatoes .....                  | 1,201         | 1,008         | 1,596         | 2,048         | 1,195         | 1,170         |
| Green peas .....                | 501           | 400           | 508           | 385           | 432           | 421           |
| Other .....                     | 3,315         | 3,273         | 3,562         | 3,242         | 3,649         | 4,327         |
| <b>Other crops .....</b>        | <b>82</b>     | <b>376</b>    | <b>427</b>    | <b>603</b>    | <b>639</b>    | <b>653</b>    |
| <b>Total .....</b>              | <b>70,429</b> | <b>35,546</b> | <b>80,719</b> | <b>62,011</b> | <b>64,209</b> | <b>82,817</b> |

Market prices of principal crops grown in South Australia for years 1959-60 to 1963-64 are set out below.

## Prices of Agricultural Products, South Australia

| Crop               | Unit   | 1959-60  | 1960-61 | 1961-62 | 1962-63 | 1963-64 |
|--------------------|--------|----------|---------|---------|---------|---------|
|                    |        | £ s. d.  | £ s. d. | £ s. d. | £ s. d. | £ s. d. |
| <b>Cereals—</b>    |        |          |         |         |         |         |
| Wheat (a)—         |        |          |         |         |         |         |
| Bulk .....         | bushel | 0 13 11½ | 0 14 4½ | 0 15 1½ | 0 14 8½ | 0 14 4  |
| Bagged .....       | bushel | 0 14 7½  | 0 15 0½ | 0 16 0½ | 0 15 5½ | 0 15 1½ |
| Barley (a) .....   | bushel | 0 10 1½  | 0 9 1½  | 0 11 2½ | 0 11 1½ | 0 11 1½ |
| Oats .....         | bushel | 0 9 5    | 0 5 1½  | 0 7 3   | 0 7 9   | 0 6 1½  |
| Rye .....          | bushel | 0 12 2½  | 0 8 3½  | 0 11 5½ | 0 12 3  | 0 13 6  |
| <b>Vegetables—</b> |        |          |         |         |         |         |
| Potatoes (a) ..... | ton    | 20 15 5  | 39 5 4  | 42 7 1  | 22 10 9 | 22 19 1 |
| Onions .....       | ton    | 70 15 0  | 47 1 8  | 61 5 0  | 33 8 11 | 50 9 9  |
| Tomatoes—          |        |          |         |         |         |         |
| Glasshouse .....   | ½ case | 1 12 9   | 1 18 6  | 1 12 0  | 1 12 6  | 2 1 0   |
| Other .....        | ½ case | 1 1 5    | 1 1 9   | 0 16 0  | 0 19 4  | 0 16 7  |
| <b>Fruit—</b>      |        |          |         |         |         |         |
| Apples .....       | bushel | 1 5 3    | 1 8 6   | 1 3 10  | 1 9 1   | 1 3 5   |
| Apricots .....     | bushel | 2 0 10   | 2 2 8   | 1 18 4  | 1 15 8  | 1 19 9  |
| Peaches .....      | bushel | 2 4 0    | 2 19 2  | 2 2 4   | 2 7 8   | 2 12 2  |
| Pears .....        | bushel | 1 10 0   | 1 13 10 | 1 11 3  | 1 13 9  | 1 8 1   |
| <b>Oranges—</b>    |        |          |         |         |         |         |
| Navel (a) .....    | bushel | 1 5 5    | 1 9 4   | 1 10 5  | 1 1 3   | 1 6 2   |
| Other (a) .....    | bushel | 1 2 7    | 1 13 2  | 1 4 3   | 0 19 0  | 1 3 6   |
| <b>Grapes—</b>     |        |          |         |         |         |         |
| Table .....        | ton    | 77 0 0   | 86 6 8  | 72 14 6 | 83 4 6  | 91 12 0 |
| Wine (b) .....     | ton    | 23 3 7   | 24 7 8  | 24 7 0  | 24 8 1  | 26 10 0 |

(a) Average price realized.

(b) Weighted average price at winery.

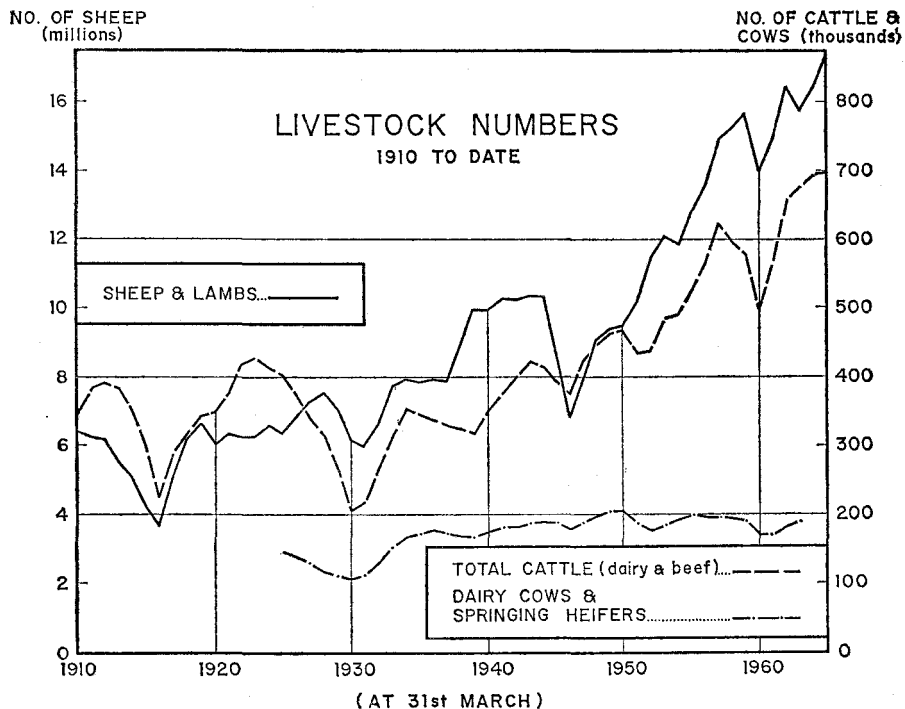
Wheat prices, which were as low as 2s. 3½d. per bushel in 1930-31, have shown little fluctuation in recent years, and have not been below 13 shillings per bushel since the 1948-49 season. Prices of other cereals, however, are subject to marked variations from year to year. For example, since 1947-48, average barley prices per bushel have been as high as 16s. 10½d. and as low as 8s. 4½d., while in the same period oats prices have been as high as 11s. 8d. and as low as 4s. 2½d. per bushel.

**PASTORAL AND DAIRYING**

Pastoral activities, with sheep grazing predominant, are widespread in South Australia, and are pursued under widely varying climatic conditions from the arid saltbush plains in the far north through to the lush, well-watered pastures of the South East. The South East and the moister southern coastal regions provide grazing for a significant portion of the livestock in this State.

At present livestock numbers are at record levels having increased markedly in recent years. The bulk of this expansion of the industry has been confined to the heavier rainfall districts. Carrying capacity has been boosted particularly by the introduction and adoption of new and improved pastures.

The increase in numbers of sheep and cattle (both in total and of dairy cows only) in South Australia since 1910 is illustrated in the graph below.



**The Dog Fence**

This fence is an unbroken barrier of wire netting five to six feet high extending for more than 5,000 miles through South Australia, along the South Australia-New South Wales and the New South Wales-Queensland borders and through part of Queensland. It has been erected to protect the sheep lands of these States

from the ravages of dingoes (native dogs). The part of the fence within South Australia, as shown on the map inside the back cover of this volume, extends in a tortuous line from the head of the Great Australian Bight to the New South Wales border for a distance of nearly 1,500 miles. The whole of the sheep population of South Australia is now confined within the area enclosed by the Dog Fence, which effectively excludes the dingoes.

### PASTURES

Over the last decade the area of sown pastures has more than doubled; this is illustrated in the following table.

Area Under Pasture<sup>(a)</sup>, Statistical Divisions, South Australia

| Date     | Statistical Divisions |             |             |               |             |               | Total |
|----------|-----------------------|-------------|-------------|---------------|-------------|---------------|-------|
|          | Central               | Lower North | Upper North | South Eastern | Western (b) | Murray Mallee |       |
|          | '000 Acres            |             |             |               |             |               |       |
| March—   |                       |             |             |               |             |               |       |
| 1956..   | 654                   | 194         | 46          | 1,441         | 279         | 234           | 2,848 |
| 1957..   | 1,057                 | 403         | 62          | 1,740         | 493         | 498           | 4,253 |
| 1958..   | 1,019                 | 357         | 71          | 1,865         | 522         | 515           | 4,349 |
| October— |                       |             |             |               |             |               |       |
| 1958..   | 928                   | 440         | 79          | 1,615         | 616         | 520           | 4,198 |
| 1959..   | 896                   | 254         | 44          | 1,428         | 509         | 485           | 3,616 |
| 1960..   | 1,050                 | 340         | 51          | 1,790         | 663         | 704           | 4,598 |
| 1961..   | 1,132                 | 374         | 57          | 2,025         | 828         | 829           | 5,245 |
| 1962..   | 1,142                 | 366         | 64          | 2,140         | 787         | 859           | 5,358 |
| 1963..   | 1,133                 | 365         | 61          | 2,246         | 883         | 886           | 5,574 |
| 1964..   | 1,240                 | 411         | 60          | 2,431         | 1,035       | 1,037         | 6,214 |

(a) Lucerne, clovers (all kinds), rye grasses (all kinds), cocksfoot, paspalum, phalaris, primrose, sudan and veldt.

(b) Includes Outside of Counties.

To a very large extent the discovery of the relationship between clovers and soil fertility has been responsible for this rapid development of pastures. The nitrogen-building clovers have, in the cereal districts, raised both fertility and crop yields while at the same time providing ready grazing of high nutritional value for livestock. Murray Mallee and Western Divisions have been transformed through the sowing of more and improved pastures from unstable farming districts to highly productive areas.

Until recently most pasture plants available flourished only in the higher rainfall zones and therefore pasture improvement was confined for the most part to the Central and South Eastern Divisions. At that stage Mount Barker sub. clover was the predominant pasture. New varieties have now been introduced, including Clare, Geraldton, Dwalganup and Yarloop sub. clovers. These are suited to the hard setting soils of the important wheatgrowing area extending northward from Adelaide to Jamestown.

Another type of legume, known as medics, has been found to be suitable for the drier cereal country, especially the mallee soils. Four medics are grown—Commercial Barrel, Barrel 173, Harbinger and Snail. Lucerne is also extensively grown; it thrives under irrigation yet still grows in areas with as little as 10 inches of rainfall per annum. It is both salt-resistant and drought-resistant and is grown in most areas of the State. Strawberry clover is the important legume on the black soils of the South East.

The most important perennial grasses in the better rainfall areas are phalaris tuberosa, perennial rye grass and cocksfoot while most widely used in the medium to low rainfall areas is the annual, wimmera rye grass.

The naturalized annual grasses which occur over the whole of the State contribute substantially to total pasture production.

Details of fertilizers used on pasture are given on page 316.

## SHEEP

### Numbers and Distribution

The pastoral industry was the first to become established, mainly because there was an assured overseas market for wool, hides and tallow. The fertile plains north of Adelaide, as well as the Adelaide hills, offered ready grazing and by 1856, only 20 years after the first settlement, there were about 2 million sheep in the State. This trend continued with sheep numbers increasing to 7.6 million in 1891, a peak that was not exceeded until 1932.

The severity of the droughts during this period is reflected in the reduced flocks of 1902 (4.8 million) and 1915 (3.7 million).

After 1932 flock numbers steadily increased, exceeding 10 million by 1940, but again a drought severely reduced the numbers to less than 7 million in 1946. Thereafter the sheep population increased steadily as improved farming techniques raised the grazing capacity of the pastoral and wheat-sheep zones. At 31st March 1965 a record 17,289,000 sheep were being maintained.

By far the greatest concentration of sheep (nearly 5 million) is in the South Eastern Division, particularly in the southern portion of the division where the high rainfall and fertile soils provide ample year-round grazing. In the upper South East large scale land development schemes have, in the last decade, doubled the sheep carrying capacity in many areas by the application of trace elements to deficient soils.

A similar scheme was undertaken on Kangaroo Island (Central Division) where the sheep population rose from 258,000 in 1956 to 637,000 in 1965. Central Division contains the next largest sheep population (3.8 million) with sheep fairly evenly distributed throughout, heaviest concentrations being on Yorke Peninsula, Kangaroo Island and in the southern Adelaide hills region.

In Western Division sheep grazing is concentrated mainly in the southern portion of Eyre Peninsula. The only other division with more than 2 million sheep is Lower North where a large proportion of sheep raising is associated with cereal growing.

**Sheep Numbers, Statistical Divisions, South Australia  
At 31st March 1956 to 1965**

| Year       | Statistical Division |             |             |               |         |               |                     | Total  |
|------------|----------------------|-------------|-------------|---------------|---------|---------------|---------------------|--------|
|            | Central              | Lower North | Upper North | South Eastern | Western | Murray Mallee | Outside of Counties |        |
|            | '000                 |             |             |               |         |               |                     |        |
| 1956 ..... | 3,046                | 1,999       | 1,134       | 2,938         | 2,167   | 1,168         | 1,133               | 13,585 |
| 1957 ..... | 3,292                | 2,184       | 1,238       | 3,337         | 2,346   | 1,389         | 1,198               | 14,984 |
| 1958 ..... | 3,227                | 2,058       | 1,200       | 3,968         | 2,346   | 1,364         | 1,074               | 15,237 |
| 1959 ..... | 3,392                | 2,079       | 1,190       | 3,930         | 2,461   | 1,381         | 1,201               | 15,634 |
| 1960 ..... | 2,969                | 1,678       | 1,081       | 3,591         | 2,168   | 1,271         | 1,267               | 14,025 |
| 1961 ..... | 3,298                | 1,927       | 1,054       | 3,932         | 2,298   | 1,393         | 1,050               | 14,952 |
| 1962 ..... | 3,670                | 2,191       | 1,111       | 4,315         | 2,514   | 1,649         | 965                 | 16,415 |
| 1963 ..... | 3,466                | 1,941       | 1,038       | 4,444         | 2,366   | 1,529         | 954                 | 15,738 |
| 1964 ..... | 3,619                | 2,114       | 1,135       | 4,375         | 2,460   | 1,592         | 1,107               | 16,402 |
| 1965 ..... | 3,804                | 2,156       | 1,087       | 4,945         | 2,532   | 1,684         | 1,081               | 17,289 |



The distribution in statistical divisions of sheep flocks classified by size of flock at 31st March 1960 is given in the following table.

**Sheep Flocks Classified by Size of Flock, Statistical Divisions, South Australia  
31st March 1960**

| Number of Sheep<br>in Flock | Statistical Division |                |                |                  |         |                  | Outside of<br>Counties | Total  |
|-----------------------------|----------------------|----------------|----------------|------------------|---------|------------------|------------------------|--------|
|                             | Central              | Lower<br>North | Upper<br>North | South<br>Eastern | Western | Murray<br>Mallee |                        |        |
|                             | Number of Flocks     |                |                |                  |         |                  |                        |        |
| Under 50 .....              | 756                  | 146            | 49             | 162              | 25      | 78               | —                      | 1,216  |
| 50- 99 .....                | 455                  | 96             | 23             | 93               | 23      | 45               | —                      | 735    |
| 100- 199 .....              | 834                  | 256            | 77             | 170              | 37      | 125              | —                      | 1,499  |
| 200- 499 .....              | 1,920                | 1,096          | 331            | 506              | 383     | 661              | 3                      | 4,900  |
| 500- 999 .....              | 1,188                | 791            | 295            | 787              | 980     | 697              | 2                      | 4,740  |
| 1,000- 1,999 .....          | 592                  | 256            | 159            | 910              | 542     | 247              | 6                      | 2,712  |
| 2,000- 4,999 .....          | 174                  | 73             | 75             | 356              | 132     | 46               | 29                     | 885    |
| 5,000- 9,999 .....          | 10                   | 16             | 16             | 57               | 15      | 6                | 26                     | 146    |
| 10,000-19,999 .....         | —                    | 5              | 11             | 11               | 5       | 1                | 26                     | 59     |
| 20,000 or more .....        | —                    | —              | 2              | —                | 3       | 1                | 17                     | 23     |
| Total flocks ...            | 5,929                | 2,735          | 1,038          | 3,052            | 2,145   | 1,907            | 109                    | 16,915 |

At present about 22% of the total sheep population consists of lambs and hoggets under 1 year. This proportion has remained fairly constant for a number of years although it is subject to some fluctuations. For example, as the next table shows, lamb numbers, which had fallen after some relatively poor lambing seasons, were built up considerably during the 1961-62 season.

**Age and Sex of Sheep, South Australia  
31st March 1956 to 1965**

| Year     | Rams | Breeding<br>Ewes | Other<br>Ewes | Wethers | Lambs and<br>Hoggets<br>(under one<br>year) | Total<br>Sheep |
|----------|------|------------------|---------------|---------|---|----------------|
|          | '000 |                  |               |         |   |                |
| 1956.... | 170  | 6,324            | 751           | 3,434   | 2,906                                       | 13,585         |
| 1957.... | 184  | 6,976            | 720           | 3,647   | 3,457                                       | 14,984         |
| 1958.... | 189  | 6,579            | 1,045         | 3,987   | 3,437                                       | 15,237         |
| 1959.... | 198  | 7,284            | 826           | 4,264   | 3,062                                       | 15,634         |
| 1960.... | 188  | 6,489            | 883           | 3,588   | 2,877                                       | 14,025         |
| 1961.... | 187  | 7,397            | 690           | 3,854   | 2,824                                       | 14,952         |
| 1962.... | 190  | 7,531            | 786           | 4,110   | 3,798                                       | 16,415         |
| 1963.... | 196  | 7,258            | 812           | 4,144   | 3,328                                       | 15,738         |
| 1964.... | 199  | 7,545            | 772           | 4,277   | 3,609                                       | 16,402         |
| 1965.... | 208  | 7,938            | 813           | 4,515   | 3,815                                       | 17,289         |

**Breeds of Sheep**

The predominant breed in South Australia is the Merino which accounts for over 80% of the total sheep numbers. The South Australian Merino having a robust constitution and a capacity to travel long distances to water has adapted well to the hot, dry conditions of the interior. Because of the particularly arid nature of the South Australian climate, pioneer breeders have developed a large framed type of Merino, yielding an exceptionally high clip of medium to broad quality wool.

Of the remaining recognized breeds, the Australasian breeds, Corriedale and Polwarth, are most important. These are dual purpose sheep, used for mutton and at the same time producing wool of good quality. The Corriedale is a fixed cross between Lincoln rams and Merino ewes while the Polwarth is a fixed comeback bred from the mating of Merino rams with Lincoln-Merino ewes.

British longwools (Border Leicester, Cheviot and Romney Marsh) are used for mating with the Merino or crossbred ewes mainly to produce fat lambs but also useful types of comeback and crossbred wools.

British shortwools (Dorset Horn, Ryeland, Suffolk, Southdown and Shropshire) are utilized principally for production of export lambs.

### Breeds of Sheep, South Australia, at 31st March 1961 to 1965

| Breed                  | 1961     | 1962     | 1963     | 1964     | 1965     |
|------------------------|----------|----------|----------|----------|----------|
|                        | '000     |          |          |          |          |
| Merino .....           | 12,505.5 | 13,772.3 | 13,152.7 | 13,897.0 | 14,581.2 |
| Corriedale .....       | 858.9    | 932.7    | 943.7    | 923.0    | 1,003.2  |
| Dorset Horn .....      | 37.4     | 40.4     | 39.3     | 41.4     | 42.0     |
| Border-Leicester ..... | 24.7     | 28.5     | 26.0     | 19.6     | 19.4     |
| Polwarth .....         | 78.8     | 81.8     | 88.4     | 80.8     | 99.7     |
| Romney Marsh .....     | 24.2     | 32.0     | 29.9     | 25.8     | 26.3     |
| Ryeland .....          | 5.5      | 4.9      | 5.0      | 4.8      | 4.3      |
| Southdown .....        | 5.9      | 7.0      | 6.6      | 5.8      | 5.5      |
| Suffolk .....          | 16.2     | 17.2     | 16.7     | 15.9     | 13.4     |
| Other .....            | 4.7      | 4.4      | 4.7      | 4.0      | 4.1      |
| Merino-Comeback ...    | 248.6    | 306.4    | 285.8    | 257.7    | 284.2    |
| Crossbred .....        | 1,141.8  | 1,186.9  | 1,138.7  | 1,126.7  | 1,205.2  |
| Total .....            | 14,952.2 | 16,414.5 | 15,737.5 | 16,402.5 | 17,288.5 |

### Lambing

In 1964 a record number of ewes (7,191,000) were mated and lambs marked totalled 5,739,000. Early reports from farmers indicated that they intended to mate almost 7.8 million ewes in 1965—approximately 5.2 million to Merino rams, 1.2 million to other longwool rams and 1.4 million to shortwool rams.

The lambing percentage (*i.e.*, of lambs marked to ewes mated) has never quite reached 80 in South Australia, although it has been regularly over 70 for a number of years. This represents a considerable improvement over the period prior to World War II when the percentage quite often fell below 60 and occasionally below 50 in drought years.

Details of lambs marked and the lambing percentage in each statistical division in recent years are given in the next table.

### Lambing, Statistical Divisions, South Australia

| Season     | Statistical Division   |             |             |               |         |               |                     | Total |
|------------|------------------------|-------------|-------------|---------------|---------|---------------|---------------------|-------|
|            | Central                | Lower North | Upper North | South Eastern | Western | Murray Mallee | Outside of Counties |       |
|            | Lambs Marked ('000)    |             |             |               |         |               |                     |       |
| 1960 ..... | 1,031                  | 565         | 247         | 1,114         | 543     | 431           | 261                 | 4,192 |
| 1961 ..... | 1,397                  | 879         | 401         | 1,349         | 754     | 614           | 250                 | 5,644 |
| 1962 ..... | 1,343                  | 841         | 366         | 1,322         | 675     | 633           | 263                 | 5,443 |
| 1963 ..... | 1,282                  | 778         | 346         | 1,371         | 679     | 587           | 359                 | 5,402 |
| 1964 ..... | 1,400                  | 893         | 359         | 1,384         | 751     | 675           | 277                 | 5,739 |
|            | Lambing Percentage (a) |             |             |               |         |               |                     |       |
| 1960 ..... | 76.4                   | 68.8        | 60.9        | 80.7          | 67.9    | 69.9          | 61.4                | 72.3  |
| 1961 ..... | 83.6                   | 81.4        | 74.3        | 84.9          | 76.6    | 79.5          | 56.8                | 79.8  |
| 1962 ..... | 82.2                   | 80.3        | 74.8        | 83.2          | 72.3    | 78.7          | 60.4                | 78.5  |
| 1963 ..... | 80.9                   | 77.5        | 71.8        | 84.9          | 73.5    | 75.6          | 77.4                | 78.9  |
| 1964 ..... | 83.5                   | 81.4        | 71.4        | 84.6          | 76.3    | 79.7          | 62.1                | 79.8  |

(a) Percentage of lambs marked to ewes mated.

**Sheep Shearing and Wool-clip**

In the agricultural areas of the State there is a predominance of shearing during the late winter and spring months, August to November. Shearing in the South Eastern Division occurs somewhat later, with some 75% of the wool-clip being obtained in the period October to November. In the northern pastoral areas (Outside of Counties) there are two main seasons, March-April and July-August.

The total wool clip, including crutchings, exceeded 200 million lb. for the first time in 1964-65. More than 90% of this wool is obtained from adult sheep.

The average fleeceweight in South Australia is well over 12 lb. per head for adult sheep. This is significantly higher than the yield obtained in other States, and is due primarily to the larger size of the South Australian Merino, its broader wool quality and longer thicker-stapled fleece.

**Sheep and Lambs Shorn, Wool-clip and Average Fleeceweight, South Australia**

| Classification       | 1959-60                        | 1960-61 | 1961-62 | 1962-63 | 1963-64 | 1964-65 |
|----------------------|--------------------------------|---------|---------|---------|---------|---------|
|                      | Number Shorn ('000)            |         |         |         |         |         |
| Sheep .....          | 13,702                         | 12,629  | 13,798  | 14,442  | 14,096  | 14,832  |
| Lambs .....          | 3,408                          | 2,753   | 3,879   | 3,417   | 3,540   | 3,911   |
| Total .....          | 17,110                         | 15,382  | 17,677  | 17,859  | 17,636  | 18,743  |
|                      | Wool Clip ('000 lb.)           |         |         |         |         |         |
| Sheep .....          | 160,213                        | 145,605 | 168,750 | 168,647 | 172,588 | 175,998 |
| Lambs .....          | 11,562                         | 9,776   | 14,776  | 12,419  | 13,137  | 14,829  |
| Crutchings .....     | 8,461                          | 7,495   | 8,679   | 8,788   | 9,062   | 9,232   |
| Total .....          | 180,236                        | 162,876 | 192,205 | 189,854 | 194,787 | 200,059 |
|                      | Average Fleeceweight (a) (lb.) |         |         |         |         |         |
| Sheep .....          | 12.31                          | 12.12   | 12.86   | 12.29   | 12.89   | 12.49   |
| Sheep and lambs .... | 10.53                          | 10.59   | 10.87   | 10.63   | 11.04   | 10.67   |

(a) Includes crutchings.

A breakdown of the State figures for 1964-65 by statistical divisions is given in the next table. This shows the high average fleeceweight obtained in the northern pastoral areas (Outside of Counties) and to a lesser extent Upper North Division. The relatively light average fleece obtained in South Eastern Division is probably explained partly by the lower proportion of Merino sheep in this area (at 31st March 1965 only 68% of total sheep in South Eastern Division were Merinos, compared with an overall State figure of over 84%), but more importantly by the lighter wool quality of the Merino and the smaller framed sheep in this area.

**Sheep and Lambs Shorn, Wool Clip and Average Fleeceweight**  
**Statistical Divisions, South Australia**  
**1964-65**

| Classification     | Statistical Division           |             |             |               |         |               | Outside of Counties | Total   |
|--------------------|--------------------------------|-------------|-------------|---------------|---------|---------------|---------------------|---------|
|                    | Central                        | Lower North | Upper North | South Eastern | Western | Murray Mallee |                     |         |
|                    | Number Shorn ('000)            |             |             |               |         |               |                     |         |
| Sheep .....        | 3,284                          | 1,858       | 939         | 4,193         | 2,226   | 1,437         | 895                 | 14,832  |
| Lambs .....        | 793                            | 581         | 286         | 1,033         | 567     | 389           | 262                 | 3,911   |
| Total ....         | 4,077                          | 2,439       | 1,225       | 5,226         | 2,793   | 1,826         | 1,157               | 18,743  |
|                    | Wool Clip ('000 lb.)           |             |             |               |         |               |                     |         |
| Sheep .....        | 37,860                         | 22,788      | 11,926      | 47,042        | 26,678  | 17,500        | 12,204              | 175,998 |
| Lambs .....        | 2,817                          | 2,227       | 1,080       | 3,972         | 1,846   | 1,478         | 1,409               | 14,829  |
| Crutchings .....   | 1,990                          | 1,193       | 622         | 2,394         | 1,422   | 967           | 644                 | 9,232   |
| Total ....         | 42,667                         | 26,208      | 13,628      | 53,408        | 29,946  | 19,945        | 14,257              | 200,059 |
|                    | Average Fleeceweight (a) (lb.) |             |             |               |         |               |                     |         |
| Sheep .....        | 12.13                          | 12.91       | 13.36       | 11.79         | 12.62   | 12.86         | 14.35               | 12.49   |
| Sheep and lambs .. | 10.46                          | 10.75       | 11.12       | 10.22         | 10.72   | 10.93         | 12.32               | 10.67   |

(a) Includes crutchings.

## WOOL INDUSTRY

### Organization of the Australian Wool Industry

The *Wool Industry Act* 1962 made provision for the replacement of three separate instrumentalities (the Australian Wool Bureau, the Wool Research Committee and the Australian Wool Testing Authority) by a single overall body, to be known as the Australian Wool Board. The Board is thus responsible for the control and co-ordination of wool promotion, research and testing and acts as an advisory authority on wool marketing. The Board was inaugurated on 1st May 1963, being made up of 11 members, viz. a chairman, six woolgrower representatives, three members with special qualifications and a representative of the Commonwealth Government.

Following the establishment of the Board, the Australian Woolgrowers' and Graziers' Council and the Australian Wool and Meat Producers' Federation formed the Australian Wool Industry Conference. Principal functions of the Conference are to nominate woolgrower representatives for appointment to the Australian Wool Board; to recommend what rates of levy should be paid by woolgrowers for promotion and research, and to review the activities of the Board at least once a year.

For research and promotional purposes levies have been imposed on shorn wool produced in Australia since 1936. The rate levied was 6d. per bale until 1944 and 2s. 0d. per bale in 1945. The levy was suspended in 1945 and contributory charges were imposed on woolgrowers. In 1952 the levy was raised to 4s. 0d. per bale, on 1st August 1960 it became 5s. 0d. per bale, and during the 1961-62 season the levy was raised to 10s. 0d. per bale. In addition, the wool research levy was introduced in 1957 and was set at 2s. 0d. per bale.

From 1st July 1964 a new levy, which includes the amount to be allocated to research, was fixed at 1¼% of the gross value of shorn wool sold.

**Production of Wool**

With the average cut per head increasing over time wool production has been increasing at a greater rate than the sheep population, and in fact has more than doubled in the past 20 years.

Total wool production consists of shorn wool (including crutchings) plus fellmongered wool, dead wool and wool exported on skins. Fellmongering is the process of removing wool from the pelt by bacterial action (sweating) or by treatment with chemicals. Dead wool is picked from the carcass of dead sheep.

**Wool Production and Value, South Australia**

| Season        | Production |                             |                        |             | Value of Wool Production<br>£'000 |
|---------------|------------|-----------------------------|------------------------|-------------|-----------------------------------|
|               | Shorn Wool | Fell-mongered and Dead Wool | Wool Exported on Skins | Total       |                                   |
|               | '000 lb.   | '000 lb.                    | '000 lb.               | '000 lb.    | £'000                             |
| 1955-56 ..... | 158,182    | 5,531                       | 9,984                  | 173,697     | 39,911                            |
| 1956-57 ..... | 175,274    | 2,944                       | 10,590                 | 188,808     | 57,289                            |
| 1957-58 ..... | 168,194    | 1,827                       | 15,822                 | 185,843     | 42,354                            |
| 1958-59 ..... | 170,645    | 1,353                       | 14,844                 | 186,842     | 33,797                            |
| 1959-60 ..... | 180,236    | 733                         | 17,320                 | 198,289     | 42,691                            |
| 1960-61 ..... | 162,876    | 713                         | 13,824                 | 177,413     | 35,242                            |
| 1961-62 ..... | 192,205    | 1,670                       | 13,109                 | 206,984     | 42,901                            |
| 1962-63 ..... | 189,854    | 952                         | 16,538                 | 207,344     | 46,257                            |
| 1963-64 ..... | 194,787    | 15,713                      |                        | 210,500     | 56,705                            |
| 1964-65 ..... | 200,059    | (a) 15,670                  |                        | (a) 215,729 | —                                 |

(a) Preliminary.

By 1891 wool production had risen to 57 million lb. when the average fleece weight was nearly 8 lb. per head. Then with sheep numbers at a slightly lower level, wool production fluctuated seasonally between 36 million and 64 million lb. until 1925 when it rose to 69 million lb.

The effects of the four year drought from 1927 to 1930 temporarily reduced the level but the improvement of the following seasons and the subsequent restocking caused a sharp increase in production. In 1938 the weight of wool produced exceeded 100 million lb. for the first time. Production then remained relatively stable until 1945-46 when it dropped significantly following the reduction in flocks caused by the 1944 drought. The industry recovered quickly and in 1947-48 a record 116 million lb. of wool had been produced, achieved by an increase in the numbers shorn and an exceptionally high average fleece of 10.87 lb. The rising trend has since continued with current production now exceeding 215 million lb.

Prior to 1946-47 the annual wool value had not exceeded £7 million and was relatively stable.

The marked changes in the value of wool produced since then have been mostly due to frequent and substantial price fluctuations rather than variations in the quantity produced.

On the resumption of the auction system in 1946-47 wool prices increased sharply, reaching a peak in the record 1950-51 season when demand for wool was intensified by the Korean crisis. Gross value of production in this year exceeded £66 million.

Demand eased in the following years causing values to fall, although a recovery in prices combined with a significant increase in production in 1956-57 raised gross value of production to £57 million. Over the seasons 1957-58 to 1962-63 value varied between £33 million and £46 million but rose to £56.7 million in 1963-64 following record wool production and somewhat higher prices.

### Quality of Wool

In general terms, quality refers to the diameter of wool fibre, which is usually indicated by the evenness and number of crimps or waves. Crimp is the main determinant of quality; the smaller and more even the crimp, the finer the wool.

Fineness is generally specified in terms of spinning ability, and in Australia is expressed generally in terms of Bradford Counts, which in practice, signify the number of hanks of yarn, each measuring 560 yards, obtainable from one pound weight of tops if spun to its fullest capacity. There are no commercial means of testing a batch of wool in its greasy state and therefore quality counts must of necessity be estimates based on the experience of the wool expert. Quality counts range from as high as 90s. to 100s. for superfine Merino down to 32s. for some English long wool breeds.

Other factors influencing grading are soundness (tensile strength), length of staple, condition, colour and style.

The South Australian Merino generally produces wool of a much broader quality than the Merino of the eastern States. The following table shows that only 0.2% of wool sold in the 1963-64 season was 64/70s and finer; the corresponding New South Wales figure was 15.4%.

**Quality Analysis of Greasy Wool Sold at Auction in South Australia**

| Predominating Quality of Bale | 1957-58      | 1958-59      | 1959-60      | 1960-61      | 1961-62      | 1962-63      | 1963-64      |
|-------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
|                               | Per Cent     |              |              |              |              |              |              |
| 64/70s and finer .....        | 1.1          | 0.5          | 0.4          | 0.3          | 0.2          | 0.2          | 0.2          |
| 64s .....                     | 4.4          | 2.0          | 2.0          | 1.3          | 1.2          | 1.3          | 1.0          |
| 64/60s .....                  | 12.3         | 7.5          | 8.5          | 4.8          | 4.2          | 6.1          | 5.5          |
| 60/64s .....                  | 27.3         | 18.1         | 22.0         | 16.0         | 15.6         | 17.5         | 15.8         |
| 60s .....                     | 34.3         | 41.9         | 40.9         | 40.5         | 40.6         | 39.8         | 42.1         |
| 58s .....                     | 12.8         | 20.9         | 17.7         | 26.2         | 26.9         | 24.3         | 24.6         |
| 56s .....                     | 4.4          | 5.6          | 5.3          | 6.8          | 7.3          | 7.1          | 6.9          |
| 50s .....                     | 1.4          | 1.5          | 1.5          | 1.8          | 2.0          | 1.6          | 1.6          |
| Below 50s .....               | 0.3          | 0.3          | 0.3          | 0.4          | 0.4          | 0.3          | 0.3          |
| Oddments .....                | 1.7          | 1.7          | 1.4          | 1.9          | 1.6          | 1.8          | 2.0          |
| <b>Total .....</b>            | <b>100.0</b> | <b>100.0</b> | <b>100.0</b> | <b>100.0</b> | <b>100.0</b> | <b>100.0</b> | <b>100.0</b> |

Apart from a significantly higher proportion of fine wools produced in the 1957-58 season, the quality distribution has remained relatively constant with over 80% of the wool classified between 58s and 60/64s quality. In the following table bales of wool of South Australian origin sold at auction in Australia in the 1963-64 season are classified by spinning quality and the statistical division of origin.

**Quality of Greasy Wool<sup>(a)</sup>, Statistical Divisions, South Australia  
1963-64**

| Predominating Spinning Quality | Statistical Division of Origin |               |               |                |               |               |                     | Total (b)      |
|--------------------------------|--------------------------------|---------------|---------------|----------------|---------------|---------------|---------------------|----------------|
|                                | Central                        | Lower North   | Upper North   | South Eastern  | Western       | Murray Mallee | Outside of Counties |                |
|                                | Bales                          |               |               |                |               |               |                     |                |
| 64/70s and finer .....         | 133                            | 45            | 23            | 1,923          | 82            | 70            | 33                  | 2,309          |
| 64s .....                      | 304                            | 293           | 271           | 3,908          | 445           | 425           | 738                 | 6,402          |
| 64/60s .....                   | 3,764                          | 2,926         | 2,346         | 9,324          | 5,353         | 3,538         | 2,302               | 29,560         |
| 60/64s .....                   | 15,098                         | 8,633         | 6,638         | 24,947         | 19,663        | 10,247        | 5,084               | 90,385         |
| 60s .....                      | 26,540                         | 14,560        | 9,556         | 31,005         | 23,138        | 13,262        | 8,022               | 126,145        |
| 60/58s .....                   | 24,350                         | 13,258        | 7,974         | 17,049         | 15,792        | 10,473        | 8,013               | 96,974         |
| 58s .....                      | 32,703                         | 17,148        | 11,066        | 29,415         | 16,245        | 11,058        | 13,608              | 131,514        |
| 56s .....                      | 14,025                         | 2,440         | 1,607         | 19,432         | 3,465         | 2,415         | 2,970               | 46,441         |
| 50s .....                      | 4,100                          | 86            | 18            | 8,808          | 555           | 423           | 14                  | 14,117         |
| Below 50s .....                | 613                            | 13            | 2             | 2,631          | 57            | 149           | —                   | 3,485          |
| Oddments .....                 | 1,790                          | 605           | 468           | 3,118          | 1,527         | 2,191         | 1,178               | 10,895         |
| <b>Total .....</b>             | <b>123,420</b>                 | <b>60,007</b> | <b>39,969</b> | <b>151,560</b> | <b>86,322</b> | <b>54,251</b> | <b>41,962</b>       | <b>558,227</b> |

(a) Wool of South Australian origin sold at auction in Australia.

(b) Including bulk-classed, interlotted and dealers' wool sold in Adelaide, but of unidentified origin.

The incidence of vegetable matter reduces the yield of all wool types. If the extent of vegetable fault is greater than 14% of the wool's greasy weight the wool has to be treated by the carbonizing process.

In a normal season just over 75% of South Australian wool is free of or contains only light burr and seed, almost 15% contains medium or heavy burr and seed and some 10% is carbonizing wool.

**Incidence of Vegetable Fault in Wool Sold at Auction In South Australia**

| Season     | Free or Near Free                   | Light Burr and/or Seed | Medium Burr and/or Seed | Heavy Burr and/or Seed | Carbonizing Wool | Combing Oddments | Total |
|------------|-------------------------------------|------------------------|-------------------------|------------------------|------------------|------------------|-------|
|            | Percentage of Total Number of Bales |                        |                         |                        |                  |                  |       |
| 1954-55 .. | 41.8                                | 35.3                   | 10.3                    | 3.5                    | 7.9              | 1.2              | 100.0 |
| 1955-56 .. | 36.6                                | 40.5                   | 9.2                     | 1.9                    | 10.1             | 1.7              | 100.0 |
| 1956-57 .. | 35.5                                | 38.7                   | 10.6                    | 2.3                    | 11.0             | 1.9              | 100.0 |
| 1957-58 .. | 34.9                                | 37.2                   | 11.8                    | 3.0                    | 11.4             | 1.7              | 100.0 |
| 1958-59 .. | 35.5                                | 38.1                   | 11.7                    | 2.6                    | 10.4             | 1.7              | 100.0 |
| 1959-60 .. | 35.7                                | 36.9                   | 12.4                    | 3.6                    | 10.1             | 1.3              | 100.0 |
| 1960-61 .. | 39.4                                | 38.3                   | 9.9                     | 1.9                    | 8.7              | 1.8              | 100.0 |
| 1961-62 .. | 38.6                                | 37.4                   | 10.2                    | 2.2                    | 10.1             | 1.5              | 100.0 |
| 1962-63 .. | 34.9                                | 40.5                   | 11.2                    | 2.6                    | 9.0              | 1.8              | 100.0 |
| 1963-64 .. | 32.9                                | 44.7                   | 10.5                    | 2.3                    | 7.7              | 1.9              | 100.0 |

**Wool Marketing**

Approximately 8% of wool grown in South Australia is sold outside the auction system. Of the South Australian wool passing through the auction system approximately 85% is sold at the Adelaide Sales with the remainder predominately of South Eastern origin, going to Victorian selling centres. A similar inflow of wool occurs from western New South Wales and to a lesser extent from western Victoria.

On receipt into a wool store each bale is weighed and then stacked. When a catalogue is to be prepared for the buyers, clips are listed and particulars of the various lots to be shown are supplied by the broker. A proportion of the required bales is then taken from the stacks and sent to the show floors for inspection. A valuation of every lot, based on current market rates is made by the broker for the protection of the grower at the auction.

At the Wool Exchange, the sales are conducted with great rapidity taking on average for a normal market only 8 seconds to dispose of an individual lot or line of wool. On completion of the sale the bales are returned to the stacks to await instructions from the buyers. When required for shipment the bales are usually dumped, *i.e.* pressed to half their original size and banded to economize on shipping space.

Adelaide is the sole wool selling centre in South Australia handling over  $\frac{1}{2}$  million of Australia's 5 million bales annually. Twelve or thirteen sales are held each season depending on the quantity of wool expected to be offered.

During the main spring shearing season sales are held every two or three weeks, lengthening to monthly or longer intervals over the remainder of the year. Pastoral wools provide the bulk of the offerings in the early spring months with agricultural wools becoming more prominent as the season progresses. Wools from the South East and other high rainfall areas make up a considerable proportion of the offerings in the summer months. Towards the end of the season wools are drawn from various parts of the State.

Details relating to Adelaide wool sales during the past eight seasons compared with 1950-51, the year of boom prices, are as follows:

#### Adelaide Wool Sales

| Season     | Wool Sold<br>(Scoured and Greasy) |          | Amount<br>Realized | Average Price<br>Per Lb.<br>(Greasy) | In Store at<br>End of Season |
|------------|-----------------------------------|----------|--------------------|--------------------------------------|------------------------------|
|            | Bales                             | Weight   |                    |                                      |                              |
|            | Number                            | '000 Lb. | £'000              | Pence                                | Bales                        |
| 1950-51 .. | 383,630                           | 117,032  | 62,978             | 129.16                               | 6,304                        |
| 1957-58 .. | 512,236                           | 157,298  | 36,777             | 56.11                                | 10,517                       |
| 1958-59 .. | 546,768                           | 172,316  | 32,771             | 45.64                                | 7,952                        |
| 1959-60 .. | 502,820                           | 155,677  | 34,914             | 53.82                                | 38,997                       |
| 1960-61 .. | 495,021                           | 158,560  | 31,822             | 48.17                                | 55,607                       |
| 1961-62 .. | 573,002                           | 182,630  | 37,978             | 49.91                                | 41,359                       |
| 1962-63 .. | 563,370                           | 180,672  | 40,532             | 53.84                                | 33,900                       |
| 1963-64 .. | 569,845                           | 182,560  | 49,492             | 65.06                                | 41,033                       |
| 1964-65 .. | 570,976                           | 179,066  | 39,522             | 52.97                                | 52,853                       |

#### Reserve Price Scheme

A Wool Marketing Committee was appointed by the Australian Wool Board on 20th June 1963 to inquire into current methods of marketing wool and in particular to investigate the operation of a Reserve Price Scheme within the auction system.



In its report of July 1964, the Committee made the following recommendations—

The Australian clip should be marketed by a Reserve Price Scheme under the control of a statutory body to be known as the Australian Wool Marketing Authority.

At the commencement of each wool selling season the Authority should set a floor price based on—

- (a) the level of reserve prices fixed by other countries,
- (b) the average price for wool in the previous season,
- (c) economic conditions in the major consuming countries, and
- (d) the relationship between price of wool and other competitive fibres.

In addition to setting the average reserve price, the Authority should prepare a "Table of Limits", *i.e.*, corresponding reserve prices for each of the types of wool offered, and should buy in at the floor price when any lot fails to reach this reserve. Wool brought by the Authority would then be placed on the market at some later date when prices were more favourable.

For the effective operation of the scheme, a capital fund should be established from contributions by growers and the government.

A referendum of woolgrowers throughout Australia rejected this scheme. Overall, 52% of woolgrowers voted against the scheme, but in South Australia 65% were not in favour.

### Wool Prices

Prices paid for wool sold in South Australia tend to be on average less than prices realized in other States, this being partly attributable to the large proportion of medium to broad quality wools grown in South Australia and in western New South Wales.

Average prices realized for greasy wool at Adelaide sales were below 7d. per lb. in the depression years of the early 1930's and then fluctuated between about 9 and 14 pence. Between 1945-46 and 1949-50 the price rose sharply to 58 pence and more than doubled to over 129 pence in 1950-51. There was an immediate drop to half this level in the following year and since then prices have been somewhat more stable, the lowest level in recent years being 46 pence and the highest 75 pence. Details of average prices of greasy Merino and Crossbred wool of various grades over the last 10 seasons are given below.

Average Wool Prices, Adelaide Sales

| Description          | 1954-55       | 1955-56 | 1956-57 | 1957-58 | 1958-59 | 1959-60 | 1960-61 | 1961-62 | 1962-63 | 1963-64 |
|----------------------|---------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
|                      | Pence per Lb. |         |         |         |         |         |         |         |         |         |
| Greasy Merino—       |               |         |         |         |         |         |         |         |         |         |
| Superior .....       | 95            | 86      | 119     | 90      | 66      | 79      | 70      | 77      | 83      | 99      |
| Good .....           | 82            | 72      | 97      | 77      | 58      | 68      | 60      | 63      | 71      | 84      |
| Average .....        | 68            | 59      | 86      | 66      | 53      | 61      | 54      | 56      | 65      | 75      |
| Wasty and inferior   | 58            | 53      | 72      | 54      | 43      | 50      | 46      | 47      | 52      | 64      |
| Super lambs .....    | 100           | 82      | 96      | 72      | 54      | 66      | 60      | 64      | 70      | 85      |
| Good lambs .....     | 67            | 58      | 73      | 50      | 42      | 49      | 45      | 46      | 51      | 60      |
| Average lambs .....  | 47            | 43      | 52      | 36      | 27      | 32      | 30      | 28      | 32      | 46      |
| Inferior lambs ..... | 38            | 35      | 44      | 28      | 21      | 25      | 21      | 24      | 25      | 34      |
| Greasy Crossbred—    |               |         |         |         |         |         |         |         |         |         |
| Super Comebacks      | 92            | 80      | 106     | 82      | 64      | 74      | 63      | 69      | 74      | 92      |
| Fine Crossbred ..    | 87            | 70      | 90      | 75      | 61      | 69      | 64      | 65      | 72      | 90      |
| Medium Crossbred     | 74            | 62      | 80      | 65      | 55      | 65      | 62      | 61      | 66      | 86      |

## CATTLE

In comparison with other States, cattle grazing is not a major industry in South Australia. Of the cattle in Australia at 31st March 1965 only about 3% of those used mainly for meat production and a little over 5% of those for milk production were in South Australia.

**Cattle Numbers, Statistical Divisions, South Australia  
31st March 1965**

| Classification                   | Statistical Division |             |             |               |         |               |                     | Total |
|----------------------------------|----------------------|-------------|-------------|---------------|---------|---------------|---------------------|-------|
|                                  | Central              | Lower North | Upper North | South Eastern | Western | Murray Mallee | Outside of Counties |       |
|                                  | '000                 |             |             |               |         |               |                     |       |
| Associated with milk production— |                      |             |             |               |         |               |                     |       |
| Bulls (a) .....                  | 3.4                  | 0.7         | 0.2         | 1.5           | 0.3     | 0.6           | —                   | 6.7   |
| Cows—                            |                      |             |             |               |         |               |                     |       |
| In milk ...                      | 62.9                 | 5.6         | 1.7         | 14.8          | 2.3     | 10.3          | —                   | 97.6  |
| Dry .....                        | 27.6                 | 4.0         | 1.1         | 22.8          | 1.7     | 3.9           | 0.1                 | 61.2  |
| Heifers—                         |                      |             |             |               |         |               |                     |       |
| Springing .                      | 11.2                 | 1.1         | 0.3         | 9.0           | 0.5     | 1.6           | —                   | 23.7  |
| Other .....                      | 16.5                 | 1.2         | 0.3         | 5.1           | 0.4     | 2.4           | —                   | 25.9  |
| Calves under one year ...        | 21.1                 | 2.6         | 0.9         | 10.4          | 1.3     | 3.7           | —                   | 40.0  |
| House cows ..                    | 1.8                  | 0.9         | 0.4         | 1.6           | 1.2     | 0.7           | 0.1                 | 6.7   |
| Total ....                       | 144.5                | 16.1        | 4.9         | 65.2          | 7.7     | 23.2          | 0.2                 | 261.8 |
| Associated with meat production— |                      |             |             |               |         |               |                     |       |
| Bulls (a) .....                  | 1.8                  | 0.7         | 0.3         | 4.0           | 0.5     | 0.4           | 1.6                 | 9.3   |
| Cows and heifers                 | 35.3                 | 9.6         | 6.6         | 96.2          | 7.3     | 9.4           | 58.1                | 222.5 |
| Calves under one year ...        | 19.4                 | 5.4         | 3.8         | 59.5          | 5.0     | 5.9           | 30.5                | 129.5 |
| Other cattle ...                 | 9.6                  | 3.0         | 2.0         | 26.7          | 1.0     | 2.3           | 28.8                | 73.4  |
| Total ....                       | 66.1                 | 18.7        | 12.7        | 186.4         | 13.8    | 18.0          | 119.0               | 434.7 |
| Total cattle.....                | 210.6                | 34.8        | 17.6        | 251.6         | 21.5    | 41.2          | 119.2               | 696.5 |

a) Aged one year or over, used or intended for service.

**Beef Cattle**

Beef cattle numbers have increased rapidly in the last 15 years, exceeding 200,000 for the first time in 1952 and passing 300,000 by 1956. At 31st March 1965, 435,000 cattle associated with meat production were recorded, and although this figure is not strictly comparable with earlier figures (because of a change of classification adopted in 1964) it provides a good guide to the growth of the industry. In 1965 about 43% of beef cattle were in the South Eastern Division, 27% were Outside of Counties, 15% in Central Division, and smaller numbers in other parts of the State. In the northern pastoral areas, Shorthorns are the predominant breed and there are lesser numbers of Herefords; in the South East Herefords and Shorthorns are the main breeds and there are substantial numbers of Aberdeen Angus, while in the Central Division near Adelaide, where a number of studs are located, several breeds are well represented.

The northern pastoral region is traditionally the breeding area for beef cattle but in recent years there has been a trend towards moving cattle which were bred in this drier country to the better rainfall areas for fattening. The rapid increase in the area of sown pastures has contributed to the increase of beef cattle in southern parts of the State, since cattle do not crop the grasses as closely as sheep and thus are less likely to damage newly sown pastures.

Until recently most of the beef cattle were Outside of Counties, and it was not until 1957 that numbers in this area fell below 50% of the State total. The marked switch during the last 15 years from Outside of Counties to the

South East, and to other parts of the State, is illustrated in the following table. The actual number of beef cattle in Outside of Counties in 1965 was very close to the 1950 level, and well below the numbers in the mid 1950's.

**Proportion of Beef Cattle in Statistical Divisions, South Australia**

| Statistical Division      | 1950     | 1953 | 1957 | 1961 | 1965 (a) |
|---------------------------|----------|------|------|------|----------|
|                           | Per Cent |      |      |      |          |
| Central .....             | 7        | 8    | 10   | 13   | 15       |
| South Eastern .....       | 25       | 24   | 31   | 40   | 43       |
| Outside of Counties ..... | 60       | 59   | 49   | 34   | 27       |
| Other areas .....         | 8        | 9    | 10   | 13   | 15       |
| Total .....               | 100      | 100  | 100  | 100  | 100      |

(a) Proportions relate to "Cattle for meat production".

### Dairy Cattle

Dairy cattle numbers have not increased to any degree for many years and the total number of cattle associated with milk production at 31st March 1965, 262,000, differs very little from the dairy cattle population 20 years ago. Distribution within the State is also little changed although there has been some tendency for concentration in the principal dairying areas.

Properties in South Australia on which dairying is the main activity are situated mainly in the areas where high rainfall or irrigation permits the growing of sown pastures, but many of the mixed farms in the better cereal growing country carry dairy herds and these represent nearly half of the dairy cows in the State. Dairy production on these farms is almost entirely in the form of cream for butter making, whereas the properties in the sown pasture areas mainly market whole milk, either for consumption in the Adelaide metropolitan area or for cheese making.

Commercial dairying activities are to be found mainly within an 80 mile radius of Adelaide. Of greatest importance is the Adelaide hills district, comprising the Mount Lofty Ranges and areas as far south as Cape Jervis and Encounter Bay. This district embraces some of the best dairy land in the State and includes most of the properties devoted specifically to dairy farming. Although some herds are grazed on natural pastures improved only by top dressing with superphosphate, the most common type is sown pasture consisting of subterranean clover in combination with perennial grasses such as perennial rye grass or phalaris.

Dairy production is mainly in the form of whole milk for consumption in Adelaide but the surplus from the flush period of the year is converted into cheese at factories situated at several centres throughout the Adelaide hills.

Most of the dairy breeds are represented; Friesians and Jerseys predominate, with Guernseys, Australian Illawarra Shorthorn, Ayrshires and their crosses in use to a lesser extent.

Other areas inside the 80 mile radius are the Lower Murray swamps and the Lakes District. The Lower Murray swamps extending from Mannum to Wellington are reclaimed areas ideally suited to dairying pursuits, combining the attributes of suitable climate, good soil, and convenient location and an abundant water supply. The swamps have a very high carrying capacity. A significant proportion of the produce is sold as whole milk in the Adelaide market, the remainder being used for cheese, butter and casein production. The cattle are predominantly Friesian. The farms are flood irrigated through sluice gates in the levees and

distributing channels. Surplus water is led into a drainage system and pumped back into the river.

The Lakes District owes much to the completion of barrages across the mouth of the Murray which has helped to maintain the waters of Lake Alexandrina and Lake Albert in a reasonably fresh state. This has greatly contributed to the improvement of productivity of this area and has also had the effect of maintaining a greater control over the level of the water in the river, thereby greatly facilitating irrigation of the reclaimed swamps upstream. The outlet for dairy products is generally towards the processing plants situated on the Murray. On the eastern side both cream and milk are produced whilst on the western side most of the produce is sold as whole milk. Where cream is produced, pig-raising is complementary to dairying. The dairy cattle are principally Jersey breed and enjoy a high reputation for productive ability.

Outside the 80 mile radius, the most important dairying area is the Lower South East, where the high rainfall and the reasonably low evaporation rate combine to allow a fairly long growth period after the autumn and winter rains and spring flush of feed. The intensity of dairying varies with the different areas, being greatest on the richer soils. These soils are the peat and peat-type soils close to the coast and the rich volcanic soils around Mount Gambier.

Most breeds are well represented in the district, the Jersey and Friesian being slightly more popular than other breeds.

DAIRY PRODUCE

Milk

Total milk production in any one year is not known precisely. However, as actual details are known of two major components of total milk utilization in South Australia, viz the amount consumed by factories in the production of milk, cheese and other milk products and home consumption in the Metropolitan Milk Board area, a carefully considered estimate can be made.

The following table shows the estimated production of whole milk and the quantity of this milk used for various purposes in 1954-55 and later seasons.

Production and Utilization of Milk, South Australia

| Year         | Total Milk Produced | Milk Used for |            |                    |                  |                         | Other Purposes |
|--------------|---------------------|---------------|------------|--------------------|------------------|-------------------------|----------------|
|              |                     | Butter        |            | Factory Cheese (a) | Home Consumption |                         |                |
|              |                     | On Farm       | In Factory |                    | Milk Board Area  | Outside Milk Board Area |                |
| '000 Gallons |                     |               |            |                    |                  |                         |                |
| 1954-55      | 90,699              | 1,133         | 35,506     | 28,163             | 14,876           | 9,750                   | 1,271          |
| 1955-56      | 90,342              | 940           | 35,449     | 27,467             | 15,216           | 9,902                   | 1,368          |
| 1956-57      | 89,882              | 919           | 36,278     | 25,963             | 15,359           | 9,984                   | 1,379          |
| 1957-58      | 80,606              | 802           | 29,886     | 23,012             | 15,536           | 9,908                   | 1,462          |
| 1958-59      | 82,121              | 783           | 29,879     | 24,280             | 16,267           | 9,379                   | 1,533          |
| 1959-60      | 78,572              | 720           | 25,892     | 23,729             | 16,999           | 9,636                   | 1,596          |
| 1960-61      | 87,029              | 645           | 29,817     | 27,504             | 17,591           | 9,800                   | 1,672          |
| 1961-62      | 95,504              | 604           | 33,100     | 32,314             | 17,859           | 9,907                   | 1,720          |
| 1962-63      | 95,378              | 553           | 31,229     | 33,492             | 18,282           | 10,206                  | 1,616          |
| 1963-64      | 97,523              | 531           | 32,622     | 33,989             | 18,631           | 9,791                   | 1,959          |

(a) Factory production accounts for virtually all cheese produced.

The Metropolitan Milk Board is constituted to regulate the treatment and marketing of milk within the Metropolitan Milk Board area. The duties of the Board include the fixing of the metropolitan producing district and the granting of milk producers' and treatment licences. The Board may fix the prices of milk and sweet cream and may make recommendations on the quotas of milk and cream which can be sold as such.

### Butter and Cheese

The quantities of butter and cheese produced during the last 10 years were as follows—

#### Butter and Cheese Production, South Australia

| Year          | Butter (a) | Cheese (b) | Year          | Butter (a) | Cheese (b) |
|---------------|------------|------------|---------------|------------|------------|
|               | '000 lb.   |            |               | '000 lb.   |            |
| 1954-55 ..... | 19,498     | 29,347     | 1959-60 ..... | 14,151     | 24,483     |
| 1955-56 ..... | 19,541     | 28,297     | 1960-61 ..... | 15,610     | 28,245     |
| 1956-57 ..... | 19,260     | 26,787     | 1961-62 ..... | 16,861     | 32,835     |
| 1957-58 ..... | 16,061     | 23,510     | 1962-63 ..... | 16,608     | 33,967     |
| 1958-59 ..... | 16,103     | 25,088     | 1963-64 ..... | 16,791     | 34,236     |

(a) Includes factory and farm production.

(b) Factory production only.

### PIGS

In South Australia pigs are normally kept as a sideline on mixed farms or in conjunction with dairy cattle and there are relatively few holdings specializing in pigs.

Although there are substantial fluctuations in the pig population from year to year induced by the exceptional variability of prices, over time the numbers have remained remarkably stable. The total number has never exceeded 200,000, yet it was over 160,000 as early as 1884. Of the record number of 195,900 pigs at 31st March 1965, over 60% were in Central or Lower North Divisions. Total numbers were made up of 3,800 boars, 27,900 breeding sows and 164,200 other pigs.

### MEAT PRODUCTION AND MARKETING

South Australia is a relatively small meat producer, providing only about 6% of total Australian production. The following table shows the number of livestock slaughtered for human consumption and the production of meat during the last 10 years. Slaughtering and meat production on rural holdings are included in these figures.

## Livestock Slaughtered and Meat Produced, South Australia

| Season      | Livestock Slaughtered for Human Consumption |                 |      | Meat Production (Bone-in-Weight) |                 |         |         |
|-------------|---|-----------------|------|----------------------------------|-----------------|---------|---------|
|             | Cattle and Calves                           | Sheep and Lambs | Pigs | Beef and Veal                    | Mutton and Lamb | Pigmeat | Total   |
|             |   | '000            |      |                                  | Tons            |         |         |
| 1955-56 ..  | 227   | 2,358           | 132  | 37,512                           | 44,339          | 8,124   | 89,975  |
| 1956-57 ..  | 252   | 2,329           | 124  | 40,262                           | 42,563          | 7,367   | 90,192  |
| 1957-58 ..  | 283   | 3,278           | 175  | 41,070                           | 53,681          | 9,516   | 104,267 |
| 1958-59 ..  | 287   | 3,145           | 179  | 42,167                           | 55,001          | 9,451   | 106,619 |
| 1959-60 ..  | 238   | 3,899           | 171  | 33,281                           | 62,760          | 9,161   | 105,202 |
| 1960-61 ..  | 174   | 2,784           | 183  | 26,647                           | 52,242          | 9,574   | 88,463  |
| 1961-62 ..  | 201   | 3,140           | 232  | 30,061                           | 55,390          | 11,558  | 97,009  |
| 1962-63 ..  | 254   | 3,467           | 235  | 36,420                           | 58,919          | 11,810  | 107,149 |
| 1963-64 ..  | 279   | 2,996           | 214  | 39,759                           | 52,864          | 11,163  | 103,786 |
| 1964-65 (a) | 273   | 3,102           | 239  | 37,481                           | 55,440          | 12,564  | 105,485 |

(a) Preliminary figures.

The Metropolitan and Export Abattoirs Board has the sole right within the Metropolitan Abattoirs area to slaughter stock for export as fresh meat in a frozen condition. It controls the handling and distribution of meat within this area and may fix the maximum number of stock sold in any one day in a Board controlled market.

Average market prices of some of the principal classes of livestock are set out below. Prices fluctuate considerably from year to year, but were generally fairly high in 1964, with cattle prices not far below the record levels of 1960, and fat sheep prices having been exceeded only once before, in 1951.

Livestock, Average Prices at Adelaide Market  
1960 to 1964

| Class of Stock       | 1960    | 1961    | 1962    | 1963    | 1964    |
|----------------------|---------|---------|---------|---------|---------|
|                      | £ s. d. | £ s. d. | £ s. d. | £ s. d. | £ s. d. |
| Fat cattle—          |         |         |         |         |         |
| Bullocks and steers— |         |         |         |         |         |
| Prime, medium ..     | 67 11 3 | 62 12 2 | 51 0 7  | 52 6 6  | 60 13 5 |
| Good .....           | 61 19 7 | 55 4 1  | 44 5 8  | 45 0 0  | 52 3 6  |
| Cows—                |         |         |         |         |         |
| Prime, medium ..     | 59 11 2 | 52 2 2  | 40 14 9 | 42 16 8 | 50 5 1  |
| Good .....           | 46 14 8 | 43 9 3  | 32 1 0  | 35 17 1 | 42 2 2  |
| Calves—              |         |         |         |         |         |
| Prime vealers ...    | 28 0 1  | 30 7 3  | 22 6 0  | 22 5 1  | 24 16 1 |
| Good .....           | 20 10 1 | 22 4 6  | 15 5 4  | 15 10 5 | 18 19 2 |
| Fat sheep—           |         |         |         |         |         |
| Merino wether—       |         |         |         |         |         |
| Prime .....          | 3 10 1  | 3 7 10  | 3 1 5   | 4 0 8   | 4 16 1  |
| Medium .....         | 2 14 10 | 2 11 9  | 2 4 10  | 3 3 0   | 4 0 2   |
| Lambs—               |         |         |         |         |         |
| Prime, medium ..     | 3 11 6  | 3 6 8   | 3 5 5   | 3 10 11 | 4 2 2   |
| Good .....           | 2 19 2  | 2 18 10 | 2 11 10 | 3 1 9   | 3 12 10 |
| Pigs—                |         |         |         |         |         |
| Choppers .....       | 37 12 7 | 30 14 3 | 25 3 4  | 42 7 8  | 39 1 2  |
| Baconers .....       | 17 15 1 | 13 19 6 | 16 2 0  | 19 11 8 | 20 16 1 |
| Porkers .....        | 11 5 3  | 10 1 2  | 8 10 1  | 10 19 8 | 11 5 5  |

The Australian Meat Board controls the export of meat, its sale and distribution overseas, and advises on matters relating to quality and grading of meat for export. The trading powers of the Board enable it to purchase and sell meat in its own right for the purpose of developing existing markets or creating new markets where there are special problems or circumstances which preclude the effective participation of private traders.

Finance for the Board's operations is derived from a levy imposed under the *Livestock Slaughtering Levy Act 1964*. The levy is payable on the slaughter of all cattle (over 200 lb. dressed weight), sheep and lambs for human consumption.

At present Australia has meat agreements with the United Kingdom under a 15-year agreement signed in 1952, and with the United States of America following an agreement made in 1964.

### OTHER RURAL INDUSTRIES

#### Poultry Farming

The main concentration of poultry farmers is found close to Adelaide, with almost 90% of table poultry sold in 1964-65 coming from Central Statistical Division.

The poultry farming industry can be divided into two categories—the production of eggs, and the raising of poultry for meat. The annual average egg production controlled by the South Australian Egg Board was 11.8 million dozen in the 5 years ended 1953-54, 11.3 million dozen over the next 5 years and 10.1 million dozen in the 5 years ended 1963-64. However, these figures do not take into account movement of eggs interstate independently of the Egg Board, which may represent a significant proportion of total egg production.

Statistics collected relating to the sale of table poultry show a rapid expansion in this side of the industry. In 1964-65 the number sold was 2,229,000, this being over 6 times the number sold 5 years previously.

#### Poultry Industry<sup>(a)</sup>, South Australia

At 31st March

| Particulars              | Unit       | 1959-60 | 1960-61 | 1961-62 | 1962-63 | 1963-64 | 1964-65 |
|--------------------------|------------|---------|---------|---------|---------|---------|---------|
|                          |            | Number  |         |         |         |         |         |
| Hens and pullets         | '000       | 1,508   | 1,603   | 1,714   | 1,550   | 1,534   | 1,553   |
| Other fowls and chickens | '000       | 223     | 244     | 280     | 357     | 495     | 508     |
| Ducks                    | '000       | 53      | 49      | 54      | 52      | 55      | 59      |
| Turkeys                  | '000       | 51      | 51      | 64      | 50      | 55      | 60      |
| Geese                    | '000       | 22      | 20      | 21      | 20      | 19      | 18      |
| Table poultry sold       | '000       | 364     | 474     | 650     | 1,213   | 1,595   | 2,229   |
| Egg production (b)       | '000 dozen | 10,041  | 10,491  | 11,387  | 9,918   | 8,731   | 9,261   |

(a) Excludes poultry kept in backyards, etc.

(b) Recorded by the South Australian Egg Board.

#### Beekeeping

Beekeeping in South Australia is only a small industry, for in 1964-65 there were less than 800 keepers with 5 or more hives. Of necessity, most commercial apiarists operate on a migratory basis, following the flowering of the various species of honey flora. The production of honey and beeswax fluctuates considerably from year to year, depending upon seasonal conditions.

**Beekkeeping<sup>(a)</sup>, South Australia**

| Season  | Beekeepers | Hives      |               | Honey Produced | Yield of Honey per Productive Hive | Beeswax Produced |
|---------|------------|------------|---------------|----------------|------------------------------------|------------------|
|         |            | Productive | Un-productive |                |                                    |                  |
|         | No.        | No.        | No.           | '000 Lb.       | Lb.                                | '000 Lb.         |
| 1960-61 | 838        | 47,298     | 18,658        | 4,442          | 94                                 | 59               |
| 1961-62 | 906        | 61,545     | 10,162        | 8,405          | 137                                | 123              |
| 1962-63 | 842        | 51,010     | 18,590        | 4,147          | 81                                 | 56               |
| 1963-64 | 857        | 63,142     | 8,535         | 9,721          | 154                                | 134              |
| 1964-65 | 781        | 58,728     | 13,900        | 6,527          | 111                                | 90               |

(a) Excludes particulars for producers having less than five hives.

**9.2. MINING, FORESTRY AND FISHERIES****MINING****INTRODUCTION**

In common with all industrialized countries, South Australia has a well developed and growing mineral industry. While iron ore is the major product, the State also has very large resources of industrial minerals which make up a significant proportion of the total annual value of mineral production—almost £34 million in 1964.

Prior to the founding of the colony in 1836, small quantities of salt had been gathered in the salt lakes of Kangaroo Island. Soon after settlement was established at Adelaide, the first metallic mineral discoveries were made in the silver-lead lodes of Glen Osmond and copper ores of Montacute. Of much greater significance, however, were the discoveries of carbonate copper ores at Kapunda in 1843 and at Burra in 1845 followed in 1860 by the major copper fields of Wallaroo and Moonta. While the first two were comparatively short lived, the Wallaroo-Moonta field prospered, surviving as a major copper producing field for 63 years until final closure in 1923. The relative importance of copper in the early years of the State can be seen from the following figures—

**Value of Mineral Production to 31st December 1918, South Australia**

|                    | £                 |
|--------------------|-------------------|
| Copper . . . . .   | 13,907,754        |
| Iron ore . . . . . | 1,496,733         |
| Salt . . . . .     | 884,129           |
| Gold . . . . .     | 656,920           |
| Gypsum . . . . .   | 119,416           |
| Other . . . . .    | 1,099,606         |
| <b>Total</b>       | <b>18,164,558</b> |

Details of production in various years since 1841 are given in the Statistical Summary on page 529.



Gold was discovered at Echunga in 1852 followed by Barossa in 1868, Waukaranga 1872, Woodside 1881, Mannahill 1885, Teetulpa 1886 and Tarcoola in 1900. While these fields attracted interest for a short time, all were small by world standards and most faded quickly into obscurity.

The major mineral industry of today, iron mining in the Middleback Ranges, had its beginnings early in the century as a supplier of flux to the lead smelters at Port Pirie. It was developed as a source of iron ore for blast furnaces in the eastern States in 1915 and now supplies a major proportion of the requirements of the Australian steel industry. A further development is the establishment of an integrated steel industry at Whyalla.

Industrial minerals such as salt, gypsum, talc, barite, and limestone have grown in importance in recent years. The quantity and value of production of the major minerals for years 1962 to 1964 are listed below.

### Mining and Quarrying Production, South Australia

*As recorded by the Director of Mines*

| Mineral                          | Quantity  |        |        | Value  |        |        |
|----------------------------------|-----------|--------|--------|--------|--------|--------|
|                                  | 1962      | 1963   | 1964   | 1962   | 1963   | 1964   |
|                                  | '000 Tons |        |        | £'000  |        |        |
| Metal mining—                    |           |        |        |        |        |        |
| Iron ore .....                   | 3,510     | 4,242  | 4,367  | 15,600 | 18,940 | 19,495 |
| Pyrite concentrate .....         | 74        | 83     | 86     | 516    | 582    | 601    |
| Other .....                      | ..        | ..     | ..     | 50     | 2      | 10     |
| Fuel mining—                     |           |        |        |        |        |        |
| Coal (sub-bituminous) ...        | 1,392     | 1,512  | 1,736  | 1,449  | 1,447  | 1,648  |
| Non-metal mining—                |           |        |        |        |        |        |
| Barite .....                     | 12        | 7      | 11     | 78     | 46     | 58     |
| Clay .....                       | 406       | 488    | 596    | 274    | 341    | 406    |
| Dolomite .....                   | 170       | 201    | 222    | 127    | 159    | 191    |
| Gypsum .....                     | 429       | 498    | 581    | 499    | 593    | 696    |
| Limestone .....                  | 1,400     | 1,574  | 1,542  | 1,050  | 1,182  | 1,160  |
| Opal .....                       | ..        | ..     | ..     | 949    | 1,143  | 1,316  |
| Salt .....                       | 390       | 459    | 440    | 779    | 918    | 881    |
| Talc and soapstone .....         | 8         | 7      | 8      | 43     | 38     | 48     |
| Other .....                      | ..        | ..     | ..     | 49     | 61     | 59     |
| Total mining .....               | ..        | ..     | ..     | 21,463 | 25,452 | 26,569 |
| Construction material—           |           |        |        |        |        |        |
| Quarrying .....                  | 10,602    | 11,430 | 14,213 | 5,516  | 5,764  | 7,229  |
| Total mining and quarrying ..... | ..        | ..     | ..     | 26,979 | 31,216 | 33,798 |

.. Not applicable.

### INDIVIDUAL INDUSTRIES

Details of mining of individual minerals are given below. Reference should also be made to an article in Part 1.3, page 21 which contains particulars of the location of mineral resources. Map 8 on page 22 shows a number of localities referred to in this section.

#### Iron Ore

The only proven high grade iron ores of South Australia lie in the Middleback Ranges to the west of Whyalla. The ranges are composed primarily of iron-rich rocks in which occur local concentrates of high grade ore.

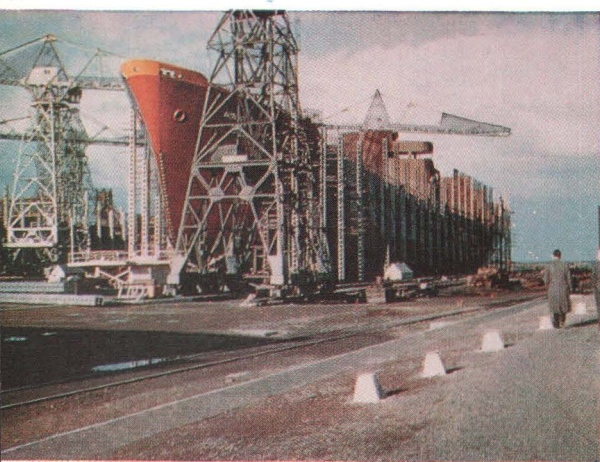


Iron Monarch, a major source of high grade iron ore for Australia's steel industry. Some of the ore is used locally in the Whyalla blast furnace (see picture overleaf), but the bulk is shipped to the Newcastle and Port Kembla steelworks in New South Wales.

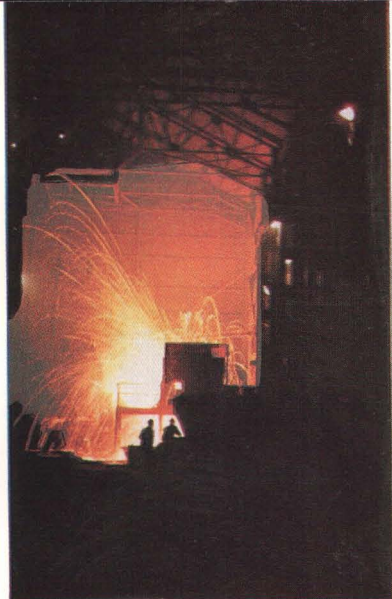
Salt harvesting, solar saltfields, Dry Creek







Ship building, Whyalla



Blast furnace at Whyalla

Assembly line production of motor bodies at Elizabeth



The Iron Monarch deposit near Iron Knob has provided the bulk of the iron ore for Australia's steel industry for many years. Production from this and the smaller deposits of Iron Prince and Iron Baron is now maintained by the Broken Hill Pty. Co. Ltd. at the rate of over four million tons annually. The bulk of the ore is shipped to Newcastle and Port Kembla, but a proportion is used for the production of pig iron in the Whyalla blast furnace. Recent developments at Whyalla have included the new, larger blast furnace and an integrated steel plant, together with a considerable expansion of the town.

Reserves of high grade iron ore, though large, are limited in extent, being estimated at about 170 million tons. The grade of ore at 62% iron is exceptionally high by world standards, with the deposit at Iron Monarch having added importance for its high manganese content. In view of the known limitation of high grade ore, the Broken Hill Company has carried out an active exploration programme, and is also planning future use of the very large reserves of low grade siliceous ores known to exist in the Middleback Ranges.

The South Australian Government is conscious of the need for further reserves of iron ore, and has carried out extensive exploration in the Middleback Ranges and elsewhere. Current Department of Mines work is directed at several deposits on Lower Eyre Peninsula, some of which hold promise of substantial tonnages of low grade ore.

### **Barite**

There are widespread occurrences of barite (barytes) throughout the Adelaide System rocks of South Australia. Deposits are located in a number of areas including the Mount Lofty and Flinders Ranges and the Olary district. Its main use is in the paint industry and as a drilling mud in oil drilling.

For some years the principal producer has been the Oraparinna mine in the Flinders Ranges, this being the largest producer of high-grade barite in Australia.

### **Gypsum**

South Australian deposits contain by far the largest part of Australian reserves of gypsum. The deposits have in general been formed in coastal basins cut off from the ocean, giving rise to extensive deposits of rock gypsum. The most important coastal deposits are found at Lake MacDonnell, Stenhouse Bay and on Kangaroo Island. Inland deposits mainly of seed gypsum occur at Moonabie, Lake Fowler, Cookes Plains and along the Murray River.

The gypsum deposits have been worked extensively over the past 50 years to provide the bulk of Australasian requirements for the plaster industry and for portland cement manufacture. Present production now exceeds 500,000 tons annually.

Reserves of high grade gypsum in Lake MacDonnell have been proved by the Department of Mines to exceed 500 million tons, sufficient to meet Australia's requirements for many generations. Because of its remote location on the West Coast of South Australia, development of the deposit has been slow. However, with installation of bulk loading equipment and the development of overseas markets, considerable expansion of operations at Lake MacDonnell may be expected.

**Salt**

The semi-arid climate and high evaporation rate along much of South Australia's coast line, together with the high salinity of the gulf waters, creates very favourable conditions for the production of salt by solar evaporation. The availability of sites close to cheap transport led to the establishment of solar salt works at the head of Spencer Gulf near Port Augusta and at Whyalla, at Price on the eastern shore of Yorke Peninsula, and in 1940 at Dry Creek near Adelaide. In addition several operators recover salt from shallow salt lakes on Yorke Peninsula and elsewhere.

At present South Australia produces about 450,000 tons annually, and provides some 80% of Australia's salt requirements. The industry is capable of very great expansion to cope with any increase in demand.

**Opal**

Precious opal was discovered in 1915 at Coober Pedy and in 1930 at Andamooka. From very small beginnings the value of opal production has grown till it now exceeds £1 million annually.

In spite of the value of opal being won at present, opal mining remains a small scale operation. Both Andamooka and Coober Pedy are small outback settlements with few amenities and with floating populations. The distances from Port Augusta are 200 and 400 miles respectively to Andamooka and Coober Pedy.

Mining at both centres is relatively shallow, rarely exceeding 90 feet. The extent of the opal fields is not known as there has been no systematic exploration, but it is probable that the fields will continue to yield the gem for many years.

**Pyrite**

In the vicinity of Nairne, 30 miles south-east of Adelaide, there has long been known to exist an enormous body of iron pyrite extending for a distance of at least six miles. Until 1950 this deposit was of little economic significance. However, a world shortage of sulphur, upon which the fertilizer industry is dependent for sulphuric acid, made it necessary to utilize local sources at that time.

Limited exploration of the deposit was made by private enterprise, and extended by the Department of Mines and resulted in the proving over some two miles in length, of 14 million tons of mineable ore containing 10% of recoverable sulphur.

Development, sponsored and aided by the Government, was then undertaken as a joint enterprise by local companies. Regular production commenced in 1955 and an annual output in excess of 80,000 tons of concentrate containing the equivalent of 30,000 tons of sulphur is utilized for acid and fertilizer manufacture at Birkenhead.

**Talc**

The principal occurrences of talc are to be found at Mount Fitton in the Northern Flinders Ranges and in the Gumeracha district. From these sources approximately 8,000 tons a year are mined to supply 90% of Australia's requirements.

The Mount Fitton talc is particularly high grade, and is in demand for use by the cosmetic industry. Lower grade material is used in the rubber, paint, and ceramics industries.

## Coal

South Australia is deficient in bituminous coal resources and the only mining is of sub-bituminous coal at Leigh Creek. The field was discovered in 1888 during dam sinking operations, leading to an unsuccessful attempt at underground mining in the years 1892-1908.

The present development of the field commenced with Department of Mines boring operations in 1941. The Electricity Trust of South Australia assumed control of the field in 1948 and developed it as a source of fuel for the Port Augusta power station. Meanwhile testing by the Department of Mines continued for some years, proving a total of 55 million tons of coal available by open cut methods and a further 81 million tons of underground reserves.

Coal production is now well over one and a half million tons annually. Almost the entire production is railed to Port Augusta for use in power generation to supply a large proportion of the State's requirements of electric power.

## Limestone and Dolomite

The combined tonnage of limestone and dolomite extracted each year is in excess of 1,750,000 tons.

The principal deposits mined are limestone at Rapid Bay and dolomite at Ardrossan for the steel industry, limestone at Penrice for the chemical industry, lime sand at Wardang Island for the metallurgical industry, and limestone at Angaston and Klein Point for the cement industry. In the process of development are the very large lime sand deposits of Coffin Bay. It is anticipated that approximately one million tons of sand will be taken from Coffin Bay each year and railed to Port Lincoln for transshipment to the Whyalla smelters and interstate.

### Limestone Production, South Australia

*Excluding limestone used as building stone, road materials, etc.*

| Classification | 1960      | 1961    | 1962    | 1963    | 1964    |
|----------------|-----------|---------|---------|---------|---------|
|                | '000 Tons |         |         |         |         |
| Flux .....     | 297.8     | 353.5   | 604.2   | 751.8   | 591.9   |
| Cement .....   | 532.6     | 535.9   | 580.5   | 594.5   | 713.5   |
| Chemical ..... | 211.5     | 196.8   | 195.6   | 214.6   | 222.3   |
| Other .....    | 21.8      | 19.1    | 19.8    | 13.2    | 13.8    |
| Total .....    | 1,063.7   | 1,105.3 | 1,400.1 | 1,574.1 | 1,541.5 |

## Clay

South Australia possesses a wide variety of clays which are used for industrial purposes such as cement manufacture, building bricks and roofing tiles, refractory ware, pottery and ceramic purposes. Because of the scarcity of local timber supplies, softwoods excepted, much greater use is made of clay bricks for construction in South Australia than in other parts of the Commonwealth. The clay brick industry is concentrated near the metropolitan area.

There are also widely distributed occurrences of special clays for ceramic and refractory ware, the most noteworthy being the ball clay at Woocalla, china clay at Mount Crawford, and fire clay at Birdwood, Littlehampton, Tea Tree Gully, Booleroo Centre, and Lincoln Gap.

## Clay Production, South Australia

| Classification             | 1960         | 1961         | 1962         | 1963         | 1964         |
|----------------------------|--------------|--------------|--------------|--------------|--------------|
|                            | '000 Tons    |              |              |              |              |
| Brick clay and shale ..... | 407.9        | 311.3        | 338.2        | 407.3        | 517.1        |
| Cement clay (shale) .....  | 18.1         | 11.7         | 14.6         | 13.0         | 21.1         |
| Fire clay .....            | 21.0         | 25.6         | 20.8         | 29.5         | 27.2         |
| Kaolin and ball clay ..... | 3.3          | 2.1          | 2.2          | 3.8          | 4.5          |
| Pottery clay .....         | 53.4         | 46.8         | 30.4         | 34.7         | 26.0         |
| <b>Total .....</b>         | <b>503.7</b> | <b>397.5</b> | <b>406.2</b> | <b>488.3</b> | <b>595.9</b> |

The Department of Mines, together with the Australian Mineral Development Laboratories, is continually engaged in investigations relating to the usage of clay deposits encountered during geological surveys throughout the State.

## Construction Material Quarrying

Post-war industrial expansion, accompanied by extensive housing programmes and highway construction has resulted in a rapidly increasing demand for construction materials. Total production has risen from less than 2 million tons in 1947 to over 14 million tons in 1964.

A variety of building stones is quarried including Mount Lofty sandstone, a white stone which hardens in the atmosphere; Basket Range sandstone, a dark coloured stone of pleasing appearance, and Mount Gambier limestone, a polyzoal limestone of the South East. Limestone deposits have also been worked at Overland Corner, Cadell and Waikerie. A quantity of granite is extracted each year and marble occurrences are worked at Angaston, Kapunda, Macclesfield and Paris Creek. The two main sources of slate in South Australia are at Willunga and Mintaro. Both areas supply paving slate and a large quantity of Mintaro slate is dressed and polished.

## Building Stone, South Australia

| Type of Stone      | 1960        | 1961        | 1962        | 1963        | 1964        |
|--------------------|-------------|-------------|-------------|-------------|-------------|
|                    | '000 Tons   |             |             |             |             |
| Granite .....      | 2.4         | 1.5         | 2.2         | 2.4         | 2.1         |
| Limestone .....    | 23.2        | 25.9        | 21.3        | 13.5        | 13.9        |
| Marble .....       | 1.5         | 1.3         | 1.4         | 1.7         | 1.8         |
| Sandstone .....    | 7.6         | 8.8         | 9.3         | 4.8         | 10.8        |
| Slate .....        | 4.1         | 2.2         | 2.6         | 2.7         | 2.9         |
| <b>Total .....</b> | <b>38.8</b> | <b>39.7</b> | <b>36.8</b> | <b>25.1</b> | <b>31.5</b> |

Production of other construction materials is shown below. The importance and expansion in production of limestone (predominantly for construction of roads) and quartzite (mainly in the form of screenings) can be seen.

## Road and Other Construction Materials, South Australia

| Type of Material     | 1960   | 1961   | 1962      | 1963   | 1964   |
|----------------------|--------|--------|-----------|--------|--------|
|                      |        |        | '000 Tons |        |        |
| Limestone.....       | 3,700  | 4,258  | 4,188     | 4,127  | 6,051  |
| Quartzite.....       | 2,790  | 3,270  | 2,827     | 3,146  | 3,624  |
| Sand.....            | 1,814  | 1,863  | 1,516     | 2,031  | 1,854  |
| Other materials..... | 2,025  | 1,992  | 2,035     | 2,101  | 2,653  |
| Total.....           | 10,329 | 11,383 | 10,566    | 11,405 | 14,182 |

## MINERAL DEVELOPMENTS

Natural gas is probably the most exciting of the State's recent mineral discoveries. Testing of the Gidgealpa gas field is now in progress, with promise of natural gas reserves for both new and established industries. Elsewhere throughout the State the search for both natural gas and petroleum is continuing at an increasing rate.

In spite of the long history of copper discovery and development in this State there has been negligible production of this metal for over 40 years. However, at present there is a vigorous revival of copper exploration, with many private companies as well as the Department of Mines participating. A large deposit of low grade oxidized copper, which may lead to commercial production, has recently been discovered at the old copper mining town of Burra, and the use of modern geophysical and geological methods may well lead to further significant discoveries in the very near future.

Other minerals, either not being produced or having only minor production at present, but which may have significant development in the next few years, include—

*Silver-lead.* A field at Ediacara, at present being investigated by the Department of Mines, shows promise as a very large low-grade lead ore body.

*Molybdenite,* the ore of the metal molybdenum. An occurrence has recently been recorded at Spilsby Island, although so far it is not an economic proposition.

*Manganese ores,* which have been recorded in the lower Flinders Ranges, and more importantly at Pernatty Lagoon. There is a keen demand for manganese ores, and although the State's known deposits are largely depleted, the prospects for new discoveries are good.

*Nickel,* which is also in great demand. The presence of nickel has been recorded in several parts of the Flinders Ranges, and in the Tomkinson Ranges of the far north-west.

*Phosphate Rock.* Australia's requirements at present are supplied from Pacific island deposits which are rapidly being depleted. Known deposits in this State are only small.

## EMPLOYMENT AND WAGES

The number of persons engaged in mining and quarrying in South Australia (expressed as an average over the period of operation) is shown in the next



table. The greatest increase in recent years has occurred as a result of a rapid rise in the number of opal miners at Coober Pedy and Andamooka.

**Employment in Mines and Quarries, South Australia**  
*Average Number Employed During Period Worked<sup>(a)</sup>*

| Classification                              | 1960  | 1961  | 1962  | 1963  | 1964  |
|---|-------|-------|-------|-------|-------|
| <b>Mining—</b>                              |       |       |       |       |       |
| In mines with 4 or more employees . . . .   | 1,188 | 1,180 | 1,249 | 1,106 | 1,112 |
| In mines with less than 4 employees . . . . | 546   | 886   | 952   | 992   | 969   |
| <b>Construction material quarrying—</b>     |       |       |       |       |       |
| In quarries with 4 or more employees . .    | 663   | 685   | 740   | 757   | 919   |
| In quarries with less than 4 employees . .  | 282   | 316   | 255   | 263   | 242   |
| <b>Total</b> . . . . .                      | 2,679 | 3,067 | 3,196 | 3,118 | 3,242 |

(a) Includes working proprietors.

Wages and salaries paid in the larger mines and quarries are shown below. Drawings by working proprietors are not included.

**Salaries and Wages Paid in Mines and Quarries, South Australia**  
*In Mines and Quarries With 4 or More Employees During Period Worked*

| Classification                          | 1960  | 1961  | 1962  | 1963  | 1964  |
|---|-------|-------|-------|-------|-------|
|   |       |       | £'000 |       |       |
| <b>Mining—</b>                          |       |       |       |       |       |
| Salaries . . . . .                      | 1,351 | 196   | 211   | 232   | 267   |
| Wages . . . . .                         |       | 1,225 | 1,376 | 1,246 | 1,299 |
| <b>Construction material quarrying—</b> |       |       |       |       |       |
| Salaries . . . . .                      | 652   | 52    | 64    | 63    | 84    |
| Wages . . . . .                         |       | 685   | 660   | 783   | 1,014 |
| <b>Total salaries and wages</b>         | 2,003 | 2,158 | 2,311 | 2,324 | 2,664 |

### MINING ADMINISTRATION

The Department of Mines is responsible for—

- The administration of mining legislation including the granting of mineral leases and collection of royalties and fees.
- Geological and geophysical investigations to ascertain the extent and nature of the State's mineral resources.
- Boring to test mineral deposits and underground water supplies.
- Development of sub-surface water supplies for farming, pastoral, irrigation and mining purposes.
- The testing and treatment of minerals, generally in arrangement with the Australian Mineral Development Laboratories.

The Mining Act, 1930-1962 deals with such subjects as authority to prospect and the acquisition of mining titles.

The Mines and Works Inspection Act, 1920-1964 regulates in respect to "the state and condition of the mine, machinery, ventilation, and all other things relating to the safety, health and well being of the employees and general public".

## FORESTRY

### HISTORICAL

South Australia was the first State to inaugurate a forest policy. This, however, was probably due more to need and past misgivings than to foresightedness, as much of the productive areas of the State had been denuded of their natural vegetation by the early settlers.

The first attempt came in 1873 with the passing of an Act authorizing the issue of a land order valued at £2 per acre to landowners who planted and maintained forest areas. Unfortunately only one landowner successfully availed himself of this offer.

Forest management in South Australia dates from the Forest Board Act of 1875 when 195,000 acres were placed under the control of a Board, together with the power to proclaim further reserves. The two basic functions of the Forest Board were to promote the protection, and hence the regeneration, of natural vegetation, and to demonstrate the practicability of forestry.

By 1877 the Board had established nurseries at Bundaleer and Wirrabara in the Flinders Ranges and Mount Gambier in the lower South East of the State. It had also planted 1,000 acres of eucalypts and pines at Bundaleer and had carried out small plantings of pines around the Mount Gambier lakes. Further plantings followed at Wirrabara and Mount Burr. *Pinus radiata*, the native of California which today dominates the South Australian forestry scene, was first planted experimentally in 1876.

The first Conservator of Forests took office in 1878. The Forest Board was abolished in 1883 and the Woods and Forests Department established, the Conservator of Forests becoming departmental head. This was the first forests department to be established in the then British Empire. Forest reserves in that year stood at 150,000 acres.

In 1881 the Government introduced a scheme for the free distribution of seedlings to landowners and between 200,000 and 300,000 trees were distributed each year until 1924-25 when the scheme was terminated.

By 1890, with continued planting, particularly in northern areas, a total of over 9,000 acres had been planted and the area of reserves had increased to 225,000 acres.

During these early years a multiplicity of species was planted in an effort to determine those best suited to the local environment. From this astute experimentation there emerged a distinct pattern of development. By 1909 a pronounced swing to softwood plantings was under way although softwoods still accounted for only 12% of total plantations. The first pines were felled between 1903 and 1910, and their encouraging yield provided such an impetus for further plantings that softwoods accounted for 35% of area planted by 1920.

The future pattern of forestry development was now well established. The South East had become the centre of forestry operations and *Pinus radiata* the

dominant species. The planting of hardwoods had virtually ceased, and in 1923 the Government released many of the small reserves and plantations in the north, the operation of which had ceased to be economical.

Forestry development entered a period of vigorous growth in the mid 1920's when greatly increased expenditure was available to the State authorities and when private interests, impressed by early successes with *Pinus radiata*, began developing plantations. Prior to 1924-25 the State's expenditure on afforestation had come from general revenue, but henceforth it was to come from loan funds thus permitting a considerable increase in expenditure. Furthermore, the Development and Migration Commission decided to sponsor a large scale afforestation programme and in the period 1925-1937 advanced a total of £335,000 for this purpose. During this period the Woods and Forests Department established on average over 5,000 acres of new forest per annum and considerable areas were planted by private interests. Details of planting in this and subsequent periods are given in the following table:—

**Forests Planted, South Australia**

| Particulars        | 1929-1936     | 1937-1944     | 1945-1952     | 1953-1960     |
|--------------------|---------------|---------------|---------------|---------------|
|                    | Acres         |               |               |               |
| Area—              |               |               |               |               |
| State .....        | 47,500        | 18,650        | 24,050        | 27,746        |
| Private .....      | 12,000        | 6,550         | 2,100         | 10,099        |
| <b>Total .....</b> | <b>59,500</b> | <b>25,200</b> | <b>26,150</b> | <b>37,845</b> |
|                    | '000          |               |               |               |
| Trees—             |               |               |               |               |
| State .....        | 28,000        | 12,500        | 16,500        | Not available |
| Private .....      | 7,500         | 4,500         | 1,350         |               |
| <b>Total .....</b> | <b>35,500</b> | <b>17,000</b> | <b>17,850</b> |               |

### THE FOREST ESTATE

There are an estimated 23½ million acres of land classified as forests in South Australia although most is of very low grade and of little economic value. Some 2½ million acres, however, are currently considered as exploitable but half of this area yields only firewood. Although uneconomic for timber getting, many forests are of considerable value through soil conservation, and timbered areas help regulate climate and provide shelter, shade and natural beauty.

Certain areas have been set aside as State forest reserves, the area thus reserved at the 30th June 1964 being 282,098 acres. Although the total area reserved has shown little fluctuation since 1929 the area under plantation has been consistently increasing.

#### Indigenous Forests

The natural forests of South Australia consist of eucalypt hardwoods restricted principally to the Mount Lofty Ranges, the lower Flinders Ranges, the southern portion of Eyre Peninsula, and the South East. A few species are of commercial value and these are devoted largely to the production of poles, posts, rails and sleepers. The mallee lands provide an important source of firewood.

Areas of forest reserves not yet planted with conifers are maintained in natural hardwoods but it is unlikely that further hardwood plantations will be established except in small trial areas.

**Exotic Plantations**

Exotic softwoods accounted for 98% of the planted forest area at 30th June 1964.

As can be seen from the accompanying tables the vast majority of planted forest is situated in the South East. With an annual rainfall in excess of 25 inches the South East has proved an ideal site for forestry activity. The Mount Lofty Ranges, geographically suitable for pine forests, contain only limited areas due to the high price of land.

The following table clearly illustrates the overwhelming importance of one species, *Pinus radiata*, in the composition of South Australian forests.

**Forests, South Australia**

*Area Planted During 1963 and Area of Plantations at 30th June 1964*

| Location                       | Planted during 1963  |              |            | Plantations at 30th June 1964 |               |              |
|--------------------------------|----------------------|--------------|------------|-------------------------------|---------------|--------------|
|                                | Softwoods            |              | Hard-woods | Softwoods                     |               | Hard-woods   |
|                                | <i>Pinus Radiata</i> | Other Pinus  |            | <i>Pinus Radiata</i>          | Other Pinus   |              |
| Acres                          |                      |              |            |                               |               |              |
| <b>State Forests—</b>          |                      |              |            |                               |               |              |
| <b>South East—</b>             |                      |              |            |                               |               |              |
| Penola .....                   | 659                  | 495          | —          | 24,764                        | 3,562         | 247          |
| Mount Burr .....               | 1,408                | 3            | —          | 26,602                        | 1,860         | 168          |
| Mount Gambier .....            | 1,270                | 211          | —          | 17,160                        | 1,472         | 21           |
| Myora .....                    | 1,158                | 158          | —          | 10,485                        | 322           | —            |
| Caroline .....                 | 809                  | —            | —          | 6,727                         | 353           | —            |
| Tantanoola.....                | 83                   | 154          | —          | 5,935                         | 219           | 11           |
| Comaum.....                    | 345                  | 23           | —          | 4,480                         | 411           | 14           |
| Other.....                     | 192                  | —            | —          | 1,842                         | 161           | 3            |
| <b>Total South East ....</b>   | <b>5,924</b>         | <b>1,044</b> | <b>—</b>   | <b>97,995</b>                 | <b>8,360</b>  | <b>464</b>   |
| <b>Central—</b>                |                      |              |            |                               |               |              |
| Mount Crawford.....            | 196                  | 42           | —          | 6,207                         | 679           | 507          |
| Kuitpo .....                   | 111                  | 29           | —          | 4,978                         | 947           | 353          |
| Reservoir areas .....          | 177                  | —            | —          | 1,104                         | 134           | —            |
| Other.....                     | 50                   | 9            | —          | 3,432                         | 616           | 150          |
| <b>Total Central .....</b>     | <b>534</b>           | <b>80</b>    | <b>—</b>   | <b>15,721</b>                 | <b>2,376</b>  | <b>1,010</b> |
| Northern .....                 | 356                  | —            | —          | 4,871                         | 181           | 1,035        |
| Murray Lands .....             | —                    | —            | —          | —                             | 15            | 120          |
| Western .....                  | 11                   | 1            | —          | 51                            | 31            | 850          |
| <b>Total State forests....</b> | <b>6,825</b>         | <b>1,125</b> | <b>—</b>   | <b>118,638</b>                | <b>10,963</b> | <b>3,479</b> |
| <b>Private Forests—</b>        |                      |              |            |                               |               |              |
| South East (a) .....           | <i>n.a.</i>          | <i>n.a.</i>  | —          | 37,993                        | —             | —            |
| Other.....                     | <i>n.a.</i>          | <i>n.a.</i>  | —          | 2,587                         | —             | 302          |
| <b>Total private forests .</b> | <b>1,533</b>         | <b>55</b>    | <b>—</b>   | <b>40,580</b>                 | <b>—</b>      | <b>302</b>   |
| <b>Total forests.....</b>      | <b>9,483</b>         | <b>55</b>    | <b>—</b>   | <b>170,181</b>                | <b>—</b>      | <b>3,781</b> |

(a) Small plantations on farming properties have been included in "Other".

*n.a.*—Not available for publication.

Despite the virtues of relative ease and cheapness in planting and rapid growth *Pinus radiata* is likely to play a less prominent role in future forestry expansion as areas suitable for its cultivation are now limited. Experimental plantings have proved *Pinus pinaster* to be most promising on sites unsuitable for *Pinus radiata* and this species should become increasingly prominent.

The 1,125 acres of "other" softwoods planted in State forests during 1963 were all *Pinus pinaster*, bringing the total area of that species standing at 30th June 1964 to 9,057 acres. In all, some 25 species of pines are growing in State forests, although the majority were planted in earlier periods of experimentation.

**Forests, South Australia**  
*Net Area of Plantations at 30th June*

| Location               | 1960    | 1961    | 1962    | 1963    | 1964    |
|------------------------|---------|---------|---------|---------|---------|
| State Forests—         | Acres   |         |         |         |         |
| South East—            |         |         |         |         |         |
| Penola .....           | 25,839  | 26,091  | 26,662  | 27,550  | 28,573  |
| Mount Burr .....       | 26,861  | 27,758  | 26,660  | 27,466  | 28,630  |
| Mount Gambier .....    | 19,000  | 19,567  | 16,508  | 17,477  | 18,654  |
| Myora .....            | 9,033   | 9,305   | 9,425   | 9,666   | 10,807  |
| Caroline .....         | 3,700   | 4,537   | 5,148   | 6,281   | 7,081   |
| Tantanoola (a) .....   | —       | —       | 5,575   | 5,925   | 6,165   |
| Comaum .....           | 3,952   | 4,132   | 4,205   | 4,535   | 4,904   |
| Other .....            | 1,176   | 1,292   | 1,421   | 1,801   | 2,005   |
| Total South East ..    | 89,561  | 92,682  | 95,604  | 100,701 | 106,819 |
| Central—               |         |         |         |         |         |
| Mount Crawford .....   | 6,562   | 6,819   | 6,983   | 7,160   | 7,394   |
| Kuitpo .....           | 6,018   | 6,030   | 6,045   | 6,146   | 6,277   |
| Reservoir areas .....  | 622     | 821     | 923     | 1,115   | 1,238   |
| Other .....            | 4,148   | 3,869   | 4,020   | 4,121   | 4,198   |
| Total Central .....    | 17,350  | 17,539  | 17,971  | 18,542  | 19,107  |
| Northern .....         | 5,174   | 5,442   | 5,412   | 5,725   | 6,088   |
| Murray Lands .....     | 135     | 135     | 135     | 135     | 135     |
| Western .....          | 949     | 967     | 980     | 991     | 932     |
| Total State forests .. | 113,169 | 116,765 | 120,102 | 126,094 | 133,081 |
| Private Forests—       |         |         |         |         |         |
| South East (b) .....   | 34,291  | 34,398  | 36,183  | 37,938  | 37,993  |
| Other .....            | 3,278   | 2,622   | 2,532   | 2,664   | 2,889   |
| Total private forests  | 37,569  | 37,020  | 38,715  | 40,602  | 40,882  |
| Total forests .....    | 150,738 | 153,785 | 158,817 | 166,696 | 173,963 |

(a) Tantanoola forest created from land previously included in Mount Gambier and Mount Burr forests.

(b) Small plantations on farming properties have been included in "other".

Seedlings raised in nurseries are planted out at a density of 700-900 trees to the acre. A series of thinnings, starting when the trees are about 10 years old, reduces the density to 100-150 trees to the acre at age 30. These thinnings are carried out on a commercial basis and make an important and very substantial contribution to timber and pulpwood output. The clear felling age is

aimed at not less than 40 years although for management purposes some earlier felling has been necessary in the past.

### FOREST ADMINISTRATION

#### State Forests

State forests are administered by the Woods and Forests Department. The Conservator of Forests is departmental head and each forest reserve is in the charge of a professionally trained forester.

In earlier years when large areas of plantations were being established expenditure by the department naturally exceeded revenue, but since 1942-43 the revenue has exceeded expenditure including depreciation and interest on loans. By 1954-55 accumulated surpluses had almost matched expenditure on establishment and maintenance of plantations, and it was decided to pay future annual surpluses of the department to Consolidated Revenue.

Funds employed by the Woods and Forests Department, including its milling operations, amounted to £11,237,649 at 30th June 1964 of which £4,682,362 was represented by timber stands and land at net cost. During 1963-64 working account receipts from the forestry operations of the department were £3,341,748 as against payments of £2,011,789. During the year a contribution of £540,000 was made from surpluses on operations to Consolidated Revenue.

#### Private Forests

Private forests accounted for approximately 24% of the planted area at the 30th June 1964. A small number of private companies operating pine plantations in the South East controlled the bulk of private forest land, the balance representing a large number of holdings of a few acres on farming properties throughout the State.

### PRODUCTION

The following table gives the quantity and value of output of forest logs over the last 10 years.

Forest Log Production, South Australia

| Year          | Softwoods        |           | Hardwoods        |           |
|---------------|------------------|-----------|------------------|-----------|
|               | Quantity         | Value (a) | Quantity         | Value (a) |
|               | '000 Sup. Ft (b) | £         | '000 Sup. Ft (b) | £         |
| 1954-55 ..... | 177,686          | 1,409,269 | 9,305            | 88,019    |
| 1955-56 ..... | 216,751          | 1,680,236 | 8,331            | 95,764    |
| 1956-57 ..... | 208,595          | 1,405,408 | 8,206            | 80,126    |
| 1957-58 ..... | 184,839          | 1,493,639 | 7,030            | 72,422    |
| 1958-59 ..... | 267,880          | 2,168,926 | 6,466            | 75,165    |
| 1959-60 ..... | 298,305          | 2,293,395 | 4,797            | 53,138    |
| 1960-61 ..... | 265,408          | 2,154,949 | 7,192            | 104,581   |
| 1961-62 ..... | 277,388          | 2,283,210 | 6,892            | 101,677   |
| 1962-63 ..... | 311,185          | 2,584,554 | 5,489            | 61,169    |
| 1963-64 ..... | 304,054          | 2,535,771 | 7,504            | 89,669    |

(a) Value on mill skids.

(b) Full round measure.

Log production depends on the supply of mature trees and on thinning operations, and planned forestry management ensures that the amount of timber cut each year does not exceed new growth. As planting during the 10 years prior to 1925 was relatively light the number of mature trees available in recent years has been limited, and thinning operations have provided approximately two thirds of log production.

By contrast the extensive plantings of 1926-34 are now reaching maturity and production is therefore expected to increase rapidly in the immediate future. Forestry in South Australia has almost reached a stage where the full annual yield can be cut in perpetuity.

Other forestry products include firewood, yacca gum, wattle bark and eucalyptus oil.

### EMPLOYMENT

The number of persons directly employed by the Woods and Forests Department in forestry activity in recent years is given below. The department also employs over 700 persons in milling activities.

The townships of Mount Burr (population 937 at 30th June 1961) and Nangwarry (1,318) are maintained by the department.

#### State Forestry Employees, South Australia

At 30th June

| Classification                                     | 1960       | 1961       | 1962       | 1963       | 1964       |
|--|------------|------------|------------|------------|------------|
| Professional staff—                                |            |            |            |            |            |
| Foresters.....                                     | 35         | 35         | 31         | 33         | 35         |
| Other.....   | 37         | 45         | 44         | 45         | 41         |
| Non-professional field staff .....                 | 9          | 2          | 8          | 8          | 7          |
| Clerical staff.....                                | 100        | 103        | 101        | 102        | 97         |
| Labour (silvicultural forest works,<br>etc.) ..... | 320        | 316        | 302        | 307        | 275        |
| <b>Total .....</b>                                 | <b>501</b> | <b>501</b> | <b>486</b> | <b>495</b> | <b>455</b> |

The extraction of timber from State forests is carried out by contractors. At 30th June 1964 an estimated 400 persons were employed extracting timber from forests in South Australia.

### RESEARCH AND ADVISORY SERVICES

The virtual dependence of the South Australian forestry industry on a single species necessitates continued research into the maintenance and expansion of *Pinus radiata* resources, as well as into forestry in general.

The Woods and Forests Department maintains its own research facilities and in addition combines with the Commonwealth Forest Research Institute in operating a regional branch of the Institute at Mount Gambier. Certain aspects of forestry research are also undertaken by the Soils Division of the C.S.I.R.O. and the Waite Agricultural Research Institute.

Research activities aimed at an expansion of forestry production include the development of fertilizers, both to stimulate growth and to bring into production land previously considered unsuitable, and the improvement of planting stock through selective breeding. Preventive research is concerned with the extremely important question of soil deterioration and with combating various

diseases and pests. Permanent sample plots have been established in departmental forests as an aid to research into various aspects of forest management.

The Woods and Forests Department provides an advisory service in arboriculture and distributes, through the Belair nursery, a wide variety of trees which have been selected for their adaptability to various climatic and soil conditions.

### FOREST PROTECTION

The State's hot dry summer conditions require forest managements to take considerable precautions and to maintain constant vigilance against forest fire. The clearing of undergrowth, the maintenance of fire-breaks, the manning of observation towers and the constant readiness of fire fighting units are all an integral part of forestry practice.

Other protective measures include spraying to prevent the disorder known as "die-back", exposing land prior to planting to counteract the bark beetle and the eradication of the various weeds and pests which threaten young plants.

Since the discovery of the *Sirex* wood wasp in Victorian forests in 1961 constant watch has been maintained for any sign of this pest in South Australian pine forests.

### FISHERIES

The entire coastline of South Australia except for the unpopulated area west of Fowlers Bay, is fished commercially. In the sheltered waters of the gulfs, Kangaroo Island, the Coorong and the West Coast bays, there are net and handline fisheries; in the open off-shore waters tuna, crayfish and shark are sought; and inland in the River Murray a small quantity of fresh water fish is caught each year.

### HISTORICAL

The earliest commercial fishing industries were associated with oysters and with net and handline fishing for whiting, snapper and net-fish. Oysters were severely overfished and by 1930 supplies were reduced to such an extent that they were no longer commercially exploited. The fishing for whiting by hand line and the general net fishery have remained operative and have benefited from modern methods of handling, transporting and marketing.

Crayfish were also taken quite early in the State's history but it was not until the establishment in the mid-forties of the American market for frozen cray-tails, with its high prices, that production was substantially increased.

Shark fishing in South Australia developed in conjunction with the crayfish industry as the fishing areas were generally similar and the boats easily converted for either type of fishing. The main expansion in shark fishing occurred in the early 1950's when there was a strong demand for shark from Victoria and prices were attractive. Production which reached a maximum in 1957, decreased when the Victorian price fell and the market for shark liver oil collapsed. Recently markets have improved and production has risen substantially.

Early attempts at trawling throughout the State gave poor results except in the Great Australian Bight where several productive grounds were discovered. In an attempt to establish trawling in this area the Commonwealth Government purchased the trawler *Southern Endeavour* and the grounds were fished for a period of 18 months during 1960 and 1961. Although fish were landed in commercial quantities, financial returns were insufficient to justify continuation of the programme and the vessel was sold. The development of a trawling industry might be possible in the future when techniques and markets improve.



The most recently developed fishery in the State is that of "live bait pole" fishing for tuna. Production has increased rapidly since the first attempts at tuna fishing in the 1940's, and currently tuna provides half of the total State catch of scale fish.

#### ADMINISTRATION

Exploitation of the State's fish resources is controlled by two Acts, the State Fisheries Act, 1917-1962 and the Commonwealth *Fisheries Act* 1952-1959. Under the State Act, which is administered by the Fisheries and Fauna Conservation Department, provision is made for the licensing of fishermen and the registration of boats and gear. Control of fishing activity is maintained by the establishment of size limits, closed areas and closed seasons, the regulation of net sizes, and the prohibition of the use of explosive or noxious substances. There is also provision for the maintenance and improvement of port and harbor facilities. The Commonwealth Fisheries Act complements State legislation and provides for management of resources in extra-territorial waters.

#### FISHERMEN AND BOATS

The numbers of persons and boats engaged in commercial fishing activities are shown in the following table. Practically all boats of 55 feet and over are engaged in tuna fishing. During the off season for tuna some are used for salmon, shark or cray fishing. Boats over 25 feet and under 55 feet are engaged in taking shark and crayfish and those under 25 feet are used mainly in net and hand line fisheries. Boats and equipment were valued at £2,602,000 in 1963-64.

**Fishing: Persons and Equipment Engaged, South Australia**

| Particulars                | 1959-60 | 1960-61   | 1961-62 | 1962-63 | 1963-64 |
|----------------------------|---------|-----------|---------|---------|---------|
| Persons engaged (a) .....  | 6,156   | 6,452     | 6,848   | 7,200   | 8,520   |
| Boats engaged—             |         |           |         |         |         |
| Under 25 feet .....        |         |           |         | 1,360   | 1,366   |
| 25 feet and under 35 ..... |         | Not       |         | 180     | 154     |
| 35 feet and under 55 ..... |         | available |         | 96      | 91      |
| 55 feet and over .....     |         |           |         | 14      | 25      |
| Total .....                |         |           |         | 1,650   | 1,636   |

(a) Includes full-time and part-time licensed fishermen. Full-time fishermen estimated at 2,000 over these years.

#### PRODUCTION

##### Marine Fish

Tuna, shark, whiting and salmon are the most important marine species.

Tuna are taken in the waters south of Eyre Peninsula and Kangaroo Island. Occasional catches are taken beyond the continental shelf. Although purse-seining has been attempted the only successful technique to date is pole fishing with live bait. The use of spotting aircraft has increased the efficiency of fishing operations. Most tuna are landed at Port Lincoln although occasional landings have been made at Port Adelaide.

Whiting are taken commercially in Gulf St. Vincent, Spencer Gulf, Investigator Strait and the West Coast bays. In many areas hand lining continues to provide

profitable catches as this fish attracts a high price. In other areas of the gulfs and the West Coast, netting restrictions have been eased and large quantities of whiting and garfish are netted.

The shark fishing extends from the Victorian border in the east to Fowlers Bay in the far west. The main landing ports are the South East crayfish ports, Port Adelaide, Port Lincoln and Victor Harbor. Most shark are taken by long line but some are taken on hand lines by snapper fishermen.

Australian salmon provides useful off-season fishing for a number of tuna fishermen. The best catches are taken in Spencer Gulf and around Kangaroo Island. Most fish are landed at Port Lincoln for canning. In the South East large quantities of salmon trout are netted for crayfish bait.

Of other species garfish, mullocky and snapper are highly regarded as table fish. Mullocky are netted in the Coorong, garfish are netted in the gulfs and West Coast bays and, in season, snapper are taken by hand and long line in most areas of the State.

### Fresh Water Fish

Approximately 210 part-time commercial fishermen using drum nets and set lines are engaged in fishing on the River Murray for Murray cod and callop. This is the only commercial source for fresh water fish in the State because of the general lack of permanent streams and lakes. To prevent over-fishing, the river has been sectioned into "reaches" and "reserves" and each commercial fisherman is issued with a permit to fish a separate reach.

The main commercial fish species, together with their production in recent years, are listed below.

### Fish: Production by Species, South Australia

#### Estimated Live Weight

| Species                         | 1959-60       | 1960-61       | 1961-62       | 1962-63       | 1963-64       |
|---------------------------------|---------------|---------------|---------------|---------------|---------------|
|                                 | '000 Lb.      |               |               |               |               |
| <b>Marine—</b>                  |               |               |               |               |               |
| Australian salmon .....         | 630           | 740           | 1,050         | 885           | 1,245         |
| Bream .....                     | —             | 65            | 52            | 67            | 54            |
| Garfish .....                   | 410           | 585           | 505           | 500           | 620           |
| Mullet .....                    | 625           | 612           | 675           | 550           | 600           |
| Mullocky .....                  | —             | 64            | 85            | 135           | 141           |
| Ruff .....                      | 400           | 365           | 390           | 460           | 475           |
| Shark .....                     | 1,825         | 1,682         | 1,582         | 2,632         | 2,397         |
| Snapper .....                   | 485           | 571           | 505           | 637           | 579           |
| Snook .....                     | 410           | 385           | 410           | 410           | 390           |
| Tuna .....                      | 3,071         | 4,961         | 7,420         | 7,932         | 12,085        |
| Whiting .....                   | 1,600         | 1,475         | 1,675         | 1,875         | 1,615         |
| Other marine species .....      | 950           | 1,252         | 841           | 425           | 535           |
| <b>Total .....</b>              | <b>10,406</b> | <b>12,757</b> | <b>15,190</b> | <b>16,508</b> | <b>20,736</b> |
| <b>Freshwater—</b>              |               |               |               |               |               |
| Golden perch (callop) .....     | 400           | 400           | 300           | 500           | 400           |
| Murray cod .....                | 200           | 200           | 150           | 100           | 75            |
| <b>Total .....</b>              | <b>600</b>    | <b>600</b>    | <b>450</b>    | <b>600</b>    | <b>475</b>    |
| <b>Total fish production ..</b> | <b>11,006</b> | <b>13,357</b> | <b>15,640</b> | <b>17,108</b> | <b>21,211</b> |

Production in 1959-60 was valued at £650,000 and by 1963-64 had reached £1,149,000. The gross values of the major species taken in 1963-64 were—

|                     | £         |
|---------------------|-----------|
| Tuna . . . . .      | 415,000   |
| Whiting . . . . .   | 323,000   |
| Shark . . . . .     | 113,000   |
| Garfish . . . . .   | 78,000    |
| Snapper . . . . .   | 58,000    |
| All other . . . . . | 162,000   |
|                     | 1,149,000 |

### Crustaceans

Crayfish are taken by cray pot between the shore and the edge of the continental shelf. The South East coast between Kingston and the Victorian border is the main fishing area. Good catches are also taken from grounds around Kangaroo Island, near the Althorpe Islands and Port Lincoln, and along the West Coast. The value of crayfish production reached 83% of the value of scale fish species in 1961-62 and was equivalent to 73% in 1963-64.

#### Crayfish Production, South Australia

| Particulars                       | 1959-60 | 1960-61 | 1961-62 | 1962-63 | 1963-64 |
|-----------------------------------|---------|---------|---------|---------|---------|
| Estimated gross weight ('000 lb.) | 3,500   | 3,721   | 4,025   | 4,650   | 4,325   |
| Value (£'000) . . . . .           | 475     | 620     | 720     | 770     | 836     |

### MARKETING AND PROCESSING

Marketing and processing arrangements vary according to the species. Tuna are landed at Port Lincoln and then canned or frozen for export. As Port Lincoln is a deep sea port, few transport problems exist. Large catches of salmon are generally landed at Port Lincoln and these are also canned. Crayfish are tailed and frozen for export at most of the main ports, but some are cooked for local consumption. Shark are gutted and headed at sea and are frozen at the port of landing for interstate markets. Other fish are generally iced for dispatch to the Adelaide market or are scaled, filleted and frozen for general distribution.

Most of the main landing ports have chilling or freezing facilities. Several of these are operated by individual buyers but most are depots of the South Australian Fishermen's Co-operative Limited (Safcol). This is the larger of the State's two fishermen's co-operatives. The other is the Yorke Peninsula Fishermen's Co-operative based at Moonta. In addition to collecting, processing and distributing fish from the out ports, Safcol also operates the Adelaide fish market. This is an auction market which handles fish for both members and non-members.

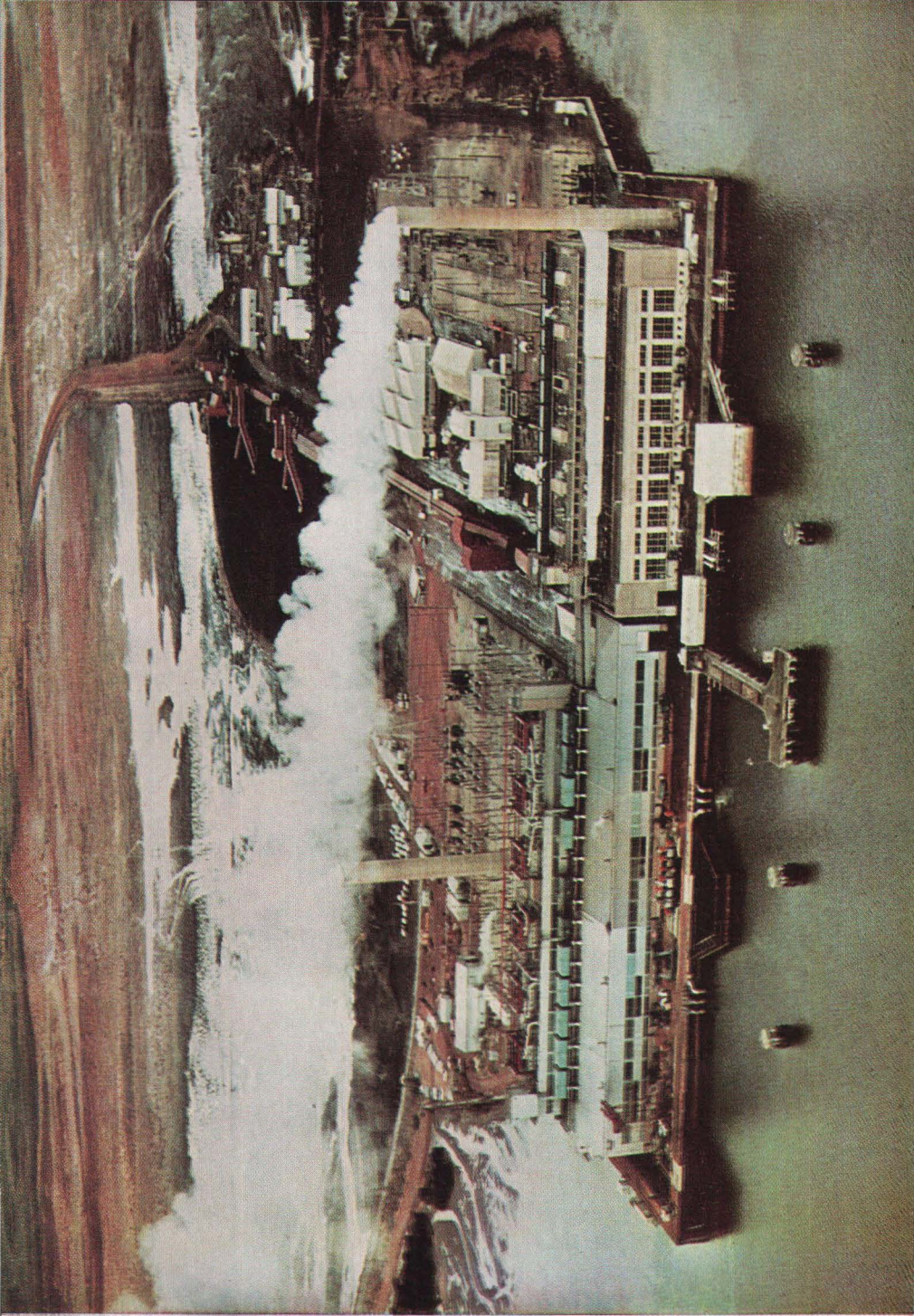


Pine logs being gathered in a South Eastern forest for pulping for manufacture of paper, paper board, hard boards, etc. These logs are the product of thinning operations to reduce the density of the planted forests.



Pole fishing for tuna





The Thomas Playford  
Power Station, Port Augusta

## RESEARCH

In recent years the realization that research is essential for effective fisheries management has promoted several research programmes. Tuna, crayfish and salmon resources have been investigated by a joint Commonwealth and States group consisting of the Division of Fisheries and Oceanography of the Commonwealth Scientific and Industrial Research Organization, the Fisheries Division of the Commonwealth Department of Primary Industry, and the Fisheries departments of New South Wales, Victoria, Tasmania and South Australia. In addition, the State Fisheries and Fauna Conservation Department is conducting a whiting research programme. All programmes will provide a scientific basis for the management of the fisheries concerned.

## 9.3. MANUFACTURING

## DEVELOPMENT

Early factory production was naturally orientated to local needs: thus brick kilns, flour mills, tanneries, distilleries and a candle and soap works were among factories recorded in the 1840's. Also in operation were the smaller establishments of saddlers and coachbuilders, while various food and clothing industries were being established. Heavy industry can probably be traced to the production of agricultural machinery, beginning with the reaper of 1843 and including the stump-jump plough of 1876.

The discovery of copper in 1843, together with later discoveries, provided an impetus to certain industrial pursuits. However, the finding of gold in Victoria in 1851 led to an exodus of skilled personnel for which the Colony's infant industries were not fully to recover for some two decades.

A highlight in the industrial progress of the State was the establishment at Port Pirie in 1889 of smelters for the processing of silver-lead ore from Broken Hill. This was primarily responsible for building up Port Pirie's population from about 900 at the 1881 Census to some 8,000 twenty years later, making the town at that time by far the largest country centre in South Australia.

There had been customs tariffs from very early days, but it was not until the 1880's that they reached a level offering protection to secondary industries. Further stimulus was provided in 1901 when the establishing of the Commonwealth provided for free trade between the States and the erection of a common tariff barrier. After World War I, manufacturing industry again expanded with the assistance of still higher tariffs.

Despite certain industrial growth, South Australia in the mid 1930's was still basically a primary producing State. It is over the last thirty years, that a really rapid growth in the relative contribution of secondary industry to total production has taken place. Development in the mid 1930's coincided with Government action which reduced company taxation and wharfage charges, and provided for a programme of low-cost housing. The needs of war provided a further stimulus to the industrialization process in the early 1940's; it is since the war, however, that the most impressive development has taken place.

In the following table various measures of industrial development have been recorded for the period since World War I.

## Factory Development, South Australia

| Period             | Factories | Persons Employed<br>(a) | Motive Power<br>(b) | Value of Land, Buildings, Plant and Machinery | Value of Production |
|--------------------|-----------|-------------------------|---------------------|---|---------------------|
|                    | No.       | No.                     | Horsepower          | £'000   | £'000               |
| Five year average— |           |                         |                     |   |                     |
| 1920-21 to 1924-25 | 1,578     | 33,382                  | 83,887              | 11,415  | 9,789               |
| 1925-26 to 1929-30 | 1,823     | 37,617                  | 149,891             | 17,908  | 12,672              |
| 1930-31 to 1934-35 | 1,710     | 27,409                  | 184,797             | 17,603  | 8,154               |
| 1935-36 to 1939-40 | 2,025     | 42,337                  | 266,051             | 18,340  | 13,169              |
| 1940-41 to 1944-45 | 2,172     | 64,778                  | 358,940             | 33,109  | 25,105              |
| 1945-46 to 1949-50 | 2,788     | 72,302                  | 467,009             | 41,938  | 38,282              |
| 1950-51 to 1954-55 | 3,410     | 84,490                  | 638,220             | 72,082  | 90,299              |
| 1955-56 to 1959-60 | 4,211     | 94,045                  | 903,699             | 141,292                                       | 136,754             |
| Year—              |           |                         |                     |   |                     |
| 1960-61 .....      | 5,042     | 99,955                  | 1,185,497           | 200,829                                       | 170,062             |
| 1961-62 .....      | 5,519     | 99,094                  | 1,296,507           | 224,800                                       | 173,914             |
| 1962-63 .....      | 5,766     | 105,265                 | 1,317,292           | 253,286                                       | 189,571             |
| 1963-64 .....      | 5,826     | 110,813                 | 1,456,332           | 280,454                                       | 213,678             |

(a) Average employment for whole year ; includes working proprietors.

(b) Rated horsepower of engines ordinarily in use. From 1940-41 excludes motors driven by electricity of own generation, to avoid duplication.

## THE CONTENT OF FACTORY STATISTICS

The period covered by the statistics is generally the twelve months ended 30th June. In cases where some other accounting period is used, returns may be obtained for that accounting period. These cases, however, are comparatively few, and their inclusion in no way impairs the comparability of the statistics in the year under review or from year to year. In preparing the statistics the following definitions have been applied—

**Factory.** For the purposes of the accompanying statistics a factory is defined as an establishment in which four or more persons are employed or where power-driven machinery is used in manufacturing, repairing, or assembling. It should be noted that the details relating to small establishments not classified for statistical purposes as factories are not included in the figures shown herein. Also excluded are the activities of the Commonwealth Department of Supply and the various private firms working within the Weapons Research Establishment at Salisbury and at the testing range at Woomera.

If a manufacturing business is conducted in conjunction with any other activity, particulars relating to the manufacturing section only are included in the statistics.

**Average Number of Persons Employed.** All persons employed in the manufacturing activities of a factory are counted as factory employees. The figures relating to employment, therefore, exclude all those engaged in selling and distribution, such as salesmen, travellers, collectors, carters engaged solely on outward delivery of manufactured goods, and retailing storemen. The figures, however, include proprietors who work in their own businesses and "out-workers".

The average number of persons employed is quoted on two different bases: the average during the period of operation and the average over the whole year. Of

these, the former is simply the aggregate of the average number of persons employed in each factory during its period of operation (whether the whole or only part of the year); this average is used only in respect of details relating to classification according to number of persons employed. The latter, which is used in all other instances, is calculated by reducing the average number working in the factories (irrespective of period of operation) to the equivalent number working for a full year.

Working proprietors are included in all employment figures other than those relating to age dissections, but in all cases drawings by working proprietors are excluded from salaries and wages paid.

*Value of Premises and Machinery.* The values shown include an allowance for rent capitalized where premises and machinery are not owned by the occupiers.

*Value of Materials Used.* This item includes cost of the materials used, stores used, containers, tools replaced, and materials used in repairs to plant. In general, it does not include the value of customers' articles or materials repaired, assembled, or treated by the factory.

*Value of Fuel, Etc., Used.* This includes also the cost of power, light, lubricants, and water used within the factory.

*Value of Output.* The value of factory output is the value of the goods manufactured or their value after passing through the particular process of manufacture and includes the amount received for repair work, work done on commission, and receipts for other factory work. The basis of valuation of the output is the selling value of the goods at the factory exclusive of all delivery costs and charges and excise duties but inclusive of bounty, and subsidy payments to the manufacturer of the finished article.

*Value of Production.* The value of production is the value added to raw materials by the process of manufacture. It is calculated by deducting from the value of factory output the value (at the factory) of materials, containers, packing, power, fuel, and light used, tools replaced, and materials used in repairs to plant (but not depreciation charges).

In the process of manufacture many goods are treated in several industries, the output of one becoming the raw materials of another, so that such commodities are counted more than once in the aggregate value of output and of raw materials. On the other hand the aggregate value of production is assessed without duplication, the value added by each industry being taken into account once only. For this reason the value of production, and not the value of output is usually the more useful measure of activity.

There are many miscellaneous expenses, such as maintenance of buildings, depreciation, workers' compensation insurance, other insurances, pay-roll tax, income tax, advertising, interest on borrowed money, bad debts, and many other sundry charges, which are not taken into account. Consequently it must not be inferred that when wages and salaries are deducted from value of production the whole of the surplus is available for interest and profits.

### THE CLASSIFICATION OF FACTORIES

In a number of tables in this section factories are classified by the nature of their output into 16 major classes. These classes, together with sub-classes for which factories are operating in this State, are listed below.

Where the nature of goods produced would place the factory in more than one sub-class and where its activities cannot be thus separated it is classified according to its predominant activity.



### Classification of Factories

- Class 1—Treatment of non-metalliferous mine and quarry products.**  
 Lime, plaster of paris, asphalt.  
 Fibrous plaster and products.  
 Marble, slate, etc.  
 Cement, portland.  
 Asbestos cement sheets and mouldings.  
 Other cement goods.  
 Other.
- Class 2—Bricks, pottery, glass, etc.**  
 Bricks and tiles.  
 Earthenware, china, porcelain, terracotta.  
 Glass (other than bottles).  
 Glass bottles.
- Class 3—Chemicals, dyes, explosives, paints, oils, grease.**  
 Industrial and heavy chemicals and acids.  
 Pharmaceutical and toilet preparations.  
 Explosives (including fireworks).  
 White lead, paints, varnish.  
 Oils, vegetable.  
 Oils, mineral.  
 Boiling-down, tallow-refining.  
 Soap and candles.  
 Chemical fertilizers.  
 Inks, polishes, etc.
- Class 4—Industrial metals, machines, conveyances.**  
 Smelting, converting, refining, rolling of iron and steel.  
 Foundries (ferrous).  
 Plant, equipment, and machinery, including machine tools.  
 Other engineering.  
 Extracting and refining of other metals, alloys.  
 Electrical machinery, cables, and apparatus.  
 Construction and repair of vehicles—  
 Tramcars and railway rollingstock.  
 Motor vehicles—  
 Construction and assembly.  
 Repairs.  
 Motor bodies.  
 Horse-drawn vehicles.  
 Motor accessories.  
 Aircraft.  
 Cycles (foot and hand driven) and accessories.
- Ship and boat building and repairing.  
 Cutlery and small hand tools.  
 Agricultural machines and implements.  
 Non-ferrous metals—  
 Rolling and extrusion.  
 Founding, casting, etc.  
 Sheet metal working pressing, stamping.  
 Pipes, tubes, and fittings—Ferrous.  
 Wire and wireworking (including nails).  
 Stoves, ovens and ranges.  
 Gas fittings and meters.  
 Sewing machines.  
 Arms, ammunition (excluding explosives).  
 Wireless and amplifying apparatus.  
 Other metal works.
- Class 5—Precious metals, jewellery, plate.**  
 Jewellery.  
 Watches and clocks (including repairs).  
 Electroplating (gold, silver, chromium, etc.).
- Class 6—Textile and textile goods (not dress).**  
 Cotton spinning and weaving.  
 Wool carding, spinning, weaving.  
 Hosiery and other knitted goods.  
 Rope and cordage.  
 Canvas goods, tents, tarpaulins, etc.  
 Bags and sacks.  
 Textile dyeing, printing, and finishing.  
 Other.
- Class 7—Skins and leather (not clothing or footwear).**  
 Furriers and fur-dressing.  
 Woollscouring and fellmongering.  
 Tanning, currying and leather-dressing.  
 Saddlery, harness and whips.  
 Bags, trunks, and other goods of leather and leather substitutes.
- Class 8—Clothing (except knitted).**  
 Tailoring and ready-made clothing.  
 Waterproof and oilskin clothing.  
 Dressmaking, hemstitching.  
 Millinery.  
 Shirts, collars, underclothing.  
 Handkerchiefs, ties, scarves.

## Class 8—(continued)

Gloves.  
 Boots and shoes (not rubber).  
 Boot and shoe repairing.  
 Boot and shoe accessories.  
 Umbrellas and walking sticks.  
 Dyeworks and cleaning (including renovating and repairing).  
 Other.

Class 9—*Food, drink and tobacco.*

Flour milling.  
 Cereal foods and starch.  
 Animal and bird foods.  
 Chaff cutting.  
 Bakeries (including cakes and pastry).  
 Biscuits.  
 Sugar refining.  
 Confectionery (including chocolate and icing sugar).  
 Jam, fruit and vegetable canning.  
 Pickles, sauces, vinegar.  
 Bacon curing.  
 Butter factories.  
 Cheese factories.  
 Margarine.  
 Meat and fish preserving.  
 Condiments, coffee, spices.  
 Ice and refrigerating.  
 Salt.  
 Aerated waters, cordials, etc.  
 Breweries.  
 Distilleries.  
 Winemaking.  
 Malting.  
 Bottling.  
 Dehydrated fruit and vegetables.  
 Ice cream.  
 Sausage skins.  
 Other.

Class 10—*Sawmills, joinery, boxes, etc., wood turning and carving.*

Sawmills.  
 Plywood mills (including veneers).  
 Joinery.  
 Cooperage.  
 Boxes and cases.  
 Woodturning, woodcarving, etc.  
 Basketware and wickerware (including seagrass and bamboo furniture).  
 Perambulators (including pushers and strollers).

Wall and ceiling boards (not plaster or cement).

Other.

Class 11—*Furniture of wood, bedding, etc.*

Cabinet and furniture making (including billiard tables and upholstery).  
 Bedding and mattresses (not wire).  
 Furnishing drapery.  
 Picture frames.  
 Blinds.

Class 12—*Paper, stationery, printing, bookbinding, etc.*

Newspapers and periodicals.  
 Printing, Government  
 Printing, general (including book-binding).  
 Manufactured stationery.  
 Process and photo-engraving.  
 Cardboard boxes, cartons, and containers.  
 Paper bags.  
 Paper making.  
 Other.

Class 13—*Rubber.*

Rubber goods (including tyres made).  
 Tyre retreading and repairing.

Class 14—*Musical instruments.*

Gramophone and gramophone records.  
 Pianos, piano-players, organs.  
 Other.

Class 15—*Miscellaneous products.*

Plastic moulding and products.  
 Brooms and brushes  
 Optical instruments and appliances.  
 Surgical and other scientific instruments and appliances.  
 Photographic material (including developing and printing).  
 Toys, games and sports requisites.  
 Other.

Class 16—*Heat, light and power.*

Electric light and power—  
 Government.  
 Local authority.  
 Other.  
 Gasworks—  
 Other.

## LEGISLATION

Industrial legislation is dealt with in Part 7, Labour. Other legislation is concerned with the location of factory premises and with the processes carried out therein.

Under the Local Government Act, 1934-1963 local government authorities may make by-laws restricting the erection of factory premises to certain sections of the area under their jurisdiction. The Manufacturing Industries Protection Act, 1937 provides for the proclamation of certain areas wherein proprietors and occupiers of factories are protected against civil action for noise and vibration problems. This Act, which takes precedence over zoning by-laws, currently applies to four relatively small zones. Regulations made under the Noxious Trade Act, 1943-1955 have defined certain processes as noxious trades for which a licence must be obtained. In addition an area between Wingfield and Dry Creek in the outer northern suburbs has been declared a noxious trade area with persons operating therein being protected from civil action.

Similarly the licensing of noisy trades may be required under a section of the Local Government Act. Protection against health hazards is provided under the Health Act, 1935-1960.

## THE STRUCTURE AND LOCATION OF SECONDARY INDUSTRY

Post-war industrialization has to a considerable extent evolved around three major industrial groups. The motor vehicle, the electrical goods and the household appliance industries, together with their peripheral suppliers of components and services, have accounted for much of the post-war expansion.

These industries are located in, or adjacent to, the metropolitan area. In fact the tendency for manufacturing industries, particularly those supplying consumer goods, to congregate near their market has resulted in a heavy concentration of South Australian secondary industries within the metropolitan area, where almost 60% of the State's population is located, and in adjacent areas.

In the table below some details are given of factory activity in the Metropolitan Area and in the Remainder of the State. Included in the latter category are some large industrial plants close to Adelaide, particularly the oil refinery at Port Stanvac and the motor vehicle works at Elizabeth.

## Factory Activity, Adelaide Metropolitan Area and Remainder of State

| Year    | Factories          | Persons Employed<br>(a) | Value of Land and Buildings | Value of Plant and Machinery | Value of Output | Value of Production |
|---------|--------------------|-------------------------|-----------------------------|------------------------------|-----------------|---------------------|
|         | No.                | No.                     | £'000                       | £'000                        | £'000           | £'000               |
|         | Metropolitan Area  |                         |                             |                              |                 |                     |
| 1959-60 | 3,024              | 78,860                  | 61,298                      | 74,344                       | 295,299         | 131,782             |
| 1960-61 | 3,120              | 77,920                  | 61,635                      | 64,193                       | 308,051         | 138,673             |
| 1961-62 | 3,437              | 75,529                  | 66,734                      | 66,284                       | 297,661         | 134,517             |
| 1962-63 | 3,599              | 80,606                  | 72,970                      | 72,300                       | 343,077         | 148,417             |
| 1963-64 | 3,662              | 82,896                  | 78,919                      | 74,556                       | 378,395         | 163,062             |
|         | Remainder of State |                         |                             |                              |                 |                     |
| 1959-60 | 1,660              | 20,158                  | 16,334                      | 23,897                       | 90,403          | 31,191              |
| 1960-61 | 1,922              | 22,035                  | 26,094                      | 48,907                       | 93,577          | 31,389              |
| 1961-62 | 2,082              | 23,565                  | 31,563                      | 60,219                       | 104,136         | 39,397              |
| 1962-63 | 2,167              | 24,659                  | 33,512                      | 74,504                       | 113,960         | 41,154              |
| 1963-64 | 2,164              | 27,917                  | 36,395                      | 90,584                       | 152,498         | 50,616              |

(a) Average over whole year; includes working proprietors.

Generally industrial plants outside the metropolitan area are orientated to sources of supply, exceptions being the production of agricultural machinery at Mannum and the presence of woollen mills at Lobethal and Mount Gambier. Wallaroo and Port Lincoln, being central to their markets, are the sites of chemical fertilizer production.

The two most important undertakings beyond the vicinity of Adelaide are the iron and steel complex at Whyalla and the lead smelters at Port Pirie. These undertakings together with the power station at Port Augusta are sited for important mineral sources. Other factories are located near sources of primary products and include the sawmills and paper pulp industries of the South East, the fruit processing plants of the Upper Murray, the wineries and distilleries of the Barossa Valley and the Murray, and various dairy product factories and fish processing plants.

In the table below details of factories for 1963-64 are classified according to industrial class. The dominating position of class 4 which includes the industrial metals treatment, motor vehicles, electrical, and consumer durable industries referred to above, can be clearly seen.

**Factories by Class of Industry, South Australia, 1963-64**

| Industrial Class   | Factories | Persons Employed | Value of Premises and Equipment | Salaries and Wages Paid (b) | Materials, Fuel and Power Used | Value of Production |
|--|-----------|------------------|---------------------------------|-----------------------------|--------------------------------|---------------------|
|  |           | (a)              |                                 |                             |                                |                     |
|  | No.       | No.              | £'000                           | £'000                       | £'000                          | £'000               |
| 1. Treatment of non-metalliferous mine and quarry products   | 192       | 2,325            | 10,732                          | 2,818                       | 9,484                          | 8,383               |
| 2. Bricks, pottery, glass, etc.                              | 76        | 2,203            | 4,601                           | 2,611                       | 3,985                          | 5,325               |
| 3. Chemicals, dyes, explosives, paints, oils, grease         | 100       | 3,215            | 22,741                          | 4,022                       | 22,194                         | 13,210              |
| 4. Industrial metals, machines, conveyances                  | 2,841     | 64,479           | 126,026                         | 73,847                      | 171,913                        | 113,291             |
| 5. Precious metals, jewellery, plate                         | 174       | 571              | 897                             | 443                         | 479                            | 845                 |
| 6. Textile and textile goods (not dress)                     | 57        | 2,522            | 4,410                           | 2,379                       | 5,687                          | 4,219               |
| 7. Skins and leather (not clothing or footwear)              | 38        | 1,203            | 1,253                           | 1,227                       | 7,493                          | 1,797               |
| 8. Clothing (except knitted)                                 | 573       | 5,312            | 4,715                           | 3,599                       | 4,434                          | 5,874               |
| 9. Food, drink and tobacco                                   | 737       | 11,614           | 29,302                          | 11,049                      | 52,185                         | 23,430              |
| 10. Sawmills, joinery, boxes, etc., wood turning and carving | 413       | 5,457            | 8,402                           | 5,183                       | 13,474                         | 9,540               |
| 11. Furniture of wood, bedding, etc.                         | 221       | 2,332            | 2,520                           | 1,972                       | 4,403                          | 3,576               |
| 12. Paper, stationery, printing, book-binding, etc.          | 193       | 4,986            | 15,507                          | 5,547                       | 9,893                          | 10,854              |
| 13. Rubber   | 59        | 1,248            | 2,768                           | 1,613                       | 2,661                          | 3,323               |
| 14. Musical instruments                                      | 11        | 32               | 73                              | 28                          | 12                             | 45                  |
| 15. Miscellaneous  | 108       | 1,381            | 1,923                           | 1,201                       | 2,499                          | 2,712               |
| Total classes 1-15   | 5,793     | 108,880          | 235,870                         | 117,539                     | 310,796                        | 206,424             |
| 16. Heat, light and power                                    | 33        | 1,933            | 44,584                          | 2,619                       | 6,419                          | 7,254               |
| Total all classes  | 5,826     | 110,813          | 280,454                         | 120,158                     | 317,215                        | 213,678             |

(a) Average employment for whole year; includes working proprietors.

(b) Excludes drawings by working proprietors.

The "Industrial metals, machines, conveyances" class accounted for 53% of total production and 58% of employment; the next highest class, viz. "Food, drink and tobacco" represented 11% and 10% respectively.

The next table records the number of factories in each industrial class for recent years.

## PRODUCTION

## Number of Factories by Class of Industry, South Australia

| Industrial Class   | 1959-60 | 1960-61 | 1961-62 | 1962-63 | 1963-64 |
|--|---------|---------|---------|---------|---------|
| 1. Treatment of non-metalliferous mine and quarry products .....   | 164     | 182     | 185     | 182     | 192     |
| 2. Bricks, pottery, glass, etc. ....                               | 71      | 76      | 76      | 80      | 76      |
| 3. Chemicals, dyes, explosives, paints, oils, grease .....         | 89      | 89      | 95      | 97      | 100     |
| 4. Industrial metals, machines, conveyances .....                  | 2,151   | 2,358   | 2,545   | 2,781   | 2,841   |
| 5. Precious metals, jewellery, plate ...                           | 80      | 104     | 164     | 169     | 174     |
| 6. Textile and textile goods (not dress)                           | 54      | 56      | 59      | 58      | 57      |
| 7. Skins and leather (not clothing or footwear) .....              | 37      | 39      | 41      | 40      | 38      |
| 8. Clothing (except knitted) .....                                 | 440     | 491     | 591     | 594     | 573     |
| 9. Food, drink and tobacco .....                                   | 719     | 723     | 756     | 744     | 737     |
| 10. Sawmills, joinery, boxes, etc., wood turning and carving ..... | 350     | 361     | 406     | 409     | 413     |
| 11. Furniture of wood, bedding, etc. ...                           | 198     | 208     | 220     | 218     | 221     |
| 12. Paper, stationery, printing, book-binding, etc. ....           | 163     | 175     | 190     | 197     | 193     |
| 13. Rubber .....   | 59      | 65      | 62      | 57      | 59      |
| 14. Musical instruments .....                                      | 11      | 10      | 11      | 11      | 11      |
| 15. Miscellaneous .....  | 61      | 69      | 81      | 96      | 108     |
| Total classes 1-15 .....   | 4,647   | 5,006   | 5,482   | 5,733   | 5,793   |
| 16. Heat, light and power .....                                    | 37      | 36      | 37      | 33      | 33      |
| Total all classes .....  | 4,684   | 5,042   | 5,519   | 5,766   | 5,826   |

Although there were 5,826 factories operating in 1963-64, only 158 or 3% had an average employment in excess of 100 persons while 4,402 factories, or 76% of the total employed 10 persons or less. In the following table factories are grouped according to the average number of persons employed during the period of operation. The top section of the table shows the number of factories in each size grouping, and the lower section the number of persons employed in the factories located in the groups. Where a manufacturer operates at more than one location each factory premises is recorded separately.

## Number of Factories and Persons Employed by Size of Factory, South Australia

| Year    | Size of Factory (i.e. Average Employment) |       |       |        |        |         |          | Total   |
|---------|---|-------|-------|--------|--------|---------|----------|---------|
|         | Under 5                                   | 5-10  | 11-20 | 21-50  | 51-100 | 101-500 | Over 500 |         |
|         | Number of Factories                       |       |       |        |        |         |          |         |
| 1959-60 | 2,245                                     | 1,140 | 592   | 415    | 154    | 116     | 22       | 4,684   |
| 1960-61 | 2,543                                     | 1,194 | 587   | 419    | 159    | 118     | 22       | 5,042   |
| 1961-62 | 3,010                                     | 1,174 | 589   | 434    | 169    | 120     | 23       | 5,519   |
| 1962-63 | 3,165                                     | 1,228 | 621   | 429    | 171    | 127     | 25       | 5,766   |
| 1963-64 | 3,143                                     | 1,259 | 636   | 446    | 184    | 130     | 28       | 5,826   |
|         | Persons Employed                          |       |       |        |        |         |          |         |
| 1959-60 | 5,232                                     | 7,772 | 8,610 | 13,128 | 10,926 | 22,621  | 31,244   | 99,533  |
| 1960-61 | 5,684                                     | 8,252 | 8,654 | 13,206 | 11,217 | 23,084  | 30,465   | 100,562 |
| 1961-62 | 6,504                                     | 8,125 | 8,611 | 13,864 | 11,866 | 23,396  | 27,228   | 99,594  |
| 1962-63 | 6,810                                     | 8,531 | 9,149 | 13,739 | 11,819 | 24,949  | 30,765   | 105,762 |
| 1963-64 | 6,772                                     | 8,693 | 9,338 | 14,062 | 12,692 | 25,512  | 34,079   | 111,148 |

In 1963-64 the 28 largest firms were responsible for 31% of total factory employment. By contrast the 3,143 factories employing less than 5 persons, while constituting 54% of total factories, accounted for only 6% of employment, including a considerable proportion of working proprietors.

Factories operating during 1963-64 are classified by size of establishment for each industrial class in the next table.

**Factories by Persons Employed, South Australia  
1963-64**

| Industrial Class   | Average Employment |       |       |       |        |         |          | Total |
|--|--------------------|-------|-------|-------|--------|---------|----------|-------|
|  | Under 5            | 5-10  | 11-20 | 21-50 | 51-100 | 101-500 | Over 500 |       |
| 1. Treatment of non-metalliferous mine and quarry products . . . . .   | 98                 | 47    | 22    | 15    | 5      | 5       | —        | 192   |
| 2. Bricks, pottery, glass, etc. . . . .                                | 20                 | 20    | 10    | 14    | 9      | 3       | —        | 76    |
| 3. Chemicals, dyes, explosives, paints, oils, grease . . . . .         | 39                 | 27    | 8     | 10    | 6      | 9       | 1        | 100   |
| 4. Industrial metals, machines, conveyances . . . . .                  | 1,617              | 619   | 280   | 171   | 74     | 59      | 21       | 2,841 |
| 5. Precious metals, jewellery, plate . . . . .                         | 144                | 20    | 7     | 3     | —      | —       | —        | 174   |
| 6. Textile and textile goods (not dress) . . . . .                     | 19                 | 17    | 5     | 7     | 4      | 4       | 1        | 57    |
| 7. Skins and leather (not clothing or footwear) . . . . .              | 16                 | 9     | 5     | 2     | 3      | 2       | 1        | 38    |
| 8. Clothing (except knitted) . . . . .                                 | 368                | 94    | 52    | 40    | 12     | 7       | —        | 573   |
| 9. Food, drink and tobacco . . . . .                                   | 311                | 174   | 114   | 84    | 35     | 19      | —        | 737   |
| 10. Sawmills, joinery, boxes, etc., wood turning and carving . . . . . | 211                | 90    | 56    | 36    | 12     | 8       | —        | 413   |
| 11. Furniture of wood, bedding, etc. . . . .                           | 125                | 40    | 24    | 24    | 5      | 3       | —        | 221   |
| 12. Paper, stationery, printing, book-binding, etc. . . . .            | 49                 | 61    | 38    | 27    | 10     | 7       | 1        | 193   |
| 13. Rubber . . . . .   | 37                 | 12    | 4     | 3     | 1      | 1       | 1        | 59    |
| 14. Musical instruments . . . . .                                      | 9                  | 2     | —     | —     | —      | —       | —        | 11    |
| 15. Miscellaneous . . . . .  | 60                 | 23    | 10    | 8     | 6      | 1       | —        | 108   |
| Total classes 1-15 . . . . .   | 3,123              | 1,255 | 635   | 444   | 182    | 128     | 26       | 5,793 |
| 16. Heat, light and power . . . . .                                    | 20                 | 4     | 1     | 2     | 2      | 2       | 2        | 33    |
| Total all classes . . . . .  | 3,143              | 1,259 | 636   | 446   | 184    | 130     | 28       | 5,826 |

In 1963-64 factories employing less than 5 persons included 945 motor repair workshops, 177 motor body workshops, 190 bakeries, 165 boot and shoe repairers and 150 joineries.

#### EMPLOYMENT IN FACTORIES.

In 1931-32, at the height of the depression, average factory employment in South Australia was 23,880. By 1938-39 it had passed the previous peak of 41,075 reached in 1926-27 and stood at 43,371. There was a rapid increase in the factory work force in the early war years and a new peak of 72,751 was reached in 1942-43, after which it declined for the remaining three years of the war. Since the war the employment level has shown an increase in all but 3 years to reach the level of 110,813 recorded in 1963-64.

The factory work force in 1963-64 represented 10.6% of the total population compared with 9.9% in 1945-46 and 7.2% in 1938-39. Details of factory employment for each year since 1911 are given in the Statistical Summary on page 522.

A breakdown of the factory work force by sex and age is given below for four selected post war years and for 1939. The most noticeable variation in composition is the considerable drop in the relative contribution of persons under 21 years to the total work force between 1939 and the early post war years.

**Factory Employees by Age and Sex, South Australia**  
(Excludes working proprietors)

| At<br>30th June               | Males             |                      |        | Females           |                      |        | Total<br>Employees |
|-------------------------------|-------------------|----------------------|--------|-------------------|----------------------|--------|--------------------|
|                               | Under 21<br>Years | 21 Years<br>and Over | Total  | Under 21<br>Years | 21 Years<br>and Over | Total  |                    |
| Number of Employees           |                   |                      |        |                   |                      |        |                    |
| 1939.....                     | 7,146             | 25,672               | 32,818 | 4,140             | 3,657                | 7,797  | 40,615             |
| 1950.....                     | 5,850             | 57,909               | 63,759 | 4,049             | 11,357               | 15,406 | 79,165             |
| 1955.....                     | 6,338             | 65,532               | 71,870 | 3,951             | 11,573               | 15,524 | 87,394             |
| 1960.....                     | 7,989             | 71,567               | 79,556 | 4,722             | 12,935               | 17,657 | 97,213             |
| 1964.....                     | 10,352            | 79,176               | 89,528 | 5,840             | 13,714               | 19,554 | 109,082            |
| Percentage of Total Employees |                   |                      |        |                   |                      |        |                    |
| 1939.....                     | 17.6              | 63.2                 | 80.8   | 10.2              | 9.0                  | 19.2   | 100.0              |
| 1950.....                     | 7.4               | 73.1                 | 80.5   | 5.1               | 14.4                 | 19.5   | 100.0              |
| 1955.....                     | 7.2               | 75.0                 | 82.2   | 4.5               | 13.3                 | 17.8   | 100.0              |
| 1960.....                     | 8.2               | 73.6                 | 81.8   | 4.9               | 13.3                 | 18.2   | 100.0              |
| 1964.....                     | 9.5               | 72.6                 | 82.1   | 5.3               | 12.6                 | 17.9   | 100.0              |

Although the overall trend in factory employment in the post-war period has been that of a steady increase, employment trends in individual industries have varied considerably. In the following table factory employment over the last 5 years is classified by industrial class. Class 4, which includes the motor vehicle, electrical goods and household appliance industries, has accounted for 76% of the post-war increase in factory employment. In the 6 years immediately after the war, employment in this class increased 28% and in the 6 years to 1963-64 has increased 24%. Employment in class 1, which includes the portland cement industry and the production of other materials consumed in the post-war building boom, increased 120% between 1946-47 and 1963-64; other industrial classes have recorded lesser rates of growth.

By contrast employment in class 7 and 8 has declined in the post-war era. and in class 6 has been steady except for 3 years in the early 1950's when activity in cotton spinning and weaving was curtailed.

**Factory Employment, South Australia**

*Average number of persons employed during the year*

| Industrial Class  | 1959-60 | 1960-61 | 1961-62 | 1962-63 | 1963-64 |
|---|---------|---------|---------|---------|---------|
| 1. Treatment of non-metalliferous mine and quarry productions ..... | 2,142   | 2,308   | 2,173   | 2,282   | 2,325   |
| 2. Bricks, pottery, glass, etc. ....                                | 2,315   | 2,290   | 2,124   | 2,225   | 2,203   |
| 3. Chemicals, dyes, explosives, paints, oils, grease .....          | 3,134   | 2,976   | 2,942   | 2,944   | 3,215   |
| 4. Industrial metals, machines, conveyances .....                   | 55,802  | 56,447  | 55,245  | 60,470  | 64,479  |
| 5. Precious metals, jewellery, plate .....                          | 452     | 464     | 536     | 539     | 571     |
| 6. Textile and textile goods (not dress) .....                      | 2,510   | 2,530   | 2,520   | 2,533   | 2,522   |
| 7. Skins and leather (not clothing or footwear) .....               | 1,212   | 1,147   | 1,133   | 1,164   | 1,203   |
| 8. Clothing (except knitted) .....                                  | 5,060   | 5,087   | 5,023   | 5,098   | 5,312   |
| 9. Food, drink and tobacco .....                                    | 10,793  | 10,902  | 11,362  | 11,241  | 11,614  |
| 10. Sawmills, joinery, boxes, etc., wood turning and carving .....  | 5,243   | 5,094   | 5,256   | 5,311   | 5,457   |
| 11. Furniture of wood, bedding, etc. ....                           | 2,253   | 2,186   | 2,069   | 2,191   | 2,332   |
| 12. Paper, stationery, printing, bookbinding, etc. ....             | 4,386   | 4,612   | 4,698   | 4,868   | 4,986   |
| 13. Rubber .....  | 1,288   | 1,228   | 1,074   | 1,148   | 1,248   |
| 14. Musical instruments .....                                       | 33      | 29      | 37      | 32      | 32      |
| 15. Miscellaneous .....   | 816     | 871     | 1,012   | 1,256   | 1,381   |
| Total classes 1-15 .....  | 97,439  | 98,171  | 97,204  | 103,302 | 108,880 |
| 16. Heat, light and power .....                                     | 1,579   | 1,784   | 1,890   | 1,963   | 1,933   |
| Total all classes .....   | 99,018  | 99,955  | 99,094  | 105,265 | 110,813 |

Further details of persons employed in factories during 1963-64 are given in the following table. In that year females constituted 17.9% of the total work force, but industries traditionally associated with female employment had a much higher component, as was the case of Class 8 where females constituted 65.9% of the work force, and Classes 6 and 9 with 51.0% and 31.7% respectively.

### Factory Employees by Nature of Employment, South Australia

*Average number of persons employed during 1963-64*

| Industrial Class   | Working Proprietors | Managerial and Clerical Staff | Technical Staff (a) | All Other | Total Employees |         |         |
|--|---------------------|-------------------------------|---------------------|-----------|-----------------|---------|---------|
|  |                     |                               |                     |           | Males           | Females | Persons |
| 1. Treatment of non-metalliferous mine and quarry products .....   | 87                  | 380                           | 47                  | 1,811     | 2,186           | 139     | 2,325   |
| 2. Bricks, pottery, glass, etc. ....                               | 28                  | 238                           | 7                   | 1,930     | 2,008           | 195     | 2,203   |
| 3. Chemicals, dyes, explosives, paints, oils, grease .....         | 35                  | 583                           | 179                 | 2,418     | 2,720           | 495     | 3,215   |
| 4. Industrial metals, machines, conveyances .....                  | 2,038               | 7,993                         | 1,543               | 52,905    | 57,032          | 7,447   | 64,479  |
| 5. Precious metals, jewellery, plate ..                            | 153                 | 63                            | —                   | 355       | 502             | 69      | 571     |
| 6. Textile and textile goods (not dress) ..                        | 36                  | 212                           | 21                  | 2,253     | 1,237           | 1,285   | 2,522   |
| 7. Skins and leather (not clothing or footwear) .....              | 31                  | 160                           | 12                  | 1,000     | 1,035           | 168     | 1,203   |
| 8. Clothing (except knitted) .....                                 | 488                 | 351                           | 3                   | 4,470     | 1,812           | 3,500   | 5,312   |
| 9. Food, drink and tobacco .....                                   | 469                 | 1,811                         | 162                 | 9,172     | 7,936           | 3,678   | 11,614  |
| 10. Sawmills, joinery, boxes, etc., wood turning and carving ..... | 305                 | 635                           | 13                  | 4,504     | 5,076           | 381     | 5,457   |
| 11. Furniture of wood, bedding, etc. ....                          | 175                 | 221                           | 2                   | 1,934     | 1,846           | 486     | 2,332   |
| 12. Paper, stationery, printing, book-binding, etc. ....           | 120                 | 896                           | 22                  | 3,948     | 3,756           | 1,230   | 4,986   |
| 13. Rubber .....   | 6                   | 198                           | 27                  | 1,017     | 1,046           | 202     | 1,248   |
| 14. Musical instruments .....                                      | 6                   | 2                             | —                   | 24        | 32              | —       | 32      |
| 15. Miscellaneous .....  | 70                  | 193                           | 15                  | 1,103     | 806             | 575     | 1,381   |
| Total classes 1-15 .....   | 4,047               | 13,936                        | 2,053               | 88,844    | 89,030          | 19,850  | 108,880 |
| 16. Heat, light and power .....                                    | 3                   | 143                           | 34                  | 1,753     | 1,903           | 30      | 1,933   |
| Total all classes .....  | 4,050               | 14,079                        | 2,087               | 90,597    | 90,933          | 19,880  | 110,813 |

(a) Chemists, draftsmen, and other laboratory and research staff.

A relatively greater number of working proprietors are naturally found in classes which embrace the smaller manufacturing unit. For example, the 4,050 working proprietors shown for 1963-64 included 1,398 persons operating motor repair and motor body workshops, while others were associated with engineering workshops, bakeries, joineries, cabinet-making, printing, tailoring, shoe repairing, upholstery, and the jewellery trade.

### SALARIES, WAGES, AND OTHER COSTS

The following table shows aggregate and average wages and salaries paid over the last 10 years. Working proprietors and their drawings have been excluded.

In 1946-47, the average of wages and salaries per employee was £299; however, this figure had doubled by 1951-52 when it stood at £657, and by 1963-64 had



reached £1,125, over 3½ times the 1946-47 rate. A comparison of the male and female rates shows little variation over the period with the female rate being 53% of the male rate for 1963-64.

### Factories: Salaries and Wages Paid, South Australia

| Year    | Salaries and Wages Paid |         |         | Average Per Employee |         |         |
|---------|-------------------------|---------|---------|----------------------|---------|---------|
|         | Males                   | Females | Persons | Males                | Females | Persons |
|         | £'000                   | £'000   | £'000   | £                    | £       | £       |
| 1954-55 | 62,943                  | 7,431   | 70,374  | 883                  | 477     | 810     |
| 1955-56 | 68,213                  | 8,024   | 76,237  | 925                  | 497     | 848     |
| 1956-57 | 69,644                  | 8,174   | 77,818  | 953                  | 508     | 873     |
| 1957-58 | 71,152                  | 8,692   | 79,844  | 970                  | 536     | 892     |
| 1958-59 | 74,268                  | 8,877   | 83,145  | 992                  | 543     | 912     |
| 1959-60 | 85,333                  | 9,905   | 95,238  | 1,088                | 576     | 996     |
| 1960-61 | 88,623                  | 10,360  | 98,983  | 1,125                | 592     | 1,028   |
| 1961-62 | 89,385                  | 10,146  | 99,531  | 1,140                | 610     | 1,048   |
| 1962-63 | 98,910                  | 11,123  | 110,033 | 1,188                | 620     | 1,088   |
| 1963-64 | 107,564                 | 12,594  | 120,158 | 1,228                | 656     | 1,125   |

Salaries and wages paid to the factory work force during 1963-64 are shown separately for each industrial class in the next table.

### Factories: Salaries and Wages Paid<sup>(a)</sup>, South Australia 1963-64

| Industrial Class   | Salaries and Wages Paid |         |         | Average per Employee |         |         |
|--|-------------------------|---------|---------|----------------------|---------|---------|
|  | Males                   | Females | Persons | Males                | Females | Persons |
|  | £'000                   | £'000   | £'000   | £                    | £       | £       |
| 1. Treatment of non-metalliferous mine and quarry products .....   | 2,731                   | 88      | 2,818   | 1,294                | 691     | 1,259   |
| 2. Bricks, pottery, glass, etc. ....                               | 2,468                   | 142     | 2,610   | 1,186                | 734     | 1,147   |
| 3. Chemicals, dyes, explosives, paints, oils, grease .....         | 3,705                   | 316     | 4,022   | 1,376                | 648     | 1,265   |
| 4. Industrial metals, machines, conveyances .....                  | 68,680                  | 5,168   | 73,847  | 1,242                | 721     | 1,183   |
| 5. Precious metals, jewellery, plate .....                         | 403                     | 40      | 443     | 1,125                | 668     | 1,060   |
| 6. Textile and textile goods (not dress) ..                        | 1,523                   | 856     | 2,379   | 1,255                | 672     | 957     |
| 7. Skins and leather (not clothing or footwear) .....              | 1,143                   | 84      | 1,227   | 1,133                | 515     | 1,047   |
| 8. Clothing (except knitted) .....                                 | 1,646                   | 1,953   | 3,598   | 1,111                | 584     | 746     |
| 9. Food, drink and tobacco .....                                   | 8,817                   | 2,232   | 11,049  | 1,163                | 626     | 991     |
| 10. Sawmills, joinery, boxes, etc., wood turning and carving ..... | 4,959                   | 224     | 5,183   | 1,035                | 622     | 1,006   |
| 11. Furniture of wood, bedding, etc. ....                          | 1,696                   | 275     | 1,972   | 1,004                | 589     | 914     |
| 12. Paper, stationery, printing, book-binding, etc. ....           | 4,838                   | 709     | 5,548   | 1,322                | 588     | 1,140   |
| 13. Rubber .....   | 1,458                   | 156     | 1,614   | 1,400                | 775     | 1,299   |
| 14. Musical instruments .....                                      | 28                      | —       | 28      | 1,067                | —       | 1,067   |
| 15. Miscellaneous .....  | 867                     | 334     | 1,201   | 1,152                | 598     | 916     |
| Total classes 1-15 .....   | 104,962                 | 12,577  | 117,539 | 1,225                | 656     | 1,121   |
| 16. Heat, light and power .....                                    | 2,602                   | 17      | 2,619   | 1,369                | 580     | 1,357   |
| Total all classes .....  | 107,564                 | 12,594  | 120,158 | 1,228                | 656     | 1,125   |

(a) Excludes drawings by working proprietors.

Other major production costs for 1963-64 are listed below.

**Factories: Cost of Materials, Fuel, Light, Etc., Used, South Australia  
1963-64**

| Industrial Class   | Raw Materials | Non-returnable Containers, Etc. | Tools Replaced, Repairs, Etc. | Power, Fuel, Light, Lubricating Oil and Water | Total   |
|--|---------------|---------------------------------|-------------------------------|---|---------|
|  | £'000         |                                 |                               |   |         |
| 1. Treatment of non-metalliferous mine and quarry products   | 7,411         | 293                             | 599                           | 1,182   | 9,485   |
| 2. Bricks, pottery, glass, etc.                              | 2,765         | 23                              | 368                           | 829   | 3,985   |
| 3. Chemicals, dyes, explosives, paints, oils, grease         | 18,180        | 1,743                           | 610                           | 1,661   | 22,194  |
| 4. Industrial metals, machines, conveyances                  | 159,406       | 1,454                           | 5,092                         | 5,961   | 171,913 |
| 5. Precious metals, jewellery, plate                         | 409           | 2                               | 20                            | 48  | 479     |
| 6. Textile and textile goods (not dress)                     | 5,169         | 110                             | 178                           | 230   | 5,687   |
| 7. Skins and leather (not clothing or footwear)              | 7,076         | 23                              | 246                           | 147   | 7,492   |
| 8. Clothing (except knitted)                                 | 4,101         | 72                              | 103                           | 158   | 4,434   |
| 9. Food, drink and tobacco                                   | 42,693        | 6,921                           | 1,058                         | 1,513   | 52,185  |
| 10. Sawmills, joinery, boxes, etc., wood turning and carving | 12,792        | 72                              | 266                           | 344   | 13,474  |
| 11. Furniture of wood, bedding, etc.                         | 4,280         | 11                              | 58                            | 54  | 4,403   |
| 12. Paper, stationery, printing, bookbinding, etc.           | 8,885         | 89                              | 259                           | 660   | 9,893   |
| 13. Rubber   | 2,298         | 44                              | 130                           | 189   | 2,661   |
| 14. Musical instruments                                      | 11            | (a)                             | (a)                           | 1   | 12      |
| 15. Miscellaneous  | 2,328         | 46                              | 59                            | 66  | 2,499   |
| Total classes 1-15   | 277,804       | 10,903                          | 9,046                         | 13,043  | 310,796 |
| 16. Heat, light and power                                    | 1,638         | —                               | 438                           | 4,343   | 6,419   |
| Total all classes  | 279,442       | 10,903                          | 9,484                         | 17,386  | 317,215 |

(a) Less than £500.

The values of the various fuels and of power used in factories during the years 1959-60 to 1963-64 are shown in the next table. Although the table shows a decline in the value of coal consumed the quantity of coal used has increased, the declining value resulting from the substitution of cheaper Leigh Creek coal for imported black coal.

**Fuel<sup>(a)</sup> and Power Used in Factories, South Australia**

| Fuel          | 1959-60 | 1960-61 | 1961-62 | 1962-63 | 1963-64 |
|---------------|---------|---------|---------|---------|---------|
|               | £'000   |         |         |         |         |
| Coal          | 5,499   | 5,163   | 4,779   | 4,687   | 4,714   |
| Coke          | 2,336   | 2,509   | 2,603   | 2,445   | 2,285   |
| Wood          | 387     | 375     | 359     | 364     | 374     |
| Fuel oils (b) | 2,763   | 2,759   | 3,141   | 3,309   | 3,894   |
| Gas           | 263     | 260     | 262     | 298     | 325     |
| Electricity   | 4,062   | 4,330   | 4,375   | 4,985   | 5,606   |

(a) Includes value of coal and oil used as raw materials.

(b) Includes tar fuel.

The contribution of the various specified costs of production to the total value of output is summarized in the following table. "Other Expenses and Profit", being the balance between the specified costs and the total value of output, includes all other costs and overhead expenses such as rent, interest, payroll and company taxation, and depreciation, as well as drawings by working proprietors and profit.

## PRODUCTION

## Factories: Costs and Output, South Australia

| Year       | Salaries and Wages | Materials (a) | Power and Fuel (b) | Other Expenses and Profit | Value of Output |
|------------|--------------------|---------------|--------------------|---------------------------|-----------------|
|            |                    |               | £'000              |                           |                 |
| 1959-60 .. | 95,238             | 207,636       | 15,093             | 67,736                    | 385,703         |
| 1960-61 .. | 98,983             | 216,382       | 15,184             | 71,079                    | 401,628         |
| 1961-62 .. | 99,531             | 212,560       | 15,323             | 74,383                    | 401,797         |
| 1962-63 .. | 110,033            | 251,430       | 16,036             | 79,538                    | 457,037         |
| 1963-64 .. | 120,158            | 299,829       | 17,386             | 93,520                    | 530,893         |

(a) Includes containers, tools replaced, repairs, etc.

(b) Includes lubricants and water.

There is considerable variation in the importance of certain costs as between industrial classes. In the table below the various costs are expressed as a percentage of the value of output.

Factories: Costs as Percentage of Output, South Australia  
1963-64

| Industrial Class   | Salaries and Wages | Materials (a) | Power and Fuel (b) | Other Expenses and Profit | Value of Output |
|--|--------------------|---------------|--------------------|---------------------------|-----------------|
|  | Per Cent           |               |                    |                           |                 |
| 1. Treatment of non-metalliferous mine and quarry products .....   | 15.8               | 46.5          | 6.6                | 31.1                      | 100.0           |
| 2. Bricks, pottery, glass, etc. ....                               | 28.0               | 33.9          | 8.9                | 29.2                      | 100.0           |
| 3. Chemicals, dyes, explosives, paints, oils, grease ...           | 11.4               | 58.0          | 4.7                | 25.9                      | 100.0           |
| 4. Industrial metals, machines, conveyances .....                  | 25.9               | 58.2          | 2.1                | 13.8                      | 100.0           |
| 5. Precious metals, jewellery, plate .....                         | 33.5               | 32.5          | 3.6                | 30.4                      | 100.0           |
| 6. Textile and textile goods (not dress) .....                     | 24.0               | 55.1          | 2.3                | 18.6                      | 100.0           |
| 7. Skins and leather (not clothing or footwear) .....              | 13.2               | 79.1          | 1.6                | 6.1                       | 100.0           |
| 8. Clothing (except knitted) .....                                 | 34.9               | 41.5          | 1.5                | 22.1                      | 100.0           |
| 9. Food, drink and tobacco .....                                   | 14.6               | 67.0          | 2.0                | 16.4                      | 100.0           |
| 10. Sawmills, joinery, boxes, etc., wood turning and carving ..... | 22.5               | 57.1          | 1.5                | 18.9                      | 100.0           |
| 11. Furniture of wood, bedding, etc. ....                          | 24.7               | 54.5          | 0.7                | 20.1                      | 100.0           |
| 12. Paper, stationery, printing, bookbinding, etc. ....            | 26.7               | 44.5          | 3.2                | 25.6                      | 100.0           |
| 13. Rubber .....   | 27.0               | 41.3          | 3.1                | 28.6                      | 100.0           |
| 14. Musical instruments .....                                      | 48.9               | 20.0          | 0.8                | 30.3                      | 100.0           |
| 15. Miscellaneous .....  | 23.0               | 46.7          | 1.3                | 29.0                      | 100.0           |
| Total classes 1-15 .....   | 22.7               | 57.6          | 2.5                | 17.2                      | 100.0           |
| 16. Heat, light and power .....                                    | 19.1               | 15.2          | 31.8               | 33.9                      | 100.0           |
| Total all classes .....  | 22.6               | 56.5          | 3.3                | 17.6                      | 100.0           |

(a) Includes containers, tools replaced, repairs, etc.

(b) Includes lubricants and water.

## VALUE OF OUTPUT AND PRODUCTION

A common measure of factory activity is that of value of output, this being the value of goods manufactured, plus amounts received for repairs and for work done on commission.

In the years immediately following World War I the annual value of factory output was approximately £20 million. After reaching a peak of £37 million in 1926-27 output declined with a low point of £19 million occurring in the depression year 1931-32. War time output showed some increase, but it was not until after World War II that the value of factory output began to rise rapidly. Early rises which involved a trebling of output between 1945-46 and 1951-52 were, however, largely attributable to a rising price structure. Steadier prices after 1952-53 suggest that a substantial part of the increase from this date represented an increase in physical output. The value of output exceeded £300 million in 1955-56, £400 million in 1960-61 and £500 million in 1963-64.

A division by industrial classes of the value of factory output for the years 1959-60 to 1963-64 is given below.

**Value of Factory Output, South Australia**

| Industrial Class   | 1959-60 | 1960-61 | 1961-62 | 1962-63 | 1963-64 |
|--|---------|---------|---------|---------|---------|
|  | £'000   |         |         |         |         |
| 1. Treatment of non-metalliferous mine and quarry products   | 11,311  | 12,727  | 13,739  | 15,149  | 17,867  |
| 2. Bricks, pottery, glass, etc.                              | 7,721   | 7,912   | 7,380   | 8,629   | 9,310   |
| 3. Chemicals, dyes, explosives, paints, oils, grease         | 20,926  | 20,955  | 20,927  | 25,773  | 35,404  |
| 4. Industrial metals, machines, conveyances                  | 200,918 | 210,050 | 197,594 | 241,745 | 285,205 |
| 5. Precious metals, jewellery, plate                         | 883     | 957     | 1,156   | 1,175   | 1,324   |
| 6. Textile and textile goods (not dress)                     | 8,209   | 8,643   | 9,343   | 8,855   | 9,906   |
| 7. Skins and leather (not clothing or footwear)              | 7,268   | 6,131   | 7,123   | 8,718   | 9,290   |
| 8. Clothing (except knitted)                                 | 9,081   | 9,402   | 9,208   | 9,412   | 10,308  |
| 9. Food, drink and tobacco                                   | 59,469  | 63,171  | 70,282  | 68,749  | 75,614  |
| 10. Sawmills, joinery, boxes, etc., wood turning and carving | 19,647  | 18,992  | 21,541  | 21,372  | 23,014  |
| 11. Furniture of wood, bedding, etc.                         | 6,246   | 6,568   | 6,560   | 7,062   | 7,979   |
| 12. Paper, stationery, printing, bookbinding, etc.           | 15,154  | 16,495  | 16,821  | 18,381  | 20,748  |
| 13. Rubber   | 4,713   | 4,993   | 4,554   | 5,231   | 5,984   |
| 14. Musical instruments                                      | 47      | 49      | 60      | 55      | 57      |
| 15. Miscellaneous  | 2,616   | 2,683   | 3,011   | 4,120   | 5,210   |
| Total classes 1-15   | 374,209 | 389,728 | 389,299 | 444,426 | 517,220 |
| 16. Heat, light and power                                    | 11,493  | 11,900  | 12,498  | 12,611  | 13,673  |
| Total all classes  | 385,702 | 401,628 | 401,797 | 457,037 | 530,893 |

Value of production, *i.e.* the value added to raw materials by factory production, is useful both as a guide to the growth of secondary industry and as a measure of the relative contribution of the various industrial classes to total production.

Factory production has increased markedly since World War II. However, when considering the statistics of value of production given in the next table, it should be born in mind that prices and costs have risen substantially in the post war period.

**Value of Factory Production, South Australia  
1920-21 to 1963-64**

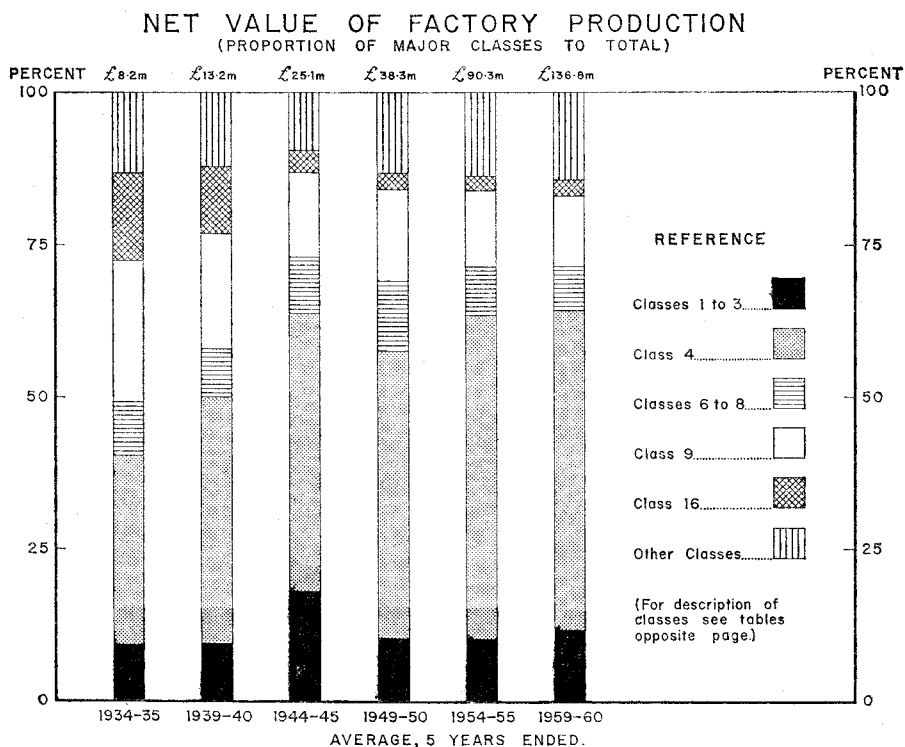
| Period             | Total Production | Production Per Employee | Production Per Head of Population |
|--------------------|------------------|-------------------------|-----------------------------------|
|                    | £'000            | £                       | £                                 |
| Annual Average—    |                  |                         |                                   |
| 1920-21 to 1924-25 | 9,789            | 293                     | 19                                |
| 1925-26 to 1929-30 | 12,672           | 337                     | 22                                |
| 1930-31 to 1934-35 | 8,154            | 297                     | 14                                |
| 1935-36 to 1939-40 | 13,169           | 311                     | 22                                |
| 1940-41 to 1944-45 | 25,105           | 388                     | 41                                |
| 1945-46 to 1949-50 | 38,282           | 529                     | 58                                |
| 1950-51 to 1954-55 | 90,299           | 1,066                   | 119                               |
| 1955-56 to 1959-60 | 136,754          | 1,499                   | 154                               |
| Year—              |                  |                         |                                   |
| 1960-61            | 170,062          | 1,767                   | 178                               |
| 1961-62            | 173,914          | 1,830                   | 177                               |
| 1962-63            | 189,571          | 1,874                   | 190                               |
| 1963-64            | 213,678          | 2,000                   | 209                               |

The contribution of each industrial class to total factory production in the last five years is shown below.

### Value of Factory Production, South Australia

| Industrial Class   | 1959-60 | 1960-61 | 1961-62 | 1962-63 | 1963-64 |
|--|---------|---------|---------|---------|---------|
|  | £'000   |         |         |         |         |
| 1. Treatment of non-metalliferous mine and quarry products   | 5,057   | 5,848   | 6,099   | 7,364   | 8,383   |
| 2. Bricks, pottery, glass, etc.                              | 4,437   | 4,578   | 4,134   | 4,849   | 5,325   |
| 3. Chemicals, dyes, explosives, paints, oils, grease         | 8,957   | 8,992   | 8,982   | 10,347  | 13,210  |
| 4. Industrial metals, machines, conveyances                  | 87,945  | 92,014  | 91,329  | 101,792 | 113,291 |
| 5. Precious metals, jewellery, plate                         | 619     | 636     | 705     | 809     | 845     |
| 6. Textile and textile goods (not dress)                     | 3,756   | 3,861   | 3,988   | 3,848   | 4,219   |
| 7. Skins and leather (not clothing or footwear)              | 1,619   | 1,420   | 1,522   | 1,721   | 1,798   |
| 8. Clothing (except knitted)                                 | 5,067   | 5,290   | 5,290   | 5,507   | 5,874   |
| 9. Food, drink and tobacco                                   | 17,921  | 18,081  | 21,087  | 20,701  | 23,430  |
| 10. Sawmills, joinery, boxes, etc., wood turning and carving | 7,977   | 7,720   | 8,600   | 8,452   | 9,540   |
| 11. Furniture of wood, bedding, etc.                         | 2,884   | 3,029   | 3,085   | 3,261   | 3,576   |
| 12. Paper, stationery, printing, bookbinding, etc.           | 7,861   | 8,632   | 8,867   | 9,656   | 10,854  |
| 13. Rubber   | 2,547   | 2,741   | 2,542   | 2,789   | 3,323   |
| 14. Musical instruments                                      | 38      | 37      | 47      | 45      | 45      |
| 15. Miscellaneous  | 1,374   | 1,370   | 1,635   | 2,051   | 2,717   |
| Total classes 1-15   | 158,059 | 164,249 | 167,912 | 183,192 | 206,425 |
| 16. Heat, light and power                                    | 4,915   | 5,813   | 6,002   | 6,379   | 7,253   |
| Total all classes  | 162,974 | 170,062 | 173,914 | 189,571 | 213,678 |

The relative importance of certain classes, and groups of classes, for earlier years is illustrated in the following bar chart.



## FACTORY PREMISES AND EQUIPMENT

In the following tables values are given for land and buildings, and plant and machinery used in manufacturing pursuits. Where the premises and equipment are the property of the occupier the values are the depreciated values or book values existing in respect of them. Where premises or equipment are rented the value has been estimated by capitalizing the annual rental for 15 years in the case of land and buildings, and 10 years for plant and machinery. The values below are accordingly not synonymous with total investment in industrial premises and equipment.

The value at 30th June of productive factory premises is given for the years 1960 to 1964 in the following table.

**Factories: Value of Land and Buildings, South Australia**  
*At 30th June*

| Industrial Class   | 1960   | 1961   | 1962   | 1963    | 1964    |
|--|--------|--------|--------|---------|---------|
|  |        |        | £'000  |         |         |
| 1. Treatment of non-metalliferous mine and quarry products .....   | 2,148  | 2,430  | 3,263  | 3,493   | 3,559   |
| 2. Bricks, pottery, glass, etc. ....                               | 1,368  | 1,455  | 1,769  | 1,964   | 2,218   |
| 3. Chemicals, dyes, explosives, paints, oils, grease ...           | 3,576  | 3,961  | 4,229  | 4,820   | 4,955   |
| 4. Industrial metals, machines, conveyances .....                  | 33,219 | 39,219 | 44,092 | 50,714  | 56,195  |
| 5. Precious metals, jewellery, plate .....                         | 358    | 427    | 586    | 619     | 721     |
| 6. Textile and textile goods (not dress) .....                     | 1,732  | 1,770  | 1,804  | 1,872   | 2,082   |
| 7. Skins and leather (not clothing or footwear).....               | 669    | 677    | 692    | 720     | 762     |
| 8. Clothing (except knitted) .....                                 | 2,356  | 2,897  | 3,411  | 3,382   | 3,267   |
| 9. Food, drink and tobacco .....                                   | 11,669 | 12,635 | 14,680 | 15,339  | 16,614  |
| 10. Sawmills, joinery, boxes, etc., wood turning and carving ..... | 4,150  | 4,888  | 4,224  | 4,020   | 4,240   |
| 11. Furniture of wood, bedding, etc. ....                          | 1,546  | 1,481  | 1,616  | 1,719   | 1,860   |
| 12. Paper, stationery, printing, bookbinding, etc. ....            | 3,999  | 4,788  | 5,547  | 5,868   | 6,533   |
| 13. Rubber .....   | 1,092  | 1,020  | 1,321  | 1,355   | 1,749   |
| 14. Musical instruments .....                                      | 73     | 65     | 70     | 56      | 52      |
| 15. Miscellaneous .....  | 587    | 655    | 761    | 989     | 1,217   |
| Total classes 1-15 .....   | 68,542 | 78,368 | 88,065 | 96,930  | 106,024 |
| 16. Heat, light and power .....                                    | 9,090  | 9,361  | 10,232 | 9,552   | 9,290   |
| Total all classes .....  | 77,632 | 87,729 | 98,297 | 106,482 | 115,314 |

The estimated value of factory premises at 30th June 1947 was £18.7 million of which £4.8 million, or 26% was for premises in Class 4. By contrast, premises in Class 4 in 1963-64 represented 49% of total estimated value.

The value of machinery and plant employed in the above premises is given below. The values cover all machinery, implements, and tools, including vehicles and plant for the conveyance of raw materials. The total estimated value of plant and machinery employed at 30th June 1947 was £18.4 million, a little more than 10% of the value at 30th June 1964—£165.1 million.

Most of the plant and machinery is used in Class 4 (with 42% of the total value in 1964 compared with 29% in 1947) and Class 16 (21% in 1964 compared with 25% in 1947).

## Factories: Value of Plant and Machinery, South Australia

At 30th June

| Industrial Class   | 1960   | 1961    | 1962    | 1963    | 1964    |
|--|--------|---------|---------|---------|---------|
|  | £'000  |         |         |         |         |
| 1. Treatment of non-metalliferous mine and quarry products   | 4,450  | 6,165   | 7,915   | 7,305   | 7,173   |
| 2. Bricks, pottery, glass, etc.                              | 1,063  | 1,165   | 1,501   | 1,839   | 2,383   |
| 3. Chemicals, dyes, explosives, paints, oils, grease         | 7,949  | 8,409   | 8,809   | 18,312  | 17,786  |
| 4. Industrial metals, machines, conveyances                  | 32,871 | 39,489  | 46,317  | 53,815  | 69,831  |
| 5. Precious metals, jewellery, plate                         | 133    | 156     | 131     | 163     | 176     |
| 6. Textile and textile goods (not dress)                     | 2,021  | 1,999   | 1,989   | 2,019   | 2,328   |
| 7. Skins and leather (not clothing or footwear)              | 435    | 416     | 395     | 429     | 491     |
| 8. Clothing (except knitted)                                 | 1,025  | 1,165   | 1,298   | 1,308   | 1,448   |
| 9. Food, drink and tobacco                                   | 10,257 | 10,782  | 11,486  | 12,191  | 12,688  |
| 10. Sawmills, joinery, boxes, etc., wood turning and carving | 3,631  | 4,231   | 4,503   | 4,151   | 4,162   |
| 11. Furniture of wood, bedding, etc.                         | 476    | 501     | 520     | 569     | 660     |
| 12. Paper, stationery, printing, bookbinding, etc.           | 4,033  | 6,181   | 6,845   | 8,359   | 8,974   |
| 13. Rubber   | 587    | 629     | 695     | 678     | 1,019   |
| 14. Musical instruments                                      | 7      | 13      | 13      | 13      | 21      |
| 15. Miscellaneous  | 362    | 408     | 572     | 710     | 706     |
| Total classes 1-15   | 69,300 | 81,709  | 92,989  | 111,861 | 129,846 |
| 16. Heat, light and power                                    | 28,941 | 31,391  | 33,514  | 34,943  | 35,294  |
| Total all classes  | 98,241 | 113,100 | 126,503 | 146,804 | 165,140 |

Some indication of the mechanization of each industrial class can be obtained by relating plant and machinery to persons employed.

In the following table an average of the values of plant and machinery employed at the beginning and the end of each year is divided by the average employment for that year.

## Value of Plant and Machinery Per Employee, South Australia

| Industrial Class   | 1959-60 | 1960-61 | 1961-62 | 1962-63 | 1963-64 |
|--|---------|---------|---------|---------|---------|
|  | £       |         |         |         |         |
| 1. Treatment of non-metalliferous mine and quarry products   | 1,902   | 2,300   | 3,240   | 3,335   | 3,114   |
| 2. Bricks, pottery, glass, etc.                              | 428     | 486     | 628     | 751     | 958     |
| 3. Chemicals, dyes, explosives, paints, oils, grease         | 2,163   | 2,748   | 2,926   | 4,389   | 5,614   |
| 4. Industrial metals, machines, conveyances                  | 535     | 641     | 777     | 828     | 959     |
| 5. Precious metals, jewellery, plate                         | 289     | 311     | 267     | 273     | 296     |
| 6. Textile and textile goods (not dress)                     | 842     | 794     | 791     | 791     | 862     |
| 7. Skins and leather (not clothing or footwear)              | 389     | 371     | 357     | 354     | 382     |
| 8. Clothing (except knitted)                                 | 199     | 215     | 245     | 256     | 259     |
| 9. Food, drink and tobacco                                   | 923     | 965     | 980     | 1,053   | 1,071   |
| 10. Sawmills, joinery, boxes, etc., wood turning and carving | 693     | 772     | 831     | 815     | 762     |
| 11. Furniture of wood, bedding, etc.                         | 204     | 223     | 247     | 249     | 263     |
| 12. Paper, stationery, printing, bookbinding, etc.           | 830     | 1,107   | 1,386   | 1,562   | 1,738   |
| 13. Rubber   | 452     | 495     | 616     | 598     | 679     |
| 14. Musical instruments                                      | 188     | 342     | 349     | 407     | 531     |
| 15. Miscellaneous  | 472     | 442     | 484     | 510     | 513     |
| Total classes 1-15   | 654     | 769     | 899     | 992     | 1,110   |
| 16. Heat, light and power                                    | 17,351  | 16,909  | 17,171  | 17,437  | 18,168  |
| Total all classes  | 924     | 1,057   | 1,209   | 1,298   | 1,408   |

The considerable increase in Class 3 over the last two years is partly attributable to the new oil refining industry, which has an extremely high plant: employee ratio.

Details of additions to factory premises and equipment are recorded each year. These figures provide a guide to new investment in premises and equipment but also include the value of secondhand assets purchased by manufacturers. Where

a major construction programme is involved the total value of the asset is generally recorded when the premises are brought into production even though construction may have been spread over a number of years.

### Additions to Factory Premises and Equipment, South Australia

| Year                      | Industrial Metals, Machines, and Conveyances | Food, Drink and Tobacco | Paper, Stationery, Printing, Book-binding | Heat, Light and Power | Other Classes of Industry | Total  |
|---------------------------|--|-------------------------|---|-----------------------|---------------------------|--------|
| Land and Buildings—£'000  |  |                         |   |                       |                           |        |
| 1959-60 .....             | 3,706  | 853                     | 607                                       | 518                   | 1,365                     | 7,049  |
| 1960-61 .....             | 3,181  | 861                     | 506                                       | 405                   | 2,244                     | 7,197  |
| 1961-62 .....             | 3,434  | 748                     | 377                                       | 526                   | 975                       | 6,060  |
| 1962-63 .....             | 4,672  | 813                     | 620                                       | 304                   | 1,720                     | 8,129  |
| 1963-64 .....             | 6,973  | 986                     | 841                                       | 64                    | 1,800                     | 10,664 |
| Plant and Machinery—£'000 |  |                         |   |                       |                           |        |
| 1959-60 .....             | 5,837  | 1,684                   | 1,169                                     | 4,114                 | 2,853                     | 15,657 |
| 1960-61 .....             | 7,115  | 1,751                   | 1,324                                     | 2,878                 | 3,818                     | 16,886 |
| 1961-62 .....             | 11,576                                       | 2,005                   | 1,279                                     | 3,093                 | 4,774                     | 22,727 |
| 1962-63 .....             | 13,396                                       | 1,809                   | 2,381                                     | 2,324                 | 13,075                    | 32,985 |
| 1963-64 .....             | 24,453                                       | 2,201                   | 1,398                                     | 2,099                 | 4,547                     | 34,698 |

Statistics of motive power available in factories are given in the two following tables.

In the first table, plant installed in electricity generating stations has been separated from that installed in other factories. The figures for generating stations refer to the "rated capacity" of engines and generators installed, and for other factories to the "rated horsepower" of engines ordinarily in use and of engines in reserve or idle. Obsolete engines are excluded altogether.

### Engines and Electric Motors in Factories, South Australia

#### Rated horsepower of engines

| Year                               | Ordinarily in Use |                     |           |           |                       |                | Total (a) | In Reserve or Idle |
|------------------------------------|-------------------|---------------------|-----------|-----------|-----------------------|----------------|-----------|--------------------|
|                                    | Steam             | Internal Combustion |           |           | Driven by Electricity |                |           |                    |
|                                    |                   | Gas                 | Light Oil | Heavy Oil | Purchased             | Own Generation |           |                    |
| In Electricity Generating Stations |                   |                     |           |           |                       |                |           |                    |
| 1959-60 .....                      | 613,200           | —                   | 3,420     | 17,048    | —                     | 51,467         | 633,668   | —                  |
| 1960-61 .....                      | 714,800           | —                   | 3,281     | 16,286    | —                     | 58,991         | 734,367   | —                  |
| 1961-62 .....                      | 806,100           | —                   | 4,130     | 14,512    | —                     | 66,060         | 824,742   | —                  |
| 1962-63 .....                      | 800,200           | —                   | 4,404     | 13,559    | —                     | 66,871         | 818,163   | —                  |
| 1963-64 .....                      | 877,900           | —                   | 5,998     | 11,833    | —                     | (b) 5,066      | 895,731   | —                  |
| In Other Factories                 |                   |                     |           |           |                       |                |           |                    |
| 1959-60 .....                      | 15,786            | 976                 | 8,040     | 8,898     | 373,122               | 19,200         | 406,822   | 46,281             |
| 1960-61 .....                      | 19,350            | 921                 | 10,220    | 7,478     | 413,161               | 19,519         | 451,130   | 55,041             |
| 1961-62 .....                      | 15,415            | 890                 | 8,670     | 4,653     | 442,137               | 20,728         | 471,765   | 56,995             |
| 1962-63 .....                      | 20,527            | 688                 | 9,275     | 3,273     | 465,366               | 23,221         | 499,129   | 62,991             |
| 1963-64 .....                      | 19,346            | 393                 | 10,113    | 1,487     | 529,262               | 21,672         | 560,601   | 63,452             |

(a) Excludes motors driven by electricity of own generation, to avoid duplication.

(b) Figure for 1963-64 includes only those motors used in driving generators.



Motive power in factories has naturally increased with post-war industrialization. The electricity generating industry has had to help meet these increased demands from secondary industry as well as accommodate the domestic requirements of a rapidly expanding population, and at the same time expand its services into previously unserved areas. In 1946-47 comparable figures to those shown above were 228,483 horsepower installed in generating stations and 205,132 horsepower, including that of engines in reserve or idle, in other factories.

The distribution of motive power in factories, other than electricity generating stations, between the various industrial classes is shown below.

**Engines and Electric Motors<sup>(a)</sup> in Factories Other than Electric Generating Stations, South Australia**

| Industrial Class   | 1959-60    | 1960-61 | 1961-62 | 1962-63 | 1963-64 |
|--|------------|---------|---------|---------|---------|
|  | Horsepower |         |         |         |         |
| 1. Treatment of non-metalliferous mine and quarry products   | 30,583     | 35,645  | 40,593  | 42,488  | 47,574  |
| 2. Bricks, pottery, glass, etc.                              | 10,978     | 12,407  | 13,069  | 13,487  | 15,164  |
| 3. Chemicals, dyes, explosives, paints, oils, grease         | 32,598     | 33,293  | 37,065  | 49,356  | 53,203  |
| 4. Industrial metals, machines, conveyances                  | 204,525    | 215,196 | 225,812 | 234,533 | 281,545 |
| 5. Precious metals, jewellery, plate                         | 956        | 1,055   | 1,153   | 2,381   | 1,277   |
| 6. Textile and textile goods (not dress)                     | 9,475      | 9,462   | 9,655   | 9,810   | 9,916   |
| 7. Skins and leather (not clothing or footwear)              | 6,899      | 6,843   | 6,676   | 7,275   | 7,442   |
| 8. Clothing (except knitted)                                 | 4,028      | 4,312   | 4,595   | 4,709   | 4,805   |
| 9. Food, drink and tobacco                                   | 65,630     | 76,527  | 78,313  | 77,786  | 79,831  |
| 10. Sawmills, joinery, boxes, etc., wood turning and carving | 47,954     | 59,459  | 57,702  | 62,873  | 63,863  |
| 11. Furniture of wood, bedding, etc.                         | 7,576      | 7,309   | 7,311   | 7,461   | 7,800   |
| 12. Paper, stationery, printing, bookbinding, etc.           | 16,646     | 26,857  | 27,722  | 29,870  | 31,144  |
| 13. Rubber   | 5,989      | 7,602   | 7,905   | 8,836   | 10,033  |
| 14. Musical instruments                                      | 12         | 12      | 13      | 14      | 14      |
| 15. Miscellaneous  |            |         |         |         |         |
| 16. Heat, light and power (a)                                | 9,254      | 10,192  | 11,176  | 11,241  | 10,442  |
| Total (excluding electricity generating stations)            | 453,103    | 506,171 | 528,760 | 562,120 | 624,053 |

(a) Includes engines and electric motors in reserve or idle, but excludes electric motors driven by electricity generated within the factory.

Further details of electricity generating stations are given on page 401.

**SELECTED FACTORY PRODUCTS**

The factory products listed in this section are not necessarily the principal products produced in this State. Where publication of details of an individual product would enable the output of a particular manufacturer to be determined, these figures are treated as confidential and are not separately available for publication. As a considerable number of products are produced in this State by industries containing one or two dominant firms, the list of publishable items is considerably restricted and the absence of a product from the list does not imply its non-production.

Values shown represent the selling value at the factory excluding delivery costs and charges, and excise duty where applicable.

Selected Factory Products, South Australia

| Item  | Unit          | Quantity Produced |           |           | Value at Factory |         |         |
|---|---------------|-------------------|-----------|-----------|------------------|---------|---------|
|   |               | 1961-62           | 1962-63   | 1963-64   | 1961-62          | 1962-63 | 1963-64 |
|   |               |                   |           |           | £'000            | £'000   | £'000   |
| Aerated and carbonated waters . . . .                               | '000 gal.     | 10,778            | 10,881    | 11,310    | 2,499            | 2,155   | 2,623   |
| Air conditioning (excluding room conditioners) . . . . .            | —             | —                 | —         | —         | 1,200            | 1,065   | 969     |
| Bacon and ham . . . . .   | '000 lb.      | 6,708             | 6,718     | 6,717     | —                | —       | —       |
| Bags—   |               |                   |           |           |                  |         |         |
| Hessian (excluding sugar) . . . . .                                 | doz.          | 147,228           | 294,980   | 303,512   | 148              | 243     | 268     |
| Paper (excluding multiwall) . . . . .                               | —             | —                 | —         | —         | 733              | 710     | 676     |
| Blinds and awnings—   |               |                   |           |           |                  |         |         |
| Metal venetian . . . . .  | —             | —                 | —         | —         | 302              | 289     | 337     |
| Canvas . . . . .  | —             | —                 | —         | —         | 259              | 230     | 214     |
| Other . . . . .   | —             | —                 | —         | —         | 368              | 311     | 372     |
| Books, exercise, account, etc. . . . .                              | —             | —                 | —         | —         | 321              | 296     | 357     |
| Boxes and cartons, paperboard, etc. . . . .                         | —             | —                 | —         | —         | 1,904            | 2,283   | 2,693   |
| Boxes and cases, wooden (including shooks)—                         |               |                   |           |           |                  |         |         |
| Fruit cases . . . . .   | '000          | 11,490            | 11,527    | 9,019     | 1,535            | 1,520   | 1,376   |
| Other . . . . .   | —             | —                 | —         | —         | 1,312            | 1,195   | 1,321   |
| Bread (in terms of 2 lb. loaves) . . . . .                          | '000          | 73,731            | 74,199    | 76,459    | 4,436            | 4,594   | 4,734   |
| Bricks—   |               |                   |           |           |                  |         |         |
| Clay . . . . .  | '000          | 102,181           | 123,256   | 144,314   | 1,912            | 2,316   | 2,719   |
| Cement, standard size . . . . .                                     | '000          | 8,375             | 9,114     | 8,682     | 113              | 121     | 120     |
| Butter . . . . .  | ton           | 7,424             | 7,319     | 7,405     | 3,318            | 2,766   | 2,806   |
| Cakes, pastry, pies, etc. . . . .                                   | —             | —                 | —         | —         | 3,261            | 3,454   | 3,964   |
| Cans and containers, metal . . . . .                                | —             | —                 | —         | —         | 1,798            | 1,529   | 1,497   |
| Cardigans, pullovers, etc.—Men's and boys' . . . . .                | doz.          | 9,862             | 11,245    | 11,669    | 229              | 258     | 281     |
| Caravans . . . . .  | No.           | 815               | 753       | 898       | 476              | 524     | 549     |
| Casks and barrels . . . . .   | No.           | 13,757            | 17,074    | 16,850    | 130              | 147     | 169     |
| Cheese (green weight) . . . . .                                     | ton           | 14,659            | 15,164    | 15,284    | 3,785            | 3,488   | 3,771   |
| Concrete, ready mixed . . . . .                                     | cub. yd.      | 395,960           | 542,097   | 659,374   | 1,930            | 2,539   | 3,186   |
| Confectionery—  |               |                   |           |           |                  |         |         |
| Chocolate and chocolate coated . . . . .                            | '000 lb.      | 2,472             | 2,621     | 2,651     | 546              | 581     | 583     |
| Other . . . . .   | '000 lb.      | 3,834             | 3,619     | 3,486     | 376              | 387     | 370     |
| Cordials and syrups (excluding cordial extract) . . . . .           | '000 gal.     | 313               | 379       | 445       | 206              | 235     | 289     |
| Cycles . . . . .  | No.           | 8,048             | 8,248     | 9,588     | —                | —       | —       |
| Electrical apparatus—Regulating, starting and controlling . . . . . | —             | —                 | —         | —         | 252              | 431     | 460     |
| Electrical fittings, household . . . . .                            | —             | —                 | —         | —         | n.a.             | 987     | n.a.    |
| Electric motors . . . . .   | No.           | 113,205           | 134,825   | n.a.      | —                | —       | —       |
| Electricity generated . . . . .                                     | mill. kWh.    | 2,173             | 2,335     | 2,547     | —                | —       | —       |
| Envelopes . . . . .   | —             | —                 | —         | —         | n.a.             | 304     | 312     |
| Fertilizers—  |               |                   |           |           |                  |         |         |
| Superphosphate . . . . .  | ton           | 381,032           | 443,719   | 523,082   | —                | —       | —       |
| Mixed chemical . . . . .  | ton           | 65,022            | 76,386    | 104,244   | 1,235            | 1,459   | 1,960   |
| Blood, bone, or offal . . . . .                                     | ton           | 4,057             | 3,508     | 3,835     | 119              | 97      | 104     |
| Fibrous plaster sheets . . . . .                                    | '000 sq. yd.  | 1,084             | 1,124     | 1,158     | 353              | 361     | 390     |
| Flock and other fillings . . . . .                                  | '000 lb.      | 4,273             | 4,385     | 4,891     | 211              | 244     | 294     |
| Floorboards, Australian timber . . . . .                            | '000 sup. ft. | 21,408            | 17,248    | 18,822    | 1,171            | 1,155   | 1,286   |
| Flour, white . . . . .  | short ton     | 168,921           | 170,003   | 170,935   | —                | —       | —       |
| Footwear, other than rubber . . . . .                               | pair          | 1,643,334         | 1,600,512 | 1,935,821 | 3,047            | 3,040   | 3,636   |
| Fruit—  |               |                   |           |           |                  |         |         |
| Canned or bottled . . . . .   | '000 lb.      | 51,388            | 45,455    | 58,420    | n.a.             | 2,524   | n.a.    |
| Crystallized and glace . . . . .                                    | '000 lb.      | 1,510             | 1,284     | 1,348     | 256              | 227     | 238     |
| Furniture—  |               |                   |           |           |                  |         |         |
| Metal furniture and office equipment . . . . .                      | —             | —                 | —         | —         | 1,843            | 2,007   | 2,378   |
| Wooden (excluding wicker, etc.) . . . . .                           | —             | —                 | —         | —         | 4,051            | 4,410   | 5,076   |
| Gloves, work . . . . .  | doz. pair     | 63,466            | 81,224    | 82,137    | 252              | 321     | 320     |
| Jams and fruit spreads . . . . .                                    | '000 lb.      | 7,216             | 6,887     | n.a.      | 473              | 452     | n.a.    |
| Lacquers, nitro-cellulose . . . . .                                 | gallon        | 74,282            | n.a.      | 77,037    | 163              | n.a.    | 182     |
| Macaroni, vermicelli, and spaghetti . . . . .                       | cwt.          | 107,501           | 102,048   | n.a.      | 439              | 413     | n.a.    |
| Machinery—  |               |                   |           |           |                  |         |         |
| Metal working other than machine too . . . . .                      | —             | —                 | —         | —         | 349              | 1,107   | 1,655   |
| Conveyors and conveying systems . . . . .                           | —             | —                 | —         | —         | 232              | 442     | 671     |
| Cranes, hoists, winches, etc. . . . .                               | —             | —                 | —         | —         | 850              | 1,018   | 1,112   |
| Weighing appliances . . . . .                                       | —             | —                 | —         | —         | 160              | 164     | 204     |
| Margarine . . . . .   | '000 lb.      | 5,160             | n.a.      | n.a.      | 526              | n.a.    | n.a.    |
| Mattresses—   |               |                   |           |           |                  |         |         |
| Inner spring . . . . .  | No.           | 58,161            | 62,255    | 67,454    | 425              | 450     | 497     |
| Woven wire, spring, etc. . . . .                                    | No.           | 32,286            | 35,317    | 39,433    | 153              | 172     | 201     |
| Other (including rubber) . . . . .                                  | No.           | 20,375            | 19,734    | 19,869    | 124              | 103     | 114     |
| Medicines, proprietary . . . . .                                    | —             | —                 | —         | —         | 10,062           | n.a.    | 900     |
| Nails . . . . .   | ton           | 2,204             | 2,475     | 2,450     | 240              | 277     | 276     |
| Paints (excluding plastic)—   |               |                   |           |           |                  |         |         |
| Architectural and decorative—                                       |               |                   |           |           |                  |         |         |
| Primers and undercoats . . . . .                                    | '000 gal.     | 170               | 158       | 162       | 304              | 266     | 281     |
| Finishing coats . . . . .   | '000 gal.     | 411               | 400       | 424       | 944              | 957     | 999     |
| Industrial—   |               |                   |           |           |                  |         |         |
| Primers and undercoats . . . . .                                    | '000 gal.     | 110               | n.a.      | n.a.      | 171              | n.a.    | n.a.    |
| Finishing coats . . . . .   | '000 gal.     | 292               | 384       | 428       | 621              | 808     | 901     |

n.a.—Not available for publication.

## Selected Factory Products, South Australia (continued)

| Item   | Unit          | Quantity Produced |           |           | Value of Factory |         |         |
|--|---------------|-------------------|-----------|-----------|------------------|---------|---------|
|  |               | 1961-62           | 1962-63   | 1963-64   | 1961-62          | 1962-63 | 1963-64 |
|  |               |                   |           |           | £'000            | £'000   | £'000   |
| Paints, plastic  | '000 gal.     | 247               | 301       | 307       | 493              | 617     | 617     |
| Pickles  | '000 pints    | 1,934             | 2,010     | 1,590     | 229              | 223     | 165     |
| Pipes, stoneware   | —             | —                 | —         | —         | 644              | 779     | n.a.    |
| Pipes and tubes, ferrous (excluding sheet metal)           | ton           | 46,552            | 46,690    | 53,157    | 8,175            | 8,403   | 9,542   |
| Refrigeration equipment (excluding drinking water coolers) | —             | —                 | —         | —         | 1,803            | 2,328   | 2,875   |
| Sauce, tomato  | '000 pints    | 2,691             | 2,975     | 2,711     | 236              | 260     | 244     |
| Soaps and detergents                                       | cwt.          | 32,822            | 37,758    | 39,581    | n.a.             | 186     | 223     |
| Springs (including laminated)                              | —             | —                 | —         | —         | 366              | 371     | 510     |
| Steam, gas and water fittings                              | —             | —                 | —         | —         | 940              | 1,005   | 1,084   |
| Steel, fabricated, structural                              | ton           | 34,211            | 37,949    | 46,053    | 4,090            | 4,564   | 5,508   |
| Stock and poultry foods, cereal based                      | short ton     | n.a.              | 64,253    | 72,995    | n.a.             | 1,980   | 2,230   |
| Tallow, inedible   | '000 lb.      | 16,337            | 17,639    | 18,101    | 355              | 386     | 431     |
| Thinners   | gallon        | 375,036           | 463,774   | 539,550   | 234              | 286     | 322     |
| Tiles, roofing   | '000          | 12,326            | 14,407    | 16,854    | —                | —       | —       |
| Timber—  |               |                   |           |           |                  |         |         |
| From local logs—   |               |                   |           |           |                  |         |         |
| Hardwood   | '000 sup. ft. | 4,291             | 4,434     | 5,363     | —                | —       | —       |
| Softwood   | '000 sup. ft. | 118,845           | 134,150   | 134,449   | —                | —       | —       |
| Dressed (excluding floorboards and weatherboards)          | '000 sup. ft. | 12,466            | 17,072    | 17,757    | 897              | 1,146   | 1,398   |
| Trailers (excluding low loading)                           | No.           | 1,797             | 1,641     | 2,371     | 174              | 235     | 293     |
| Trailers, semi (excluding low loading)                     | No.           | 143               | 106       | 186       | 227              | 168     | 348     |
| Tyres, retreaded and recapped                              | No.           | 297,412           | 291,598   | 314,442   | 1,454            | 1,438   | 1,604   |
| Vegetables, canned or bottled                              | '000 lb.      | 4,289             | 3,652     | 2,546     | —                | —       | 262     |
| Washing machines, domestic—                                |               |                   |           |           |                  |         |         |
| Electric   | No.           | 75,480            | n.a.      | n.a.      | 4,939            | n.a.    | n.a.    |
| Water heating systems, electric                            | No.           | 8,159             | 8,684     | 11,052    | 326              | 344     | 433     |
| Window frames, metal                                       | —             | —                 | —         | —         | 971              | n.a.    | 1,508   |
| Wines and spirits—   |               |                   |           |           |                  |         |         |
| Beverage wine—   |               |                   |           |           |                  |         |         |
| Fortified  | '000 gal.     | 8,011             | 5,569     | 7,305     | 3,843            | 2,787   | 3,743   |
| Unfortified  | '000 gal.     | 4,686             | 3,841     | 5,200     | 1,607            | 1,346   | —       |
| Distillation wine  | '000 gal.     | 19,299            | 12,102    | 15,457    | —                | —       | —       |
| Spirits distilled—   |               |                   |           |           |                  |         |         |
| Grape spirit   | pf. gal.      | 2,948,564         | 1,759,323 | 2,129,667 | —                | —       | —       |
| Brandy   | pf. gal.      | 1,042,580         | 994,420   | 1,052,850 | 960              | 931     | —       |
| Wire, woven and wire mesh                                  | —             | —                 | —         | —         | 342              | 378     | n.a.    |
| Wool, scoured or carbonized                                | '000 lb.      | 18,440            | 19,150    | 18,991    | n.a.             | n.a.    | n.a.    |

n.a.—Not available for publication.

## GOVERNMENT FACTORIES

Approximately 9% of factory employment in 1963-64 was in government factories, *i.e.* in manufacturing plants or workshops operated by Commonwealth or State government departments or semi-governmental authorities. Included were electricity generating stations, railway and omnibus workshops, abattoirs, sawmills, and a number of workshops associated with telephone services, water supply, highways and building.

## Government Factories, South Australia

| Particulars                    | 1961-62 | 1962-63 | 1963-64 |
|--------------------------------|---------|---------|---------|
| Number of factories            | 95      | 94      | 97      |
| Average number of employees    | 9,555   | 9,527   | 9,522   |
|                                |         | £'000   |         |
| Value of land and buildings    | 15,293  | 15,170  | 15,279  |
| Value of plant and machinery   | 34,563  | 36,117  | 36,366  |
| Salaries and wages paid        | 9,958   | 10,412  | 10,635  |
| Materials, fuel and power used | 12,222  | 11,596  | 11,685  |
| Value of production            | 15,852  | 16,460  | 18,258  |

## INDIVIDUAL INDUSTRIES

In this section details are given of major South Australian secondary industries. However, statistics relating to a number of important industries are not available for publication because of the need to maintain confidentiality of details for individual businesses. Where the activities of a factory encompass more than one industry and the operations of the factory are not statistically divisible all details of the establishment are accredited to the major activity. Statistics for an individual industry may therefore include limited outside activity and may exclude production which is ancillary to other industries.

In the following tables "Persons Employed" refers to average employment for the whole year, and "Motive Power" to the rated horsepower of engines ordinarily in use, but excluding motors driven by electricity generated within the plant. The drawings of working proprietors are excluded from "Salaries and Wages".

**Cement Products**

The post-war building boom resulted in an expansion of the building materials industries. Supported by two producers of portland cement are some 85 firms producing a variety of cement products. The output of the cement products industry is largely accounted for by ready mixed concrete, prestressed concrete, concrete pipes, modular masonry and cement roofing tiles.

**Cement Products (Excluding Asbestos Cement), South Australia**

| Year          | Factories | Persons Employed | Motive Power | Value of Premises and Equipment | Salaries and Wages Paid | Materials, Fuel and Power Used | Value of Output | Value of Production |
|---------------|-----------|------------------|--------------|---------------------------------|-------------------------|--------------------------------|-----------------|---------------------|
|               | No.       | No.              | H.P.         | £'000                           | £'000                   | £'000                          | £'000           | £'000               |
| 1959-60 ..... | 70        | 904              | 3,005        | 2,276                           | 887                     | 2,195                          | 4,119           | 1,924               |
| 1960-61 ..... | 78        | 1,019            | 4,782        | 2,885                           | 1,094                   | 2,674                          | 5,040           | 2,366               |
| 1961-62 ..... | 79        | 1,051            | 5,505        | 3,552                           | 1,113                   | 3,068                          | 5,776           | 2,708               |
| 1962-63 ..... | 78        | 1,100            | 6,109        | 3,370                           | 1,350                   | 3,629                          | 6,872           | 3,243               |
| 1963-64 ..... | 85        | 1,107            | 6,802        | 2,998                           | 1,404                   | 4,439                          | 7,809           | 3,370               |

In addition considerable quantities of asbestos cement sheeting and pipes are produced each year.

**Bricks and Tiles**

There are a considerable number of clay brick producers operating in South Australia. The majority of these brickworks are located in metropolitan or near metropolitan areas including the Adelaide hills, with larger country plants at Nuriootpa, Port Pirie and Whyalla.

One organization accounts for nearly all terracotta roofing tile production.

**Brick and Tile Works, South Australia**

| Year          | Factories | Persons Employed | Motive Power | Value of Premises and Equipment | Salaries and Wages Paid | Materials, Fuel and Power Used | Value of Output | Value of Production |
|---------------|-----------|------------------|--------------|---------------------------------|-------------------------|--------------------------------|-----------------|---------------------|
|               | No.       | No.              | H.P.         | £'000                           | £'000                   | £'000                          | £'000           | £'000               |
| 1959-60 ..... | 38        | 851              | 5,646        | 818                             | 975                     | 690                            | 2,190           | 1,500               |
| 1960-61 ..... | 42        | 844              | 6,870        | 962                             | 929                     | 644                            | 2,120           | 1,476               |
| 1961-62 ..... | 41        | 756              | 7,713        | 1,370                           | 871                     | 694                            | 2,108           | 1,414               |
| 1962-63 ..... | 42        | 800              | 8,055        | 1,402                           | 957                     | 808                            | 2,521           | 1,713               |
| 1963-64 ..... | 40        | 815              | 9,582        | 2,029                           | 1,012                   | 996                            | 2,978           | 1,982               |

**Industrial and Heavy Chemicals**

Foremost in the production of industrial and heavy chemicals is a large soda ash plant at Osborne, associated with nearby saltfields at Dry Creek. This plant is the major producer in the Australian alkali industry.

Two organizations are involved in the production of industrial gases and a further plant produces sulphuric acid, largely for use in the fertilizer industry.

**Industrial and Heavy Chemicals, South Australia**

| Year          | Factories | Persons Employed | Motive Power | Value of Premises and Equipment | Salaries and Wages Paid | Materials, Fuel and Power Used | Value of Output | Value of Production |
|---------------|-----------|------------------|--------------|---------------------------------|-------------------------|--------------------------------|-----------------|---------------------|
|               | No.       | No.              | H.P.         | £'000                           | £'000                   | £'000                          | £'000           | £'000               |
| 1959-60 ..... | 12        | 892              | 6,019        | 6,526                           | 1,013                   | 1,836                          | 5,060           | 3,224               |
| 1960-61 ..... | 12        | 896              | 6,267        | 6,184                           | 1,050                   | 1,840                          | 5,107           | 3,267               |
| 1961-62 ..... | 13        | 858              | 8,746        | 6,650                           | 1,134                   | 1,707                          | 4,832           | 3,125               |
| 1962-63 ..... | 16        | 829              | 7,954        | 6,464                           | 1,137                   | 1,824                          | 4,937           | 3,113               |
| 1963-64 ..... | 16        | 979              | 10,727       | 6,938                           | 1,399                   | 2,482                          | 6,408           | 3,926               |

**Paints**

A variety of paints and allied finishes are produced in plants operated by a number of leading paint manufacturers. This industry has been subject to expansion both in output and technical progress with recent emphasis on industrial and plastic paints.

**Paint and Varnish Factories, South Australia**

| Year          | Factories | Persons Employed | Motive Power | Value of Premises and Equipment | Salaries and Wages Paid | Materials, Fuel and Power Used | Value of Output | Value of Production |
|---------------|-----------|------------------|--------------|---------------------------------|-------------------------|--------------------------------|-----------------|---------------------|
|               | No.       | No.              | H.P.         | £'000                           | £'000                   | £'000                          | £'000           | £'000               |
| 1959-60 ..... | 15        | 482              | 1,929        | 986                             | 478                     | 1,988                          | 3,561           | 1,573               |
| 1960-61 ..... | 15        | 416              | 1,948        | 1,014                           | 442                     | 1,941                          | 3,494           | 1,553               |
| 1961-62 ..... | 18        | 398              | 1,869        | 1,035                           | 446                     | 1,981                          | 3,571           | 1,590               |
| 1962-63 ..... | 15        | 402              | 1,790        | 1,117                           | 459                     | 2,246                          | 4,106           | 1,860               |
| 1963-64 ..... | 16        | 460              | 2,396        | 1,141                           | 551                     | 2,391                          | 4,411           | 2,020               |

**Mineral Oil**

Prior to 1963 production in this field was comparatively small and confined largely to the processing of various bituminous products. However, in March 1963 a further milestone in industrial development was reached with the opening of an oil refinery at Port Stanvac, some 15 miles south of Adelaide. The Port Stanvac refinery provides a variety of petroleum products including refinery gas for conversion into domestic gas, and residual oil for use in electricity generation.

**Chemical Fertilizers**

In the chemical fertilizer industry there are major plants at Port Adelaide, Port Lincoln and Wallaroo. The most important product is superphosphate which represented approximately 70% of the total value of output in 1963-64, with various mixed fertilizers accounting for most of the balance.

## Chemical Fertilizer Plants, South Australia

| Year          | Factories | Persons Employed | Motive Power | Value of Premises and Equipment | Salaries and Wages Paid | Materials, Fuel and Power Used | Value of Output | Value of Production |
|---------------|-----------|------------------|--------------|---------------------------------|-------------------------|--------------------------------|-----------------|---------------------|
|               | No.       | No.              | H.P.         | £'000                           | £'000                   | £'000                          | £'000           | £'000               |
| 1959-60 ..... | 9         | 826              | 10,155       | 3,608                           | 886                     | 4,682                          | 6,426           | 1,744               |
| 1960-61 ..... | 9         | 814              | 10,607       | 3,686                           | 916                     | 4,825                          | 6,677           | 1,852               |
| 1961-62 ..... | 10        | 825              | 11,170       | 3,751                           | 921                     | 4,548                          | 6,580           | 2,032               |
| 1962-63 ..... | 11        | 781              | 13,969       | 3,532                           | 928                     | 5,197                          | 7,465           | 2,268               |
| 1963-64 ..... | 9         | 722              | 9,684        | 2,794                           | 863                     | 5,023                          | 7,086           | 2,063               |

## Metal Extraction and Refining

Since the turn of the century most of the iron ore used in the Australian steel industry has come from the Middleback Ranges, inland from Whyalla. In 1941, with the installation of a blast furnace, Whyalla became the major source of Australia's foundry iron. This production ceased in 1965 when a steel mill was opened, with the hot metal being fed directly into the steel works.

Port Pirie is the site of one of the world's largest single lead smelters, treating ore railed from Broken Hill. The plant also produces silver, gold, cadmium and copper by-products. A new plant is currently under construction for the recovery of zinc, and to a lesser extent lead from a huge slag dump.

## Plant, Equipment, Machinery and Other Engineering

For a number of years South Australia has been one of the leading States in the production of the larger household appliances, including refrigerators, washing machines and stoves. These items constitute a significant part of the total output shown in the table below. Also represented are manufacturers of industrial, construction, and earthmoving machinery, air conditioning equipment, metal furniture and office equipment, and a wide variety of fabricated steel products, together with a large number of general engineering workshops.

## Plant, Equipment, Machinery, and Other Engineering, South Australia

| Year          | Factories | Persons Employed | Motive Power | Value of Premises and Equipment | Salaries and Wages Paid | Materials, Fuel and Power Used | Value of Output | Value of Production |
|---------------|-----------|------------------|--------------|---------------------------------|-------------------------|--------------------------------|-----------------|---------------------|
|               | No.       | No.              | H.P.         | £'000                           | £'000                   | £'000                          | £'000           | £'000               |
| 1959-60 ..... | 413       | 13,131           | 47,904       | 13,040                          | 13,057                  | 21,135                         | 42,545          | 21,410              |
| 1960-61 ..... | 442       | 13,372           | 47,778       | 16,444                          | 13,829                  | 23,702                         | 45,012          | 21,310              |
| 1961-62 ..... | 475       | 14,875           | 57,933       | 19,391                          | 15,182                  | 26,923                         | 50,068          | 23,145              |
| 1962-63 ..... | 489       | 15,516           | 57,772       | 21,686                          | 16,672                  | 29,872                         | 55,434          | 25,562              |
| 1963-64 ..... | 508       | 16,409           | 60,548       | 23,263                          | 18,444                  | 33,998                         | 62,751          | 28,753              |

## Electrical Machinery, Cables and Apparatus

This classification includes two producers of cables and wires, the production of fluorescent and other light fittings, and of household electrical fittings.

## Electrical Machinery, Cables and Apparatus, South Australia

| Year          | Factories | Persons Employed | Motive Power | Value of Premises and Equipment | Salaries and Wages Paid | Materials, Fuel and Power Used | Value of Output | Value of Production |
|---------------|-----------|------------------|--------------|---------------------------------|-------------------------|--------------------------------|-----------------|---------------------|
|               | No.       | No.              | H.P.         | £'000                           | £'000                   | £'000                          | £'000           | £'000               |
| 1959-60 ..... | 115       | 2,046            | 2,446        | 2,075                           | 1,795                   | 2,738                          | 5,592           | 2,854               |
| 1960-61 ..... | 123       | 2,288            | 3,182        | 2,565                           | 2,098                   | 3,057                          | 6,162           | 3,015               |
| 1961-62 ..... | 131       | 2,063            | 2,406        | 2,120                           | 2,069                   | 3,238                          | 6,462           | 3,224               |
| 1962-63 ..... | 142       | 2,110            | 2,765        | 2,262                           | 1,997                   | 3,396                          | 7,014           | 3,618               |
| 1963-64 ..... | 149       | 2,610            | 3,457        | 2,116                           | 2,464                   | 4,767                          | 9,194           | 4,427               |

Not included in the above table is the output of a very large enterprise manufacturing mainly wireless and television apparatus but which also produces electrical cable and wires, and lighting equipment.

## Railway Rollingstock

The principal workshop of the South Australian Railways is situated at Islington. Although concerned primarily with repairs and maintenance, a number of power rail cars and a variety of goods wagons and freight cars have been constructed at Islington in recent years. The South Australian Railways maintains 3 smaller metropolitan workshops and 8 country workshops, mainly for servicing, with the largest being at Peterborough and Port Lincoln.

Repairs and maintenance to Commonwealth Railways rollingstock operating from Port Pirie to Kalgoorlie and Alice Springs are carried out in workshops located at Port Augusta.

## Railway Rollingstock, South Australia

| Year          | Factories | Persons Employed | Motive Power | Value of Premises and Equipment | Salaries and Wages Paid | Materials, Fuel and Power Used | Value of Output | Value of Production |
|---------------|-----------|------------------|--------------|---------------------------------|-------------------------|--------------------------------|-----------------|---------------------|
|               | No.       | No.              | H.P.         | £'000                           | £'000                   | £'000                          | £'000           | £'000               |
| 1959-60 ..... | 13        | 3,955            | 14,686       | 4,105                           | 3,709                   | 3,185                          | 7,754           | 4,569               |
| 1960-61 ..... | 13        | 3,860            | 14,995       | 4,088                           | 3,758                   | 3,208                          | 7,862           | 4,654               |
| 1961-62 ..... | 13        | (a)              | (a)          | (a)                             | (a)                     | (a)                            | (a)             | (a)                 |
| 1962-63 ..... | 13        | 3,797            | 15,245       | 4,378                           | 4,035                   | 2,922                          | 7,940           | 5,018               |
| 1963-64 ..... | 13        | 3,699            | 13,027       | 4,515                           | 4,114                   | 2,994                          | 8,391           | 5,397               |

(a) Not available for publication.

## Motor Vehicles

The largest single industry in South Australia and a major contributor to the post-war industrial growth is the motor vehicle industry. However, because of the need to maintain confidentiality of information for individual producers, statistics relating to motor vehicle production cannot be published.

Immediately after World War II, General Motors-Holden's Pty. Ltd. prepared for the production of an Australian built car, and volume production of the "Holden" commenced in 1948. The success of this car has led to a number of major increases in productive capacity by the firm involving not only considerable expansion at the Woodville site but also the establishment of a new construction and assembly plant at Elizabeth. In addition, a recently completed plant at Tonsley Park has become the centre of manufacturing operations for Chrysler Australia Ltd.

These large motor vehicle plants in turn absorb the products of many establishments producing vehicle components.

Other manufacturers produce omnibus and commercial vehicle bodies, fork lift trucks, garage equipment, trailers, caravans, and a wide range of vehicle accessories.

Repairs to motor vehicles are carried out in the larger workshops operated by new vehicle distributors and in the many smaller workshops generally associated with service stations.

#### Motor Vehicle Repair Workshops, South Australia

| Year          | Factories | Persons Employed | Motive Power | Value of Premises and Equipment | Salaries and Wages Paid | Materials, Fuel and Power Used | Value of Output | Value of Production |
|---------------|-----------|------------------|--------------|---------------------------------|-------------------------|--------------------------------|-----------------|---------------------|
|               | No.       | No.              | H.P.         | £'000                           | £'000                   | £'000                          | £'000           | £'000               |
| 1959-60 ..... | 957       | 5,369            | 7,049        | 6,855                           | 3,929                   | 4,420                          | 10,367          | 5,947               |
| 1960-61 ..... | 1,086     | 5,761            | 7,927        | 7,731                           | 4,375                   | 5,288                          | 12,107          | 6,819               |
| 1961-62 ..... | 1,162     | 6,141            | 8,534        | 8,932                           | 4,774                   | 5,957                          | 13,545          | 7,588               |
| 1962-63 ..... | 1,342     | 6,742            | 8,780        | 10,553                          | 5,433                   | 7,094                          | 15,861          | 8,767               |
| 1963-64 ..... | 1,355     | 7,158            | 9,045        | 10,428                          | 6,029                   | 7,701                          | 17,564          | 9,863               |

#### Ship and Boat Building

The largest shipyards in Australia are located at Whyalla. Since 1941 over 40 vessels have been constructed in these yards including the largest vessel yet built in Australia, the 49,500 ton ore-carrier *Darling River*, which was launched in December 1965. Tugs and larger fishing boats are built in shipyards at Port Adelaide while other establishments produce smaller commercial and pleasure craft and carry out slipway repair work.

In 1962-63, 29 establishments employing 1,854 persons were associated with ship and boat building or repairing. In that year the industry had a value of output of £5,879,000 and a production value of £2,913,000.

#### Agricultural Machinery and Implements

The production of agricultural machinery and implements is one of the State's oldest industries. The industry contains a number of comparatively large producers, 4 of whom accounted for over 80% of total output in 1963-64.

#### Agricultural Machinery and Implements, South Australia

| Year          | Factories | Persons Employed | Motive Power | Value of Premises and Equipment | Salaries and Wages Paid | Materials, Fuel and Power Used | Value of Output | Value of Production |
|---------------|-----------|------------------|--------------|---------------------------------|-------------------------|--------------------------------|-----------------|---------------------|
|               | No.       | No.              | H.P.         | £'000                           | £'000                   | £'000                          | £'000           | £'000               |
| 1959-60 ..... | 40        | 1,645            | 5,839        | 1,419                           | 1,546                   | 2,424                          | 5,074           | 2,650               |
| 1960-61 ..... | 41        | 1,659            | 5,914        | 1,555                           | 1,692                   | 2,674                          | 5,320           | 2,646               |
| 1961-62 ..... | 57        | 1,764            | 6,577        | 1,745                           | 1,741                   | 2,700                          | 6,020           | 3,320               |
| 1962-63 ..... | 63        | 1,874            | 6,818        | 1,821                           | 1,887                   | 2,886                          | 6,477           | 3,591               |
| 1963-64 ..... | 65        | 2,008            | 6,917        | 2,038                           | 2,146                   | 3,069                          | 7,045           | 3,976               |

#### Sheet Metal Working

Details of factories whose main activities are sheet metal working, pressing and stamping are given below.



## Sheet Metal Working, Pressing and Stamping, South Australia

| Year          | Factories | Persons Employed | Motive Power | Value of Premises and Equipment | Salaries and Wages Paid | Materials, Fuel and Power Used | Value of Output | Value of Production |
|---------------|-----------|------------------|--------------|---------------------------------|-------------------------|--------------------------------|-----------------|---------------------|
|               | No.       | No.              | H.P.         | £'000                           | £'000                   | £'000                          | £'000           | £'000               |
| 1959-60 ..... | 115       | 3,658            | 11,249       | 3,231                           | 3,481                   | 7,510                          | 12,555          | 5,045               |
| 1960-61 ..... | 114       | 3,562            | 11,530       | 3,777                           | 3,447                   | 8,933                          | 13,874          | 4,941               |
| 1961-62 ..... | 120       | 2,835            | 9,397        | 3,835                           | 2,730                   | 6,049                          | 10,667          | 4,618               |
| 1962-63 ..... | 130       | 3,080            | 9,758        | 4,669                           | 3,059                   | 6,563                          | 11,848          | 5,285               |
| 1963-64 ..... | 131       | 3,322            | 9,604        | 5,379                           | 3,662                   | 7,031                          | 13,515          | 6,484               |

## Ferrous Pipes, Tubes, and Fittings

A number of large pipe and tube-making firms are located in Adelaide. These firms accounted for 23% of the total Australian output of ferrous pipes, tubes, and fittings for 1963-64.

## Ferrous Pipes, Tubes, and Fittings, South Australia

| Year          | Factories | Persons Employed | Motive Power | Value of Premises and Equipment | Salaries and Wages Paid | Materials, Fuel and Power Used | Value of Output | Value of Production |
|---------------|-----------|------------------|--------------|---------------------------------|-------------------------|--------------------------------|-----------------|---------------------|
|               | No.       | No.              | H.P.         | £'000                           | £'000                   | £'000                          | £'000           | £'000               |
| 1959-60 ..... | 11        | 2,223            | 19,500       | 3,907                           | 2,696                   | 4,794                          | 10,381          | 5,587               |
| 1960-61 ..... | 11        | 2,332            | 19,421       | 3,821                           | 2,819                   | 5,299                          | 10,704          | 5,405               |
| 1961-62 ..... | 9         | 2,151            | 11,674       | 3,737                           | 2,621                   | 5,407                          | 10,096          | 4,688               |
| 1962-63 ..... | 8         | 2,209            | 12,034       | 3,578                           | 2,838                   | 6,221                          | 11,046          | 4,825               |
| 1963-64 ..... | 8         | 2,391            | 16,349       | 3,798                           | 3,236                   | 6,701                          | 12,591          | 5,890               |

## Wireworking

There were 27 factories, employing 851 persons, associated with the wire working industry in 1963-64. Output in that year was valued at £4,646,000 and production at £1,880,000 compared with £3,655,000 and £1,445,000 respectively in 1959-60. Major production items are woven wire, welded wire fabric, processed reinforcing rods, springs, barbed wire, and nails.

## Cotton and Woollen Mills

Cotton spinning and weaving is carried out in three mills located in the metropolitan area, with the most important products being sheeting, canvas and duck, and towelling.

The two largest of three operative woollen mills are located at the country centres of Lobethal and Mount Gambier. Activity is concentrated largely on the production of blankets and rugs and on worsted spinning.

## Cotton and Woollen Mills, South Australia

| Year          | Factories | Persons Employed | Motive Power | Value of Premises and Equipment | Salaries and Wages Paid | Materials, Fuel and Power Used | Value of Output | Value of Production |
|---------------|-----------|------------------|--------------|---------------------------------|-------------------------|--------------------------------|-----------------|---------------------|
|               | No.       | No.              | H.P.         | £'000                           | £'000                   | £'000                          | £'000           | £'000               |
| 1959-60 ..... | 6         | 1,939            | 5,560        | 3,142                           | 1,683                   | 2,763                          | 5,735           | 2,972               |
| 1960-61 ..... | 7         | 1,928            | 6,054        | 3,138                           | 1,633                   | 2,630                          | 5,605           | 2,975               |
| 1961-62 ..... | 9         | 1,908            | 5,988        | 3,073                           | 1,751                   | 2,909                          | 6,006           | 3,097               |
| 1962-63 ..... | 9         | 1,951            | 6,013        | 3,120                           | 1,739                   | 2,941                          | 5,879           | 2,938               |
| 1963-64 ..... | 7         | 1,922            | 6,579        | 3,633                           | 1,928                   | 3,493                          | 6,772           | 3,279               |

**Food and Drink**

Details of various food and drink industries which together accounted for 14% of the total value of factory output in 1963-64 are given in the following table.

**Food and Drink: Individual Industries, South Australia  
1963-64**

| Individual Industry                    | Factories  | Persons Employed | Motive Power  | Value of Premises and Equipment | Salaries and Wages Paid | Materials, Fuel and Power Used | Value of Output | Value of Production |
|--|------------|------------------|---------------|---------------------------------|-------------------------|--------------------------------|-----------------|---------------------|
|  | No.        | No.              | H.P.          | £'000                           | £'000                   | £'000                          | £'000           | £'000               |
| Flour milling                          | 18         | 475              | 4,277         | 1,409                           | 546                     | 7,086                          | 8,195           | 1,109               |
| Bakeries .....                         | 282        | 1,877            | 4,531         | 4,138                           | 1,675                   | 5,156                          | 8,810           | 3,654               |
| Jam, fruit and vegetable canning ..... | 14         | 717              | 3,188         | 1,555                           | 743                     | 2,461                          | 3,882           | 1,421               |
| Bacon curing .....                     | 15         | 558              | 2,699         | 900                             | 587                     | 3,811                          | 4,822           | 1,011               |
| Butter .....                           | 13         | 287              | 2,484         | 503                             | 276                     | 2,679                          | 3,230           | 551                 |
| Cheese .....                           | 29         | 391              | 3,300         | 1,170                           | 441                     | 3,021                          | 3,736           | 715                 |
| Meat and fish preserving ..            | 22         | 359              | 1,079         | 455                             | 279                     | 2,356                          | 3,005           | 649                 |
| Condiments, coffee and spices .....    | 18         | 458              | 1,524         | 796                             | 373                     | 2,376                          | 3,027           | 651                 |
| Ice and refrigerating ..               | 40         | 497              | 10,582        | 2,406                           | 508                     | 557                            | 1,169           | 612                 |
| Aerated waters, cordials, etc.         | 44         | 696              | 2,557         | 2,293                           | 625                     | 2,214                          | 3,683           | 1,469               |
| Distilleries and winemaking ..         | 72         | 1,393            | 11,503        | 3,915                           | 1,401                   | 6,421                          | 9,942           | 3,521               |
| Other food or drink industries ...     | 170        | 3,906            | 21,824        | 9,762                           | 3,595                   | 14,047                         | 22,114          | 8,067               |
| <b>Total ..</b>                        | <b>737</b> | <b>11,614</b>    | <b>69,548</b> | <b>29,302</b>                   | <b>11,049</b>           | <b>52,185</b>                  | <b>75,615</b>   | <b>23,430</b>       |

**Flour Milling and Bakeries**

The post-war years have seen considerable consolidation in the flour milling industry. In 1946-47 there were 39 operative mills compared with 18 in 1963-64. Of these 18 mills, 14 are located outside the metropolitan area. Employment in flour milling totalled 475 in 1963-64, with a value of output of £8,195,000 and a value of production of £1,109,000.

Details of establishments producing bread, cakes and pastries are shown in the following table.

**Bakeries, South Australia**

| Year          | Factories | Persons Employed | Motive Power | Value of Premises and Equipment | Salaries and Wages Paid | Materials, Fuel and Power Used | Value of Output | Value of Production |
|---------------|-----------|------------------|--------------|---------------------------------|-------------------------|--------------------------------|-----------------|---------------------|
|               | No.       | No.              | H.P.         | £'000                           | £'000                   | £'000                          | £'000           | £'000               |
| 1959-60 ..... | 294       | 1,732            | 3,395        | 2,849                           | 1,259                   | 4,278                          | 7,115           | 2,837               |
| 1960-61 ..... | 287       | 1,755            | 3,794        | 3,306                           | 1,368                   | 4,513                          | 7,437           | 2,924               |
| 1961-62 ..... | 296       | 1,777            | 4,240        | 3,925                           | 1,442                   | 4,747                          | 7,956           | 3,209               |
| 1962-63 ..... | 288       | 1,795            | 4,214        | 4,100                           | 1,528                   | 4,736                          | 8,161           | 3,425               |
| 1963-64 ..... | 282       | 1,877            | 4,531        | 4,148                           | 1,675                   | 5,156                          | 8,810           | 3,654               |

**Wineries and Distilleries**

Another early industry and one involving traditional skills is that of wine-making. In 1963-64, South Australia accounted for 58% of the total value of output of Australian wineries and distilleries.

Principal production areas are the Barossa Valley, the Upper Murray irrigation areas and the districts south of Adelaide.

## Wineries and Distilleries, South Australia

| Year          | Factories | Persons Employed | Motive Power | Value of Premises and Equipment | Salaries and Wages Paid | Materials, Fuel and Power Used | Value of Output | Value of Production |
|---------------|-----------|------------------|--------------|---------------------------------|-------------------------|--------------------------------|-----------------|---------------------|
|               | No.       | No.              | H.P.         | £'000                           | £'000                   | £'000                          | £'000           | £'000               |
| 1959-60 ..... | 72        | 1,295            | 7,365        | 3,017                           | 1,150                   | 4,433                          | 6,875           | 2,442               |
| 1960-61 ..... | 73        | 1,322            | 14,047       | 3,283                           | 1,235                   | 5,274                          | 7,376           | 2,102               |
| 1961-62 ..... | 70        | 1,348            | 14,174       | 3,317                           | 1,268                   | 6,250                          | 8,996           | 2,746               |
| 1962-63 ..... | 68        | 1,337            | 11,089       | 3,693                           | 1,298                   | 5,097                          | 7,580           | 2,483               |
| 1963-64 ..... | 72        | 1,393            | 11,503       | 3,915                           | 1,401                   | 6,421                          | 9,942           | 3,521               |

## Sawmilling

Well over half of Australia's plantation grown pines are in South Australia. Details of milling operations are given in the table below. Of the 91 mills recorded for 1963-64, 72 were in country districts with almost all the larger mills being located near the South East forests. The State Woods and Forests Department operates mills at Mount Gambier, Mount Burr and Nangarry.

In addition to the milling of logs for flooring, cases, etc., facilities exist for kiln drying and timber preservation, with increasing quantities of fencing posts and poles being treated each year.

## Sawmills, South Australia

| Year          | Factories | Persons Employed | Motive Power | Value of Premises and Equipment | Salaries and Wages Paid | Materials, Fuel and Power Used | Value of Output | Value of Production |
|---------------|-----------|------------------|--------------|---------------------------------|-------------------------|--------------------------------|-----------------|---------------------|
|               | No.       | No.              | H.P.         | £'000                           | £'000                   | £'000                          | £'000           | £'000               |
| 1959-60 ..... | 92        | 2,432            | 26,552       | 5,334                           | 2,109                   | 6,883                          | 10,855          | 3,972               |
| 1960-61 ..... | 84        | 2,248            | 36,342       | 5,973                           | 2,042                   | 6,351                          | 9,891           | 3,540               |
| 1961-62 ..... | 82        | 2,304            | 32,885       | 5,040                           | 2,088                   | 7,502                          | 11,547          | 4,045               |
| 1962-63 ..... | 85        | 2,341            | 37,244       | 4,696                           | 2,250                   | 7,751                          | 11,800          | 4,049               |
| 1963-64 ..... | 91        | 2,485            | 37,796       | 4,931                           | 2,436                   | 8,277                          | 13,201          | 4,924               |

In South Australia there are some 250 joinery workshops. In 1963-64 these workshops employed 2,186 persons, with output being valued at £6,520,000 and production at £3,014,000. The motive power of electric motors employed has increased steadily over the last five years from 8,283 horsepower in 1959-60 to 10,424 horsepower in 1963-64.

## Cabinet and Furniture Making

Details of cabinet and furniture making establishments are given in the following table. The 178 factories in 1963-64 varied in size from the many small establishments run solely by a working proprietor or employing one or two persons to three factories each employing over 100 persons.

## Cabinet and Furniture Making, South Australia

| Year          | Factories | Persons Employed | Motive Power | Value of Premises and Equipment | Salaries and Wages Paid | Materials, Fuel and Power Used | Value of Output | Value of Production |
|---------------|-----------|------------------|--------------|---------------------------------|-------------------------|--------------------------------|-----------------|---------------------|
|               | No.       | No.              | H.P.         | £'000                           | £'000                   | £'000                          | £'000           | £'000               |
| 1959-60 ..... | 151       | 1,657            | 5,882        | 1,344                           | 1,291                   | 2,225                          | 4,215           | 1,990               |
| 1960-61 ..... | 163       | 1,590            | 5,548        | 1,297                           | 1,310                   | 2,324                          | 4,426           | 2,102               |
| 1961-62 ..... | 172       | 1,584            | 5,711        | 1,507                           | 1,310                   | 2,386                          | 4,638           | 2,252               |
| 1962-63 ..... | 172       | 1,667            | 5,684        | 1,584                           | 1,385                   | 2,690                          | 5,047           | 2,357               |
| 1963-64 ..... | 178       | 1,794            | 5,995        | 1,807                           | 1,563                   | 3,116                          | 5,774           | 2,658               |

**Newspapers and Periodicals**

There are two large establishments producing newspapers in the metropolitan area. Newspaper printing offices are also located in some 33 country towns, a number of these producing newspapers for more than one locality. An historical summary of the press in South Australia is given on page 167.

**Newspapers and Periodicals, South Australia**

| Year          | Factories | Persons Employed | Motive Power | Value of Premises and Equipment | Salaries and Wages Paid | Materials, Fuel and Power Used | Value of Output | Value of Production |
|---------------|-----------|------------------|--------------|---------------------------------|-------------------------|--------------------------------|-----------------|---------------------|
|               | No.       | No.              | H.P.         | £'000                           | £'000                   | £'000                          | £'000           | £'000               |
| 1959-60 ..... | 36        | 1,232            | 4,503        | 3,080                           | 1,335                   | 2,460                          | 4,815           | 2,355               |
| 1960-61 ..... | 36        | 1,212            | 4,725        | 3,334                           | 1,392                   | 2,415                          | 5,112           | 2,697               |
| 1961-62 ..... | 36        | 1,182            | 4,845        | 3,442                           | 1,467                   | 2,189                          | 4,851           | 2,662               |
| 1962-63 ..... | 37        | 1,180            | 4,920        | 3,942                           | 1,444                   | 2,463                          | 5,197           | 2,734               |
| 1963-64 ..... | 39        | 1,249            | 5,274        | 4,474                           | 1,618                   | 2,685                          | 5,893           | 3,208               |

**Printing and Bookbinding**

Particulars of general printing establishments, other than those printing newspapers and periodicals, are given in the following table. Excluded are the extensive activities of the State Government Printing Office.

The activities of one establishment include the printing and binding of a wide range of books for Australian and oversea publishers.

**General Printing and Bookbinding, South Australia**

| Year          | Factories | Persons Employed | Motive Power | Value of Premises and Equipment | Salaries and Wages Paid | Materials, Fuel and Power Used | Value of Output | Value of Production |
|---------------|-----------|------------------|--------------|---------------------------------|-------------------------|--------------------------------|-----------------|---------------------|
|               | No.       | No.              | H.P.         | £'000                           | £'000                   | £'000                          | £'000           | £'000               |
| 1959-60 ..... | 92        | 1,513            | 2,344        | 2,110                           | 1,366                   | 1,673                          | 4,059           | 2,386               |
| 1960-61 ..... | 102       | 1,626            | 2,599        | 2,369                           | 1,504                   | 1,827                          | 4,473           | 2,646               |
| 1961-62 ..... | 114       | 1,677            | 2,793        | 2,878                           | 1,584                   | 1,816                          | 4,511           | 2,695               |
| 1962-63 ..... | 120       | 1,775            | 2,938        | 2,764                           | 1,701                   | 2,052                          | 4,994           | 2,942               |
| 1963-64 ..... | 115       | 1,732            | 3,588        | 2,444                           | 1,748                   | 2,076                          | 5,202           | 3,126               |

A further 18 factories in 1963-64 were involved in the production of cardboard containers and paper bags. Containers and bags to the value of £5,203,000 were produced, with the value of production being £3,126,000. Employment in these establishments totalled 1,732.

**Electricity Generation**

The Electricity Trust of South Australia is responsible for the generation of most of the State's electricity requirements. A resumé of the activities of the Electricity Trust is given on pages 278-283.

**Government Electricity Generating Stations, South Australia**

| Year          | Factories | Persons Employed | Motive Power | Value of Premises and Equipment | Salaries and Wages Paid | Materials, Fuel and Power Used | Value of Output | Value of Production |
|---------------|-----------|------------------|--------------|---------------------------------|-------------------------|--------------------------------|-----------------|---------------------|
|               | No.       | No.              | H.P.         | £'000                           | £'000                   | £'000                          | £'000           | £'000               |
| 1961-62 ..... | 12        | 1,365            | 771,769      | 38,299                          | 1,680                   | 4,284                          | 9,312           | 5,028               |
| 1962-63 ..... | 10        | 1,441            | 765,060      | 39,078                          | 1,849                   | 4,041                          | 9,241           | 5,200               |
| 1963-64 ..... | 10        | 1,436            | 841,778      | 38,758                          | 1,984                   | 4,263                          | 10,105          | 5,842               |

Small quantities of electricity are generated by local authorities or private firms for domestic consumption in certain country areas, and a number of private firms operate power stations for their own needs.

#### 9.4. VALUE OF PRODUCTION

Factory production accounted for 55% of the total net value of production (excluding building and construction) in South Australia during 1963-64.

Over the same period the value of agricultural production reached a record level and the value of pastoral production was at its second highest, being exceeded only by the wool boom year of 1950-51.

Details for the last five years of these and other classes of production are given in the tables below. In the first, primary production is expressed in terms of gross value, this being the value placed on recorded production at the wholesale prices realized in principal markets.

**Gross Value of Primary Production, South Australia**

| Class of Production        | 1959-60 | 1960-61 | 1961-62 | 1962-63 | 1963-64 |
|----------------------------|---------|---------|---------|---------|---------|
|                            |         |         | £'000   |         |         |
| Agricultural .....         | 35,546  | 80,719  | 62,011  | 64,209  | 82,817  |
| Pastoral .....             | 61,676  | 47,226  | 55,925  | 63,693  | 75,233  |
| Dairying .....             | 14,727  | 15,153  | 14,924  | 15,984  | 17,133  |
| Other rural .....          | 3,927   | 3,946   | 3,866   | 3,635   | 4,218   |
| Mining and quarrying ..... | 25,607  | 26,514  | 30,283  | 28,484  | 33,012  |
| Forestry .....             | 4,033   | 3,756   | 3,763   | 4,085   | 4,110   |
| Other .....                | 1,639   | 2,033   | 1,987   | 1,993   | 2,364   |
| Total primary .....        | 147,155 | 179,347 | 172,759 | 182,083 | 218,887 |

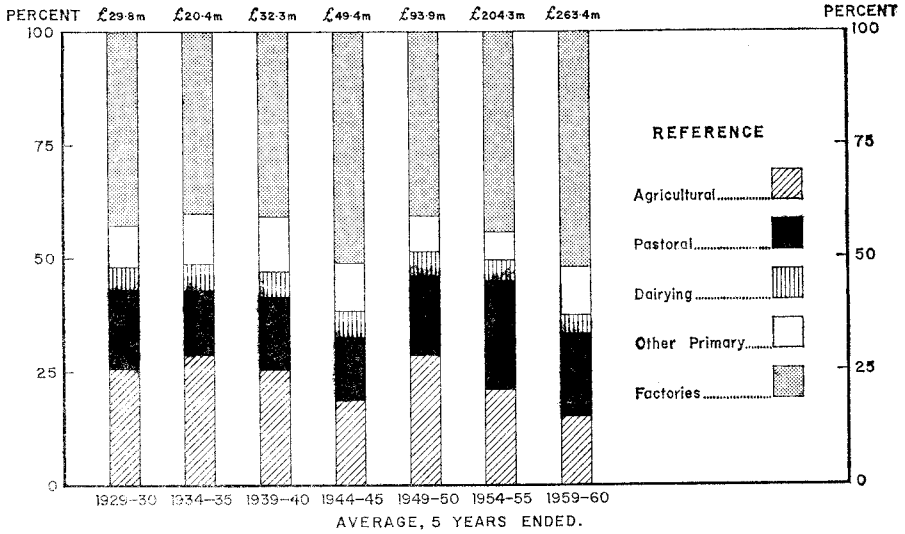
In the next table primary production is expressed in terms of net value and incorporated with comparable figures for factory production. The net value of primary production is the gross value less marketing costs and costs of materials used in the process of production. The factory figures are for value added in the process of manufacture, *i.e.*, the value of output less value of materials and fuels used.

**Net Value of Production, South Australia**

| Class of Production        | 1959-60 | 1960-61 | 1961-62 | 1962-63 | 1963-64 |
|----------------------------|---------|---------|---------|---------|---------|
|                            |         |         | £'000   |         |         |
| Agricultural .....         | 24,246  | 58,324  | 45,467  | 46,679  | 62,590  |
| Pastoral .....             | 50,067  | 36,118  | 45,628  | 51,995  | 62,989  |
| Dairying .....             | 9,140   | 8,463   | 9,913   | 9,870   | 10,598  |
| Other rural .....          | 1,772   | 1,516   | 1,234   | 870     | 1,183   |
| Mining and quarrying ..... | 22,155  | 22,887  | 26,312  | 24,801  | 28,918  |
| Forestry .....             | 3,929   | 3,729   | 3,734   | 4,058   | 4,084   |
| Other .....                | 1,418   | 1,777   | 1,721   | 1,729   | 2,055   |
| Total primary .....        | 112,727 | 132,814 | 134,009 | 140,002 | 172,417 |
| Factory .....              | 162,974 | 170,062 | 173,914 | 189,571 | 213,678 |
| Total .....                | 275,701 | 302,876 | 307,923 | 329,573 | 386,095 |

Movements in the relative contributions of individual classes to total production since 1925-26 can be readily seen in the following bar chart.

NET VALUE OF PRODUCTION  
(PROPORTION OF COMPONENTS TO TOTAL)



Earlier information on the gross value of primary production, since 1908-09 is given on the Statistical Summary on page 530 while details of net value of production since 1925-26 are on page 531.

## **PART 10**

# **COMMERCE**

### **10.1. INTERNAL TRADE**

#### **RETAIL TRADE**

Various aspects of retail trading in South Australia are subject to control under State legislation. Examples are hours of trading in the metropolitan and specified country areas, which are controlled under the Early Closing Act, 1926-1960, administered by the Department of Labour and Industry; prices for a variable range of goods which are controlled under the Prices Act, 1948-1964, administered by the South Australian Prices Department; and minimum wages payable and some other conditions of employment which are prescribed in awards and determinations of the State Industrial Court and industrial boards. Some classes of employees are covered by Commonwealth awards.

Statistics of retail sales and other information concerning the structure and pattern of retail trading have been obtained from Censuses of Retail Establishments conducted throughout Australia in respect of the years ended 30th June 1948, 1949, 1953, 1957, and 1962. In addition, quarterly estimates of the value of retail sales have been calculated from September quarter 1950 by means of sample surveys.

#### **Censuses of Retail Establishments**

In general terms, the Censuses cover the retail trading activities of establishments which normally sell goods by retail to the general public from fixed premises such as shops, rooms, kiosks, and yards. Retail activities of wholesalers and manufacturers who sell regularly by retail to the general public are included. Sales by itinerant vendors and sales from casual stalls and booths are excluded. Establishments with total retail sales of less than £500 in census years are not included.

The design of the censuses is such that particulars of retail sales relate principally to sales, to the final consumer, of new and secondhand goods generally used for household and personal purposes. For this reason sales of building materials, farm and industrial machinery and equipment, earth-moving equipment, etc., have been excluded. For the same reason, and also because of difficulties in obtaining reliable and complete reporting, sales of builders' hardware and supplies, business machines and equipment, grain, feed, fertilizers and agricultural supplies, and tractors were excluded from the 1961-62 Census. Retail sales of motor vehicles, parts, etc., are included whether for industrial, commercial, farm or private use.

At each census every establishment was classified according to type of business. For most businesses the classification was based on the commodity or commodity group in which predominant sales were recorded. Details of number of establishments, value of retail sales and value of stocks for the various types of business at the last two censuses are as follows:

**Retail Establishments, Sales and Stocks by Type of Business, South Australia**  
*Censuses 1956-57 and 1961-62*

| Type of Business   | Establishments |               | Retail Sales   |                | Retail Stocks<br>at 30th June |               |
|--|----------------|---------------|----------------|----------------|-------------------------------|---------------|
|  | 1956-57        | 1961-62       | 1956-57        | 1961-62        | 1957                          | 1962          |
|  | No.            | No.           | £'000          | £'000          | £'000                         | £'000         |
| <b>Food stores—</b>  |                |               |                |                |                               |               |
| Grocers .....  | 2,088          | 2,011         | 38,290         | 48,832         | 5,441                         | 5,991         |
| Butchers .....   | 915            | 1,034         | 14,567         | 16,811         | 174                           | 185           |
| Fruiterers .....   | 620            | 613           | 6,315          | 7,171          | 164                           | 167           |
| Bakers .....   | 404            | 392           | 5,538          | 6,339          | 174                           | 194           |
| Confectioners and milk bars .....                                | 770            | 1,059         | 8,056          | 12,661         | 419                           | 624           |
| Cafes .....  | 104            | 117           | 465            | 492            | 42                            | 37            |
| Fishmongers and poulterers .....                                 | 125            | 177           | 980            | 1,370          | 23                            | 27            |
| Other food stores .....  | 206            | 252           | 2,239          | 3,147          | 86                            | 130           |
| <b>Hotels, tobacconists, etc.—</b>                               |                |               |                |                |                               |               |
| Hotels, wine saloons, etc. ....                                  | 641            | 650           | 20,843         | 24,799         | 836                           | 1,097         |
| Tobacconists .....   | 106            | 70            | 1,324          | 811            | 128                           | 92            |
| Tobacconists and hairdressers .....                              | 281            | 319           | 1,121          | 809            | 109                           | 88            |
| <b>Department stores, clothiers, drapers, etc.—</b>              |                |               |                |                |                               |               |
| Department stores .....  | 9              | 12            | 24,462         | 34,524         | 4,429                         | 5,245         |
| Clothiers and drapers .....                                      | 1,060          | 988           | 22,987         | 22,742         | 5,536                         | 5,491         |
| Footwear stores .....  | 187            | 209           | 3,227          | 3,839          | 1,048                         | 1,294         |
| <b>Hardware, electrical goods, furniture stores,<br/>etc.—</b>   |                |               |                |                |                               |               |
| Domestic hardware stores .....                                   | 305            | 274           | 2,109          | 2,638          | 633                           | 655           |
| Electrical goods, and musical instru-<br>ment stores .....       | 344            | 402           | 6,621          | 12,209         | 1,370                         | 2,424         |
| Furniture and floor coverings stores ..                          | 194            | 184           | 7,948          | 7,473          | 1,789                         | 1,825         |
| <b>Other goods stores—</b>                                       |                |               |                |                |                               |               |
| Chemists .....   | 403            | 466           | 5,317          | 9,163          | 962                           | 1,528         |
| Newsagents and booksellers .....                                 | 208            | 237           | 2,792          | 3,513          | 484                           | 651           |
| Sports goods stores .....  | 43             | 64            | 622            | 807            | 177                           | 227           |
| Watchmakers and jewellers .....                                  | 149            | 138           | 1,611          | 1,477          | 776                           | 721           |
| Cycle stores .....   | 67             | 51            | 461            | 426            | 146                           | 170           |
| Florists and nurserymen .....                                    | 93             | 85            | 432            | 518            | 25                            | 25            |
| Other types of business .....                                    | 264            | 290           | 2,404          | 2,566          | 514                           | 740           |
| <b>Motor vehicle dealers, garages, etc.—</b>                     |                |               |                |                |                               |               |
| New motor vehicle dealers, garages and<br>service stations ..... | 1,232          | 1,405         | 48,515         | 55,423         | 5,177                         | 5,711         |
| Used motor vehicle dealers .....                                 | 157            | 154           | 12,073         | 12,913         | 1,320                         | 1,630         |
| Motor parts and tyre dealers .....                               | 85             | 159           | 2,187          | 3,881          | 365                           | 734           |
| <b>Total .....</b>   | <b>11,060</b>  | <b>11,812</b> | <b>243,506</b> | <b>297,354</b> | <b>32,347</b>                 | <b>37,703</b> |

The table below shows, for the last two censuses, the number of establishments selling goods in each of 30 broad commodity groups and the total value, and value per head of population, of sales in those commodity groups. Adjustments have been made for changes in the scope of the censuses. The number



of establishments shown for each commodity group is the number which recorded any sales in that group.

Some retailers selling small quantities of particular commodities may not have shown those sales separately in their returns; it is unlikely that this has caused significant understatement of the sale of any commodity but the numbers of establishments should be taken as giving only a general indication of the pattern of retail outlets for the various commodity groups. Because many retailers recorded sales in more than one commodity group the numbers of establishments shown against the groups do not add to the total of individual establishments.

### Retail Establishments and Sales by Commodity Groups, South Australia

*Censuses 1956-57 and 1961-62*

| Commodity Group                                 | Establishments |               | Retail Sales of Goods |                |                        |              |
|---|----------------|---------------|-----------------------|----------------|------------------------|--------------|
|   | 1956-57        | 1961-62       | Total                 |                | Per Head of Population |              |
|   |                |               | 1956-57               | 1961-62        | 1956-57                | 1961-62      |
|   | No.            | No.           | £'000                 | £'000          | £                      | £            |
| <b>Foodstuffs—</b>                              |                |               |                       |                |                        |              |
| Groceries .....                                 | 3,168          | 3,480         | 27,648                | 35,506         | 31.9                   | 36.2         |
| Butchers' meat .....                            | 1,006          | 1,439         | 14,532                | 17,599         | 16.9                   | 18.3         |
| Fresh fruit and vegetables .....                | 1,721          | 2,050         | 6,406                 | 7,434          | 7.4                    | 7.5          |
| Bread, cakes and pastry .....                   | 2,188          | 2,696         | 6,647                 | 8,154          | 7.7                    | 8.3          |
| Confectionery, icecream, softdrinks .....       | 3,554          | 4,172         | 8,099                 | 10,488         | 9.4                    | 10.7         |
| Other types of food .....                       | 1,945          | 2,491         | 4,243                 | 6,405          | 5.0                    | 6.6          |
| <b>Beer, tobacco, etc.—</b>                     |                |               |                       |                |                        |              |
| Beer, wine and spirits .....                    | 747            | 740           | 19,886                | 23,640         | 23.1                   | 24.1         |
| Tobacco and cigarettes .....                    | 5,003          | 6,046         | 8,693                 | 10,779         | 10.1                   | 11.1         |
| <b>Clothing, drapery, etc.—</b>                 |                |               |                       |                |                        |              |
| <b>Clothing—</b>                                |                |               |                       |                |                        |              |
| Men's and boys' .....                           | 1,115          | 1,125         | 10,683                | 12,091         | 12.3                   | 12.4         |
| Women's, girls' and infants' .....              | 1,231          | 1,206         | 18,217                | 19,837         | 20.9                   | 20.3         |
| Drapery, piecegoods, blankets, etc. ....        | 928            | 1,028         | 6,607                 | 8,396          | 7.9                    | 8.6          |
| <b>Footwear—</b>                                |                |               |                       |                |                        |              |
| Men's and boys' .....                           | 835            | 831           | 2,074                 | 2,524          | 2.4                    | 2.6          |
| Women's, girls' and infants' .....              | 761            | 783           | 3,484                 | 4,470          | 4.0                    | 4.6          |
| <b>Hardware (a), electrical goods, etc.—</b>    |                |               |                       |                |                        |              |
| Domestic hardware .....                         | 1,478          | 1,587         | 5,503                 | 6,149          | 6.4                    | 6.3          |
| Radios and radiograms .....                     | 594            | 487           | 1,951                 | 1,676          | 2.3                    | 1.7          |
| Television and accessories (b) .....            | 266            | 400           | 995                   | 3,829          | 1.2                    | 3.9          |
| Musical instruments, records, etc. ....         | 539            | 236           | 995                   | 1,016          | 1.2                    | 1.0          |
| Domestic refrigerators .....                    | 943            | 428           | 2,644                 | 3,180          | 3.1                    | 3.2          |
| Other electrical goods .....                    | 421            | 945           | 3,766                 | 5,508          | 4.4                    | 5.6          |
| <b>Furniture and floor coverings—</b>           |                |               |                       |                |                        |              |
| Furniture .....                                 | 421            | 407           | 6,306                 | 6,950          | 7.3                    | 7.1          |
| Floor coverings .....                           | 351            | 360           | 3,100                 | 3,362          | 3.6                    | 3.4          |
| <b>Other goods—</b>                             |                |               |                       |                |                        |              |
| Chemists' goods (c) .....                       | 1,334          | 1,832         | 6,526                 | 11,307         | 7.6                    | 11.5         |
| Newspapers, books and stationery .....          | 1,543          | 1,805         | 4,340                 | 5,321          | 5.0                    | 5.4          |
| Sporting requisites, travelgoods .....          | 571            | 656           | 1,221                 | 1,573          | 1.4                    | 1.6          |
| Jewellery, watches, clocks, etc. ....           | 616            | 668           | 2,360                 | 2,452          | 2.7                    | 2.5          |
| Other goods .....                               | 888            | 1,064         | 5,203                 | 6,136          | 6.2                    | 6.3          |
| <b>Total (excluding motor vehicles, etc.) .</b> | <b>(e)</b>     | <b>(e)</b>    | <b>181,134</b>        | <b>225,782</b> | <b>210.2</b>           | <b>230.8</b> |
| <b>Motor vehicles, etc. (d)—</b>                |                |               |                       |                |                        |              |
| <b>Motor vehicles (incl. motor cycles)—</b>     |                |               |                       |                |                        |              |
| New .....                                       | 305            | 470           | 25,259                | 26,769         | 29.3                   | 27.3         |
| Used .....                                      | 600            | 611           | 18,321                | 20,718         | 21.3                   | 21.2         |
| Motor parts, accessories, etc. ....             | 1,291          | 1,531         | 7,724                 | 8,866          | 9.0                    | 9.2          |
| Petrol, oil, etc. ....                          | 1,488          | 1,715         | 11,068                | 15,219         | 12.8                   | 15.5         |
| <b>Total motor vehicles .....</b>               | <b>(e)</b>     | <b>(e)</b>    | <b>62,372</b>         | <b>71,572</b>  | <b>72.4</b>            | <b>73.2</b>  |
| <b>Grand Total .....</b>                        | <b>11,060</b>  | <b>11,812</b> | <b>243,506</b>        | <b>297,354</b> | <b>282.6</b>           | <b>304.0</b> |

(a) Excludes basic building materials and builders' hardware and supplies such as tools of trade, paint, etc.

(b) Negligible in 1956-57.

(c) Includes toiletries, cosmetics, and dispensing.

(d) Excludes tractors, farm machinery and implements, earth-moving equipment, etc.

(e) Not available.

In 1956-57, the value of retail sales per head of population in South Australia was almost the same as the overall Australian average of £283, but in 1961-62 the figure for this State (£304) had fallen well below the corresponding Australian figure of £327. However, subsequent estimates from the Survey of Retail Establishments indicate that by 1964-65 sales per head of population in South Australia had recovered to about (and perhaps slightly above) the Australian level.

In the next table, 1956-57 and 1961-62 Census results are classified by statistical division. (A map showing statistical division boundaries is inside the back cover of this volume.)

A variation in classification of new motor vehicle sales has affected comparability of these figures. In 1956-57, each sale on commission was attributed to the principal rather than to the agent but in 1961-62 each sale of a new motor vehicle was attributed to the establishment, whether of a principal or an agent, which made the sale to the final consumer. In practice, the 1956-57 procedure probably tended to bias new motor vehicle sales towards the metropolitan area, where principals are mainly located.

### Retail Establishments, Sales and Stocks, Statistical Divisions

*Censuses 1956-57 and 1961-62*

| Statistical Division | Establishments |         | Retail Sales |         | Retail Stocks<br>at 30th June |        |
|----------------------|----------------|---------|--------------|---------|-------------------------------|--------|
|                      | 1956-57        | 1961-62 | 1956-57      | 1961-62 | 1957                          | 1962   |
|                      | No.            | No.     | £'000        | £'000   | £'000                         | £'000  |
| Metropolitan—        |                |         |              |         |                               |        |
| Municipality of      |                |         |              |         |                               |        |
| Adelaide .....       | 1,491          | 1,490   | 88,761       | 97,948  | 13,525                        | 14,689 |
| Other metropolitan.  | 5,150          | 5,485   | 75,800       | 101,897 | 7,536                         | 9,715  |
| Total metropolitan   | 6,641          | 6,975   | 164,561      | 199,845 | 21,061                        | 24,404 |
| Central .....        | 1,552          | 1,757   | 22,882       | 30,979  | 2,888                         | 3,648  |
| Lower North .....    | 792            | 769     | 13,402       | 14,141  | 2,279                         | 2,328  |
| Upper North (a) .... | 376            | 378     | 7,436        | 8,175   | 927                           | 1,129  |
| South Eastern .....  | 581            | 690     | 13,722       | 16,399  | 2,020                         | 2,353  |
| Western .....        | 501            | 568     | 9,707        | 13,331  | 1,433                         | 1,825  |
| Murray Mallee .....  | 617            | 675     | 11,796       | 14,484  | 1,739                         | 2,016  |
| Total State .        | 11,060         | 11,812  | 243,506      | 297,354 | 32,347                        | 37,703 |

(a) Including "Remainder of State".

### Surveys of Retail Establishments

During periods between censuses, estimates of the value of retail sales are calculated from returns received from a sample of retail establishments covering businesses which account for approximately 45% of all retail sales in Australia. The sample is designed so that estimates of retail sales in each State are also obtained.

The following table shows the value of retail sales of goods in South Australia in broad commodity groups in each of the years 1960-61 to 1964-65. Details

for the year 1960-61 have been revised to a basis comparable with that of the 1961-62 Census. Figures for the last two years are subject to amendment when more precise information is available concerning trading by new businesses.

### Value of Retail Sales: Commodity Groups, South Australia

| Commodity Group                      | Value of Retail Sales of Goods |                |         |         |         |
|--------------------------------------|--------------------------------|----------------|---------|---------|---------|
|                                      | 1960-61                        | 1961-62<br>(a) | 1962-63 | 1963-64 | 1964-65 |
|                                      | £ million                      |                |         |         |         |
| Groceries.....                       | 34.5                           | 35.5           | 37.4    | 39.9    | 43.9    |
| Butchers' meat.....                  | 17.7                           | 17.6           | 19.1    | 21.2    | 22.7    |
| Other food.....                      | 32.9                           | 32.5           | 33.4    | 36.3    | 40.5    |
| Total food and groceries.....        | 85.1                           | 85.6           | 89.9    | 97.4    | 107.1   |
| Beer, wine and spirits.....          | 22.1                           | 23.7           | 24.9    | 26.7    | 28.6    |
| Clothing, drapery, etc.....          | 39.8                           | 40.3           | 43.5    | 47.8    | 51.1    |
| Footwear.....                        | 6.9                            | 7.0            | 7.1     | 7.6     | 8.0     |
| Hardware, china, etc.....            | 6.4                            | 6.1            | 6.5     | 6.3     | 7.3     |
| Electrical goods.....                | 17.1                           | 15.2           | 16.9    | 19.2    | 21.2    |
| Furniture and floor coverings....    | 11.0                           | 10.3           | 11.2    | 12.7    | 14.4    |
| Chemists' goods (b).....             | 10.3                           | 11.3           | 12.2    | 12.9    | 14.3    |
| Other goods (c).....                 | 25.8                           | 26.3           | 27.1    | 30.2    | 32.9    |
| Total excluding motor vehicles, etc. | 224.5                          | 225.8          | 239.3   | 260.8   | 284.9   |
| Motor vehicles, parts, petrol, etc.. | 78.1                           | 71.6           | 89.9    | 104.5   | 116.5   |
| Total.....                           | 302.6                          | 297.4          | 329.2   | 365.3   | 401.4   |

NOTE :—Builders' hardware and supplies, basic building materials, farm and business machines, earth moving equipment, and grain, feed and fertilizers are excluded.

(a) Census figures.

(b) Includes toiletries, cosmetics, and dispensing.

(c) Includes tobacco, cigarettes, jewellery, sporting goods, etc.

Figures on the above basis are available from 1952-53. Since then sales of motor vehicles have shown occasional marked fluctuations and sales in the electrical goods group increased following the introduction of television in 1959. These fluctuations have had some effect on the ratio of sales in other groups to total retail sales. However some trends are discernible in these ratios: these include the relative stability of the food group, increases in motor vehicles and in chemists' goods, and decreases in clothing, drapery and footwear.

### WHOLESALE TRADE

An exploratory wholesale census was conducted throughout Australia in respect of the year 1963-64, but details are not yet available for publication.

Some indication of the volume of wholesale trade in South Australia is given by statistics collected under Commonwealth Sales Tax Acts. However, the statistics do not relate to all wholesale trade and do not necessarily cover a constant portion of such trade because vendors trading in exempt goods only are not required to furnish returns.

## Wholesale Sales Recorded Under Sales Tax Acts, South Australia

| Particulars          | 1959-60 | 1960-61 | 1961-62 | 1962-63 | 1963-64 | 1964-65 |
|----------------------|---------|---------|---------|---------|---------|---------|
|                      | £'000   |         |         |         |         |         |
| Gross taxable sales— |         |         |         |         |         |         |
| At a tax rate of—    |         |         |         |         |         |         |
| 2½%.....             | —       | —       | 15,587  | 18,836  | 20,686  | 22,128  |
| 8½%.....             | 18,899  | 17,331  | 1,849   | —       | —       | —       |
| 12½%.....            | 37,255  | 40,197  | 44,254  | 54,144  | 52,422  | 55,864  |
| 16½%.....            | 11,679  | 11,813  | 6,427   | —       | —       | —       |
| 22½%.....            | —       | —       | 6,602   | 21,375  | 26,013  | 4,765   |
| 25%.....             | 10,015  | 7,361   | 6,541   | 7,003   | 7,496   | 32,401  |
| 30%.....             | 16,909  | 13,289  | 7,747   | —       | —       | —       |
| 40%.....             | —       | 2,886   | —       | —       | —       | —       |
| Exempt sales .....   | 196,941 | 207,738 | 200,666 | 217,760 | 245,550 | 281,912 |
| Total sales ..       | 291,698 | 300,615 | 289,673 | 319,118 | 352,167 | 397,070 |

## 10.2. OVERSEA TRADE

## LEGISLATION AFFECTING OVERSEA TRADE

The power to make laws with respect to trade and commerce with other countries was conferred on the Commonwealth Parliament by the Commonwealth of Australia Constitution Act, Section 51 (i). Under Section 86 of the Constitution, the collection and control of duties of customs and excise passed to the Executive Government of the Commonwealth on 1st January 1901. Other references to trade and commerce are contained in Sections 87 to 95 of the Constitution.

The Commonwealth legislation affecting overseas trade includes the Customs Act, the Customs Tariff, the Customs Tariff (Dumping and Subsidies) Act, and the Trading with the Enemy Act. The Customs Act is the administrative Act under which the Department of Customs and Excise operates, while the Customs Tariff provides the statutory authority for imposing the actual rates of duty operative from time to time.

**The Customs Tariff**

The first Commonwealth Customs Tariff was introduced by Resolution on 8th October 1901 from which date uniform duties for each State came into effect throughout Australia. The tariff has since been extensively amended.

On 1st July 1965 the Australian tariff was reissued in Brussels Nomenclature form. The new form of the tariff is claimed to have the following advantages—

- (a) it provides a permanent framework for future amendments and expansion of the tariff, and
- (b) the nomenclature has been adopted by a large number of countries, providing a uniform method of classifying commodities in international trade.

The Australian Customs Tariff has been developed in conformity with the policy of protecting economic and efficient Australian industries and of granting preferential treatment to certain imports from certain countries of the British Commonwealth of Nations. Duties are also imposed on some goods, generally of a luxury nature, for revenue purposes. Customs collections are a major

source of revenue, but in its protective character the tariff has an important influence on the Australian economy.

Australia has two classes of tariff—the Preferential Tariff and the General Tariff.

The Preferential Tariff rates of duty apply to goods the produce or manufacture of the United Kingdom, provided that such goods comply with the laws and statutory regulations in force at the time affecting the grant of preference, and that the intended destination of the goods, when originally shipped from the United Kingdom, was Australia.

The Preferential Tariff also applies to the Republic of Ireland and, with the exception of a relatively small number of commodities which carry special rates of duty, to Canada, New Zealand (except Cook Islands) and the Territory of Papua and New Guinea. In relation to certain goods, the Preferential Tariff also applies to specified countries of the British Commonwealth of Nations and most of the British non-self-governing colonies, protectorates and trust territories.

The General Tariff applies to goods other than those to which the Preferential Tariff applies.

From 1937 an Intermediate Tariff applied to countries with which Australia had trade agreements, to countries which accorded Australia reciprocal most-favoured-nation tariff treatment, and to certain other countries. This tariff was discontinued on 1st July 1965 on the introduction of the Brussels-type tariff.

#### **Primage Duties**

In addition to the duties imposed by the Customs Tariff, *ad valorem* primage duties at rates of 5% or 10% are charged on some goods according to the type of goods and origin thereof. Other goods are exempt from primage duty. Goods the produce or manufacture of New Zealand, Norfolk Island, Fiji, Cocos Islands, Christmas Island and the Territory of Papua and New Guinea are also exempt from primage duty.

#### **Anti-dumping Legislation**

The *Customs Tariff (Dumping and Subsidies) Act* 1961 provides protection for Australian industry against various forms of unfair trading. Under this Act a dumping duty may be imposed on goods that are sold to Australia at an export price which is less than the normal value of the goods, where this causes or threatens material injury to an Australian industry.

Special duties may be collected also if dumped or subsidized goods are imported to the detriment of the trade of a third country in the Australian market.

#### **Import Controls**

A system of import licensing introduced in 1939, as a war-time measure, provided that goods could not be imported into Australia unless a licence had been issued or they had been specifically exempted from control.

The controls were progressively relaxed during the post war years but were subsequently re-imposed in 1952 as a result of a serious deterioration in Australia's external financial position. These controls were imposed on imports from all sources except Papua, New Guinea and Norfolk Island.

The object of import licensing was to limit the value of imports to an annual rate determined by the government in order that payments for imports would not involve an excessive drawing on Australia's international reserves.

The import licensing controls have since been removed with the exception of some goods retained under control for reasons associated with the protection of certain Australian industries.

The Customs (Prohibited Imports) Regulations, list those commodities whose importation is prohibited absolutely, or restricted, on social grounds. Other items are prohibited, or restricted, on health grounds (human, animal or plant) in accordance with the *Quarantine Act 1908-1961* and the *Therapeutic Substances Act 1953-1959*.

### Export Controls

Under Section 112 of the Customs Act the exportation of goods from Australia, may be (a) prohibited absolutely, (b) prohibited to a specified place, or (c) prohibited unless prescribed conditions or restrictions are complied with.

The *Banking Act 1959* contains provision to ensure that the full proceeds of goods exported from Australia are received into the Australian banking system and that these proceeds are received in the currency and in the manner prescribed by the Reserve Bank of Australia.

## ADVISORY AUTHORITIES ON OVERSEA TRADE

### Tariff Board

The *Tariff Board Act 1921-1962* provides for the appointment of a Tariff Board consisting of eight members. Of these, two must, and three may, be members of the Commonwealth Public Service at the time of their original appointment. The purpose of the Tariff Board is to advise the Government on matters relating to the protection and encouragement of Australian industry.

The Minister for Trade and Industry is required to refer to the Board for inquiry and report the following matters—the necessity for new, increased, or reduced duties; the necessity for granting bounties and the effect of existing bounties; and any complaint that a manufacturer is taking undue advantage of the protection afforded him by the tariff or by the restriction of the importation of any goods by charging unnecessarily high prices for his goods or acting in restraint of trade.

In addition, the Minister may refer the following matters to the Tariff Board for inquiry and report—the general effect of the working of the Customs Tariff and the Excise Tariff; the fiscal and industrial effects of the customs laws on the Commonwealth; the incidence between the rates of duty on raw materials and on finished or partly finished products; and other matters affecting the encouragement of primary and secondary industries in relation to the tariff.

The Minister for Customs and Excise may refer to the Tariff Board for inquiry and report the following matters—the classification of goods in the Customs Tariff or Excise Tariff and matters in connection with the interpretation of these tariffs; the question of the value for duty of goods; whether goods not prescribed in departmental by-laws should be so prescribed; and any matters in respect of which action may be taken under the *Customs Tariff (Dumping and Subsidies) Act 1961*.

### Special Advisory Authority

The Minister for Trade and Industry may also request a Special Advisory Authority to inquire into cases where urgent action appears necessary to protect an Australian industry against import competition pending receipt and consideration of a full report by the Tariff Board. The Special Advisory Authority's report must be submitted to the Minister within 30 days of the making of the request. Temporary protection recommended by a Special Advisory Authority may be imposed, but may only operate for a period of up to three months after the date of receipt of the final report by the Tariff Board on the goods concerned.

## ENCOURAGEMENT OF OVERSEA TRADE

**Trade Commissioner Service**

The *Trade Commissioners Act 1933-1936* provides for the appointment of one or more Trade Commissioners and Assistant Trade Commissioners of the Commonwealth in such places as the Governor-General determines.

In 1957 Australia's official commercial representation was extended by the introduction of a system of government Trade Correspondents. These men, who as a rule already reside in particular centres overseas, are engaged on a part-time basis to carry out market research, arrange introductions between buyers and sellers, and generally promote Australia's trade interests in the same way as Trade Commissioners. Each Trade Correspondent operates under the general direction of the nearest Trade Commissioner.

Trade Commissioners and, to a lesser extent, Trade Correspondents, are responsible for commercial intelligence in their territories. Particular facilities provided for Australian exporters and export organizations include—surveys of market prospects; advice on selling and advertising methods; arrangement of introductions with buyers and agents; provision of reports on the standing of oversea firms; and helping organization of trade displays and other promotion and publicity.

In some countries, Trade Commissioners also participate in inter-governmental negotiations in the economic and commercial fields. In certain countries where there is no diplomatic or consular mission he is called upon to act as the Australian representative.

**Export Payments Insurance**

The *Export Payments Insurance Corporation Act 1956* established the Corporation with the objective of protecting Australian exporters against risks of loss arising from non-payment of their oversea accounts.

The main risks of loss against which the Corporation insures are the "commercial" risks of the insolvency or protracted default of the buyer, and "political" risks.

## TRADE AGREEMENTS

Australia has entered into a number of trade agreements with various countries to obtain, in general, preferential rates of duty for a range of Australian commodities in those countries and in turn has contracted to extend preferential treatment to a range of commodities entering Australia from those countries.

In terms of the annual value of trade, the principal agreements are with the United Kingdom, Canada, New Zealand, Japan, and the Federal Republic of Germany.

The General Agreement on Tariffs and Trade (G.A.T.T.), of which Australia is an original member, is an international trade agreement which has been in operation since 1st January 1948.

The objectives of the G.A.T.T. include the expansion of world trade and the raising of living standards throughout the world. The essential features of the G.A.T.T. are the schedules of tariff concessions which its members have agreed to apply consequent to tariff negotiations with each other, the application of most-favoured-nation treatment among its members, the avoidance of trade discrimination, and a code of agreed commercial policy rules for fair international trading.

Five series of tariff negotiations have been conducted, as a result of which Australia has obtained tariff concessions on almost all the principal products of which it is an actual or potential exporter to the individual countries concerned.

## METHOD OF RECORDING IMPORTS AND EXPORTS

Oversea trade statistics are compiled from documents obtained under the *Customs Act 1901-1965*.

Statistics for South Australia apply to the imports into and exports from Australia which are recorded at South Australian ports. Imports do not provide a record of the oversea goods used or consumed in South Australia, as some of the goods pass subsequently to other Australian States and some goods imported through other States pass into South Australia. Similarly, exports include products of other States shipped oversea from South Australian ports, but exclude products of South Australia shipped oversea from ports in other States.

Commodities which have entered or have been cleared from South Australia by sea, air or parcels post are included.

Details of oversea imports and exports which follow were compiled according to the classification which came into operation on 1st July 1945. On 1st July 1965, concurrent with the introduction of the Australian Brussels-type Tariff, the new Australian Import Commodity Classification, based on the United Nations' Standard International Trade Classification (S.I.T.C.) Revised, was introduced. Exports will continue to be compiled in terms of the 1945 classification until the new Australian Export Commodity Classification, also based on S.I.T.C., Revised, is adopted.

Recorded values of imports are "transaction value (f.o.b.)" or "domestic value (f.o.b.)", whichever is the higher. These values are f.o.b. port of shipment Australian currency.

The definitions of f.o.b. values adopted for exports generally are—

- (a) For goods sold to oversea buyers before export—the Australian f.o.b. port of shipment equivalent of the price at which the goods were sold.
- (b) For goods shipped on consignment—the Australian f.o.b. port of shipment equivalent of the current price offering for similar goods of Australian origin in the principal markets of the country to which the goods were dispatched for sale (as regards wool, the f.o.b. port of shipment equivalent of the current price ruling in Australia will normally provide a sufficient approximation to the f.o.b. port of shipment equivalent of the price ultimately received).

*Inclusions and Exclusions*

Export tabulations do not include the value of stores loaded on aircraft and ships. Ships' stores include stores used to operate ships and aircraft (*e.g.*, aircraft fuel, bunker oil, food and drink for passengers and crew) and ships' fittings installed on overseas-owned ships in Australian ports.

Outside packages (containers, crates) are included as a separate item in the tabulation of imports. For exports, however, the value recorded for each item includes the value of the outside package.

Particulars of direct transit trade through Australia are not recorded.

*Countries*

"Country of origin" appearing in import tables should be taken to mean the country of production. "Country of consignment" appearing in export tables means the country to which goods were consigned so far as this can be determined at the time of export. Where the country of consignment is not determined at the time of export, goods are shown as exported "For Orders".



## OVERSEA TRADE OF SOUTH AUSTRALIA

## IMPORTS

The total value of direct overseas imports into South Australia has risen considerably in the last three years, and exceeded £100 million for the first time in 1964-65.

In this period machines and machinery varied between 18.7% of total imports in 1961-62 and 15.8% in 1964-65, motor vehicles and parts increased from 11.4% in 1961-62 to 24.4% in 1963-64 and declined slightly to 22.8% in 1964-65, while crude oil, first imported in 1962-63 following the opening of the Port Stanvac oil refinery, represented 9.2% in 1963-64 and 8.3% in 1964-65.

## Direct Oversea Imports to South Australia: Principal Commodities

| Commodity  | 1960-61       | 1961-62       | 1962-63       | 1963-64       | 1964-65        |
|--|---------------|---------------|---------------|---------------|----------------|
|  | £'000         |               |               |               |                |
| Foodstuffs, alcoholic liquors, and tobacco ..... | 1,485         | 1,484         | 1,438         | 1,630         | 1,786          |
| Bags and sacks .....                             | 3,705         | 2,772         | 1,599         | 1,996         | 2,015          |
| Fibres—Vegetable .....                           | 1,348         | 1,263         | 1,202         | 1,808         | 1,557          |
| Paper, pulp, and board .....                     | 2,616         | 1,595         | 2,288         | 2,468         | 2,942          |
| Rubber and rubber goods .....                    | 853           | 760           | 917           | 1,020         | 1,664          |
| Stationery and books .....                       | 1,310         | 1,419         | 1,419         | 1,489         | 1,444          |
| Textiles and piecegoods .....                    | 3,657         | 2,773         | 3,250         | 3,062         | 3,551          |
| Timber .....                                     | 3,603         | 2,100         | 2,586         | 3,410         | 3,933          |
| Drugs, chemicals and medicines .                 | 1,685         | 1,423         | 1,785         | 1,884         | 2,357          |
| Fertilizers .....                                | 762           | 818           | 870           | 1,037         | 1,553          |
| Plastic materials, fibres and yarns              | 1,126         | 899           | 1,065         | 1,486         | 1,905          |
| Metals and metal manufactures—                   |               |               |               |               |                |
| Electrical equipment .....                       | 4,235         | 3,032         | 4,199         | 3,712         | 4,331          |
| Iron and steel .....                             | 6,891         | 1,629         | 2,489         | 3,307         | 5,912          |
| Machines and machinery .....                     | 11,842        | 9,667         | 11,404        | 14,694        | 16,202         |
| Vehicles—  |               |               |               |               |                |
| Motor vehicles and parts ...                     | 8,741         | 5,918         | 14,433        | 21,935        | 23,329         |
| Other .....                                      | 1,137         | 557           | 814           | 994           | 1,054          |
| Other .....                                      | 3,450         | 2,588         | 2,576         | 2,510         | 3,294          |
| Oils, fats, waxes—                               |               |               |               |               |                |
| Petrol .....                                     | 2,014         | 1,652         | 1,807         | 1,343         | 1,422          |
| Crude oil .....                                  | —             | —             | 2,258         | 8,231         | 8,514          |
| Other .....                                      | 1,806         | 1,799         | 2,053         | 1,225         | 1,354          |
| Glass and glassware .....                        | 1,287         | 810           | 1,309         | 1,131         | 1,185          |
| All other .....                                  | 6,412         | 5,645         | 6,453         | 7,329         | 8,854          |
| Outside packages .....                           | 1,417         | 1,090         | 1,699         | 2,124         | 2,270          |
| <b>Total .....</b>                               | <b>71,382</b> | <b>51,693</b> | <b>69,913</b> | <b>89,825</b> | <b>102,428</b> |

The following table shows the value of imports from principal countries during each of the years 1960-61 to 1964-65.

During this period the United States of America replaced the United Kingdom as the principal source of imports. In 1953-54 the United Kingdom supplied over half of the direct imports to South Australia, but subsequently there has been a steady decline to 32.6% in 1960-61 and to only 23.7% in 1964-65. In the years immediately prior to 1960-61, imports from the United States of America represented about 10 to 12% of total imports, but in 1963-64 and 1964-65 the proportion had increased to about 30%.

## Direct Oversea Imports to South Australia: Principal Countries

| Country of Origin               | 1960-61       | 1961-62       | 1962-63       | 1963-64       | 1964-65        |
|---------------------------------|---------------|---------------|---------------|---------------|----------------|
|                                 | £'000         |               |               |               |                |
| United Kingdom .....            | 23,267        | 16,400        | 22,176        | 22,146        | 24,298         |
| Nauru .....                     | 306           | 397           | 442           | 517           | 604            |
| Canada .....                    | 4,677         | 3,086         | 4,731         | 4,858         | 5,592          |
| India .....                     | 3,617         | 1,714         | 1,687         | 1,609         | 2,367          |
| Malaysia .....                  | 1,315         | 601           | 939           | 969           | 1,670          |
| New Zealand .....               | 684           | 595           | 878           | 1,084         | 1,190          |
| Pakistan .....                  | 1,150         | 1,904         | 1,067         | 1,336         | 778            |
| Saudi Arabia .....              | 43            | 309           | 2,688         | 8,493         | 9,006          |
| Belgium-Luxembourg .....        | 901           | 467           | 486           | 550           | 753            |
| France .....                    | 3,635         | 799           | 2,324         | 1,663         | 846            |
| Germany, Federal Republic of .. | 2,817         | 2,522         | 2,876         | 3,629         | 4,409          |
| Indonesia .....                 | 1,290         | 1,262         | 751           | 525           | 910            |
| Iran .....                      | 792           | 803           | 703           | 608           | 757            |
| Italy .....                     | 871           | 534           | 865           | 778           | 1,014          |
| Japan .....                     | 3,823         | 1,684         | 2,843         | 4,220         | 8,199          |
| Netherlands .....               | 2,579         | 1,279         | 1,722         | 1,647         | 2,262          |
| Sweden .....                    | 891           | 1,435         | 1,049         | 1,495         | 1,325          |
| Switzerland .....               | 560           | 511           | 420           | 501           | 486            |
| United States of America .....  | 12,542        | 11,228        | 15,969        | 27,405        | 29,827         |
| Other .....                     | 5,622         | 4,163         | 5,297         | 5,792         | 6,135          |
| <b>Total .....</b>              | <b>71,382</b> | <b>51,693</b> | <b>69,913</b> | <b>89,825</b> | <b>102,428</b> |

The following table shows by commodity groups the imports from principal countries during the year 1964-65.

Direct Oversea Imports to South Australia from Principal Countries:  
Commodity Groups, 1964-65

| Commodity Group                                   | United Kingdom | Canada       | Saudi-Arabia | Germany, Federal Republic | Japan        | U.S.A.        | Other         | Total          |
|---|----------------|--------------|--------------|---------------------------|--------------|---------------|---------------|----------------|
|   | £'000          |              |              |                           |              |               |               |                |
| Foodstuffs of animal origin ..                    | 259            | 89           | ..           | 27                        | 131          | 38            | 444           | 988            |
| Foodstuffs of vegetable origin                    | 73             | 5            | ..           | 15                        | 4            | 45            | 1,073         | 1,215          |
| Vegetable substances .....                        | 23             | 12           | ..           | 7                         | ..           | 1,009         | 781           | 1,832          |
| Fibres and yarns .....                            | 203            | 48           | ..           | 52                        | 287          | 236           | 2,119         | 2,945          |
| Textiles .....                                    | 853            | 139          | ..           | 61                        | 756          | 138           | 1,604         | 3,551          |
| Apparel .....                                     | 189            | 16           | ..           | 12                        | 18           | 14            | 165           | 414            |
| Oils, fats and waxes—                             |                |              |              |                           |              |               |               |                |
| Motor and aviation spirit ..                      | ..             | ..           | 419          | ..                        | ..           | ..            | 1,003         | 1,422          |
| Other .....                                       | 79             | 3            | 8,587        | 33                        | 5            | 234           | 927           | 9,868          |
| Metals and metal manufactures—                    |                |              |              |                           |              |               |               |                |
| Basic shapes .....                                | 1,250          | 1,014        | ..           | 132                       | 3,366        | 537           | 682           | 6,981          |
| Vehicles—   |                |              |              |                           |              |               |               |                |
| Motor vehicles and parts                          | 3,787          | 1,179        | ..           | 171                       | 960          | 16,863        | 369           | 23,329         |
| Other .....                                       | 404            | 2            | ..           | 20                        | 134          | 318           | 176           | 1,054          |
| Other manufactures .....                          | 1,139          | 20           | ..           | 353                       | 121          | 225           | 372           | 2,230          |
| Dynamo electrical machinery and equipment .....   | 1,912          | 102          | ..           | 606                       | 199          | 800           | 1,369         | 4,988          |
| Machinery (including electrically operated) ..... | 6,589          | 286          | ..           | 1,736                     | 799          | 4,689         | 1,446         | 15,545         |
| Rubber (except apparel) .....                     | 560            | 63           | ..           | 26                        | 158          | 392           | 465           | 1,664          |
| Wood and wicker .....                             | 21             | 1,468        | ..           | 18                        | 54           | 634           | 1,810         | 4,005          |
| Earthenware, cement, china, glassware .....       | 1,194          | 63           | ..           | 51                        | 392          | 245           | 423           | 2,368          |
| Paper, pulp and paper board .....                 | 146            | 624          | ..           | 55                        | 71           | 109           | 1,937         | 2,942          |
| Paper manufactures, stationery, books .....       | 934            | 2            | ..           | 51                        | 18           | 344           | 95            | 1,444          |
| All other .....                                   | 4,683          | 457          | ..           | 983                       | 726          | 2,957         | 3,835         | 13,643         |
| <b>Total .....</b>                                | <b>24,298</b>  | <b>5,592</b> | <b>9,006</b> | <b>4,409</b>              | <b>8,199</b> | <b>29,827</b> | <b>21,095</b> | <b>102,428</b> |

.. Nil or less than £500.

## EXPORTS

The value of direct overseas exports from South Australia reached a record level of £161.1 million in 1963-64, but fell slightly to £151.1 million in 1964-65. Exports of wheat were considerably reduced and the value of wool exported fell as a result of lower prices. Increased values were recorded for pig-lead (with higher prices more than offsetting a fall in quantity exported) and for concentrates and ores.

In 1964-65 wool accounted for 30.6% of the total value of exports, wheat 15.9%, pig-lead 13.6%, concentrates and ores 10.6% and barley 5.0%.

## Direct Oversea Exports from South Australia: Principal Commodities

| Commodity                      | 1960-61        | 1961-62        | 1962-63        | 1963-64        | 1964-65        |
|--------------------------------|----------------|----------------|----------------|----------------|----------------|
|                                | Quantities     |                |                |                |                |
| Cheese..... '000 lb.           | 11,164         | 15,706         | 11,876         | 21,194         | 18,612         |
| Flour..... ton                 | 72,424         | 82,777         | 89,971         | 90,216         | 92,762         |
| Wheat..... '000 bush.          | 23,911         | 30,146         | 18,509         | 48,658         | 33,782         |
| Barley..... '000 bush.         | 22,427         | 24,768         | 6,875          | 13,454         | 12,894         |
| Wine..... '000 gal.            | 1,813          | 1,568          | 1,516          | 1,437          | 1,882          |
| Wool—                          |                |                |                |                |                |
| Greasy..... '000 lb.           | 133,260        | 158,008        | 151,999        | 163,298        | 164,358        |
| Other..... '000 lb.            | 10,316         | 14,326         | 15,526         | 14,624         | 11,652         |
| Pig-lead..... '000 cwt.        | 2,537          | 3,918          | 3,372          | 3,364          | 2,959          |
|                                | Values (£'000) |                |                |                |                |
| Cheese.....                    | 956            | 1,257          | 1,026          | 1,810          | 1,850          |
| Flour.....                     | 2,028          | 2,491          | 2,758          | 2,817          | 2,575          |
| Fruit—                         |                |                |                |                |                |
| Dried—                         |                |                |                |                |                |
| Raisins.....                   | 940            | 944            | 1,002          | 1,572          | 1,520          |
| Other.....                     | 885            | 840            | 880            | 987            | 985            |
| Preserved and pulped.....      | 882            | 1,283          | 887            | 1,703          | 1,760          |
| Other.....                     | 724            | 870            | 823            | 1,102          | 1,096          |
| Wheat.....                     | 16,271         | 21,419         | 13,543         | 35,352         | 24,053         |
| Barley.....                    | 9,609          | 11,711         | 3,484          | 6,914          | 7,623          |
| Meat.....                      | 1,502          | 1,665          | 3,175          | 2,430          | 2,524          |
| Wine.....                      | 1,197          | 1,264          | 1,251          | 1,239          | 1,606          |
| Hides and skins.....           | 2,911          | 3,137          | 4,035          | 4,848          | 4,157          |
| Wool—                          |                |                |                |                |                |
| Greasy.....                    | 28,821         | 36,452         | 36,241         | 47,518         | 41,705         |
| Other.....                     | 3,343          | 5,101          | 5,458          | 6,181          | 4,562          |
| Concentrates and ores.....     | 8,085          | 8,119          | 10,785         | 11,992         | 15,993         |
| Metals and metal manufactures— |                |                |                |                |                |
| Pig-lead.....                  | 10,499         | 14,277         | 11,045         | 15,205         | 20,532         |
| Other.....                     | 6,890          | 5,620          | 5,184          | 13,258         | 11,354         |
| All other.....                 | 3,736          | 5,538          | 4,895          | 6,152          | 7,226          |
| <b>Total.....</b>              | <b>99,279</b>  | <b>121,988</b> | <b>106,472</b> | <b>161,080</b> | <b>151,121</b> |

The following table shows the value of exports to principal countries during each of the years 1960-61 to 1964-65. In 1964-65, 25.8% of exports were to the United Kingdom, 17.2% to Japan, 7.5% to the United States of America and 7.4% to U.S.S.R.

## Direct Oversea Exports from South Australia: Principal Countries

| Country of Consignment          | 1960-61       | 1961-62        | 1962-63        | 1963-64        | 1964-65        |
|---------------------------------|---------------|----------------|----------------|----------------|----------------|
|                                 | £'000         |                |                |                |                |
| United Kingdom .....            | 26,734        | 31,250         | 27,105         | 42,230         | 39,007         |
| Canada .....                    | 1,047         | 1,732          | 1,888          | 2,015          | 2,292          |
| India .....                     | 1,333         | 2,785          | 2,104          | 3,299          | 3,184          |
| New Zealand .....               | 5,431         | 5,006          | 4,785          | 7,666          | 7,646          |
| South Arabia (Aden) .....       | 446           | 896            | 775            | 1,107          | 1,316          |
| Belgium-Luxembourg .....        | 2,187         | 2,945          | 3,213          | 5,282          | 7,257          |
| China, Republic of—Mainland ..  | 7,446         | 6,440          | 1,037          | 4,940          | 3,335          |
| France .....                    | 5,747         | 6,103          | 6,367          | 8,311          | 6,070          |
| Germany, Federal Republic of .. | 3,400         | 6,997          | 3,011          | 4,457          | 4,109          |
| Iran .....                      | 530           | 565            | 640            | 527            | 3,012          |
| Italy .....                     | 3,123         | 5,473          | 4,298          | 4,979          | 3,125          |
| Japan .....                     | 17,572        | 17,909         | 17,232         | 27,900         | 26,017         |
| Kuwait .....                    | 128           | 214            | 709            | 753            | 1,050          |
| Lebanon .....                   | 845           | 1,940          | 1,608          | 2,957          | 389            |
| Mexico .....                    | 205           | 335            | 598            | 1,338          | 1,682          |
| Netherlands .....               | 1,686         | 2,931          | 1,155          | 2,464          | 1,660          |
| Norway .....                    | 145           | 1,149          | 2,143          | 3,038          | 2,036          |
| Saudi Arabia .....              | 82            | 300            | 451            | 738            | 1,018          |
| South Africa .....              | 1,441         | 624            | 1,088          | 1,325          | 1,677          |
| United States of America .....  | 4,567         | 10,354         | 9,106          | 9,502          | 11,316         |
| U.S.S.R. ....                   | 634           | 1,804          | 2,197          | 8,720          | 11,253         |
| For orders .....                | 2,242         | 1,015          | 1,707          | 2,472          | 696            |
| Other .....                     | 12,308        | 13,221         | 13,255         | 15,060         | 11,974         |
| <b>Total .....</b>              | <b>99,279</b> | <b>121,988</b> | <b>106,472</b> | <b>161,080</b> | <b>151,121</b> |

Exports to principal countries during the year 1964-65 classified by commodity groups are shown below.

Direct Oversea Exports from South Australia to Principal Countries:  
Commodity Groups, 1964-65

| Commodity Group                            | United Kingdom | New Zealand  | France       | Japan         | U.S.A.        | U.S.S.R.      | Other         | Total          |
|--|----------------|--------------|--------------|---------------|---------------|---------------|---------------|----------------|
|  | £'000          |              |              |               |               |               |               |                |
| Foodstuffs of animal origin—               |                |              |              |               |               |               |               |                |
| Meats, poultry and game ..                 | 1,293          | ..           | 7            | 76            | 580           | ..            | 568           | 2,524          |
| Dairy products, eggs, honey ..             | 1,516          | ..           | ..           | 131           | 19            | ..            | 302           | 1,968          |
| Other (including fish) .....               | 1              | ..           | 57           | 6             | 592           | ..            | 79            | 735            |
| Foodstuffs of vegetable origin—            |                |              |              |               |               |               |               |                |
| Cereals, bakery products, vegetables ..... | 5,410          | 374          | ..           | 4,073         | ..            | 7,162         | 18,182        | 35,201         |
| Fruit (including pulp, and juices) .....   | 2,582          | 626          | 24           | 22            | 73            | ..            | 2,213         | 5,540          |
| Other .....                                | 107            | 1            | ..           | 1             | 40            | ..            | 303           | 452            |
| Spirituos liquors .....                    | 1,065          | 96           | ..           | 11            | 4             | ..            | 628           | 1,804          |
| Animal substances—                         |                |              |              |               |               |               |               |                |
| Fibres (including wool) ..                 | 7,752          | 117          | 3,063        | 12,702        | 3,179         | 4,091         | 15,364        | 46,268         |
| Hides and skins .....                      | 240            | ..           | 2,794        | 103           | 67            | ..            | 953           | 4,157          |
| Oils, fats and waxes .....                 | 216            | 237          | 12           | 34            | 20            | ..            | 564           | 1,083          |
| Rocks and minerals .....                   | 5,716          | 348          | 3            | 5,955         | 1,763         | ..            | 3,441         | 17,226         |
| Metals and metal manufactures—             |                |              |              |               |               |               |               |                |
| Basic shapes—                              |                |              |              |               |               |               |               |                |
| Pig lead .....                             | 11,990         | 612          | ..           | 1,580         | 4,487         | ..            | 1,863         | 20,532         |
| Other .....                                | 148            | 548          | ..           | 1,098         | 139           | ..            | 1,589         | 3,522          |
| Vehicles and parts .....                   | 83             | 3,530        | ..           | 2             | 16            | ..            | 1,631         | 5,262          |
| Other manufactures .....                   | 228            | 133          | ..           | 24            | 99            | ..            | 137           | 621            |
| Machinery and electrical appliances .....  | 232            | 439          | 1            | 2             | 49            | ..            | 493           | 1,216          |
| Bullion and specie .....                   | 2              | 51           | 94           | ..            | ..            | ..            | 588           | 735            |
| All other .....                            | 426            | 534          | 15           | 197           | 189           | ..            | 914           | 2,275          |
| <b>Total .....</b>                         | <b>39,007</b>  | <b>7,646</b> | <b>6,070</b> | <b>26,017</b> | <b>11,316</b> | <b>11,253</b> | <b>49,812</b> | <b>151,121</b> |

.. Nil or less than £500.

### Exports of Wool

In 1960-61 Japan replaced the United Kingdom as the principal market for wool exported from South Australia, and in recent years over 25% of wool exported has been to Japan. There was a sharp increase in wool exports to U.S.S.R. and to Mainland China in 1964-65.

#### Direct Oversea Exports of Wool from South Australia

| Country of Consignment          | 1960-61       | 1961-62       | 1962-63       | 1963-64       | 1964-65       |
|---------------------------------|---------------|---------------|---------------|---------------|---------------|
|                                 | £'000         |               |               |               |               |
| United Kingdom .....            | 7,286         | 8,498         | 7,572         | 9,507         | 7,752         |
| Belgium-Luxembourg .....        | 1,475         | 2,561         | 2,149         | 2,912         | 2,745         |
| China, Republic of—Mainland ... | 302           | 1,272         | 436           | 1,724         | 4,699         |
| France .....                    | 3,424         | 3,647         | 3,330         | 4,451         | 3,063         |
| Germany, Federal Republic of .. | 1,511         | 1,641         | 1,746         | 2,432         | 2,350         |
| Italy .....                     | 1,499         | 3,051         | 2,478         | 2,940         | 1,756         |
| Japan .....                     | 9,902         | 10,553        | 10,964        | 17,507        | 12,702        |
| Poland .....                    | 1,033         | 1,220         | 1,135         | 909           | 913           |
| U.S.A. ....                     | 595           | 1,189         | 2,831         | 2,257         | 3,179         |
| U.S.S.R. ....                   | 632           | 1,788         | 2,189         | 1,754         | 4,090         |
| Other .....                     | 4,505         | 6,133         | 6,869         | 7,306         | 3,018         |
| <b>Total .....</b>              | <b>32,164</b> | <b>41,553</b> | <b>41,699</b> | <b>53,699</b> | <b>46,267</b> |

### Exports of Wheat

The total amount of wheat exported from South Australia fluctuates considerably from year to year, depending on the success of the harvest. The value of wheat exported was at a record level in 1963-64, and although the 1964-65 value was about 32% lower, this was still the second highest ever recorded.

The principal countries of consignment also show marked variations over time; a feature of exports in the last two years has been the large quantities of wheat shipped to U.S.S.R.

#### Direct Oversea Exports of Wheat from South Australia

| Country of Consignment          | 1960-61       | 1961-62       | 1962-63       | 1963-64       | 1964-65       |
|---------------------------------|---------------|---------------|---------------|---------------|---------------|
|                                 | £'000         |               |               |               |               |
| United Kingdom .....            | 2,964         | 5,219         | 3,580         | 11,215        | 4,358         |
| New Zealand .....               | 1,984         | 1,947         | 1,347         | —             | 370           |
| Rhodesia and Nyasaland (a) ...  | 1,354         | 1,323         | 1,222         | 1,967         | 503           |
| China, Republic of—Mainland ..  | 3,694         | 2,344         | 581           | 3,189         | 2,452         |
| Germany, Federal Republic of .. | 1,204         | 1,870         | 701           | 1,319         | —             |
| Iran .....                      | 491           | 435           | 523           | 234           | 2,868         |
| Iraq .....                      | 1,742         | 14            | —             | 1,231         | 514           |
| Lebanon .....                   | 751           | 1,890         | 1,589         | 2,952         | 376           |
| Norway .....                    | —             | 1,109         | 1,998         | 2,902         | 1,952         |
| U.S.S.R. ....                   | —             | —             | 3             | 6,358         | 7,162         |
| Other .....                     | 2,087         | 5,268         | 1,999         | 3,985         | 3,498         |
| <b>Total .....</b>              | <b>16,271</b> | <b>21,419</b> | <b>13,543</b> | <b>35,352</b> | <b>24,053</b> |

(a) Now the separate countries of Southern Rhodesia, Zambia and Malawi.

## TRADE AT PRINCIPAL PORTS

The following table shows the value of imports and exports at the principal ports during each of the years 1960-61 to 1964-65.

Over 95% of imports are unloaded at Port Adelaide but the proportion of exports loaded there is much lower and in recent years has been of the order of 60%. Exports from Port Pirie principally comprise pig-lead and concentrates and ores (the produce of Broken Hill) and wheat. Shipments of wheat and to a lesser extent barley constitute the major part of exports from Port Lincoln, Wallaroo, Ardrossan and Thevenard, while the principal commodity exported from Port Augusta is copper concentrate from the Northern Territory.

## Value of Oversea Trade: Principal Ports, South Australia

| Port                   | 1960-61       | 1961-62        | 1962-63        | 1963-64        | 1964-65        |
|------------------------|---------------|----------------|----------------|----------------|----------------|
| <b>IMPORTS (£'000)</b> |               |                |                |                |                |
| Port Adelaide .....    | 68,483        | 48,325         | 67,577         | 85,686         | 98,984         |
| Port Augusta .....     | 970           | 2              | 2              | 1              | 3              |
| Port Lincoln .....     | 953           | 686            | 342            | 615            | 642            |
| Port Pirie .....       | 311           | 699            | 237            | 653            | 158            |
| Wallaroo .....         | 446           | 498            | 296            | 388            | 519            |
| Whyalla .....          | 219           | 1,483          | 1,459          | 2,482          | 2,122          |
| <b>Total .....</b>     | <b>71,382</b> | <b>51,693</b>  | <b>69,913</b>  | <b>89,825</b>  | <b>102,428</b> |
| <b>EXPORTS (£'000)</b> |               |                |                |                |                |
| Port Adelaide .....    | 56,937        | 71,469         | 68,691         | 96,703         | 86,199         |
| Ardrossan .....        | 3,049         | 3,273          | 2,402          | 5,141          | 4,843          |
| Port Augusta .....     | 1,678         | 2,018          | 2,168          | 2,252          | 2,871          |
| Edithburgh .....       | 122           | 162            | 190            | 186            | 91             |
| Port Lincoln .....     | 7,921         | 8,690          | 4,470          | 12,482         | 8,314          |
| Port Pirie .....       | 18,867        | 22,468         | 20,576         | 32,182         | 38,954         |
| Thevenard .....        | 578           | 1,936          | 2,102          | 3,565          | 3,770          |
| Wallaroo .....         | 8,095         | 9,955          | 4,932          | 8,195          | 5,421          |
| Whyalla .....          | 2,032         | 2,017          | 941            | 374            | 658            |
| <b>Total .....</b>     | <b>99,279</b> | <b>121,988</b> | <b>106,472</b> | <b>161,080</b> | <b>151,121</b> |

Some details of shipping arrivals at the various South Australian ports are given on page 447.

## CUSTOMS AND EXCISE DUTY

Excise duty is levied on specific goods of Australian manufacture, principally for the purpose of raising revenue. Although these excise goods do not form a part of overseas trade, the rate of excise duty is in some cases related to the import duty on similar goods.

The following table gives details of the value of customs duty and excise duty collected in South Australia during each of the years 1960-61 to 1964-65.

## Customs and Excise: Net Revenue, South Australia

| Statistical Class and Excise Division                         | 1960-61       | 1961-62       | 1962-63       | 1963-64       | 1964-65       |
|---|---------------|---------------|---------------|---------------|---------------|
| <i>Customs</i>  | £'000         |               |               |               |               |
| Foodstuffs of animal origin.....                              | 42            | 36            | 40            | 47            | 53            |
| Foodstuffs of vegetable origin, non-alcoholic beverages ..... | 98            | 94            | 96            | 102           | 75            |
| Spiruous and alcoholic liquors .                              | 255           | 407           | 344           | 414           | 515           |
| Tobacco, cigars and cigarettes ..                             | 214           | 260           | 339           | 419           | 497           |
| Textiles .....  | 468           | 324           | 380           | 396           | 449           |
| Apparel.....  | 133           | 75            | 98            | 108           | 128           |
| Oils, fats and waxes .....                                    | 2,058         | 1,719         | 1,858         | 1,135         | 1,195         |
| Metals and metal manufactures—                                |               |               |               |               |               |
| Motor vehicles.....   | 806           | 395           | 1,322         | 1,090         | 1,052         |
| Other.....  | 370           | 195           | 415           | 451           | 711           |
| Dynamo electrical machinery, electrical appliances .....      | 531           | 272           | 450           | 436           | 440           |
| Machines and machinery, not dynamo electrical .....           | 836           | 490           | 729           | 766           | 899           |
| Rubber and rubber manufactures                                | 33            | 37            | 72            | 81            | 164           |
| Wood and wicker .....   | 361           | 223           | 266           | 435           | 618           |
| Earthenware, cement, china ....                               | 215           | 202           | 239           | 213           | 258           |
| Pulp, paper, and board .....                                  | 61            | 65            | 88            | 85            | 69            |
| Paper manufactures and stationery                             | 33            | 28            | 31            | 39            | 48            |
| Sporting material, toys, jewellery                            | 147           | 128           | 147           | 163           | 195           |
| Chemicals, medicinal and pharmaceutical products .....        | 77            | 69            | 81            | 88            | 105           |
| Other goods .....   | 353           | 287           | 422           | 417           | 568           |
| Primage and sundry duties .....                               | 120           | 91            | 118           | 131           | 160           |
| <b>Total customs duties ...</b>                               | <b>7,211</b>  | <b>5,397</b>  | <b>7,535</b>  | <b>7,016</b>  | <b>8,199</b>  |
| <i>Excise</i>   |               |               |               |               |               |
| Beer .....  | 8,815         | 9,027         | 9,410         | 9,738         | 10,106        |
| Spirits .....   | 1,019         | 1,026         | 1,090         | 1,153         | 1,350         |
| Tobacco, cigars, cigarettes.....                              | 5,497         | 5,382         | 5,098         | 4,620         | 5,914         |
| Petrol .....  | 4,216         | 4,667         | 4,952         | 6,250         | 7,088         |
| Other excise duty .....                                       | 738           | 677           | 799           | 923           | 724           |
| <b>Total excise duties .....</b>                              | <b>20,285</b> | <b>20,779</b> | <b>21,349</b> | <b>22,684</b> | <b>25,182</b> |
| <b>Total customs and excise duties</b>                        | <b>27,496</b> | <b>26,176</b> | <b>28,884</b> | <b>29,700</b> | <b>33,381</b> |

## 10.3. PRICES

## MEASUREMENTS OF PRICE MOVEMENTS

The prices of a wide range of commodities and services are collected at regular intervals by the Commonwealth Statistician for the purpose of compiling retail price indexes. These indexes aim to measure the degree of change in price levels, or more specifically the proportionate change in the aggregate cost of specified quantities and qualities of a selected list of items.

As these indexes are used to measure changes and not aggregates it is traditional for presentation purposes to select a certain year, known as the base year, to equate the average cost for that year to 100 (or some other convenient number) and to adjust other years on a proportionate basis.

The process of deciding the relative importance of the various items which compose an index is known as the "weighting" of the index. In the case of a retail price index the weighting is normally based on the relative importance of the selected items in household expenditure. The list of items must be a selected list as it would be impossible to determine at regular intervals the cost of all items entering household expenditure. The list is accordingly limited to items which are relatively significant in total expenditure and for which price variations can be ascertained with reasonable accuracy.

Over time it becomes necessary to substitute new grades, qualities or types of articles for those formerly used as indicators of price movements in an effort to keep the index representative of current conditions. These substitutions can normally be achieved without injury to the index. From time to time major changes in the overall pattern of household expenditure are noted, and in the past these have prompted the abandonment of an existing index in favour of a different index, the composition and weighting of which was more representative of expenditure at that time.

### **Previous Retail Price Indexes**

The earliest retail price index was the "A" Series Index. First compiled in 1912, it covered food, groceries, and house rents. The "A" Series Index was used for wage adjustment purposes by the Commonwealth Court of Conciliation and Arbitration from 1913 until 1933 when it was replaced by the "C" Series Index.

The "C" Series Index was first compiled in 1921 and involved a much wider coverage than the "A" Series Index. Included were food and groceries, rent of 4 and 5 roomed houses, clothing, household drapery, household utensils, fuel, lighting, fares, and smoking, as well as other miscellaneous items.

In 1925 a separate index was prepared from the food, groceries and rent components of the "C" Series Index. Known as the "B" Series Index, it replaced the "A" Series Index for general statistical purposes.

A further index, the "D" Series, was used by the Commonwealth Court of Conciliation and Arbitration during 1933-34. It was derived by combining the "A" and "C" Series Indexes.

Between 1934 and 1953 the Commonwealth basic wage was automatically adjusted each quarter for price variations. Early adjustments were made in accordance with movements in the "C" Series Index, but from 1937 special "Court" Indexes were issued by the Industrial Registrar, these in fact being arithmetical conversions of the "C" Series Index.

By the end of World War II the "C" Series Index had been in use for 25 years and its weighting was considerably out of date, even though it had been slightly revised in 1936. Wartime controls, including rationing, had caused



recurrent changes in consumption, and the pattern of household expenditure which emerged with the abolition of control in 1948 pointed to the need for complete revision of the weighting of the "C" Series Index. However, not only had household expenditure changed over the war years, but it was proving increasingly volatile in the early post war period. This suggested the need for an index with a greater adaptability to change than the "C" Series Index with its relatively fixed weights. For example, as the post war trends for home ownership and private motoring developed it would become desirable to give increased weight to these items.

The immediate problem of the inappropriateness of the "C" Series weighting was countered by the introduction of the Interim Index in 1954. A transitional measure based on the "C" Series model, it embraced a wider range of commodities and services than did the "C" Series Index. Compilation of the "C" Series Index, however, continued until 1960 and details of its movement between 1901 and 1959 are given in the Statistical Summary on page 524.

The more fundamental problem of taking into account successive major changes in the pattern of expenditure and modes of living was left to the Consumer Price Index, which succeeded the Interim Index in 1960.

### Consumer Price Index

The Consumer Price Index is a quarterly measure of variations in the retail prices of certain goods and services which make up a high proportion of the expenditure of wage earner households. Rather than a single index, it consists of a chain of linked indexes each representing a significant variation in composition and/or weighting. The weighting patterns adopted relate to an estimated aggregate expenditure for all wage earner households, and not to some estimated expenditure of a single household. In this way it is possible to give representation to certain major expenditures which relate to some households and not to others.

The Consumer Price Index was compiled for the first time in 1960, and retrospective calculations have been made dating back to 1948. This involved the linking of four indexes, with significant changes in composition or weighting introduced at the June Quarter 1952, June Quarter 1956 and the March Quarter 1960. The principal changes involved were—

- (a) the introduction of private motoring (1952) and of television (1960),
- (b) alterations in the proportions of houses under various modes of occupancy (1952 and 1956), and
- (c) changes in the weights of fuel and fares (1952 and 1956) and of private motoring (1956).

For most items, however, the weights used have not varied over the period of the index, and these are based on the estimated pattern of consumption for the years 1952-53 to 1956-57.

The wide range of commodities and services in the Consumer Price Index are arranged in five major groups, with index numbers compiled for each of these groups as well as a total for all items. Index numbers for Adelaide for these individual groups and for "all groups" are recorded below.

## Consumer Price Index, Adelaide

Base Year 1952-53 = 100

| Year          | Food  | Clothing and Drapery | Housing | Household Supplies and Equipment | Miscellaneous | All Groups |
|---------------|-------|----------------------|---------|----------------------------------|---------------|------------|
| 1948-49 ..... | 56.1  | 58.3                 | 68.7    | 69.5                             | 67.2          | 61.6       |
| 1949-50 ..... | 60.7  | 66.8                 | 71.6    | 72.0                             | 69.5          | 66.2       |
| 1950-51 ..... | 70.1  | 76.6                 | 75.9    | 79.2                             | 77.6          | 74.7       |
| 1951-52 ..... | 90.9  | 93.6                 | 85.0    | 92.8                             | 92.0          | 91.4       |
| 1952-53 ..... | 100.0 | 100.0                | 100.0   | 100.0                            | 100.0         | 100.0      |
| 1953-54 ..... | 103.5 | 101.4                | 109.9   | 100.6                            | 99.1          | 102.3      |
| 1954-55 ..... | 106.1 | 101.7                | 113.0   | 100.4                            | 99.1          | 103.5      |
| 1955-56 ..... | 110.9 | 101.6                | 120.8   | 100.1                            | 104.1         | 106.9      |
| 1956-57 ..... | 114.7 | 101.7                | 129.2   | 103.2                            | 111.6         | 111.1      |
| 1957-58 ..... | 111.8 | 104.4                | 133.9   | 104.0                            | 114.2         | 111.9      |
| 1958-59 ..... | 117.5 | 105.4                | 137.1   | 105.0                            | 114.6         | 114.5      |
| 1959-60 ..... | 123.1 | 106.8                | 140.0   | 106.0                            | 118.8         | 118.0      |
| 1960-61 ..... | 132.2 | 109.5                | 148.7   | 106.1                            | 121.4         | 122.9      |
| 1961-62 ..... | 127.6 | 111.2                | 153.5   | 106.7                            | 121.9         | 122.5      |
| 1962-63 ..... | 126.0 | 111.7                | 154.9   | 106.2                            | 121.6         | 122.1      |
| 1963-64 ..... | 129.1 | 112.8                | 158.5   | 104.4                            | 122.3         | 123.5      |
| 1964-65 ..... | 136.6 | 114.4                | 164.6   | 104.9                            | 129.6         | 128.6      |

The "all groups" index for Adelaide is shown below with that for each of the other State capital cities. It is emphasized that these numbers show trends in the index within each individual city, but they do *not* measure differences in price levels between cities.

## Consumer Price Index, Adelaide and Other State Capital Cities

Base Year 1952-53 = 100

| Year       | Sydney | Melbourne | Brisbane | Adelaide     | Perth | Hobart | Six Capital Cities |
|------------|--------|-----------|----------|--------------|-------|--------|--------------------|
| 1952-53 .. | 100.0  | 100.0     | 100.0    | <b>100.0</b> | 100.0 | 100.0  | 100.0              |
| 1959-60 .. | 117.8  | 120.0     | 121.2    | <b>118.0</b> | 116.9 | 120.8  | 118.9              |
| 1960-61 .. | 122.1  | 125.9     | 125.4    | <b>122.9</b> | 121.2 | 127.5  | 123.8              |
| 1961-62 .. | 122.6  | 126.3     | 127.3    | <b>122.5</b> | 121.6 | 128.1  | 124.3              |
| 1962-63 .. | 123.2  | 126.2     | 127.7    | <b>122.1</b> | 122.2 | 128.0  | 124.5              |
| 1963-64 .. | 124.5  | 127.1     | 129.0    | <b>123.5</b> | 123.8 | 129.4  | 125.7              |
| 1964-65 .. | 128.8  | 132.2     | 133.9    | <b>128.6</b> | 127.6 | 133.6  | 130.4              |

## RETAIL PRICES OF FOOD

The average retail prices in Adelaide of certain food items are given in the following table.

## Average Retail Prices of Selected Food Items, Adelaide

| Item                          | Unit               | 1960  | 1961  | 1962  | 1963  | 1964     |
|-------------------------------|--------------------|-------|-------|-------|-------|----------|
| Pence                         |                    |       |       |       |       |          |
| <b>Groceries—</b>             |                    |       |       |       |       |          |
| Bread (a) .....               | 2 lb.              | 16.50 | 16.75 | 17.50 | 17.63 | 17.63    |
| Self-raising flour .....      | 2 lb.              | 18.39 | 18.81 | 19.49 | 18.98 | 17.97    |
| Tea .....                     | $\frac{1}{2}$ lb.  | 38.81 | 39.61 | 38.42 | 37.76 | 37.47    |
| Sugar .....                   | 1 lb.              | 10.63 | 10.95 | 10.95 | 10.94 | 10.98    |
| Rice .....                    | 1 lb.              | 12.00 | 12.19 | 13.23 | 13.19 | 15.22    |
| Jam, plum .....               | $1\frac{1}{2}$ lb. | 33.30 | 34.00 | 33.02 | 32.33 | 32.44    |
| Peaches, canned .....         | 29oz.              | 37.45 | 36.62 | 34.78 | 31.61 | 30.88    |
| Potatoes .....                | 7 lb.              | 33.03 | 58.89 | 37.18 | 24.78 | 48.76    |
| Onions, brown .....           | 1 lb.              | 9.22  | 11.01 | 8.53  | 8.02  | 9.65     |
| <b>Dairy products—</b>        |                    |       |       |       |       |          |
| Butter, factory .....         | 1 lb.              | 56.75 | 57.14 | 56.80 | 55.98 | 57.38    |
| Cheese, processed .....       | $\frac{1}{2}$ lb.  | (b)   | (b)   | (b)   | (b)   | 27.35    |
| Eggs, large .....             | doz.               | 63.13 | 58.92 | 55.68 | 65.48 | 66.72    |
| Bacon, rashers .....          | 1 lb.              | 81.80 | 77.57 | 73.11 | 79.05 | 88.35    |
| Milk—fresh, bottled (a) ..... | quart              | 19.54 | 20.00 | 20.00 | 20.00 | 20.33    |
| <b>Meat—</b>                  |                    |       |       |       |       |          |
| <b>Beef—</b>                  |                    |       |       |       |       |          |
| Sirloin .....                 | 1 lb.              | 53.99 | 55.14 | 45.51 | 47.97 | (c)56.42 |
| Rump steak .....              | 1 lb.              | 80.04 | 81.59 | 77.63 | 80.46 | 85.13    |
| Sausages .....                | 1 lb.              | 24.11 | 24.68 | 23.75 | 24.45 | 25.38    |
| Corned silverside .....       | 1 lb.              | 55.43 | 56.41 | 51.48 | 53.71 | 57.54    |
| <b>Lamb—</b>                  |                    |       |       |       |       |          |
| Leg .....                     | 1 lb.              | (b)   | (b)   | 44.88 | 46.40 | 48.44    |
| Forequarter .....             | 1 lb.              | (b)   | (b)   | 26.64 | 27.63 | 29.93    |
| Loin chops .....              | 1 lb.              | (b)   | (b)   | 50.74 | 53.23 | 55.58    |
| <b>Mutton—</b>                |                    |       |       |       |       |          |
| Leg .....                     | 1 lb.              | 30.79 | 31.73 | 28.67 | 30.43 | 33.41    |
| Forequarter .....             | 1 lb.              | 17.57 | 17.24 | 14.98 | 16.43 | 19.02    |
| Loin chops .....              | 1 lb.              | 31.25 | 31.78 | 28.08 | 29.57 | 32.79    |
| <b>Pork—</b>                  |                    |       |       |       |       |          |
| Leg .....                     | 1 lb.              | 65.91 | 58.94 | 52.43 | 63.41 | 71.01    |
| Chops .....                   | 1 lb.              | 66.04 | 59.37 | 52.30 | 63.75 | 71.39    |

(a) Delivered.  
 (b) Not collected.  
 (c) Without bone.

Prices of agricultural products are shown in the table on page 334, and separate details for wheat, barley, wool, and livestock are given under the appropriate headings in Part 9.1.

## PRICE CONTROL

Following the outbreak of World War II, the Commonwealth Government, acting under the authority of the National Security Act, established price control in Australia. A Commonwealth Prices Commissioner was appointed and given extensive powers in the control of prices. The National Security Act expired at the end of 1946 but temporary legislation provided for the continuation of price regulation until the end of 1948.

During 1948 the Commonwealth Government held a referendum seeking authority for permanent control over prices and rents. However, the proposal was rejected and the States agreed to assume responsibility for price control. In South Australia the necessary machinery was created by the Prices Act of 1948. Provision was made for the retention of existing Commonwealth price regulation orders until altered in accordance with the Act.

The State Prices Department determines prices for a wide range of controlled goods and services and investigates complaints concerning excessive prices for goods and charges for services whether subject to price control or not. Special investigations are carried out on behalf of the Government and also in respect of complaints arising from hire-purchase transactions.

Amendments to the Prices Act in 1963 and 1964 dealt with certain unfair trading practices relating to the sale and advertising of goods.

### RENT CONTROL

Extensive rent control was introduced in South Australia at the beginning of World War II, with the passing by the State Government of the Increase in Rent (War Restrictions) Act which pegged rents at the level prevailing at 1st September 1939. In 1942 this Act was replaced by the Landlord and Tenant (Control of Rents) Act. Although providing the same benchmark, this Act allowed the South Australian Housing Trust to determine a variation in rent, either upon application by the landlord or tenant, or in certain cases on its own initiative. An appeal against a Housing Trust determination could be made to a Local Court. From the beginning of 1943 to the end of 1962, 60,180 applications for rent determinations were dealt with by the Housing Trust.

Following an inquiry held in 1951 on the future of rent control, proportionate loadings were introduced to allow for increases in property costs since 1939. The gradual relaxation of rent control was achieved through periodic extensions of these loadings and through the exclusion of long-term leases from the provisions of the Act.

At the end of 1962 the Landlord and Tenant (Control of Rents) Act was replaced by the Excessive Rents Act, which currently provides that the tenant of any premises, except where a lease in excess of three years applies, may apply to a Local Court to determine whether the rent is excessive.

Limited provisions for rent control actually existed prior to the wartime legislation through the Housing Improvement Act, 1940-1961. This Act empowers the Housing Trust to control the rents of substandard houses which are not improved after the Trust has notified its intention to declare them substandard, and in which tenants still reside.

## PART 11

# TRANSPORT AND COMMUNICATIONS

### 11.1. TRANSPORT

A network of sea, rail, road, and air services has been established between South Australia and the other States of Australia. Transport between the eastern States and Western Australia, and to a lesser extent Northern Territory, is made *via* South Australian services.

Distances between Adelaide and other Australian capital cities, and Darwin, are shown below:

**Distances Between Adelaide and Other Capital Cities**

| Method of Travel | Canberra | Sydney | Melbourne | Brisbane | Perth    | Hobart | Darwin   |
|------------------|----------|--------|-----------|----------|----------|--------|----------|
|                  |          |        |           | Miles    |          |        |          |
| Road . . . .     | 753      | 890    | 464       | 1,518    | 1,704    | —      | 1,984    |
| Rail . . . . .   | 1,006    | 1,079  | 483       | 1,692    | 1,622    | —      | —        |
| Sea (a) . . . .  | —        | 973    | 514       | 1,471    | (b)1,343 | 756    | (c)3,133 |
| Air . . . . .    | 614      | 743    | 407       | 1,222    | 1,377    | 799    | 1,719    |

(a) Distance in nautical miles. (b) Fremantle. (c) Via Fremantle.

The location of the population within the State, as described in Part 5.1, created the demand for transport services to the major centres, and rural settlement throughout most of the State was assisted by the early development of rail services and the construction of arterial roads. The extension or improvement of transport services in and near the metropolitan area has followed the rapid housing development in the post-war period.

## RAILWAYS

In Part 8.4, railways in South Australia were discussed under the headings of ownership and control, historical survey, and standardization of railway gauges. It was mentioned that both the State and Commonwealth Governments operate railways in this State and that there is one privately-owned railway from Iron Knob and Iron Baron to Whyalla. This section deals with the operation of the South Australian Railways as one means of transport within and to and from the State. In the Year Book of the Commonwealth of Australia, the operations of the Commonwealth Railways in South Australia are included in figures for all Commonwealth Railways in Australia. No details are available on the operations of the private railway.

## SOUTH AUSTRALIAN RAILWAYS

Funds employed in the South Australian Railways at 30th June 1964 totalled £65,202,000, including £2,515,000 representing capital losses incurred prior to 1927 on which the Railways are not responsible for debt charges. Operations for 1963-64 resulted in a deficit of £3,175,000 and after taking into account contributions from Consolidated Revenue totalling £4,000,000 towards increases in working costs and interest not covered by rises in freight rates and fares, there was a surplus of £825,000. The following summary shows details of Funds Employed, Working Expenses, and Revenue for the past five years.

## South Australian Railways: Funds Employed, Working Expenses and Revenue

| Particulars                                     | 1959-60 | 1960-61 | 1961-62 | 1962-63 | 1963-64 |
|---|---------|---------|---------|---------|---------|
|   |         |         | £'000   |         |         |
| Funds employed .....                            | 54,540  | 59,698  | 60,884  | 62,682  | 65,202  |
| Working expenses .....                          | 15,391  | 15,376  | 15,671  | 15,561  | 15,532  |
| Revenue .....                                   | 12,826  | 13,942  | 13,992  | 13,913  | 14,836  |
| Deficit on operating ...                        | 2,565   | 1,434   | 1,679   | 1,648   | 696     |
| Debt charges .....                              | 2,107   | 2,170   | 2,332   | 2,463   | 2,479   |
| Total deficit for year ...                      | 4,672   | 3,604   | 4,011   | 4,111   | 3,175   |
| Less contributions from<br>Consolidated Revenue | 4,200   | 4,300   | 4,100   | 3,900   | 4,000   |
| Net surplus (+) or deficit (-) ..               | -472    | +696    | +89     | -211    | +825    |

## Sources of Revenue

The main sources of revenue of the South Australian Railways are from the carriage of freight (general merchandise, minerals, primary products and livestock) and passengers carried on suburban and country lines. The last general increase in freight rates and in country passenger fares occurred in August 1960. Suburban passenger fares were increased in September 1964 and some interstate fares were increased in July 1962.

The railways by-law rate structure was determined by the need to develop the country and this led to the philosophy of charging what the traffic would bear. Charges were higher for expensive commodities than for cheap ones, even though the cost were the same in each case. This type of rate helped to subsidize those people who lived in sparsely populated areas which were serviced by developmental railways. In the past, losses from these services were recouped by charging higher rates on those lines which carried the greater volume of freight. With the increased competition from road transport in recent years, on some lines it has been necessary to introduce special freight rates to meet that competition.

Sources of revenue and the amounts received for the years 1959-60 to 1963-64 are shown in the table below.

**South Australian Railways: Sources of Revenue**

| Revenue from—                                       | 1959-60       | 1960-61       | 1961-62       | 1962-63       | 1963-64       |
|---|---------------|---------------|---------------|---------------|---------------|
|   | £'000         |               |               |               |               |
| Country passengers .....                            | 813           | 828           | 844           | 854           | 839           |
| Suburban passengers .....                           | 795           | 798           | 783           | 792           | 819           |
| Parcels, mails, etc. ....                           | 456           | 465           | 464           | 465           | 492           |
| General merchandise and miscellaneous freight ..... | 5,037         | 5,592         | 5,654         | 5,433         | 5,946         |
| Wool .....  | 250           | 243           | 241           | 238           | 244           |
| Wheat .....   | 602           | 1,048         | 1,253         | 1,000         | 1,631         |
| Livestock .....                                     | 777           | 688           | 608           | 680           | 519           |
| Minerals .....                                      | 3,221         | 3,387         | 3,172         | 3,450         | 3,308         |
| Rents and miscellaneous .....                       | 458           | 480           | 564           | 583           | 619           |
| Refreshment services and book-stalls .....          | 417           | 413           | 409           | 418           | 419           |
| <b>Total .....</b>                                  | <b>12,826</b> | <b>13,942</b> | <b>13,992</b> | <b>13,913</b> | <b>14,836</b> |

The main increases in revenue in 1963-64 were from the carriage of general merchandise, etc. and wheat; the higher revenue from wheat freight reflects the record wheat harvest of that year. Revenue from road motor services amounted to £88,800 in 1963-64 and is included in revenue from passengers, parcels, mails, etc., and miscellaneous freight.

Further details of passenger traffic and freight traffic which resulted in the revenue shown in the previous table, are set out below.

**South Australian Railways: Passenger Journeys and Passenger Train Mileages 1959-60 to 1963-64**

| Year          | No. of Passengers Carried |          | Passenger Train Mileage |          | Average Miles Each Passenger Carried |          | Average Earnings per Passenger Mile |          |
|---------------|---------------------------|----------|-------------------------|----------|--------------------------------------|----------|-------------------------------------|----------|
|               | Country                   | Suburban | Country                 | Suburban | Country                              | Suburban | Country                             | Suburban |
|               | '000                      | '000     | '000                    | '000     | No.                                  | No.      | Pence                               | Pence    |
| 1959-60 ..... | 1,040                     | 15,997   | 2,089                   | 2,134    | 101.31                               | 8.01     | 1.85                                | 1.49     |
| 1960-61 ..... | 990                       | 14,584   | 2,039                   | 2,082    | 101.69                               | 8.05     | 1.97                                | 1.63     |
| 1961-62 ..... | 965                       | 14,211   | 2,043                   | 1,962    | 104.24                               | 8.08     | 2.01                                | 1.64     |
| 1962-63 ..... | 944                       | 13,978   | 2,014                   | 1,941    | 105.69                               | 8.24     | 2.05                                | 1.65     |
| 1963-64 ..... | 895                       | 14,332   | 1,954                   | 1,967    | 108.20                               | 8.38     | 2.08                                | 1.64     |

Note.—“Country” journeys here includes all interstate journeys.

The number of passengers carried in 1942-43 was nearly 31 million persons, a substantial increase on the 17.6 million in 1939-40. After a decline in the post war period, the number settled at about the pre-war level in 1949-50, but from 1960-61 the number of passengers carried dropped to a lower level of about 15 million persons. This post-war pattern of decline mainly reflects trends in suburban passenger traffic. Country passenger traffic has declined steadily since 1944-45.

Interstate passenger and freight services are operated in conjunction with interstate railways including Commonwealth Railways *e.g.* in conjunction with the Victorian Railways to Melbourne, Commonwealth and Western Australian Railways to Perth, and the Commonwealth Railways to Alice Springs. Passenger services offer sleeping accommodation and first and second class travel. The number of passengers carried on South Australian Railways on these services is included under “country” in the above table.

## South Australian Railways: Freight Carried

| Freight                           | 1959-60   | 1960-61 | 1961-62 | 1962-63 | 1963-64 |
|-----------------------------------|-----------|---------|---------|---------|---------|
|                                   | '000 Tons |         |         |         |         |
| Wool .....                        | 45        | 46      | 45      | 44      | 45      |
| Wheat .....                       | 390       | 631     | 762     | 583     | 966     |
| Barley .....                      | 329       | 476     | 541     | 216     | 290     |
| Livestock .....                   | 243       | 215     | 179     | 181     | 152     |
| Minerals .....                    | 1,269     | 1,290   | 1,195   | 1,389   | 1,431   |
| General merchandise .....         | 1,783     | 1,879   | 1,916   | 2,117   | 2,329   |
| Number of tons carried            | 4,059     | 4,537   | 4,638   | 4,530   | 5,213   |
|                                   | '000      |         |         |         |         |
| Goods and livestock train mileage | 2,664     | 2,784   | 2,733   | 2,771   | 2,745   |
|                                   | Pence     |         |         |         |         |
| Average earnings per ton-mile ... | 3.98      | 4.08    | 4.03    | 3.82    | 3.71    |

## Working Expenses

The cost of operating the South Australian Railways during 1963-64 was £15,532,000 plus debt charges which amounted to £2,479,000. The working expenses include the cost of administration, maintenance of permanent way, rolling stock maintenance and operation costs, salaries and wages of station staff, guards, and conductors, and other costs. A comparison of working expenses for the last five years is given in the following table. Since 1960 there has been a reduction of £710,000 in working expenses of the Rollingstock Branch, mainly as a result of greater use of diesel motive power.

## South Australian Railways: Working Expenses

| Expenses  | 1959-60 | 1960-61 | 1961-62 | 1962-63 | 1963-64 |
|---|---------|---------|---------|---------|---------|
|   | £'000   |         |         |         |         |
| Administration—   |         |         |         |         |         |
| Salaries, wages, expenses, etc. . .                       | 402     | 412     | 418     | 423     | 435     |
| Pay roll tax .....  | 213     | 212     | 221     | 219     | 222     |
| Superannuation Act—Pensions.                              | 451     | 477     | 509     | 531     | 542     |
| Way and works—  |         |         |         |         |         |
| Maintenance and superintendence of permanent way, etc.    | 3,077   | 3,108   | 3,194   | 3,162   | 3,162   |
| Rollingstock—   |         |         |         |         |         |
| General superintendence .....                             | 97      | 103     | 106     | 102     | 105     |
| Maintenance of rollingstock ..                            | 3,100   | 2,992   | 3,162   | 3,093   | 2,940   |
| Motive power, lubrication, etc..                          | 3,059   | 2,905   | 2,710   | 2,621   | 2,501   |
| Transportation and traffic—                               |         |         |         |         |         |
| General superintendence, station staff, guards, etc. .... | 3,653   | 3,770   | 3,863   | 3,887   | 4,068   |
| Miscellaneous—  |         |         |         |         |         |
| Refreshment services, road motors, etc. ....              | 515     | 516     | 515     | 516     | 530     |
| Stores—   |         |         |         |         |         |
| Salaries, wages, expenses .....                           | 209     | 204     | 263     | 267     | 286     |
| Depreciation (a) .....                                    | 615     | 677     | 710     | 740     | 741     |
| Total .....   | 15,391  | 15,376  | 15,671  | 15,561  | 15,532  |

(a) Additional depreciation is included in 'Maintenance of rollingstock' and other accounts to cover depreciation of workshop machinery. The amount for 1963-64 was £60,000.



The monthly average number of staff employed in operations and maintenance during 1963-64 was 8,585 persons (excluding those employed for special work).

### Debt Charges

These charges to the South Australian Railways have increased over the five-year period 1959-60 to 1963-64 because of additional loan funds made available for capital purposes and further advances provided under Railways Standardization and Railway Equipment Agreements. Net funds provided from loan moneys were £58,423,000 as at 30th June 1964 as against £53,104,000 at June 1960.

The amount for which the State was liable for interest and repayment under the Railways Standardization Agreement as at 30th June 1964 was £1,606,000, an increase from £1,369,000 at 30th June 1960. The total expenditure on standardization to 30th June 1964 was £7,258,000, of which £6,307,000 was provided by the Commonwealth (30% repayable by the State), and £951,000 was contributed from the Consolidated Revenue of the State. Repayable advances by the Commonwealth under the Railway Equipment Agreement during 1962-63 and 1963-64 amounted to £389,000.

|  |            |
|--|------------|
| Debt charges for 1963-64 were:   | £          |
| Interest on Loan Funds provided for capital purposes<br>(other than stores) including exchange on overseas<br>debt . . . . . | 2,313,480  |
| Interest on Loan Funds invested in Stores . . . . .  | 89,067     |
| Interest under Railways Standardization and Railway<br>Equipment Agreements . . . . .  | 76,580     |
|  | £2,479,127 |

### Train Mileage and Track Open

The average amount of track open for traffic during the year 1963-64 was 2,514 miles; the Balhannah-Mount Pleasant line of approximately 20 miles was closed during the year. Train miles run during 1963-64 totalled 6,666,050. Capital cost on miles open and completed at 30th June 1964 was £64,936,000.

The following table shows revenue and working expenses per train mile.

**South Australian Railways: Revenue and Working Expenses**

| Year    | Revenue | Working Expenses | Percentage of Working Expenses to Revenue | Train Mileage | Revenue per Train Mile | Working Expenses per Train Mile |
|---------|---------|------------------|---|---------------|------------------------|---------------------------------|
|         | £'000   | £'000            | %   | '000 Miles    | £ s. d.                | £ s. d.                         |
| 1959-60 | 12,826  | 15,391           | 120                                       | 6,887         | 1 17 3                 | 2 4 8                           |
| 1960-61 | 13,942  | 15,376           | 110                                       | 6,905         | 2 0 5                  | 2 4 6                           |
| 1961-62 | 13,992  | 15,671           | 112                                       | 6,737         | 2 1 6                  | 2 6 6                           |
| 1962-63 | 13,913  | 15,561           | 112                                       | 6,727         | 2 1 4                  | 2 6 3                           |
| 1963-64 | 14,836  | 15,532           | 105                                       | 6,666         | 2 4 6                  | 2 6 7                           |

Train mileage was 6,793,000 in 1942-43 but fell to about 6 million in 1946-47 and 1948-49. By 1952-53 train mileage had risen to 7.2 million but over the last seven years it has declined. Revenue and working expenses per train mile have both increased in recent years with revenue per train mile showing the more rapid increase.

**Locomotives and Rollingstock**

The development of traction in the South Australian Railways followed the pattern of development in other railway systems until early in the 1920's when more powerful steam locomotives, and goods wagons of greater capacity were introduced; the first main line diesel electric locomotive commenced operating in September 1951. With a twin unit, loads of 1,000 tons are hauled over the Adelaide hills.

Concurrently with the introduction of diesel electric locomotives there has been considerable development in the field of railcars equipped with diesel engines arranged for multiple unit operation. When a comparison was made of the relative economics to be expected from the conversion of the suburban system to electric or diesel traction, it was determined that the multiple unit diesel trains offered greater economic advantages. The first multiple unit diesel train was brought into service in October 1955. Multiple unit diesel railcars have also been introduced into the country passenger services.

The extent of the change from steam to diesel electric locomotives and from petrol to diesel railcars since 1950 is revealed in the following table.

**South Australian Railways: Locomotives and Rollingstock**

*As at 30th June in selected years*

| Particulars                    | 1950   | 1955  | 1957  | 1960  | 1963  |
|--------------------------------|--------|-------|-------|-------|-------|
|                                | Number |       |       |       |       |
| Locomotives—                   |        |       |       |       |       |
| Steam                          | 333    | 365   | 292   | 225   | 188   |
| Diesel electric—               |        |       |       |       |       |
| Main line .....                | } 2    | 12    | 16    | 30    | 38    |
| Shunting and transfer ...      |        |       | 10    | 12    | 12    |
| General purpose .....          |        |       | —     | —     | 25    |
| Total .....                    | 335    | 377   | 318   | 267   | 263   |
| Rail cars—Power—               |        |       |       |       |       |
| Diesel .....                   | —      | —     | 75    | 122   | 136   |
| Petrol (a) .....               | 51     | 53    | 15    | —     | —     |
| Rail cars—Non-power—           |        |       |       |       |       |
| Control equipped .....         | —      | —     | 4     | 7     | 7     |
| Rail cars—Trailer .....        | 29     | 28    | 42    | 52    | 58    |
| Coaches .....                  | 515    | 485   | 403   | 353   | 244   |
| Interstate coaches .....       | 47     | 54    | 56    | 61    | 69    |
| Goods and livestock wagons ... | 8,126  | 8,895 | 8,692 | 8,000 | 7,967 |
| Service wagons and vans .....  | 465    | 478   | 472   | 467   | 480   |

(a) Petrol engines replaced by diesel engines.

The tonnage of various fuels consumed in locomotives and railcars during the years ended June 1950, 1955, 1957, 1960 and 1963 was as follows:



These are some of the powers and obligations of the Board under the present Act.

### **Operations of the Board**

Licences issued by the Board must specify the route or routes over which the licensee is permitted to operate vehicles and the amount payable for the licence. The Board may also specify the maximum number of vehicles that he is allowed to operate and maximum rates to be charged for the carriage of passengers or goods. These licences have a five year currency period and both passenger and freight licences expire on a common date, viz 31st March 1968.

The Board may also issue special permits either of twelve month currency or for short periods.

At 30th June 1964 current licences totalled 131, and annual special permits 1,018. Special permits for short periods issued during the year totalled 5,860. The current licences comprised 45 passenger licences (31 regular route) and 86 goods and livestock licences. Special annual permits included 110 charter coach, 256 hire car, and 449 'defined area goods permits'.

Under Section 28(a) of the Act, the Board registers persons and firms who book passengers or receive freight on behalf of a licensee. In 1963-64 there were 75 registrations of agents.

### **Interstate Transport**

During the period prior to November 1954 the Board issued permits for interstate journeys, but after the Privy Council decision in that month interstate carriers enjoyed complete freedom of movement between the States. Early in 1957 an amendment to the Road and Railway Transport Act became operative and required owners of commercial vehicles (with a tare weight of 2½ tons or over) not registered in South Australia to contribute towards the maintenance of roads. The legislation was challenged in the High Court and in September 1957 was declared invalid.

The Road Maintenance (Contributions) Act, 1963 imposes a charge per ton mile on commercial goods vehicles of more than 8 tons load capacity using roads in South Australia.

## **TRAMWAY AND OMNIBUS SERVICES**

### **MUNICIPAL TRAMWAYS TRUST**

The Municipal Tramways Trust was incorporated by Act of Parliament in 1906. The Trust's activities are now regulated by the Municipal Tramways Trust Act, 1935-1965.

Exclusive powers are given to the Trust to:

- (1) operate tram systems propelled by electric energy within a radius of 10 miles from the G.P.O.
- (2) carry passengers by motor omnibus for hire or reward on any route wholly or partially within the prescribed area as defined by the Act.
- (3) grant to any person a licence to carry passengers by motor omnibus for hire or reward on any route in (2) above.

In 1965 the prescribed area, which formerly comprised the metropolitan area, was extended to include the municipalities of Elizabeth and Salisbury and parts of the district councils of Munno Para and Teatree Gully. Private bus operators

within the prescribed area must be licensed by the trust and the licence may stipulate such terms as duration of licence, routes, time tables and fares.

Prior to 1952 control was vested in the Board of eight members, two of whom were appointed by the Governor and six by local government authorities. An Amendment Act in 1952 reconstituted the Board to consist of five members all of whom were appointed by the Governor with effect from 2nd February 1953. The Act also empowered the State Treasurer to make grants to the Trust to enable it to meet the expenses incurred in the exercise of its functions.

### **Historical Survey**

The first tramway in South Australia, from Adelaide to Kensington, was opened on 10th June 1878. This first tram service was horse drawn.

Horse drawn tramways were developed by the Adelaide & Suburban Tramway Company Ltd. and six other companies with services eventually extending over routes totalling 51 miles. With the incorporation of the Municipal Tramways Trust in 1906 to provide electric traction for tramways, the operations of the former companies were taken over. The Kensington line was the first to be converted and was opened on 10th March 1909. Supplementary to the main electric tramways system motor bus services were introduced on 25th March 1925 and electric trolley buses on 5th September 1937.

During World War II and the early post-war period renewal of rollingstock and tracks fell below requirements. In the years following, rising costs and loss of patronage associated with greater use of private cars contributed to the Trust suffering increasing financial losses. The amending legislation passed in 1952 gave the State Government a measure of financial control over the Trust's operations.

On its appointment, the new Board conducted a comprehensive review of the Trust's finances and affairs and reached the conclusion that if operating losses were to be reduced, considerable expenditure would be necessary to modernize capital equipment as a large part of the assets of the Trust had already reached the end of its economic life. A ten year plan was drawn up to provide for the efficient rehabilitation and progressive development of the Trust. This plan incorporated the following main features:

- (1) Replacement of tram cars with diesel buses.
- (2) Erection of new parking and servicing depots.
- (3) Modernization of the workshops.
- (4) Erection of new workshops.
- (5) Abandonment of electricity generation in favour of taking power from the Electricity Trust of South Australia.
- (6) Examination of all services and planning for the future needs of the metropolitan area.
- (7) Adoption of more efficient operating methods.

Because of the amount of expenditure contemplated and the nature of the transport problems involved, the Trust sought the assistance and views of a firm of consulting engineers in the United States of America. The report of these consultants largely confirmed the Trust's proposals.

The plan, with slight modification, was subsequently completed more rapidly, and at less cost, than envisaged at first. New workshops were not built and the Glenelg tram service which runs mainly on enclosed land rather than on public roadways, was retained.

All other tramcar routes were converted to diesel bus operation between 1953 and 1958. The future method of operation for the Glenelg services will depend upon circumstances existing at the end of the economic life of the present system. Electric trolley buses were replaced by diesel buses in July 1963.

The task of taking up tram tracks and restoring roadways on abandoned tram tracks was finally completed during 1960-61. In broad terms the gross cost associated with this work was £750,000 less the value of materials salvaged £350,000, leaving a net cost of £400,000.

### Income and Expenditure

A table showing net funds employed, income and working expenses etc. for the last five years is given in Part 12.4 Public Finance—Semi-Government Authorities. Net funds employed at 30th June 1953 (under the reconstituted Board) amounted to £2,368,000, rose to £4,267,000 by June 1958 and had fallen to £3,090,000 by June 1964.

Income earned by the Trust exceeded working expenses each year until 1949-50, when income was £1,467,000 and working expenses were £1,592,000. The first grant of £700,000 to the Trust was made by the State Treasurer in 1952-53; the amounts for the last ten years are shown in the following table.

#### Municipal Tramways Trust: Income and Expenditure

| Year    | Traffic Receipts | Sundry Receipts | Government Grants | Working Expenses | Interest on Loans | Net Deficiency |
|---------|------------------|-----------------|-------------------|------------------|-------------------|----------------|
|         | £'000            |                 |                   |                  |                   |                |
| 1954-55 | 2,064            | 70              | 600               | 2,667            | 206               | 139            |
| 1955-56 | 2,251            | 83              | 570               | 2,789            | 256               | 141            |
| 1956-57 | 2,211            | 78              | 510               | 2,740            | 251               | 192            |
| 1957-58 | 2,411            | 83              | 490               | 2,895            | 285               | 196            |
| 1958-59 | 2,427            | 101             | 440               | 2,833            | 308               | 173            |
| 1959-60 | 2,764            | 56              | 94                | 2,784            | 301               | 171            |
| 1960-61 | 2,702            | 56              | 30                | 2,677            | 288               | 177            |
| 1961-62 | 2,645            | 70              | 30                | 2,606            | 278               | 139            |
| 1962-63 | 2,648            | 70              | 13                | 2,583            | 267               | 119            |
| 1963-64 | 2,660            | 77              | 30                | 2,597            | 258               | 88             |

At 30th June 1964 loan indebtedness amounted to £5,626,000; these loans are secured by debentures issued to the Treasurer of South Australia.

### Route Miles, Mileage Run and Passengers Carried

Route mileage of electric tramways in 1921 measured 66 miles, increasing to 80 miles by 1944. The removal of track mentioned earlier is evident from the table below.

Total route mileage was increased with the introduction of motor buses in 1925 and trolley buses in September 1937. With the change to diesel operation, route mileage of motor buses showed a marked increase. Trolley bus routes are now operated by diesel buses. Total route mileage was 108 miles in 1938, showed a slight increase of 10 miles by 1944, and remained unchanged until the 1950's.

Traffic miles run totalled approximately 8 million miles in 1936-37 but had increased to 10 million miles by 1944-45. Mileage has varied between 10 and 12 million miles since that year.



Savings have been effected in expenditure on maintenance and power, fuel and oil since the introduction of the ten year plan. Expenditure on rollingstock maintenance in 1953-54 was £412,000 as against £356,000 in 1963-64 and permanent way maintenance cost £120,000 in 1953-54 as against £12,000 in 1963-64. Combined figures for power, fuel and oil costs in 1953-54 were £389,000 compared with £162,000 in 1963-64.

The average number of persons employed by the Trust during 1963-64 was 1,499 persons (132 salaried and 1,367 wages staff). Salaries and wages paid amounted to £1,810,000.

**Rollingstock**

The change from electric traction to diesel operation is reflected in the following table showing details of rollingstock at the closing date of selected years.

**Municipal Tramways Trust: Rollingstock and Seating Capacity**

*As at 30th June (a)*

| Particulars              | 1945          | 1950          | 1955          | 1958          | 1960          | 1964          |
|--------------------------|---------------|---------------|---------------|---------------|---------------|---------------|
| <b>Rollingstock—</b>     |               |               |               |               |               |               |
| Electric trams . . .     | 304           | 279           | 178           | 89            | 30            | 30            |
| Motor omnibuses          | 65            | 81            | 140           | 327           | 364           | 353           |
| Trolley buses . . .      | 52            | 61            | 91            | 81            | 56            | —             |
| <b>Total vehicles</b>    | <b>421</b>    | <b>421</b>    | <b>409</b>    | <b>497</b>    | <b>450</b>    | <b>383</b>    |
| <b>Seating capacity—</b> |               |               |               |               |               |               |
| Electric trams . . .     | 15,370        | 14,280        | 10,147        | 5,456         | 1,908         | 1,908         |
| Motor omnibuses          | 2,341         | 3,998         | 5,268         | 12,923        | 14,428        | 14,112        |
| Trolley buses . . .      | 2,712         | 2,984         | 4,184         | 3,502         | 2,006         | —             |
| <b>Total seating</b>     | <b>20,423</b> | <b>21,262</b> | <b>19,599</b> | <b>21,881</b> | <b>18,342</b> | <b>16,020</b> |

(a) 31st January in 1945 and 1950.

**Accident Casualties**

The following accidents were reported by the Trust as having occurred during the last two years:

|                                | 1962-63  |            | 1963-64  |            |
|--------------------------------|----------|------------|----------|------------|
|                                | Killed   | Injured    | Killed   | Injured    |
| Passengers . . . . .           | 1        | 210        | 2        | 235        |
| Employees . . . . .            | —        | 81         | —        | 105        |
| Others . . . . .               | 1        | 20         | 1        | 25         |
| <b>Total persons . . . . .</b> | <b>2</b> | <b>311</b> | <b>3</b> | <b>365</b> |

**PRIVATE MOTOR OMNIBUS SERVICES**

**Metropolitan Services**

The Municipal Tramways Trust grants licences to private bus operators to carry passengers within the metropolitan area. Details of mileage run, passengers carried, and traffic receipts are shown below.



## Private Motor Omnibus Services, Metropolitan Area

| Year       | Route Mileage | Mileage Run | Passengers Carried | Rolling Stock | Traffic Receipts (Gross) |
|------------|---------------|-------------|--------------------|---------------|--------------------------|
|            | Miles         | '000 Miles  | '000               | No.           | £'000                    |
| 1959-60 .. | 124.05        | 3,459       | 10,832             | 117           | 508                      |
| 1960-61 .. | 132.07        | 3,494       | 10,490             | 125           | 506                      |
| 1961-62 .. | 138.88        | 3,473       | 10,394             | 125           | 504                      |
| 1962-63 .. | 144.95        | 3,584       | 10,762             | 128           | 527                      |
| 1963-64 .. | 143.14        | 3,563       | 10,926             | 124           | 534                      |

On the 31st January 1941 route mileage was 46.40 miles and passengers carried during the previous twelve months totalled 2.3 million persons. For January 1951 the corresponding figures were 115.71 route miles and 10.7 million passengers carried.

## Interstate and Country Services

Regular interstate bus services operate to the eastern States and special tours are available to all States at different times of the year.

Motor coach services are operated from Adelaide to about 290 destinations within the State *via* 20 different routes. In addition, there are co-ordinated rail and bus services on 7 additional routes.

## TAXI-CABS

The Metropolitan Taxi-Cab Act, 1956 provided for the control of taxi-cabs in the metropolitan area of Adelaide, and for incidental purposes, and set up the Metropolitan Taxi-Cab Board to administer the Act. The present Act is The Metropolitan Taxi-Cab Act, 1956-1963.

The granting of licences or permits to operate taxi-cabs within the metropolitan area was within the power of each of the metropolitan councils until the Board assumed control on 1st April 1958. It also took over the allotment of vehicles to stands and the charging of permit fees. The Board decided on one general taxi licence but portion of the Municipalities of Adelaide, Port Adelaide, and Glenelg, were to be restricted areas. Taxis operating in the Adelaide restricted area were issued with distinctive plates, and those in the Port Adelaide and Glenelg areas with numbers distinct from the unrestricted areas.

The metropolitan area, under the 1956 Act, included that part of the State which is within ten miles of the G.P.O. Adelaide, and that part of the municipality of Port Adelaide outside that area. The metropolitan area was extended to include the District Council of Stirling in March 1959, the District Council of Tea Tree Gully in October 1963, and the District Council of Salisbury and Elizabeth in June 1964. (The latter council is now the separate municipalities of the City of Elizabeth and the City of Salisbury.)

Regulations under the Act provide for the examination of taxi-cabs: the road-worthiness of all taxi-cabs is examined by the Police Department each year and the Board's inspectors check and test all meters.

Licences issued at 30th June 1964 included taxi-cabs, white plates (i.e. restricted) 250, green plates 464, hire cars 30 and funeral cars 8. Drivers licences current totalled 1,776.

## MOTOR VEHICLES

### Control of Road Traffic

Legislation covering the registration of motor vehicles, licensing of drivers, third party insurance, and general rules to be observed by road users (including pedestrians) in South Australia, was contained in the Road Traffic Act, 1934-1958. In December 1959 legislation on registration, licensing, and third party insurance, was passed under the Motor Vehicles Act, 1959 and similar provisions were repealed from the Road Traffic Act. Further amendments were made to the Motor Vehicles Act in subsequent years. A Road Traffic Act was passed in 1961 to consolidate previous amendments and in 1963 and 1964 the Road Traffic Act, 1961 was amended. The present legislation for the control of road traffic in South Australia is set out in the Road Traffic Act, 1961-1964 and the Motor Vehicles Act, 1959-1964.

The Road Traffic Act, 1961-1964 provides for the administration of the Act; contains provisions for the duties of drivers and pedestrians, equipment, size and weight of vehicles and safety; and supplementary provisions. The Act is administered by the Road Traffic Board of South Australia.

### Registration of Motor Vehicles

Under the Act 'motor vehicle' means (a) a vehicle, tractor, or mobile machine driven or propelled or ordinarily capable of being driven or propelled by a steam engine, internal combustion engine, electricity or any other power not being human or animal, or (b) a trailer; but does not include a vehicle run upon a railway or tramway.

The Registrar of Motor Vehicles controls registration and 'a person shall not drive a motor vehicle on a road unless that vehicle has been registered under this Act and the registration thereof is for the time being in force'.

The Act provides for certain exemptions from registration *e.g.* vehicles with traders' plates, vehicles carrying persons or firefighting equipment to prevent or control a fire, vehicles taking part in processions, etc. A tractor may be driven without registration on roads within twenty-five miles of a farm occupied by the owner of the tractor, when taking delivery after purchase, to and from a workshop for repairs, to draw farm implements, etc.

Permits to use vehicles, without registration, between farm blocks may be granted by the Registrar. A 14-day permit to drive a motor vehicle pending registration may be issued, under certain circumstances, by a member of the police force stationed at a police station more than twenty-five miles from the G.P.O. Adelaide. The Act provides for other exemptions and permits.

Unless an application for registration is accompanied by a certificate of third party insurance, to cover the period of registration plus 14 days, the Registrar will not register the vehicle. Registration is for a period of six or twelve months at the option of the applicant and according to the fee paid.

Registration fees vary according to the power-weight of a motor vehicle. This is calculated by adding the weight of the vehicle in hundredweights to its rated horsepower. The registration fee for a trailer is based on its unladen weight. Registration fees are higher for motor vehicles fitted with solid rubber or metal tyres.

Motor vehicles used for certain purposes are registered without fee, *e.g.* vehicles owned by the Fire Brigades Board and other fire fighting organizations, ambulances for the use of which no charge is made, council vehicles used solely or mainly

for the collection and transport of household rubbish, etc. Registration at reduced rates is allowed for primary producers' commercial vehicles and tractors, prospectors' vehicles, and to vehicles used wholly or mainly in outer areas. Reduced rates are also available to incapacitated ex-servicemen. Vehicles used solely for interstate trade can be registered for £1 for a period of twelve months.

The Act provides for registered vehicles to carry number plates and for a registration label to be affixed to each registered vehicle. It also provides for the issue of general traders' plates and limited traders' plates.

### Motor Vehicles on Register

The following table shows motor vehicles on the register at 31st December 1960 to 1964. These figures exclude defence services vehicles.

**Motor Vehicles on Register, South Australia**  
*As at 31st December*

| Type of Vehicle                 | 1960           | 1961           | 1962           | 1963           | 1964           |
|---------------------------------|----------------|----------------|----------------|----------------|----------------|
| Cars and station wagons .....   | 216,906        | 226,876        | 241,637        | 259,904        | 279,685        |
| Motor cycles and scooters ..... | 17,487         | 16,564         | 15,207         | 13,967         | 12,595         |
| Buses .....                     | 1,494          | 1,548          | 1,617          | 1,692          | 1,782          |
| Trucks, utilities, etc. ....    | 76,274         | 74,434         | 74,273         | 75,027         | 76,690         |
| <b>Total on register .....</b>  | <b>312,161</b> | <b>319,422</b> | <b>332,734</b> | <b>350,590</b> | <b>370,752</b> |
| Population per vehicle .        | 3.07           | 3.07           | 3.00           | 2.91           | 2.82           |
| Road tractors .....             | 3,930          | 3,989          | 3,925          | 3,956          | 3,964          |
| Trailers (a) .....              | 49,454         | 53,624         | 56,748         | 63,372         | 69,621         |
| Traders' plates .....           | 2,372          | 2,346          | 2,358          | 2,474          | 2,630          |

(a) Including caravans.

### New Motor Vehicle Registrations

New motor vehicle registrations during the calendar years 1960 to 1964 are shown in the following table.

**New Motor Vehicles Registrations<sup>(a)</sup>, South Australia**

| Type of Vehicle                   | 1960          | 1961          | 1962          | 1963          | 1964          |
|-----------------------------------|---------------|---------------|---------------|---------------|---------------|
| Cars .....                        | 18,868        | 12,410        | 19,621        | 23,603        | 26,328        |
| Station wagons .....              | 4,263         | 3,295         | 5,201         | 6,982         | 7,960         |
| Motor cycles and scooters .....   | 1,865         | 1,516         | 1,010         | 921           | 1,006         |
| Buses .....                       | 132           | 98            | 119           | 183           | 184           |
| Trucks .....                      | 1,812         | 1,587         | 1,696         | 2,228         | 2,651         |
| Utilities .....                   | 2,539         | 2,156         | 2,437         | 2,903         | 3,087         |
| Other (including panel vans) .... | 1,083         | 798           | 941           | 978           | 1,181         |
| <b>Total .....</b>                | <b>30,562</b> | <b>21,860</b> | <b>31,025</b> | <b>37,798</b> | <b>42,397</b> |

(a) Excludes defence services vehicles.

New motor vehicle registrations are classified by horsepower (R.A.C.) in the table below.

**New Motor Vehicle Registrations<sup>(a)</sup>, Classified by Horsepower (R.A.C.)  
South Australia**

| Type of Vehicle and Horsepower | 1960          | 1961          | 1962          | 1963          | 1964          |
|--------------------------------|---------------|---------------|---------------|---------------|---------------|
| <b>Cars—</b>                   |               |               |               |               |               |
| Under 10 .....                 | 1,462         | 898           | 1,219         | 1,950         | 1,869         |
| 10-14 .....                    | 4,839         | 2,354         | 3,971         | 3,825         | 5,608         |
| 15-19 .....                    | 1,826         | 817           | 1,501         | 2,613         | 3,065         |
| 20-24 .....                    | 7,577         | 5,780         | 7,805         | 5,740         | 696           |
| 25-29 .....                    | 2,480         | 2,013         | 4,451         | 7,575         | 8,866         |
| 30 and over .....              | 677           | 546           | 674           | 1,898         | 6,223         |
| Not stated .....               | 3             | 2             | —             | 2             | 1             |
| <b>Total .....</b>             | <b>18,864</b> | <b>12,410</b> | <b>19,621</b> | <b>23,603</b> | <b>26,328</b> |
| <b>Station Wagons—</b>         |               |               |               |               |               |
| Under 20 .....                 | 519           | 313           | 560           | 789           | 686           |
| 20-29 .....                    | 3,714         | 2,954         | 4,615         | 5,640         | 4,215         |
| 30 and over .....              | 29            | 28            | 26            | 552           | 3,059         |
| Not stated .....               | —             | —             | —             | 1             | —             |
| <b>Total .....</b>             | <b>4,262</b>  | <b>3,295</b>  | <b>5,201</b>  | <b>6,982</b>  | <b>7,960</b>  |
| <b>Utilities—</b>              |               |               |               |               |               |
| Under 20 .....                 | 389           | 149           | 195           | 232           | 311           |
| 20-29 .....                    | 2,052         | 1,949         | 2,152         | 2,541         | 2,074         |
| 30 and over .....              | 98            | 58            | 90            | 130           | 702           |
| <b>Total .....</b>             | <b>2,539</b>  | <b>2,156</b>  | <b>2,437</b>  | <b>2,903</b>  | <b>3,087</b>  |
| <b>Trucks—</b>                 |               |               |               |               |               |
| Under 20 .....                 | 55            | 32            | 13            | 91            | 105           |
| 20-29 .....                    | 719           | 619           | 577           | 767           | 784           |
| 30-39 .....                    | 680           | 664           | 727           | 915           | 1,277         |
| 40-49 .....                    | 270           | 192           | 283           | 342           | 357           |
| 50 and over .....              | 88            | 80            | 96            | 113           | 128           |
| <b>Total .....</b>             | <b>1,812</b>  | <b>1,587</b>  | <b>1,696</b>  | <b>2,228</b>  | <b>2,651</b>  |

(a) Excludes defence services vehicles.

### Drivers' Licences

The section of the Motor Vehicles Act relating to classes of licences was repealed in 1960, and the two classes of drivers' licences are now:

Class A: to drive motor vehicles of any kind.

Class B: to drive motor vehicles of any kind which do not exceed three tons.

Every motor vehicle licence in force prior to the change was deemed to be a class A licence, whilst a motor cycle licence became a class B licence with a restriction to drive a motor cycle only.

Under the 1959 Act, an applicant who had not previously held a licence was required to pass a written examination on the rules of the road before the Registrar would issue a licence. Now, an applicant must apply for a permit to learn to drive a motor vehicle and will be issued with a learner's permit once he has passed the written test. The permit is for a period not exceeding three months during which time he is expected to undergo a practical test conducted by a police officer appointed for the purpose. If he passes the test he will be issued with a certificate stating the type and make of vehicle used and that he was capable of driving this class of motor vehicle. He may then apply to the Registrar for the appropriate licence, *i.e.*, a class A or B licence.

The Act provides for the testing of drivers suspected of being incompetent or suffering from a disease or disability which may impair their ability to drive, and for the suspension of their licences should they fail to pass.

The fee for a class A or B licence is £1 and for a learner's permit 10s. Licences and permits are not issued to persons under 16 years of age.

In 1961, motor driving instructors' licences were introduced and made compulsory where instruction was given for reward. The licence fee is £10 for a period of 3 years.

Drivers' licences current at the 31st December 1964 totalled 439,061. The number in force first exceeded 100,000 in 1931, totalled 215,157 by 1951, 315,044 by 1957, and had risen to 414,656 at December 1963.

### **Revenue from Registrations and Licences**

Revenue from registration fees and driver's licence fees totalled £5,491,000 in 1964 as against £5,009,000 the previous year. These fees are paid into Consolidated Revenue Account but after deductions have been made for sinking fund and interest on loans raised for roads and bridges, and the administration expenses of the Highways and Local Government and Motor Vehicles Departments, the balance is paid into the Highways Fund.

### **Third Party Insurance**

Part IV of the Motor Vehicles Act, 1959-1963 provides that 'a person shall not drive a motor vehicle on a road unless a policy of insurance complying with this Part is in force in relation to that vehicle'. This does not apply to farmers' tractors when exempted from registration or tractors used for roads and firebreaks.

The policy of insurance must be issued by an approved insurer and must 'insure the owner of the motor vehicle mentioned in the policy and any other person who at any other time drives that vehicle, whether with or without the consent of the owner, in respect of all liability for negligence which may be incurred by that owner or other person in respect of the death of, or bodily injury to, any person caused by or arising out of the use of the vehicle in any part of the Commonwealth'.

An 'approved insurer' means a person or body of persons approved by the Treasurer. It is not obligatory to insure any vehicle owned by the Crown and used solely in the public business of the State, or to insure vehicles owned by The Municipal Tramways Trust.

The Act sets out the liabilities of insurers and these include the liability to pay for emergency treatment and hospital treatment to a person injured (including fatally injured) by or arising out of the use of an insured motor vehicle.

Where the driver of a motor vehicle has caused death or bodily injury in the use of that vehicle and the identity of the vehicle cannot be ascertained, then a person who could have obtained a judgment against the driver may give notice to the Treasurer and recover by action against a 'nominal defendant' named by the Treasurer. Payment by the 'nominal defendant' will be paid out of money contributed by an association of insurers to a scheme under section 119 or by the Treasurer, if no such scheme is in operation.

The Treasurer will appoint a 'nominal defendant' where a claim is made by a person in respect of death or a bodily injury caused by negligence in the use of an uninsured motor vehicle on a road. Payments made by the 'nominal defendant' are recoverable from the driver of the motor vehicle or any person liable for the negligence of that driver.

The Act provides that an injured person may claim against his or her spouse, where the spouse is an insured person and has caused that person bodily injury by negligence in the use of a motor vehicle.

The Act sets out the right of an insurer against the unauthorized user of a vehicle, the power of an insurer to deal with claims against the insured, and the duty of the insured not to litigate or negotiate a claim without the consent of the insurer.

Upon the recommendation of the Treasurer, the Governor may appoint a committee to inquire into and report what maximum rates of premiums are fair and reasonable for third party insurance.

Premiums from April 1964 for private and business cars in the metropolitan area are £11 per annum and in the country £7 10s., for taxis £55 and £25, and for goods-carrying vehicles, £10 10s. and £7 10s. respectively. Other premiums include £2 15s. for primary producers' trucks.

During 1963-64, third party insurance premiums received amounted to £2,934,000 and claims paid were £2,369,000.

### Vehicle Usage

In November 1963 a postal sample survey of motor vehicle usage was conducted throughout Australia. The timing of the collection and the specification of the form were such that details can be taken as representative of usage in the calendar year 1963. A summary of results obtained for South Australia is set out below.

It should be borne in mind that since results are obtained from a sample they are not precise and should be considered as approximations only. In addition, total fuel consumption calculated from the survey appears low in comparison with other available information. The deficiency appears to be of the order of 15% to 20%; a possible explanation is a tendency, particularly among car owners, to overstate average mileage per gallon.

### Motor Vehicle Usage <sup>(a)</sup>, South Australia, 1963

| Type of Vehicle                    | Average Annual Mileage per Vehicle | Average Fuel Consumption <sup>(b)</sup> | Business Mileage as a Proportion of Total Mileage |
|------------------------------------|------------------------------------|---|---|
|                                    | Miles                              | M.P.G.                                  | %   |
| Cars and station wagons .....      | 8,180                              | 25.5                                    | 25.0  |
| Utilities and panel vans .....     | 8,370                              | 20.3                                    | 75.1  |
| Trucks, with carrying capacity of— |                                    |   |   |
| Less than two tons .....           | 5,400                              | 13.2                                    | 97.3  |
| Two tons but less than three tons  | 4,860                              | 11.7                                    | 98.3  |
| Three tons but less than five tons | 5,860                              | 10.3                                    | 99.1  |
| Five tons and over—rigid .....     | 10,400                             | 8.7                                     | 99.4  |
| Five tons and over—articulated     | 29,550                             | 6.7                                     | 100.0   |

(a) Excludes defence services vehicles.

(b) May be overstated—see note above.

For cars and station wagons in South Australia (excluding dealer-owned vehicles) the average annual mileage was 7,760 for those registered at a metropolitan address and 9,330 for those registered at a non-metropolitan address. Corresponding figures for the whole of Australia were 8,770 and 8,760 respectively.

## Census of Motor Vehicles

A census of motor vehicles on the register at 31st December 1962 was carried out in Australia during 1963 from particulars of motor vehicle registrations. An earlier census was conducted at 31st December 1955.

The following table shows the number of vehicles of each type in South Australia at 31st December 1955 and 1962. In addition, in 1962 there were 4,463 tractors, heavy equipment, and industrial vehicles, and 57,525 trailers on the register; corresponding details are not available for 1955.

Types of Motor Vehicles<sup>(a)</sup>, South Australia, 1955 and 1962

| Type of Vehicle                  | 1955     |                              | 1962    |                              |
|----------------------------------|----------|------------------------------|---------|------------------------------|
|                                  | Number   | Proportion to Total Vehicles | Number  | Proportion to Total Vehicles |
|                                  |          | %                            |         | %                            |
| Motor cars—                      |          |                              |         |                              |
| Sedans .....                     | 127,582  | 52.20                        | 211,387 | 62.53                        |
| Convertibles and open cars ..... | 21,432   | 8.77                         | 7,773   | 2.30                         |
| Taxis, hire cars .....           | (b)      | (b)                          | 650     | 0.19                         |
| Ambulances, hearses .....        | (b)      | (b)                          | 192     | 0.06                         |
| Other .....                      | 148      | 0.06                         | 8       | 0.00                         |
| Total motor cars .....           | 149,162  | 61.03                        | 220,010 | 65.08                        |
| Station wagons .....             | 1,344    | 0.55                         | 18,895  | 5.59                         |
| Utilities .....                  | 33,837   | 13.84                        | 38,539  | 11.40                        |
| Panel vans .....                 | 5,256    | 2.15                         | 9,678   | 2.86                         |
| Trucks—                          |          |                              |         |                              |
| Table top, platform .....        | 24,561   | 10.05                        | 23,571  | 6.97                         |
| Van-type .....                   | 480      | 0.20                         | 686     | 0.20                         |
| Tipper .....                     | 3,150    | 1.29                         | 4,917   | 1.46                         |
| Articulated, semi-trailer .....  | 1,340    | 0.55                         | 2,205   | 0.65                         |
| Horse float, other trucks .....  | 134      | 0.05                         | 305     | 0.09                         |
| Total trucks .....               | 29,665   | 12.14                        | 31,684  | 9.37                         |
| Other truck-type—                |          |                              |         |                              |
| Tankers .....                    | } 462    | } 0.19                       | 351     | 0.10                         |
| Concrete agitators .....         |          |                              | 82      | 0.02                         |
| Tow trucks .....                 |          |                              | 62      | 0.02                         |
| Fire-fighting units, etc. ....   |          |                              | 487     | 0.15                         |
| Total other truck-type .....     | 462      | 0.19                         | 982     | 0.29                         |
| Omnibuses .....                  | 973      | 0.40                         | 1,580   | 0.47                         |
| Motor cycles—                    |          |                              |         |                              |
| Solo, motor scooters .....       | } 23,704 | } 9.70                       | 15,205  | 4.49                         |
| Side car .....                   |          |                              | 1,008   | 0.30                         |
| Auto cycle .....                 |          |                              | 481     | 0.14                         |
| Other .....                      |          |                              | 23      | 0.01                         |
| Total motor cycles .....         | 23,704   | 9.70                         | 16,717  | 4.94                         |
| Total motor vehicles .....       | 244,403  | 100.00                       | 338,085 | 100.00                       |

(a) Defence services vehicles excluded.

(b) Included with sedans or other.

Further tables on the 1962 Census containing classifications of vehicles by year or model, horsepower, etc. are given in the bulletin 'Census of Motor Vehicles, 31st December 1962, Bulletin No. 4—South Australia' published by the Commonwealth Statistician.

**Road Traffic Accidents**

Details of road traffic accidents recorded by the Police Department, involving casualty or property damage exceeding £25 (exceeding £50 prior to July 1960) are shown below for the years 1958-59 to 1963-64.

**Road Traffic Accidents, South Australia**

| Year    | Total Accidents Recorded | Accidents Involving Casualties | Persons Killed | Persons Injured | Rate per 10,000 Vehicles on Register (a) |                |                 | Rate per 100,000 of Mean Population |                |                 |
|---------|--------------------------|--------------------------------|----------------|-----------------|--|----------------|-----------------|-------------------------------------|----------------|-----------------|
|         |                          |                                |                |                 | Total Accidents Recorded                 | Persons Killed | Persons Injured | Total Accidents Recorded            | Persons Killed | Persons Injured |
| 1958-59 | 8,369                    | 3,984                          | 185            | 5,183           | 317                                      | 7              | 196             | 921                                 | 20             | 571             |
| 1959-60 | 11,350                   | 5,340                          | 203            | 6,856           | 421                                      | 8              | 254             | 1,216                               | 22             | 734             |
| 1960-61 | 19,779                   | 6,117                          | 203            | 7,665           | 661                                      | 7              | 256             | 2,066                               | 21             | 801             |
| 1961-62 | 19,095                   | 6,184                          | 179            | 7,913           | 600                                      | 6              | 248             | 1,948                               | 18             | 807             |
| 1962-63 | 21,597                   | 6,343                          | 201            | 8,216           | 651                                      | 6              | 248             | 2,161                               | 20             | 822             |
| 1963-64 | 22,912                   | 6,284                          | 236            | 8,300           | 656                                      | 7              | 238             | 2,246                               | 23             | 814             |

(a) 'Motor vehicles on register' here refers to the average of monthly figures, and excludes defence services vehicles, road tractors and trailers. Because of more accurate methods of recording number on register from mid-December 1960, figures prior to 1961-62 are not strictly comparable.

The next table shows road traffic accident casualties for the last six years. During this period casualties of drivers of motor vehicles have increased at a faster rate than any other category: 34% of persons killed and 39% of persons injured being in this category in 1963-64, compared with 25% and 28% respectively five years previously.

**Road Traffic Accidents: Casualties, South Australia**

| Year            | Drivers of Motor Vehicles | Motor Cyclists | Pedal Cyclists | Pass-engers | Pedes-trians | Other and Not Stated | Total |
|-----------------|---------------------------|----------------|----------------|-------------|--------------|----------------------|-------|
| Persons Killed  |                           |                |                |             |              |                      |       |
| 1958-59 ..      | 46                        | 18             | 19             | 53          | 49           | —                    | 185   |
| 1959-60 ..      | 55                        | 16             | 16             | 62          | 53           | 1                    | 203   |
| 1960-61 ..      | 65                        | 15             | 17             | 54          | 52           | —                    | 203   |
| 1961-62 ..      | 79                        | 9              | 11             | 43          | 36           | 1                    | 179   |
| 1962-63 ..      | 61                        | 10             | 13             | 50          | 66           | 1                    | 201   |
| 1963-64 ..      | 81                        | 19             | 15             | 63          | 58           | —                    | 236   |
| Persons Injured |                           |                |                |             |              |                      |       |
| 1958-59 ..      | 1,440                     | 774            | 576            | 1,857       | 531          | 5                    | 5,183 |
| 1959-60 ..      | 1,958                     | 1,095          | 785            | 2,345       | 670          | 3                    | 6,856 |
| 1960-61 ..      | 2,325                     | 1,184          | 852            | 2,418       | 882          | 4                    | 7,665 |
| 1961-62 ..      | 2,474                     | 1,073          | 890            | 2,657       | 813          | 6                    | 7,913 |
| 1962-63 ..      | 2,796                     | 897            | 840            | 2,836       | 845          | 2                    | 8,216 |
| 1963-64 ..      | 3,204                     | 686            | 655            | 3,106       | 642          | 7                    | 8,300 |



## SHIPPING

## Control of Shipping

The Commonwealth Parliament is empowered under the Commonwealth Constitution to make laws in respect of trade and commerce with other countries and among the States.

Navigation and shipping are regulated under the Commonwealth *Navigation Act 1912-1961* and the provisions of the Act apply to ships registered in Australia (except those engaged solely in the domestic trade of any one State) and other British ships whose first port of clearance and whose port of destination are within the Commonwealth. Other shipping Acts under the trade and commerce power of the Commonwealth are the *Sea-Carriage of Goods Act 1924-1961*, the *Seamen's Compensation Act 1911-1960*, the *Seamen's War Pensions and Allowances Act 1940-1961*, the *Australian Coastal Shipping Commission Act 1956*, the *Australian Coastal Shipping Agreement Act 1956*, and the *Stevedoring Industry Act 1956-1962*.

Shipping in South Australia was controlled by the Marine Board and Navigation Act of 1881 and subsequent amendments, and the Harbors Act, 1913. The first provisions of the Commonwealth *Navigation Act 1912* were brought into operation in 1921. At present, shipping in South Australia is controlled by the Commonwealth Act and, where this does not apply, by the Harbors Act, 1936-1962 and the Marine Act, 1936-1962. Both of these State Acts are administered by the South Australian Harbors Board.

## Registration of Shipping

Registration of shipping in Australia is in accordance with the Merchant Shipping Act 1894 of the Imperial Parliament, under sections which apply to the United Kingdom and all British dominions. Registration is not compulsory for vessels of under 15 tons burden which are engaged in river or coastal trade or for larger vessels if not engaged in trade. Yachts and small trading vessels may be registered at the request of the owners as registration facilitates the sale or mortgage of these vessels.

The table below shows the number of vessels on the South Australian Register as at 31st December 1964. The size of a vessel may be expressed as gross tonnage, net tonnage, deadweight tonnage, or in 'terms of displacement'. Gross tonnage (the total volume of the enclosed space) and net tonnage (the volume of the enclosed space that can be used for cargo or passengers) are both expressed in tons of 100 cubic feet and are used in the table.

## Vessels on South Australian Register

As at 31st December 1964

| Net Tonnage        | Steam and Motor |               |             | Sailing (including Fitted with Auxiliary Power) |               |             | Barges, Hulks, Dredges, etc., not Self-Propelled |               |             |
|--------------------|-----------------|---------------|-------------|---|---------------|-------------|--|---------------|-------------|
|                    | Vessels         | Gross Tonnage | Net Tonnage | Vessels   | Gross Tonnage | Net Tonnage | Vessels  | Gross Tonnage | Net Tonnage |
|                    |                 | '000 Tons     | '000 Tons   |   | '000 Tons     | '000 Tons   |  | '000 Tons     | '000 Tons   |
| Under 50 .....     | 33              | 2,685         | 596         | 23  | 418           | 306         | —  | —             | —           |
| 50-99 .....        | 8               | 865           | 535         | 8   | 1,080         | 712         | 1  | 101           | 93          |
| 100-199 .....      | 2               | 899           | 304         | 2   | 681           | 326         | 1  | 179           | 179         |
| 200-499 .....      | —               | —             | —           | —   | —             | —           | —  | —             | —           |
| 500-999 .....      | —               | —             | —           | —   | —             | —           | 2  | 1,242         | 1,124       |
| 1,000-2,999 .....  | 1               | 5,649         | 1,640       | —   | —             | —           | —  | —             | —           |
| 3,000 and over ... | 3               | 21,961        | 13,253      | —   | —             | —           | —  | —             | —           |
| Total ...          | 47              | 32,059        | 16,328      | 33  | 2,179         | 1,344       | 4  | 1,522         | 1,396       |

**Arrivals at South Australian Ports**

Shipping arrivals at all ports in South Australia, including vessels moving only between ports in this State, for the years 1954-55 to 1963-64 are shown in the following table whilst a further table shows arrivals for the year 1963-64. In both tables each column headed intrastate, interstate, and oversea, contains details of vessels engaged on that division of trade at the time of the voyage.

**Shipping Arrivals at South Australian Ports**

| Year          | Intrastate |             | Interstate |             | Oversea   |             | Total     |             |
|---------------|------------|-------------|------------|-------------|-----------|-------------|-----------|-------------|
|               | Number     | Net Tonnage | Number     | Net Tonnage | Number    | Net Tonnage | Number    | Net Tonnage |
|               | '000 Tons  |             | '000 Tons  |             | '000 Tons |             | '000 Tons |             |
| 1954-55 ..... | 4,007      | 1,153       | 1,100      | 3,112       | 982       | 4,643       | 6,089     | 8,908       |
| 1955-56 ..... | 3,804      | 1,000       | 1,064      | 3,043       | 998       | 4,725       | 5,866     | 8,768       |
| 1956-57 ..... | 4,199      | 1,057       | 1,143      | 3,289       | 1,022     | 4,641       | 6,364     | 8,987       |
| 1957-58 ..... | 4,205      | 1,020       | 1,145      | 3,216       | 1,033     | 4,817       | 6,383     | 9,053       |
| 1958-59 ..... | 4,122      | 943         | 1,153      | 3,077       | 1,147     | 5,284       | 6,422     | 9,304       |
| 1959-60 ..... | 3,788      | 989         | 1,123      | 3,055       | 1,143     | 5,233       | 6,054     | 9,277       |
| 1960-61 ..... | 3,803      | 695         | 1,119      | 3,075       | 1,343     | 6,140       | 6,265     | 9,910       |
| 1961-62 ..... | 3,228      | 775         | 1,098      | 3,039       | 1,464     | 6,609       | 5,790     | 10,423      |
| 1962-63 ..... | 2,949      | 899         | 1,096      | 3,184       | 1,421     | 6,638       | 5,466     | 10,721      |
| 1963-64 ..... | 2,920      | 1,227       | 1,206      | 3,574       | 1,629     | 8,326       | 5,755     | 13,127      |

In 1954-55, intrastate shipping accounted for 66% of all arrivals whereas in 1963-64 this figure had fallen to 51%. This fall in intrastate shipping was partly offset by an increase in arrivals from oversea. In 1962-63 the total number of arrivals was the lowest for the ten year period but the number of arrivals increased in 1963-64. Total net tonnage increased steadily over the period. The greatest number of arrivals of coastal (intrastate) shipping was 7,931 arrivals recorded in 1935-36.

**Shipping Arrivals at South Australian Ports, 1963-64**

| Name of Port                       | Intrastate |             | Interstate |             | Oversea   |             | Total     |             |
|------------------------------------|------------|-------------|------------|-------------|-----------|-------------|-----------|-------------|
|                                    | Number     | Net Tonnage | Number     | Net Tonnage | Number    | Net Tonnage | Number    | Net Tonnage |
|                                    | '000 Tons  |             | '000 Tons  |             | '000 Tons |             | '000 Tons |             |
| Ardrrossan .....                   | 21         | 3           | 65         | 112         | 21        | 118         | 107       | 233         |
| Ballast Head .....                 | 73         | 9           | 29         | 45          | 3         | 4           | 105       | 58          |
| Edithburgh .....                   | 32         | 2           | —          | —           | 27        | 50          | 59        | 52          |
| Farquhar Jetty (Klein Point) ..... | 320        | 160         | —          | —           | —         | —           | 320       | 160         |
| Kingscote .....                    | 236        | 112         | —          | —           | —         | —           | 236       | 112         |
| Port Adelaide (a) ..               | 948        | 299         | 300        | 591         | 1,111     | 5,379       | 2,359     | 6,269       |
| Port Augusta .....                 | —          | —           | 12         | 30          | 9         | 29          | 21        | 59          |
| Port Lincoln .....                 | 250        | 129         | 18         | 35          | 104       | 542         | 372       | 706         |
| Port Pirie .....                   | 231        | 96          | 96         | 303         | 174       | 770         | 501       | 1,169       |
| Port Stanvac .....                 | 54         | 302         | 38         | 223         | 32        | 890         | 124       | 1,415       |
| Rapid Bay .....                    | 9          | 20          | 82         | 230         | —         | —           | 91        | 250         |
| Stenhouse Bay .....                | 30         | 5           | 51         | 68          | 21        | 39          | 102       | 112         |
| Thevenard .....                    | 9          | 1           | 9          | 11          | 46        | 147         | 64        | 159         |
| Wallaroo .....                     | —          | —           | 6          | 8           | 47        | 239         | 53        | 247         |
| Wardang Island .....               | 40         | 13          | —          | —           | —         | —           | 40        | 13          |
| Whyalla .....                      | 34         | 19          | 500        | 1,918       | 34        | 119         | 568       | 2,056       |
| All other outports .               | 633        | 57          | —          | —           | —         | —           | 633       | 57          |
| Total arrivals .                   | 2,920      | 1,227       | 1,206      | 3,574       | 1,629     | 8,326       | 5,755     | 13,127      |

(a) Inner and Outer Harbor.

**Arrivals from Oversea and Interstate**

The table in this section and later shipping tables refer to vessels moving oversea direct or via other States, and to other vessels moving interstate. Vessels are entered at the first port of call in South Australia and cleared from the port of final departure from South Australia.

In the following table vessels entered are shown as arrivals; the number of vessels and net tonnage are given for the four years ended 1963-64.

### Shipping Arrivals in South Australia from Oversea and Interstate

| Arriving from—                          | Vessels |         |         |         | Net Tonnage |         |         |         |
|---|---------|---------|---------|---------|-------------|---------|---------|---------|
|   | 1960-61 | 1961-62 | 1962-63 | 1963-64 | 1960-61     | 1961-62 | 1962-63 | 1963-64 |
|   | Number  |         |         |         | '000 Tons   |         |         |         |
| <i>Oversea—</i>                         |         |         |         |         |             |         |         |         |
| British Commonwealth—                   |         |         |         |         |             |         |         |         |
| United Kingdom .....                    | 109     | 94      | 96      | 113     | 778         | 663     | 700     | 763     |
| India, Pakistan and<br>Ceylon .....     | 33      | 29      | 42      | 26      | 123         | 102     | 170     | 110     |
| Canada .....                            | 40      | 32      | 60      | 56      | 196         | 132     | 260     | 249     |
| New Zealand .....                       | 75      | 78      | 74      | 77      | 201         | 219     | 205     | 228     |
| Nauru and Ocean Island<br>Other .....   | 116     | 133     | 150     | 151     | 504         | 568     | 627     | 608     |
| <i>Foreign countries—</i>               |         |         |         |         |             |         |         |         |
| Germany, Federal<br>Republic .....      | 53      | 32      | 51      | 44      | 234         | 139     | 226     | 206     |
| Other European .....                    | 73      | 71      | 63      | 74      | 359         | 346     | 312     | 376     |
| Japan .....                             | 130     | 132     | 103     | 162     | 553         | 575     | 442     | 738     |
| Indonesia .....                         | 25      | 36      | 6       | 18      | 114         | 166     | 27      | 99      |
| United States of America<br>Other ..... | 108     | 93      | 83      | 99      | 442         | 391     | 382     | 449     |
| Other .....                             | 68      | 64      | 69      | 103     | 308         | 295     | 439     | 1,181   |
| Total oversea .....                     | 847     | 811     | 813     | 939     | 3,887       | 3,677   | 3,875   | 5,089   |
| <i>Interstate</i> .....                 | 1,103   | 1,147   | 1,132   | 1,228   | 3,726       | 3,969   | 4,011   | 4,397   |
| Total .....                             | 1,950   | 1,958   | 1,945   | 2,167   | 7,613       | 7,646   | 7,886   | 9,486   |

The number of vessels arriving from oversea and interstate in 1963-64 showed a slight increase over the previous three years; similarly net tonnage increased. There has been a steady increase in the number of arrivals in the post war period but the 1938-39 total of 1,502 was not exceeded until 1954-55 when 1,511 arrivals were recorded. The number of arrivals from United Kingdom was 151 in 1953-54 but has since decreased.

### Nationality of Arrivals

The country of registration of vessels arriving in South Australia during the years 1960-61 to 1963-64 is shown in the table below.

### Nationality of Vessels Entered South Australia

| Country of Registration                 | Vessels |         |         |         | Net Tonnage |         |         |         |
|---|---------|---------|---------|---------|-------------|---------|---------|---------|
|   | 1960-61 | 1961-62 | 1962-63 | 1963-64 | 1960-61     | 1961-62 | 1962-63 | 1963-64 |
|   | Number  |         |         |         | '000 Tons   |         |         |         |
| <i>British Commonwealth—</i>            |         |         |         |         |             |         |         |         |
| Australia .....                         | 837     | 823     | 809     | 916     | 2,294       | 2,270   | 2,307   | 2,666   |
| United Kingdom .....                    | 492     | 514     | 479     | 520     | 2,770       | 2,807   | 2,821   | 3,407   |
| New Zealand .....                       | 61      | 59      | 62      | 55      | 117         | 115     | 120     | 104     |
| Other .....                             | 58      | 58      | 46      | 52      | 203         | 196     | 153     | 174     |
| Total .....                             | 1,448   | 1,454   | 1,396   | 1,543   | 5,384       | 5,388   | 5,401   | 6,351   |
| <i>Foreign—</i>                         |         |         |         |         |             |         |         |         |
| Denmark .....                           | 31      | 40      | 46      | 50      | 155         | 193     | 234     | 201     |
| Netherlands .....                       | 83      | 83      | 88      | 94      | 356         | 356     | 343     | 384     |
| Germany, Federal<br>Republic .....      | 38      | 36      | 50      | 57      | 160         | 142     | 189     | 259     |
| Greece .....                            | 21      | 38      | 11      | 32      | 52          | 211     | 49      | 184     |
| Italy .....                             | 29      | 27      | 24      | 24      | 190         | 180     | 182     | 239     |
| Japan .....                             | 69      | 61      | 65      | 66      | 299         | 272     | 289     | 299     |
| Norway .....                            | 87      | 80      | 107     | 116     | 381         | 364     | 489     | 563     |
| Sweden .....                            | 69      | 73      | 88      | 93      | 227         | 233     | 321     | 339     |
| United States of America<br>Other ..... | 21      | 18      | 15      | 18      | 102         | 88      | 73      | 88      |
| Other .....                             | 54      | 48      | 55      | 74      | 307         | 219     | 315     | 579     |
| Total .....                             | 502     | 504     | 549     | 624     | 2,229       | 2,258   | 2,484   | 3,135   |
| Grand total ...                         | 1,950   | 1,958   | 1,945   | 2,167   | 7,613       | 7,646   | 7,885   | 9,486   |

In 1963-64, 71% of vessels entered were registered in British Commonwealth countries whereas in 1949-50 this percentage was as high as 86% and in 1954-55 83%. Since 1949-50 a marked increase has occurred in vessels entered which were registered in Australia, and also the Netherlands, Japan, and Sweden. The total number of arrivals registered in the United Kingdom has fallen slightly in this period, while the proportion has dropped from 47% to 24%.

**Arrivals, and Departures, with Cargo and in Ballast**

Shipping arrivals and departures with cargo and in ballast are shown in the table below for the year 1963-64. Most of the vessels arriving in South Australia in ballast were from interstate direct and a large number of these were ore carrying vessels arriving at Whyalla. Vessels arriving in ballast from oversea direct to outports in this State were mainly grain carriers.

**Vessels Entered and Cleared: With Cargo and in Ballast, South Australia  
1963-64**

| Country of Registration         | Vessels Entered |              |            |              | Vessels Cleared |              |            |             |
|---------------------------------|-----------------|--------------|------------|--------------|-----------------|--------------|------------|-------------|
|                                 | With Cargo      |              | In Ballast |              | With Cargo      |              | In Ballast |             |
|                                 | Number          | Net Tonnage  | Number     | Net Tonnage  | Number          | Net Tonnage  | Number     | Net Tonnage |
|                                 | '000 Tons       |              | '000 Tons  |              | '000 Tons       |              | '000 Tons  |             |
| <i>British Commonwealth—</i>    |                 |              |            |              |                 |              |            |             |
| Australia .....                 | 378             | 926          | 538        | 1,740        | 931             | 2,702        | 9          | 25          |
| United Kingdom .....            | 456             | 3,065        | 64         | 342          | 473             | 3,032        | 50         | 403         |
| New Zealand .....               | 49              | 93           | 6          | 11           | 53              | 99           | 2          | 8           |
| Other .....                     | 41              | 138          | 11         | 36           | 55              | 185          | —          | —           |
| <b>Total .....</b>              | <b>924</b>      | <b>4,222</b> | <b>619</b> | <b>2,129</b> | <b>1,512</b>    | <b>6,018</b> | <b>61</b>  | <b>436</b>  |
| <i>Foreign—</i>                 |                 |              |            |              |                 |              |            |             |
| Denmark .....                   | 37              | 159          | 13         | 42           | 47              | 190          | 2          | 10          |
| Netherlands .....               | 87              | 344          | 7          | 41           | 90              | 360          | 1          | 7           |
| Germany, Federal Republic ..... | 52              | 240          | 5          | 19           | 52              | 231          | 3          | 13          |
| Greece .....                    | 10              | 53           | 22         | 131          | 23              | 132          | 5          | 27          |
| Italy .....                     | 24              | 239          | —          | —            | 25              | 255          | —          | —           |
| Japan .....                     | 59              | 276          | 7          | 22           | 63              | 296          | —          | —           |
| Norway .....                    | 93              | 439          | 23         | 123          | 97              | 444          | 20         | 119         |
| Sweden .....                    | 88              | 312          | 5          | 27           | 86              | 294          | 7          | 43          |
| United States of America .....  | 18              | 88           | —          | —            | 18              | 88           | —          | —           |
| Other .....                     | 51              | 467          | 23         | 112          | 60              | 393          | 15         | 191         |
| <b>Total .....</b>              | <b>519</b>      | <b>2,617</b> | <b>105</b> | <b>518</b>   | <b>561</b>      | <b>2,683</b> | <b>53</b>  | <b>410</b>  |
| <b>Grand total ...</b>          | <b>1,443</b>    | <b>6,839</b> | <b>724</b> | <b>2,647</b> | <b>2,073</b>    | <b>8,701</b> | <b>114</b> | <b>846</b>  |

**Distances to Oversea Ports**

Distances in nautical miles from Port Adelaide to principal overseas ports are shown in the following table. Particulars of distances by sea from Port Adelaide to the ports of other Australian capital cities are given on page 426.

## Distances from Port Adelaide to Principal Oversea Ports

| Port Adelaide to—            | Nautical Miles | Port Adelaide to—     | Nautical Miles |
|------------------------------|----------------|-----------------------|----------------|
| <i>New Zealand—</i>          |                | <i>Africa—</i>        |                |
| Auckland .....               | 2,035          | Capetown .....        | 6,107          |
| Wellington .....             | 1,880          | Port Said .....       | 7,500          |
| <i>Europe—</i>               |                | <i>North America—</i> |                |
| Liverpool .....              | 10,677         | Baltimore .....       | 10,253         |
| London .....                 | 10,712         | Montreal .....        | 11,468         |
| Marseilles .....             | 9,011          | New York .....        | 10,323         |
| Naples .....                 | 8,607          | Panama .....          | 8,307          |
| <i>Asia and East Indies—</i> |                | San Francisco .....   | 7,357          |
| Colombo .....                | 4,364          | Vancouver .....       | 7,741          |
| Djakarta .....               | 3,047          | <i>South America—</i> |                |
| Hong Kong .....              | 4,789          | Buenos Aires .....    | 7,775          |
| Singapore .....              | 3,504          | Rio de Janeiro .....  | 8,579          |
| Yokohama .....               | 5,352          | Valparaiso .....      | 6,780          |

## CIVIL AVIATION

## Early Development

The first flights by aircraft in Australia were demonstration flights made over capital cities in 1907. The first monoplane flight in Australia is recorded as being made by the late F. C. Custance on 17th March 1910 near Bolivar in South Australia.

After the cessation of World War I a number of small companies were formed by ex-officers of the Australian Flying Corps and the Royal Air Force and throughout Australia machines were engaged in carrying passengers on short flights. In South Australia such companies included the Butler and Kauper Aviation Company which was formed in August 1919 and offered 'joy rides and aerial advertising'. Capt. Butler carried out five unofficial mail carrying flights to Minlaton, Wallaroo, Victor Harbor, Murray Bridge and Jamestown. These airmail services usually operated in connection with some 'Aviation Day'. The public interest in 'joy rides' and 'barnstorming' waned and in September 1921 this company went into liquidation.

The development of civil aviation as a commercial enterprise in Australia probably began with the granting of aerial mail services subsidies in 1921. In addition to providing a regular and speedy transport service over fixed routes, it was considered that the granting of contracts for subsidized aerial services would give an impetus to the development of civil aviation in Australia, while the trained flying and ground personnel would provide a technical reserve for air defence in case of war. A contract was accepted in 1921 for the maintenance of weekly return aerial services between Adelaide and Sydney (790 miles) for a period of 12 months; the subsidy was £17,500. Owing to delays the service was not commenced until 2nd June 1924. In July 1925 the contract was let for a weekly service from Adelaide to Cootamundra *via* Mildura, Hay and Narrandera. Another subsidized service was operated from Adelaide to Perth; this was a weekly service, covering 1,453 miles in two days by 14-passenger D.H.66 Hercules, which commenced in June 1929.

During 1930 several companies inaugurated regular commercial air services without Government subsidies and these included services from Adelaide to Renmark, Mount Gambier, Streaky Bay and Broken Hill, and Adelaide to Melbourne. Adelaide Airways Ltd. commenced operations on 29th October 1935 with a service from Adelaide to Melbourne *via* Mount Gambier and a service to Port Lincoln the following day. In July 1936 the company purchased W.A. Airways Ltd. and operated the Adelaide to Perth run. Australian National Airways Pty. Ltd. was registered as a company on 1st July 1936 to take over the operations of Adelaide Airways Ltd. and the interstate Holyman Airways Pty. Ltd. It commenced services in November 1936 and later became the major airline in Australia. Guinea Airways Ltd. which commenced operations in South Australia with the Adelaide to Darwin service in 1937, later took over the Port Lincoln and Kangaroo Island service and established services to Whyalla, Cowell, Cleve, Port Pirie and Renmark.

### Post-War Development

With the advent of the Government owned Trans-Australia Airlines in 1946, interstate services were run by that airline in competition with the privately owned Australian National Airways. The Government airline took over the Adelaide-Darwin service from Guinea Airways Ltd. After the purchase of A.N.A. by Ansett Transport Industries Ltd. in 1957, the new airline, Ansett-A.N.A., operated in direct competition with T.A.A. on all major interstate and territorial routes. Ansett Transport Industries Ltd. acquired a controlling interest in Guinea Airways Ltd. in September 1959 and the airline has operated as Airlines of S.A. Pty. Ltd. since January 1960 and has continued to carry out intrastate services in South Australia.

### Control of Civil Aviation

In Australia, civil aviation is subject to the Commonwealth *Air Navigation Act* 1920-1963 and to regulations made under the Act. The South Australian Air Navigation Act, 1937 provided for 'the application of Commonwealth Air Navigation Regulations to, and in relation to, air navigation within the State of South Australia'.

The regulations under the Commonwealth Act were drawn up to give effect to the 1944 Chicago convention on Civil Aviation. Regulations based on the resolutions of the Paris convention in 1919 were no longer adequate in the years after World War II because of the immense wartime development of aerial transport. The present regulations, administered by the Commonwealth Department of Civil Aviation, cover the registration of aircraft and the issue of certificates of airworthiness; the licensing of aircraft services, aircraft operating crews, aerodromes, and flying training schools; and the rules of the air. The department is responsible for the operation of Air Traffic Control and has assumed responsibility for co-ordination of Search and Rescue operations.

Under the *Australian National Airlines Act* 1945 the Australian National Airlines Commission was established and empowered to operate Commonwealth-owned air services. The Commission trades under the name Trans-Australia Airlines.

The *Civil Aviation Agreement Act* 1952 ratified an agreement, between the Commonwealth and Australian National Airways Pty. Ltd. to ensure the

efficient and economical operation of air services within Australia by eliminating wasteful competition between that company and Trans-Australia Airlines and to rationalize the services of both airlines. The *Civil Aviation Agreement Act 1957* was enacted to extend the privileges and obligations of the 1952 Act to the new proprietor of the major private airline after the purchase of Australian National Airways Pty. Ltd. by Ansett Transport Industries Ltd. The Commonwealth passed the Airlines Equipment Act in 1958 and this provided for further financial assistance to both airlines for the purchase of new aircraft and empowered the Commonwealth to limit the aircraft capacity being provided on competitive routes by these two operators.

The Airlines Agreement approved by the *Airlines Agreement Act 1961* consolidated all the arrangements and principles developed by the Government over the past decade for maintaining and securing the competitive airline system and made important arrangements affecting the introduction of new aircraft on Australian domestic routes. The *Civil Aviation Agreement Act 1952-1957*, amended by the 1961 Act, is now cited as the *Airlines Agreement Act 1952-1961*.

For reference to international agreements on civil aviation see Year Book of the Commonwealth of Australia No. 48, and for references to international organizations see Year Book No. 37.

#### Aircraft on Register

The total number of aircraft listed on the Australian register as at 30th June 1964 was 1,936 aircraft, an increase from 1,787 registered at June 1963. Corresponding figures for the South Australian-Northern Territory Region are given in the following table which shows aircraft classified according to operations.

**Classification of Operations of Aircraft  
South Australia-Northern Territory Region**

| Type of Operation              | As at 30th June |      |      |
|--------------------------------|-----------------|------|------|
|                                | 1962            | 1963 | 1964 |
| Private .....                  | 70              | 82   | 104  |
| Aerial work .....              | 32              | 41   | 43   |
| Charter .....                  | 40              | 47   | 39   |
| Regular public transport ..... | 18              | 18   | 19   |
| Total .....                    | 160             | 188  | 205  |

Of interest is the increase in the use of aircraft for top dressing with super-phosphate and crop dusting with insecticides, etc., in South Australia; 363,186 acres were treated during 1962 and 1,016,130 acres during 1963.

#### Aerial Medical Services

Aerial medical services are carried out in the outback areas of Australia. The Royal Flying Doctor Service of Australia (S.A. Section) Inc. operates control stations at Alice Springs and Port Augusta. The Bush Church Aid Society (S.A. Branch) maintains aircraft at Ceduna on the West Coast and these aircraft operate within a radius of 400 miles.

**Australian Flying Scholarship Scheme**

The Commonwealth has subsidized flying training in Australia largely through the aero clubs since 1926. In 1961 the Commonwealth introduced a new system of subsidies to Australian flying training organizations including the aero clubs, flying schools and the Gliding Federation of Australia, spread over a four-year period. A feature of the new subsidy arrangements was the establishment of the Australian Flying Scholarship scheme which is designed to train career pilots for the Australian commercial aviation industry.

**Passengers and Freight Carried**

The number of passengers carried on civil airlines in South Australia has increased on both interstate and intrastate services (in fact has more than doubled on intrastate services) during the last 10 years. Freight carried interstate decreased considerably in 1961-62 but has since shown some increase. Details are shown in the following table.

**Passengers and Freight Carried on Civil Airlines, South Australia**

| Year          | Passengers |            | Freight    |            |
|---------------|------------|------------|------------|------------|
|               | Interstate | Intrastate | Interstate | Intrastate |
|               |            |            | Short Tons | Short Tons |
| 1954-55 ..... | 245,296    | 65,090     | 11,409     | 1,105      |
| 1955-56 ..... | 260,405    | 68,707     | 11,371     | 1,168      |
| 1956-57 ..... | 262,623    | 71,024     | 10,864     | 1,139      |
| 1957-58 ..... | 267,656    | 69,571     | 8,995      | 1,148      |
| 1958-59 ..... | 311,365    | 91,042     | 8,547      | 1,255      |
| 1959-60 ..... | 356,826    | 106,401    | 8,560      | 1,430      |
| 1960-61 ..... | 338,476    | 110,972    | 7,772      | 1,482      |
| 1961-62 ..... | 333,909    | 112,202    | 7,100      | 1,491      |
| 1962-63 ..... | 375,465    | 117,178    | 7,576      | 1,459      |
| 1963-64 ..... | 417,101    | 131,339    | 8,152      | 1,469      |

Note—short ton = 2,000 lb.

Passenger and freight traffic at principal airports in South Australia are given below for the years 1961-62 and 1962-63. Aircraft movements (*i.e.* landings or take offs) at Adelaide Airport increased substantially during the year.

**Principal Airports, South Australia**

*Passenger and Freight Traffic and Aircraft Movements*

| Airport             | 1961-62    |            |                    | 1962-63    |            |                    |
|---------------------|------------|------------|--------------------|------------|------------|--------------------|
|                     | Passengers | Freight    | Aircraft Movements | Passengers | Freight    | Aircraft Movements |
|                     | No.        | Short Tons | No.                | No.        | Short Tons | No.                |
| Adelaide .....      | 400,372    | 6,240      | 14,762             | 468,576    | 7,066      | 16,824             |
| Kingscote .....     | 29,008     | 229        | 1,164              | 30,792     | 221        | 1,182              |
| Mount Gambier ..... | 14,539     | 88         | 1,130              | 14,810     | 91         | 1,124              |
| Port Lincoln .....  | 30,342     | 434        | 1,548              | 32,057     | 442        | 1,626              |
| Whyalla .....       | 12,598     | 132        | 728                | 13,835     | 157        | 760                |
| Woomera .....       | 36,891     | 538        | 1,171              | 34,773     | 500        | 1,134              |



## 11.2. COMMUNICATIONS

### CONTROL OF POSTS, TELEGRAPHS AND TELEPHONES

The postal, telegraphic, and telephonic services in Australia are under the control of the Postmaster-General pursuant to the provisions of the *Post and Telegraph Act* 1901-1961. The Director-General of Posts and Telegraphs controls the Commonwealth Department under the Postmaster-General, whilst the principal officer in each State is the Director of Posts and Telegraphs.

The Postmaster-General's Department works in close co-operation with three important agencies: the Overseas Telecommunications Commission, which is responsible for establishing, maintaining, and operating public cable and radio telegraph services with overseas countries, ships at sea, and aircraft in flight; the Australian Broadcasting Control Board, which ensures the provision of services by broadcasting stations and television stations in accordance with plans prepared by the Board; and the Australian Broadcasting Commission, which controls the activities of the National Broadcasting Service and the National Television Service.

As a result of federation all the former colonial post and telegraph services were taken over by the Commonwealth on 1st March 1901.

### EARLY HISTORY

#### Posts

Postal facilities were first established in South Australia on 10th April 1837 when the Colonial Storekeeper (Mr. Thomas Gilbert) was also appointed to the position of Postmaster by Governor Hindmarsh at a salary of £30 per annum. The mails were received at his residence, a temporary hut on the bank of the River Torrens, where they were sorted and delivered. The sole charge levied on letters, whether received or dispatched, was one penny each irrespective of weight. The money was paid as a gratuity to captains of the vessels carrying them.

With the increase in mail and the need for larger accommodation the site of the Post Office was changed to a site in Gilles Arcade, Currie Street in June 1838, and to the south-eastern corner of North Terrace and King William Street later the same year. In July 1848 the General Post Office was moved to a new building on the opposite corner.

In 1851 the General Post Office was removed to the corner of King William and Franklin Streets into a new building which housed the Metropolitan Police Station, Court House, and Post Office. The present General Post Office with its Victoria clock tower was completed in 1872 at a cost of between £40,000 and £50,000. The earlier Post Office was demolished in 1891, and additions to the new General Post Office were completed in 1893 to provide accommodation for the Telegraph Office.

Post offices were established at Port Adelaide and Port Lincoln in 1839 and fortnightly mails were introduced and carried by police between Adelaide, Morphett Vale, Willunga, and Encounter Bay. House to house deliveries by letter carriers began in South Adelaide at this time. In 1840 there were 6 post offices in the colony employing 9 persons, and by 1860 there were 146 post offices employing 177 persons. Revenue in 1840 was £232 but had risen to £14,582 in 1860.

A Post Office Act passed in 1839 fixed the rate of inland postage at 3d. per letter or packet whilst the charges for ship letters remained at one penny. A change in the letter rate of postage on inland letters was made to 2d. per ½oz. in 1854. Postage stamps, printed in England, were introduced in 1855 and prepayment of postage became compulsory; penny postcards were issued in December 1876. The money order department was opened in 1859, postal notes were issued in 1887, and in 1889 the parcels post was established.

Steam postal communication was inaugurated in 1852, and the first steamer arrived from London on 29th August. This steamer service was short lived but in the following year a contract was entered into for the conveyance of mails between England and Australia *via* Singapore, calling at Albany (King George's Sound), Adelaide, Melbourne, and Sydney. During 1859 a fresh contract was signed for the conveyance of a monthly mail *via* Mauritius, receiving and delivering the South Australian mails at Kangaroo Island. This route was abandoned in favour of a service from Ceylon direct to Albany and thence to Melbourne. In 1862 the Government of South Australia accepted the tender of the Australian Steam Navigation Company for a branch mail service to Albany.

### Telegraphs

Mr. Charles Todd was appointed Superintendent of Telegraphs and Observer in February 1855. He arrived in South Australia with the necessary telegraph plant in November 1855 and in December the first telegraph line in the colony was commenced from Adelaide to Port Adelaide. The line was opened for business in February 1856. Intermediate stations were opened at Bowden and Alberton, and at the railway stations at Adelaide and Port Adelaide.

A telegraph line between Adelaide and Melbourne was opened in 1858 and a second line was completed by the end of 1861; a direct line between Sydney and Adelaide was opened in 1867. In the meantime, the telegraph in South Australia had been extended to Kapunda, Clare, Kooringa, and new mining centres at Kadina, Wallaroo and Moonta, Port Augusta, and other places.

An epic in Australian history was the erection of the Overland Telegraph line from Port Augusta to Port Darwin; 2,000 miles of telegraph through an almost unknown country. The first pole was planted at Port Darwin in September 1870, and at Port Augusta in October. On 22nd August 1872 the line was completed, to form a link with the submarine cable from London, which had already been extended from Java to Port Darwin. Before the overland line was ready an interruption occurred in the submarine cable so that the first through message from London to Adelaide could not be sent until October 1872.

A line from Adelaide to Perth was opened in 1877.

The first telegraph office in Adelaide occupied rented accommodation until the new General Post Office was opened in 1872. In 1870 the Post Office and the Telegraph Department were amalgamated and Charles Todd was appointed 'to be also Postmaster-General of the Province'.

### Telephones

The first departmental trials of telephone communication in South Australia were made before the invention of the microphone, and in January 1878, communication was effected between Semaphore, Adelaide, and Kapunda, and later between Semaphore and Port Augusta. Another successful trial was made on the Adelaide-Darwin telegraph line between Beltana and Strangways Springs, a wire distance of 200 miles.

The first practical introduction of the telephone system in South Australia was to connect the Police Station with the Superintendent of the Fire Brigade and the Valve House in September 1880. This service was subsequently extended to include all the fire-reel stations in Adelaide. The next line was from Government House, Adelaide, to the Governor's summer residence at Marble Hill.

In May 1883 the Adelaide Telephone Exchange was opened with 48 subscribers and in September an exchange was opened at Port Adelaide. A telephone exchange building was erected adjoining the General Post Office in 1908.

### DEVELOPMENT OF SERVICES

Although there were 713 post offices and 304 telegraph stations in South Australia and Northern Territory in 1901, the number of post offices increased to 925 and the number of telegraph stations increased to 1,008 by 1963-64. Revenue from postal services in 1901 was approximately £140,000 whereas in 1963-64 it amounted to £4,331,000; telegraph and telephone revenue in 1901 was £131,000 compared with £926,000 telegraph revenue and £9,590,000 revenue from telephone services in 1963-64. The number of telephone lines connected in 1901 was 1,831 whereas there were 173,314 services in operation at 30th June 1964.

Details of post offices in operation and the number of persons employed in postal services in South Australia for the years 1959-60 to 1963-64 are given in the table below. Details in this and all other tables in this section include the Northern Territory; separate figures are not available.

#### Post Offices: Number and Employment South Australia and Northern Territory

| Particulars                   | 1959-60      | 1960-61       | 1961-62       | 1962-63       | 1963-64       |
|-------------------------------|--------------|---------------|---------------|---------------|---------------|
| <b>Post Offices—</b>          |              |               |               |               |               |
| Official .....                | 169          | 169           | 169           | 170           | 172           |
| Non official .....            | 744          | 755           | 757           | 754           | 753           |
| Telephone offices .....       | 109          | 106           | 107           | 106           | 110           |
| <b>Total .....</b>            | <b>1,022</b> | <b>1,030</b>  | <b>1,033</b>  | <b>1,030</b>  | <b>1,035</b>  |
| <b>Persons employed—</b>      |              |               |               |               |               |
| Permanent .....               | 5,829        | 5,971         | 6,305         | 6,499         | 6,649         |
| Non-official staff .....      | 905          | 920           | 921           | 924           | 943           |
| Temporary and part-time ...   | 344          | 233           | 244           | 259           | 258           |
| Telephone office keepers .... | 108          | 109           | 107           | 104           | 108           |
| Mail contractors .....        | 370          | 362           | 354           | 279           | 355           |
| All other .....               | 2,314        | 2,483         | 2,174         | 2,181         | 2,356         |
| <b>Total .....</b>            | <b>9,870</b> | <b>10,078</b> | <b>10,105</b> | <b>10,246</b> | <b>10,669</b> |

Non-official post offices are conducted by persons who are not members of the Commonwealth Public Service and who receive an allowance based on business transacted. In many instances this type of business is conducted in

conjunction with some other business activity. Offices from which both trunk line and local calls may be made and at which telegrams can be lodged by members of the public, but which do not provide other postal facilities, are known as telephone offices.

### Revenue and Expenditure

The Post Office maintains a system of financial and management accounts. These accounts, known as its commercial accounts, are quite distinct from the cash accounts maintained to meet Treasury requirements. The latter accounts record cash receipts paid into the Commonwealth Public Account and the cash payments made from funds appropriated by the Federal Parliament for Post Office purposes.

Cash receipts and payments of the Postmaster-General's Department in South Australia for the years 1959-60 to 1963-64 are given in the following tables. The figures exclude trust fund transactions *e.g.* pension payments, Commonwealth Savings Bank operations, etc. Cash expenditure on capital works for the last five years is shown in a separate table.

#### Postmaster-General's Department: Revenue South Australia and Northern Territory

| Year       | Postal | Telegraph | Telephone | Other   | Total Revenue |
|------------|--------|-----------|-----------|---------|---------------|
|            |        |           | £'000     |         |               |
| 1959-60 .. | 3,295  | 743       | 6,352     | (a) 385 | 10,775        |
| 1960-61 .. | 3,860  | 822       | 7,272     | 4       | 11,958        |
| 1961-62 .. | 3,870  | 717       | 7,802     | 11      | 12,400        |
| 1962-63 .. | 4,138  | 796       | 8,254     | 23      | 13,211        |
| 1963-64 .. | 4,332  | 926       | 9,590     | 23      | 14,871        |

(a) Other revenue has been mainly classified to the three major branches for 1960-61 and later years.

#### Postmaster-General's Department: Expenditure South Australia and Northern Territory

| Year          | Salaries and Payments in Nature of Salary | Administrative Expenses | Stores and Material | Mail Services | Engineering Services | Rent, Repair and Maintenance | Total Non-Capital Expenditure |
|---------------|---|-------------------------|---------------------|---------------|----------------------|------------------------------|-------------------------------|
|               |   |                         |                     | £'000         |                      |                              |                               |
| 1959-60 ..... | 4,485                                     | 460                     | 365                 | 438           | 3,514                | 151                          | 9,413                         |
| 1960-61 ..... | 4,599                                     | 534                     | 327                 | 393           | 3,735                | 174                          | 9,762                         |
| 1961-62 ..... | 4,749                                     | 562                     | 281                 | 427           | 3,936                | 176                          | 10,131                        |
| 1962-63 ..... | 4,869                                     | 570                     | (a)197              | 440           | (a)3,046             | 201                          | (a)9,323                      |
| 1963-64 ..... | 5,137                                     | 740                     | (a)162              | 463           | (a)3,970             | 196                          | (a)10,668                     |

(a) Expenditure on motor vehicles, postal plant and certain non-engineering plant now included under capital works expenditure.

**Postmaster-General's Department: Cash Expenditure on Capital Works  
South Australia and Northern Territory**

| Year          | Telephone Services | Telegraph Services | Other Plant and Equipment and Motor Vehicles | Buildings | Sites and Properties | Total    |
|---------------|--------------------|--------------------|--|-----------|----------------------|----------|
|               | £'000              |                    |  |           |                      |          |
| 1959-60 ..... | 3,355              | 50                 | 115  | 543       | 34                   | 4,097    |
| 1960-61 ..... | 3,357              | 40                 | 140  | 567       | 47                   | 4,151    |
| 1961-62 ..... | 3,757              | 48                 | 138  | 542       | 40                   | 4,525    |
| 1962-63 ..... | 5,088              | 71                 | (a)513                                       | 458       | 17                   | (a)6,147 |
| 1963-64 ..... | 5,569              | 88                 | (a)583                                       | 602       | 22                   | (a)6,864 |

(a) Includes expenditure on motor vehicles, postal plant and certain non-engineering plant recorded in previous table for earlier years.

**Postal Articles Handled**

Articles handled by the Postmaster-General's Department in South Australia and Northern Territory during the years 1959-60 to 1963-64 are shown in the following table.

**Postal Articles Handled  
South Australia and Northern Territory**

| Year                                   | Letters and Postcards | Newspapers and Packets | Parcels (a) | Registered Articles | All Articles |
|--|-----------------------|------------------------|-------------|---------------------|--------------|
|  | '000                  |                        |             |                     |              |
| <b>Posted for delivery—</b>            |                       |                        |             |                     |              |
| <b>Within Australia—</b>               |                       |                        |             |                     |              |
| 1959-60 .....                          | 131,634               | 12,594                 | 1,237       | 853                 | 146,318      |
| 1960-61 .....                          | 136,809               | 13,118                 | 1,274       | 777                 | 151,978      |
| 1961-62 .....                          | 143,442               | 13,718                 | 1,266       | 769                 | 159,195      |
| 1962-63 .....                          | 147,962               | 14,185                 | 1,253       | 749                 | 164,149      |
| 1963-64 .....                          | 156,379               | 16,463                 | 1,310       | 756                 | 174,908      |
| <b>Beyond Australia—</b>               |                       |                        |             |                     |              |
| 1959-60 .....                          | 5,289                 | 809                    | 42          | 64                  | 6,204        |
| 1960-61 .....                          | 5,475                 | 833                    | 39          | 63                  | 6,410        |
| 1961-62 .....                          | 5,497                 | 762                    | 38          | 65                  | 6,362        |
| 1962-63 .....                          | 5,523                 | 848                    | 40          | 61                  | 6,472        |
| 1963-64 .....                          | 6,410                 | 900                    | 41          | 54                  | 7,405        |
| <b>Received from beyond Australia—</b> |                       |                        |             |                     |              |
| 1959-60 .....                          | (b)                   | 4,531                  | 59          | 28                  | (b)          |
| 1960-61 .....                          | (b)                   | 6,057                  | 61          | 31                  | (b)          |
| 1961-62 .....                          | (b)                   | 5,442                  | 66          | 28                  | (b)          |
| 1962-63 .....                          | 3,241                 | 4,977                  | 72          | 28                  | 8,318        |
| 1963-64 .....                          | 4,479                 | 5,111                  | 80          | 28                  | 9,698        |

(a) Includes registered parcels.

(b) Comparable figures not available.

**Money Orders and Postal Notes**

The number of money orders issued within Australia in 1944-45 was approximately 3.5 million, whereas in 1963-64 11.4 million were issued. On the other hand, the number of postal notes issued declined from 22.7 million issued in 1944-45 to approximately 16 million in 1963-64. In South Australia money orders and postal notes paid in 1944-45 amounted to £1,498,000 and £536,000 respectively; in 1963-64 the corresponding values were £13,778,000 and £569,000.

**Money Orders Issued and Paid**  
**South Australia and Northern Territory**

| Year    | Money Order Offices | Within Australia |            |             |            | Beyond Australia |       |             |       |
|---------|---------------------|------------------|------------|-------------|------------|------------------|-------|-------------|-------|
|         |                     | Number Issued    | Value      | Number Paid | Value      | Number Issued    | Value | Number Paid | Value |
|         | Number              | '000             | £'000      | '000        | £'000      | '000             | £'000 | '000        | £'000 |
| 1959-60 | 484                 | 710              | 7,400      | 651         | 7,075      | 57               | 163   | 11          | 65    |
| 1960-61 | 511                 | 772              | 8,347      | 732         | 8,113      | 58               | 171   | 13          | 79    |
| 1961-62 | 524                 | (a) 800          | 8,649      | (a) 746     | 8,308      | 56               | 171   | 15          | 95    |
| 1962-63 | 531                 | (b) 962          | (b) 12,955 | (b) 899     | (b) 12,532 | 54               | 175   | 15          | 96    |
| 1963-64 | 535                 | (b) 1,050        | (b) 14,127 | (b) 970     | (b) 13,659 | 57               | 188   | 16          | 118   |

(a) Estimated.

(b) Include official money orders used in bringing to account Telephone Account collections and War Service Homes repayments.

Total commission charged on money orders issued in 1963-64 amounted to £93,000.

**Postal Notes Issued and Paid**  
**South Australia and Northern Territory**

| Year    | Postal Note Offices | Postal Notes Issued |       | Postal Notes Paid |       |
|---------|---------------------|---------------------|-------|-------------------|-------|
|         |                     | Number              | Value | Number            | Value |
|         | Number              | '000                | £'000 | '000              | £'000 |
| 1959-60 | 913                 | 2,776               | 1,246 | 894               | 525   |
| 1960-61 | 924                 | 2,647               | 1,216 | 885               | 532   |
| 1961-62 | 925                 | 2,785               | 1,260 | 890               | 536   |
| 1962-63 | 924                 | 3,059               | 1,426 | 922               | 557   |
| 1963-64 | 925                 | 2,951               | 1,407 | 938               | 569   |

Poundage on postal notes issued in 1963-64 amounted to £58,000.

### Telegraph System

Australia's up-to-date telegraph service, known as TRESS (Teleprinter Reperator Switching System) was first introduced in South Australia in 1959, before being extended to the other States. This system, using teleprinters and automatic switching apparatus, has eliminated the intermediate handling of telegraph traffic, resulting in greater speed and economy.

Another telegraph service known as TELEX has been available to Post Office customers in South Australia since 1957. TELEX subscribers are provided with a teleprinter in their own premises and may be connected through the teleprinter exchange with other TELEX subscribers anywhere in Australia and in a number of oversea countries. Since 1957, when there were 18 subscribers in South Australia, the number had grown to 161 at 30th June 1964.

The number of telegraph stations, the number of telegrams dispatched and received, and some information on the operations of TELEX during the years 1959-60 to 1963-64 are shown below. Internal telegraph traffic during 1963-64 amounted to 1,863,000 telegrams dispatched and these included 1,610,000 ordinary telegrams and 42,000 urgent telegrams.

**Telegraph Services**  
**South Australia and Northern Territory**

| Year    | Telegraph Stations | Telegrams                   |                             |                                | Teleprinter Exchange |             |             |
|---------|--------------------|-----------------------------|-----------------------------|--------------------------------|----------------------|-------------|-------------|
|         |                    | Dispatched within Australia | Dispatched beyond Australia | Received from beyond Australia | Subscribers          | Local Calls | Trunk Calls |
|         | Number             | '000                        | '000                        | '000                           | Number               | '000        | '000        |
| 1959-60 | 983                | 1,745                       | 90                          | 71                             | 61                   | 2           | 27          |
| 1960-61 | 986                | 1,731                       | 82                          | 69                             | 79                   | 2           | 40          |
| 1961-62 | 998                | 1,714                       | 77                          | 69                             | 100                  | 2           | 55          |
| 1962-63 | 1,028              | 1,783                       | 80                          | 72                             | 122                  | 13          | 79          |
| 1963-64 | 1,008              | 1,863                       | 85                          | 79                             | 161                  | 19          | 119         |

The Post Office picturegram service is used extensively by Adelaide newspapers to send and receive photographs to and from other parts of Australia and overseas countries for publication within a few hours of being taken. This service is also used by business and professional people to transmit photographs of documents, X-rays, and other matter capable of being photographed.

**Telephone Services**

The Post Office has continued to provide additional subscriber services, more and better trunk line circuits, and has installed automatic telephone exchanges. Between 1945 and 1964 the number of trunk line channels in the State increased from 760 to 2,991 and the number of country automatic telephone exchanges from 20 to 237. There are 31 automatic exchanges in the metropolitan area (*i.e.* the area within a 10 mile radius of the General Post Office).

Steady progress is being made towards the Post Office objective of nationwide subscriber to subscriber direct dialling, known in Post Office language as S.T.D. or Subscriber Trunk Dialling. Already this is operating to a limited extent in some interstate localities.

**Telephone Services**  
**South Australia and Northern Territory**

| At 30th June | Telephone Exchanges | Telephone Services |             |             |                         |                   | Trunk Line Channels in Service |       |
|--------------|---------------------|--------------------|-------------|-------------|-------------------------|-------------------|--------------------------------|-------|
|              |                     | Ordinary Exchange  | Duplex      | Party Line  | Private Branch Exchange | Public Telephones |                                | Total |
| 1960.....    | 727                 | <i>n.a.</i>        | <i>n.a.</i> | <i>n.a.</i> | <i>n.a.</i>             | <i>n.a.</i>       | 138,019                        | 2,102 |
| 1961.....    | 739                 | 123,198            | 2,972       | 1,670       | 14,541                  | 2,121             | 144,502                        | 2,262 |
| 1962.....    | 737                 | 131,328            | 2,710       | 1,656       | 14,878                  | 2,213             | 152,785                        | 2,483 |
| 1963.....    | 740                 | 139,484            | 2,366       | 1,600       | 16,231                  | 2,331             | 162,012                        | 2,752 |
| 1964.....    | 742                 | 150,615            | 1,948       | 1,562       | 16,796                  | 2,393             | 173,314                        | 2,991 |

*n.a.*—Not available.

Metropolitan services are all operated through automatic exchanges, whereas at 30th June 1964, 25,439 country services were automatic and 35,887 services were manually connected. Metropolitan services totalled approximately 112,000 and of these 71,000 were residence services. In the country, business phone services accounted for the larger share (about 60%) of services.

**Other Operations**

Details of other communication media under the control of the Postmaster-General in South Australia are shown in the table below.

Radio and Television Stations, South Australia<sup>(a)</sup>

As at 30th June

| Radio Communication Stations           | 1960         | 1961         | 1962         | 1963         | 1964         |
|--|--------------|--------------|--------------|--------------|--------------|
| <b>Broadcasting—</b>                   |              |              |              |              |              |
| National .....                         | 8            | 8            | 8            | 8            | 8            |
| Commercial .....                       | 8            | 8            | 8            | 8            | 8            |
| <b>Television—</b>                     |              |              |              |              |              |
| National .....                         | 1            | 1            | 1            | 1            | 1            |
| Commercial .....                       | 2            | 2            | 2            | 2            | 2            |
| <b>Transmitting and receiving—</b>     |              |              |              |              |              |
| <b>Fixed—</b>                          |              |              |              |              |              |
| Aeronautical .....                     | 6            | 6            | 6            | 6            | 5            |
| Outpost .....                          | 129          | 132          | 182          | 187          | 183          |
| Other .....                            | 63           | 69           | 83           | 90           | 97           |
| <b>Land—</b>                           |              |              |              |              |              |
| Aeronautical .....                     | 6            | 6            | 17           | 11           | 8            |
| Base station for mobile services ..... | 269          | 316          | 366          | 395          | 427          |
| Coast .....                            | 11           | 11           | 13           | 14           | 14           |
| Special experimental ...               | 22           | 25           | 35           | 40           | 44           |
| Mobile .....                           | 2,589        | 3,116        | 4,188        | 4,754        | 5,394        |
| Amateur .....                          | 481          | 501          | 544          | 586          | 615          |
| <b>Total stations.....</b>             | <b>3,595</b> | <b>4,201</b> | <b>5,453</b> | <b>6,102</b> | <b>6,806</b> |

(a) Excludes stations in Northern Territory.

Note—A fixed station is established at a fixed location for the exchange of radio messages with other fixed stations whereas a land station is established at a fixed location for the exchange of radio messages with mobile stations. An outpost station is established in an outback area and communicates with control stations operated by such organizations as the Royal Flying Doctor service.

The number of broadcast listeners' licences and television viewers' licences in force at the 30th June 1960 to 1964 and revenue from these licences during the years 1959-60 to 1963-64 are given in the following table.

**Broadcast Listeners' and Television Viewers' Licences**  
**South Australia and Northern Territory**

| Year          | Listeners' Licences |         | Viewers' Licences |         |
|---------------|---------------------|---------|-------------------|---------|
|               | Number (a)          | Revenue | Number (a)        | Revenue |
|               |                     | £       |                   | £       |
| 1959-60 ..... | 249,148             | 626,019 | 84,967            | 405,576 |
| 1960-61 ..... | 249,475             | 619,016 | 124,808           | 594,375 |
| 1961-62 ..... | 249,673             | 614,510 | 143,794           | 651,188 |
| 1962-63 ..... | 256,741             | 626,266 | 167,502           | 792,017 |
| 1963-64 ..... | 266,027             | 642,931 | 194,430           | 888,463 |

(a) At 30th June.

Television viewers' licences totalled 6,124 at 30th June 1959, although the official opening of the first station was in September 1959. Further information on radio and television services is contained in Part 6.4 under the heading of Culture and Recreation.



## **PUBLIC FINANCE**

### **12.1. STRUCTURE OF PUBLIC FINANCE**

The collection of public revenue and the expenditure of public moneys in South Australia are the responsibility of three groups of authorities:

- (i) State Government and semi-government.
- (ii) Commonwealth Government.
- (iii) Local government.

The power to raise revenue from taxation is vested in the State, Commonwealth, and local government authorities by Acts of Parliament. Other revenue comes from the proceeds of the sale of goods and services to each other and to the public. A major proportion of the revenue of the State Government, and a smaller proportion of the revenue of local government and some semi-government authorities is derived from grants from other government authorities. Grants are made by the Commonwealth to the State Government and by the latter to semi-government and local government bodies. A further source of funds is the loan market; Government securities are issued for loan raisings in Australia and overseas.

Authorization for expenditure by State and Commonwealth Government departments is given by Appropriation Acts or by Special Acts of their respective Parliaments. Each State semi-government undertaking derives its authority for expenditure from the provisions of the specific Act under which it has been set up. The Local Government Act, 1934-1963, contains sections relating to the expenditure of local government moneys.

In this chapter, reference will be made to the revenue and expenditure of the Commonwealth Government only to the extent that it affects the finances of the Government of this State. Greater detail of the Commonwealth Government finance is published annually in the Year Book of the Commonwealth of Australia.

## 12.2. COMMONWEALTH-STATE FINANCIAL RELATIONS

Payments from the Commonwealth to the State Governments fall into four categories:

- (i) Contributions under the financial agreement towards public debt charges—Section 105A.
- (ii) Special grants made to the “claimant” States on the recommendation of the Commonwealth Grants Commission—Section 96.
- (iii) Payments for special purposes determined by the Commonwealth and expended through the States, usually for convenience of administration.
- (iv) Payments to compensate for foregoing the right to levy income tax.

### THE COMMONWEALTH OF AUSTRALIA CONSTITUTION ACT

Prior to Federation in 1901, each State exercised the right to raise its own revenue by means of various forms of taxation, customs and excise duties (including interstate customs), fees for services, licence fees, etc. Under the Commonwealth Constitution the Commonwealth Government assumed responsibility for certain activities, was vested with the power to levy income tax in addition to the States, and took over from the States the right to raise customs and excise duties, interstate customs being abolished.

The States were compensated for their loss of revenue by the provisions of section 87 (known as the Braddon Clause) of the Constitution, which reads:

“During a period of ten years after the establishment of the Commonwealth and thereafter until the Parliament otherwise provides, of the net revenue of the Commonwealth from duties of customs and of excise not more than one-fourth shall be applied annually by the Commonwealth towards its expenditure.

The balance shall, in accordance with this constitution be paid to the several States, or applied towards the payment of interest on debts of the several States taken over by the Commonwealth.”

The scheme of allocation among the States is laid down in sections 89 and 93.

Under the *Surplus Revenue Act* 1910, the Commonwealth was to retain the whole of the customs and excise revenue and make a fixed annual payment of twenty-five shillings per head of population to each State for a period of ten years. Although there were moves to have it changed, this method of payment continued until 1927.

### FINANCIAL AGREEMENT 1927

With the repeal of the *Surplus Revenue Act* 1910, the States were faced with the total loss of *per capita* payments, and this led to the financial agreement between the Commonwealth and the States on 12th December 1927. It was later affected by agreements made under the powers of section 105A of the Constitution which was amended in 1928. The main features of the financial agreement were:

- (i) The taking over of the public debts of the States by the Commonwealth; but leaving the States with the obligation to find the interest.
- (ii) The payment by the Commonwealth to the States of an annual fixed amount of £7,584,912 (an amount equal to the *per capita* payments for 1926-27) as a contribution towards interest on State debts.
- (iii) The provision of sinking funds to repay the debt.
- (iv) The establishment of an Australian Loan Council.

## SPECIAL GRANTS

The Constitution provides, in section 96, for the granting of special financial assistance to the States. Prior to 1933, financial assistance of varying amounts was granted to South Australia, Western Australia, and Tasmania.

In 1933, the Commonwealth Government appointed the Commonwealth Grants Commission, of three members, to inquire into and report upon claims made by any State for a grant of financial assistance and any matters relevant thereto. Applications have been received from the three States mentioned from 1933 onwards. South Australia agreed with the Commonwealth not to apply for special grants in other than exceptional circumstances after 1st July 1959, when new financial arrangements under the *States Grants Act 1959*, came into operation.

## TAX REIMBURSEMENTS

Uniform taxation of income throughout Australia was introduced by the Commonwealth Government in 1942 to implement its financial policy for meeting the exigencies of war finance. The Commonwealth became the sole authority levying taxes upon incomes from 1st July 1942 to the end of the first full financial year after the cessation of the war. Each State received an annual payment from the Commonwealth, as reimbursement for loss of income tax revenue, under the *States Grants (Income Tax Reimbursement) Act 1942*. A similar arrangement was made under the *State Grants (Entertainments Tax Reimbursement) Act 1942*.

The Acts of 1942 were repealed in 1946 by the States Grants (Tax Reimbursement) Act which prescribed a fixed grant for each of the financial years 1946-47 and 1947-48 and, for subsequent years, an amount to be varied in accordance with changes in population and in average wages per person employed.

## FINANCIAL ASSISTANCE GRANTS

With the increasing financial needs of the States it became necessary for the Commonwealth to make grants in excess of those prescribed in the 1946 Act. Financial aid was extended by a States Grants (Special Financial Assistance) Act passed each year from 1951 to 1958 and by the States Grants (Additional Assistance) Act of 1958.

The *States Grants Act 1959*, repealed the States Grants (Tax Reimbursement) Act and provided for a new system of annual payments which are described as "financial assistance" grants. The Act incorporates an arrangement designed to eliminate the need for supplementary grants. It is essentially a *per capita* payment which varies as between States; for the year 1959-60, South Australia received £27,675,000. Section 5 (2) of the Act provides for an increase in payment in subsequent years, if population increases and a further increase if the average wage per person employed increases.

The Act provides that the system may be reviewed in relation to grants for any year subsequent to 1964-65.

## OTHER FINANCIAL ASSISTANCE

In addition to the grants under the Financial Agreement, the special grants recommended by the Commonwealth Grants Commission, and the financial assistance grants, the Commonwealth makes payments to the States for specific purposes.

Grants for road construction have been made since 1923. A new scheme of Commonwealth assistance to the States for roads was established by the *Commonwealth Aid Roads Act 1959*. Under this Act, which operated for a period of five

years from 1st July 1959 the Commonwealth undertook to make available up to £250,000,000 to the States for the construction, reconstruction, maintenance and repair of roads. Proposed grants for the period of five years from 1st July 1964 are quoted under Part 8.3. Roads and Bridges.

Under the *Tuberculosis Act* 1948, States are reimbursed by the Commonwealth for expenditure of a capital and maintenance nature on the provision of facilities for the diagnosis, treatment and control of tuberculosis.

The *States Grants (Mental Institutions) Act* 1955, provides for financial assistance to the States for capital expenditure on mental institutions to a maximum amount of £10,000,000. Each State is entitled to recover one-third of its expenditure on buildings and equipment incurred on or after 1st July 1955.

Payments to the States for universities were first introduced in 1951-52 under the *States Grants (Universities) Act* 1951. Legislation passed in 1958 provided increased contributions towards the running expenses of universities, new grants for capital works and equipment and new emergency grants. Under the *States Grants (Universities) Act* 1960, the States were to receive payments up to £42,000,000 over the three calendar years 1961, 1962, and 1963.

Up to 30th June 1964 the Commonwealth had provided £6,790,000 to South Australia under the *Railway Standardization (South Australia) Agreement Act* 1949. The Commonwealth had also undertaken, under the *Railway Equipment Agreement (South Australia) Act* 1961, to provide up to £1,325,000 for the purchase of locomotives and wagons for the carriage of ore on the railway from Broken Hill to Port Pirie.

The following table shows the pattern of Commonwealth payments to or for the State of South Australia since the financial agreement in 1927.

Commonwealth Payments To or For the States<sup>(a)</sup>, South Australia

| Particulars                                 | 1929-30      | 1939-40      | 1944-45      | 1959-60       | 1963-64       |
|---|--------------|--------------|--------------|---------------|---------------|
|   |              |              | £'000        |               |               |
| Financial Agreement—                        |              |              |              |               |               |
| Interest on State Debt .....                | 704          | 704          | 704          | 704           | 704           |
| Sinking Fund on State Debt (b) .....        | 127          | 180          | 221          | 791           | 1,028         |
| Special Grants .....                        | 360          | 995          | 1,200        | 1,426         | —             |
| Financial Assistance Grant (c) .....        | —            | —            | 2,409        | 27,675        | 36,401        |
| Additional Financial Assistance .....       | —            | —            | —            | —             | 2,762         |
| Commonwealth Aid Roads Act (d) .....        | 261          | 503          | 253          | 4,923         | 6,618         |
| Tuberculosis Act 1948—Reimbursement of      |              |              |              |               |               |
| Capital Expenditure .....                   | —            | —            | —            | 107           | 10            |
| Mental Institutions—Contribution to Capital |              |              |              |               |               |
| Expenditure .....                           | —            | —            | —            | 92            | 80            |
| Grants to Universities .....                | —            | —            | —            | 893           | 2,087         |
| Dairy Industry Extension Grant .....        | —            | —            | —            | 26            | 25            |
| Expansion of Agricultural Advisory Services |              |              |              |               |               |
| Railways—                                   |              |              |              |               |               |
| Contribution Port Augusta-Port Pirie Rail-  |              |              |              |               |               |
| way Agreement .....                         | —            | 20           | 20           | —             | —             |
| Grant for Railway Standardization (e) ..    | —            | —            | —            | 36            | 1,680         |
| Railway Equipment Agreement (e) .....       | —            | —            | —            | —             | 25            |
| <b>Total .....</b>                          | <b>1,452</b> | <b>2,402</b> | <b>4,807</b> | <b>36,698</b> | <b>51,447</b> |

(a) Excludes relief to primary producers and payments for medical research, social services, etc.

(b) Paid to National Debt Sinking Fund.

(c) Payment for 1944-45 under *States Grants (Income Tax Reimbursement) Act* 1942 and *State Grants (Entertainment Tax Reimbursement) Act* 1942.

(d) Payment under Federal Aid Roads Act for 1929-30; Federal Aid Roads and Works Act 1939-40 and 1944-45. £8,700 Local Public Works included in 1939-40 and 1944-45 payment.

(e) Excludes repayable advances.

Commonwealth subsidy paid to South Australia under section 87 of the Constitution was £842,508 for 1909-10; under the *Surplus Revenue Act* 1910, the subsidy was £514,622 for 1910-11.

### NATIONAL WELFARE FUND

The States also receive payments from the Commonwealth in respect of hospital and pharmaceutical benefits, nutrition of children and reimbursement of maintenance expenditure on tuberculosis sanatoria from the National Welfare Fund. In South Australia the receipts are paid into the Consolidated Revenue Account (or a suspense account in the case of the payment for free milk for school children). Receipts for the year 1963-64 were hospital benefits £448,000, pharmaceutical benefits £305,000, free milk for school children £353,000, tuberculosis reimbursement of maintenance expenditure and surveys £355,000.

## 12.3. STATE GOVERNMENT FINANCE

State Government accounting in South Australia is on a "cash" basis and receipts and payments fall into five main divisions, viz., the Consolidated Revenue Account, Loan Fund Accounts, Special Commonwealth Advances, Trust Fund Accounts and Deposit and Suspense Accounts.

### CONSOLIDATED REVENUE ACCOUNT

This account is credited with receipts from State taxation, fees, licences, and charges for services, recoveries of interest and sinking fund, sales of Crown lands, and Commonwealth tax reimbursement and other grants. The account is debited with the cost of revenue collection, legislative and administrative functions, interest and sinking fund on the public debt, provision of social services, operation of public undertakings and development of State resources. The resultant balance represents the State's surplus or deficit for the year.

A table showing receipts and payments for the financial year 1963-64 and four earlier years is set out below.

#### Consolidated Revenue Account

| Particulars                 | 1929-30 | 1939-40 | 1949-50 | 1959-60 | 1963-64 |
|-----------------------------|---------|---------|---------|---------|---------|
|                             |         |         | £'000   |         |         |
| Receipts .....              | 10,551  | 12,756  | 29,360  | 80,277  | 105,503 |
| Payments .....              | 12,177  | 12,918  | 29,550  | 80,589  | 103,878 |
| + Surplus (or - Deficit) .. | -1,626  | -162    | -190    | -312    | +1,625  |

#### Per Head of Population

|                | £ s. d. | £ s. d. | £ s. d. | £ s. d.  | £ s. d.  |
|----------------|---------|---------|---------|----------|----------|
| Receipts ..... | 18 3 8  | 21 7 3  | 42 15 0 | 85 19 10 | 103 8 6  |
| Payments ..... | 20 19 8 | 21 12 9 | 43 0 6  | 86 6 6   | 101 16 7 |

## Sources of Revenue

The sources of revenue for the financial years 1959-60 to 1963-64 were as follows:

## Consolidated Revenue Account—Sources of Revenue

## Total Revenue

| Source of Revenue                           | 1959-60       | 1960-61       | 1961-62       | 1962-63       | 1963-64        |
|---|---------------|---------------|---------------|---------------|----------------|
|   |               |               | £'000         |               |                |
| Taxation .....                              | 11,148        | 11,712        | 12,575        | 13,470        | 14,913         |
| Business undertakings .....                 | 25,190        | 27,540        | 28,549        | 28,864        | 31,452         |
| Territorial—Land sales, rents,<br>etc. .... | 613           | 662           | 782           | 841           | 1,004          |
| Other—                                      |               |               |               |               |                |
| Interest and exchange .....                 | 6,278         | 6,822         | 7,520         | 8,110         | 8,640          |
| Fees, fines, rents, etc. ....               | 7,243         | 8,112         | 8,878         | 8,816         | 9,664          |
| Commonwealth Grants (a)                     | 29,805        | 31,431        | 34,899        | 37,483        | 39,830         |
| <b>Total .....</b>                          | <b>80,277</b> | <b>86,279</b> | <b>93,203</b> | <b>97,584</b> | <b>105,503</b> |

## Per Head of Population

|   | £ s. d.         | £ s. d.        | £ s. d.        | £ s. d.        | £ s. d.        |
|---|-----------------|----------------|----------------|----------------|----------------|
| Taxation .....                              | 11 18 10        | 12 4 9         | 12 16 7        | 13 9 9         | 14 12 5        |
| Business undertakings .....                 | 26 19 8         | 28 15 5        | 29 2 7         | 28 17 10       | 30 16 8        |
| Territorial—Land sales, rents,<br>etc. .... | 0 13 2          | 0 13 10        | 0 16 0         | 0 16 10        | 0 19 8         |
| Other—                                      |                 |                |                |                |                |
| Interest and exchange .....                 | 6 14 6          | 7 2 7          | 7 13 5         | 8 2 4          | 8 9 4          |
| Fees, fines, rents, etc. ....               | 7 15 2          | 8 9 7          | 9 1 2          | 8 16 6         | 9 9 5          |
| Commonwealth Grants (a)                     | 31 18 6         | 32 16 9        | 35 12 2        | 37 10 5        | 39 1 0         |
| <b>Total .....</b>                          | <b>85 19 10</b> | <b>90 2 11</b> | <b>95 1 11</b> | <b>97 13 8</b> | <b>103 8 6</b> |

## Proportion of Total Revenue

|   | Per Cent      |               |               |               |               |
|---|---------------|---------------|---------------|---------------|---------------|
| Taxation .....                              | 13.89         | 13.57         | 13.49         | 13.80         | 14.14         |
| Business undertakings .....                 | 31.38         | 31.92         | 30.63         | 29.58         | 29.81         |
| Territorial—Land sales, rents,<br>etc. .... | 0.76          | 0.77          | 0.84          | 0.86          | 0.95          |
| Other—                                      |               |               |               |               |               |
| Interest and exchange .....                 | 7.82          | 7.91          | 8.07          | 8.31          | 8.19          |
| Fees, fines, rents, etc. ....               | 9.02          | 9.40          | 9.53          | 9.04          | 9.16          |
| Commonwealth Grants (a)                     | 37.13         | 36.43         | 37.44         | 38.41         | 37.75         |
| <b>Total .....</b>                          | <b>100.00</b> | <b>100.00</b> | <b>100.00</b> | <b>100.00</b> | <b>100.00</b> |

(a) Includes grants under Financial Agreement, Disabilities (section 96) grants, and Taxation Reimbursements.

**Taxation**

Until the introduction of the uniform income tax scheme in 1942-43, income tax was the major source of taxation revenue in South Australia. Revenue from this form of taxation for the years 1939-40 to 1941-42 was £2,359,000, £2,476,000 and £2,819,000 respectively or 51.70%, 57.02%, and 59.45% of total revenue from taxation.

Other forms of State taxation are included in the table for the financial years 1959-60 to 1963-64; the major forms of taxation now left to the State are motor tax, succession and stamp duties, and land tax.

**Revenue from Taxation**

| Tax                     | 1959-60       | 1960-61       | 1961-62       | 1962-63       | 1963-64       |
|-------------------------|---------------|---------------|---------------|---------------|---------------|
|                         |               |               | £'000         |               |               |
| Land tax .....          | 1,360         | 1,400         | 2,388         | 2,457         | 2,450         |
| Succession duties ..... | 2,360         | 2,402         | 2,292         | 2,625         | 3,080         |
| Racing tax (a) .....    | 703           | 751           | 738           | 734           | 734           |
| Motor tax .....         | 4,239         | 4,443         | 4,635         | 4,872         | 5,326         |
| Stamp duties .....      | 2,092         | 2,308         | 2,066         | 2,310         | 2,691         |
| Liquor licences .....   | 208           | 211           | 216           | 222           | 373           |
| Other licences .....    | 83            | 85            | 103           | 106           | 103           |
| Hospital rating .....   | 103           | 112           | 137           | 144           | 156           |
| <b>Total .....</b>      | <b>11,148</b> | <b>11,712</b> | <b>12,575</b> | <b>13,470</b> | <b>14,913</b> |

**Proportion of Total Taxation**

|                         | Per Cent      |               |               |               |               |
|-------------------------|---------------|---------------|---------------|---------------|---------------|
| Land tax .....          | 12.20         | 11.95         | 18.99         | 18.24         | 16.43         |
| Succession duties ..... | 21.17         | 20.51         | 18.22         | 19.49         | 20.65         |
| Racing tax (a) .....    | 6.31          | 6.41          | 5.87          | 5.45          | 4.92          |
| Motor tax .....         | 38.02         | 37.93         | 36.86         | 36.17         | 35.71         |
| Stamp duties .....      | 18.77         | 19.71         | 16.43         | 17.15         | 18.05         |
| Liquor licences .....   | 1.87          | 1.80          | 1.72          | 1.65          | 2.51          |
| Other licences .....    | 0.74          | 0.73          | 0.82          | 0.78          | 0.69          |
| Hospital rating .....   | 0.92          | 0.96          | 1.09          | 1.07          | 1.04          |
| <b>Total .....</b>      | <b>100.00</b> | <b>100.00</b> | <b>100.00</b> | <b>100.00</b> | <b>100.00</b> |

(a) Excludes amount paid to Betting Control Board which is principally for payments to Clubs. For the years 1959-60 to 1963-64, this amount was £373,000, £389,000, £376,000, £375,000, and £397,000.

In addition to the fields of taxation open to the State Government, there are fields of taxation in which the Commonwealth Government has sole taxing authority, e.g., customs and excise duties (since Federation), sales tax, etc. Prior to 1942 the Commonwealth Government levied income tax in addition to that imposed by the States, but since the commencement of uniform taxation the Commonwealth Government has been the sole levier of income tax in practice, although the States may still legally operate in this field. Total taxation collected by the Commonwealth Government in South Australia far exceeds that received into the State Consolidated Revenue Account; this is evident from the following table for the years 1959-60 to 1963-64.

## Commonwealth Taxation Collected in South Australia

| Tax                          | 1959-60       | 1960-61        | 1961-62        | 1962-63        | 1963-64        |
|------------------------------|---------------|----------------|----------------|----------------|----------------|
|                              |               |                | £'000          |                |                |
| Income tax .....             | 46,491        | 53,208         | 58,681         | 57,398         | 67,784         |
| Sales tax .....              | 14,821        | 15,242         | 12,244         | 13,196         | 14,216         |
| Payroll tax .....            | 4,507         | 4,879          | 4,929          | 5,337          | 5,760          |
| Customs duties .....         | 5,980         | 7,211          | 5,397          | 7,535          | 7,015          |
| Excise duties .....          | 20,595        | 20,285         | 20,779         | 21,349         | 22,684         |
| Estate duty .....            | 966           | 1,276          | 1,434          | 1,510          | 1,606          |
| Gift duty .....              | 259           | 287            | 313            | 387            | 386            |
| Wool tax .....               | 176           | 182            | 338            | 355            | 368            |
| Stevedoring industry charge  | 396           | 417            | 406            | 430            | 489            |
| Other .....                  | 27            | 42             | 48             | 143            | 149            |
| <b>Total .....</b>           | <b>94,218</b> | <b>103,029</b> | <b>104,569</b> | <b>107,640</b> | <b>120,457</b> |
|                              | £ s.          | £ s.           | £ s.           | £ s.           | £ s.           |
| Per head of population ..... | 100.18        | 107.13         | 106.14         | 107.15         | 118.2          |

## Business Undertakings

Approximately one-third of the receipts into the Consolidated Revenue Account come from State Government business undertakings. These are mainly service undertakings supplying (throughout part or most of the State) such services as passenger and freight rail carriage, sewerage, water supply, water storage, harbor facilities, etc. Produce Stores provide refrigeration for the storage of goods in Adelaide whilst at Port Lincoln lambs, pigs and cattle are treated for export or local consumption. Revenue from business undertakings for the financial year 1938-39 was £4,957,000, for 1952-53 £20,217,000 and for 1962-63 it was £28,864,000.

## Revenue from Business Undertakings

| Undertaking                                  | 1959-60       | 1960-61       | 1961-62       | 1962-63       | 1963-64       |
|--|---------------|---------------|---------------|---------------|---------------|
|  |               |               | £'000         |               |               |
| Railways (a) .....                           | 16,846        | 17,686        | 18,181        | 17,985        | 18,914        |
| Harbors, jetties and lights ..               | 2,304         | 2,700         | 2,580         | 2,512         | 3,066         |
| Sewers .....                                 | 1,669         | 2,067         | 2,268         | 2,405         | 2,699         |
| Waterworks and water con-<br>servation ..... | 3,414         | 4,202         | 4,582         | 4,905         | 5,589         |
| Irrigation and drainage .....                | 382           | 399           | 392           | 398           | 425           |
| Produce Stores .....                         | 275           | 186           | 546           | 659           | 759           |
| <b>Total .....</b>                           | <b>24,890</b> | <b>27,240</b> | <b>28,549</b> | <b>28,864</b> | <b>31,452</b> |

(a) Includes grant from Treasury each year—£4,200,000 in 1959-60, £4,000,000 in 1963-64.



**Payments from Consolidated Revenue Account**

Although public moneys from the Consolidated Revenue Account are expended by various Government departments the following table shows expenditure on a functional basis:

**Consolidated Revenue Account—Expenditure  
Classified According to Functions**

| Function  | 1959-60 | 1960-61 | 1961-62 | 1962-63 | 1963-64  |
|---|---------|---------|---------|---------|----------|
|   | £'000   |         |         |         |          |
| Legislation and general administration .....  | 4,304   | 4,620   | 5,616   | 6,141   | 6,025    |
| Law, order, public safety ..  | 3,334   | 3,740   | 4,184   | 4,343   | 4,663    |
| Regulation of trade and industry .....  | 246     | 264     | 292     | 295     | 335      |
| Education .....   | 13,209  | 15,170  | 17,604  | 19,399  | 21,949   |
| Encouragement of science, art, and research .....                                     | 290     | 342     | 404     | 430     | 515      |
| Promotion of public health and recreation .....                                       | 8,117   | 8,703   | 9,776   | 10,434  | 11,903   |
| Social amelioration .....   | 1,233   | 1,336   | 1,561   | 1,538   | 1,690    |
| War obligations .....   | 388     | 448     | 454     | 433     | 475      |
| Local government .....  | 49      | 35      | 14      | 26      | 21       |
| Development and maintenance of State resources other than business undertakings ..... | 6,122   | 7,428   | 6,625   | 7,303   | 7,963    |
| Business undertakings ....  | 24,083  | 23,881  | 25,031  | 24,453  | 24,491   |
| Revenue deficiencies .....  | 1,426   | —       | —       | —       | —        |
| Public debt charges—  |         |         |         |         |          |
| Interest (and exchange)   | 14,343  | 15,447  | 17,170  | 18,897  | 19,994   |
| Sinking fund .....  | 3,445   | 3,677   | 3,965   | 3,602   | 3,854    |
| Total .....   | 80,589  | 85,091  | 92,696  | 97,294  | 103,878  |
|   | £ s. d. | £ s. d. | £ s. d. | £ s. d. | £ s. d.  |
| Per head of population ....   | 86 6 6  | 88 18 1 | 94 11 7 | 97 7 11 | 101 16 7 |

Public debt charges were 22.07% of consolidated revenue expenditure in 1959-60 and 22.96% in 1963-64. Apart from public debt charges and expenditure by business undertakings, expenditure on education exceeded that on other individual functions; 16.39% in 1959-60 and 21.13% in 1963-64.

Expenditure on public health was 10.1% of the total in 1959-60 and 11.46% in 1963-64.

If the public debt charges are allocated to the various functions and all receipts, with the exception of revenue from taxation and Commonwealth grants, are offset against the payments for the corresponding functions, a table showing the "net cost of functions" can be prepared. A table for the financial years 1962-63 and 1963-64 is set out below; it also shows the net cost per head of population.

**Consolidated Revenue Account—Expenditure  
Net Cost of Functions**

| Function  | 1962-63       |                | 1963-64       |               |
|---|---------------|----------------|---------------|---------------|
|   | Net Cost      | Per Capita     | Net Cost      | Per Capita    |
|   | £'000         | £ s. d.        | £'000         | £ s. d.       |
| Legislative and general administration ..   | 4,934         | 4 18 10        | 4,475         | 4 7 9         |
| Law, order, and public safety .....   | 3,392         | 3 7 11         | 3,592         | 3 10 5        |
| Regulation of trade and industry .....  | 177           | 0 3 7          | 197           | 0 3 10        |
| Education .....   | 19,343        | 19 7 3         | 21,907        | 21 9 6        |
| Encouragement of science, art and<br>research .....   | 414           | 0 8 4          | 491           | 0 9 7         |
| Promotion of public health and recre-<br>ation .....  | 8,504         | 8 10 3         | 9,917         | 9 14 5        |
| Social amelioration .....   | 1,531         | 1 10 8         | 1,652         | 1 12 5        |
| War obligations .....   | 451           | 0 9 0          | 484           | 0 9 6         |
| Local Government .....  | 26            | 0 0 6          | 21            | 0 0 5         |
| Development and maintenance of State<br>resources other than business under-<br>takings ..... | 6,445         | 6 9 0          | 6,718         | 6 11 9        |
| Business undertakings .....   | 5,204         | 5 4 2          | 3,423         | 3 7 1         |
| Revenue deficiencies .....  | 242           | 0 4 10         | 240           | 0 4 9         |
| <b>Total .....</b>  | <b>50,663</b> | <b>50 14 4</b> | <b>53,117</b> | <b>52 1 5</b> |

Total net cost of functions increased in 1963-64 from the total in 1962-63 by £2,454,000 (or 4.84%). Net cost of education represented 41.2% of the total net cost in 1963-64; an increase of approximately £2,500,000 on expenditure on education in 1962-63. Total net cost *per capita* rose by £1 7s. 1d.

**Business Undertakings—Expenditure**

Further details of the expenditure of business undertakings for the years 1959-60 to 1963-64 are given in the table below.

**Business Undertakings—Expenditure**

| Function  | 1959-60       | 1960-61       | 1961-62       | 1962-63       | 1963-64       |
|---|---------------|---------------|---------------|---------------|---------------|
|   |               |               | £'000         |               |               |
| Railways .....  | 18,252        | 18,305        | 18,370        | 17,989        | 18,039        |
| Navigation, harbors, lights                           | 1,394         | 1,475         | 1,471         | 1,443         | 1,545         |
| Water supply, sewerage,<br>irrigation, and drainage.. | 4,182         | 3,905         | 4,951         | 4,760         | 4,675         |
| Produce Department .....                              | 255           | 196           | 239           | 261           | 232           |
| <b>Total .....</b>                                    | <b>24,083</b> | <b>23,881</b> | <b>25,031</b> | <b>24,453</b> | <b>24,491</b> |

**TRUST FUNDS ACCOUNTS**

These are principally moneys lodged with the Treasurer by public authorities and other bodies on current account; funds held for specific purposes pursuant to legislation, not necessarily expendable in any one year; contractors' and statutory deposits and unclaimed moneys. Some of the larger balances at 30th June 1964 are listed in the table below:

## Trust Funds Accounts

Balances at 30th June 1964

|   | £'000 |
|---|-------|
| Commissioners of Charitable Funds . . . . .         | 352   |
| Electricity Trust of South Australia . . . . .      | 689   |
| Legacy Club . . . . .                               | 103   |
| Municipal Tramways Trust . . . . .                  | 275   |
| Royal Adelaide Hospital Endowment Fund . . . . .    | 336   |
| South Australian Housing Trust Fund . . . . .       | 926   |
| South Australian Superannuation Fund . . . . .      | 259   |
| Swine Compensation Fund . . . . .                   | 134   |
| University of Adelaide . . . . .                    | 691   |
| Other . . . . .                                     | 770   |
|   | <hr/> |
| Balances on which interest is paid . . . . .        | 4,535 |
|   | <hr/> |
| Agricultural Research and Services Grants . . . . . | 86    |
| Cattle Compensation Fund . . . . .                  | 119   |
| Crown Solicitor's Trust Account . . . . .           | 102   |
| Leigh Creek Coal Fund . . . . .                     | 689   |
| Other . . . . .                                     | 347   |
|   | <hr/> |
| Balances on which no interest is paid . . . . .     | 1,343 |
|   | <hr/> |
| Total Trust Funds . . . . .                         | 5,878 |

## SPECIAL COMMONWEALTH ADVANCES

Pursuant to Commonwealth-State agreements, the Commonwealth has made sums available to the State for the erection of housing by State instrumentalities, and for loans to home builders, and also for railway standardization purposes. These advances are not subject to sinking fund conditions but are repayable to the Commonwealth by annual instalments in terms of the respective agreements.

Advances received from the Commonwealth pursuant to the Housing Agreement totalled £9,700,000 for 1963-64. Of these advances, £4,600,000 was allocated by the Treasurer to the South Australian Housing Trust, and £5,100,000 to the Home Builders Fund. Liability of the State to the Commonwealth on this account at 30th June 1964 was £61,512,000.

During 1963-64 funds provided by the Commonwealth for railway standardization works totalled £1,463,000. The State's liability to the Commonwealth at 30th June 1964, after allowing for repayment of £286,000, was £1,680,000.

Under the *Railway Equipment (South Australia) Act 1961*, the Commonwealth agreed to make available to the State, funds up to a maximum of £1,325,000 for the purposes of providing diesel locomotives and ore wagons for the Port Pirie-Broken Hill railway. Thirty per cent of the total amount advanced is repayable by the State over a 50-year period, together with interest thereon. The State's liability to the Commonwealth at 30th June 1964 was £390,000.

## DEPOSIT AND SUSPENSE ACCOUNTS

Deposit and suspense accounts which at 30th June 1964 showed a credit balance of £7,592,000, are mainly working accounts to facilitate the allocation of charges and recoups to various headings of revenue and expenditure.

## LOAN FUND ACCOUNTS

These accounts record the capitalized expenditure on construction or acquisition of assets such as schools, reservoirs, hospitals, forests, plant and stores, and advances to public authorities and for primary production and housing. Moneys used for such purposes are raised by the sale of Commonwealth Government securities on behalf of the State pursuant to the financial agreement which also provides for the redemption of such securities over specified periods from sinking funds contributed by the State and Commonwealth to the National Debt Commission.

Gross expenditure from these accounts for the years 1959-60 to 1963-64 is shown in the table below.

## Loan Fund Accounts—Gross Expenditure

| Heading                                    | 1959-60       | 1960-61       | 1961-62       | 1962-63       | 1963-64       |
|--|---------------|---------------|---------------|---------------|---------------|
|  |               |               | £'000         |               |               |
| <b>Undertakings—</b>                       |               |               |               |               |               |
| Railways .....                             | 2,297         | 2,624         | 2,448         | 2,046         | 2,514         |
| Harbors and jetties .....                  | 1,272         | 1,442         | 1,448         | 1,497         | 1,220         |
| Metropolitan water supply and sewers ..... | 4,874         | 5,388         | 5,611         | 6,367         | 6,348         |
| Country water supply and sewers (a) .....  | 3,137         | 3,729         | 5,492         | 5,400         | 5,362         |
| Water conservation .....                   | 12            | 4             | 69            | 13            | 8             |
| Irrigation works .....                     | 188           | 91            | 137           | 200           | 150           |
| South Eastern drainage ..                  | 490           | 559           | 652           | 466           | 508           |
| Afforestation .....                        | 818           | 1,300         | 1,204         | 979           | 1,045         |
| Produce stores .....                       | 24            | 23            | 40            | 16            | 20            |
| <b>Loans and advances—</b>                 |               |               |               |               |               |
| Soldier settlement .....                   | 2             | —             | —             | —             | —             |
| Advances to settlers, etc. ....            | 262           | 311           | 559           | 338           | 536           |
| State Bank .....                           | 100           | 1,000         | —             | 200           | 1,000         |
| Advances for housing .....                 | 4,298         | 3,640         | 800           | 350           | 300           |
| Tramways Trust .....                       | —             | —             | —             | —             | —             |
| Abattoirs Board .....                      | 100           | —             | —             | —             | —             |
| Electricity Trust .....                    | 3,000         | 2,300         | 2,300         | 3,000         | 2,750         |
| Other loans and advances .....             | 26            | 39            | 37            | 106           | 198           |
| <b>Other purposes—</b>                     |               |               |               |               |               |
| Roads and bridges .....                    | 85            | 90            | 200           | 290           | 475           |
| <b>Buildings—</b>                          |               |               |               |               |               |
| Hospitals .....                            | 2,036         | 1,706         | 923           | 728           | 1,397         |
| Schools .....                              | 3,997         | 4,836         | 5,944         | 5,955         | 4,925         |
| Police and courts .....                    | 305           | 393           | 656           | 576           | 1,110         |
| Other .....                                | 400           | 669           | 1,086         | 629           | 1,097         |
| River Murray weirs, etc. ....              | 69            | 111           | 80            | 60            | 120           |
| Leigh Creek coalfield ..                   | 125           | 700           | 300           | —             | —             |
| Mines Department stores, etc. ....         | 179           | 112           | 232           | 124           | 182           |
| Land repurchased for settlement .....      | 41            | 27            | 19            | 12            | 2             |
| Other .....                                | 107           | 291           | 418           | 449           | 481           |
|  | 28,244        | 31,385        | 30,655        | 29,801        | 31,748        |
| <b>Floating conversion loans—</b>          |               |               |               |               |               |
| Expenses, etc. ....                        | 41            | 71            | 33            | 40            | 50            |
| <b>Revenue deficits funded ..</b>          | —             | —             | —             | —             | —             |
| <b>Total .....</b>                         | <b>28,285</b> | <b>31,456</b> | <b>30,688</b> | <b>29,841</b> | <b>31,798</b> |

(a) Includes Morgan-Whyalla water main.

The following table shows expenditure from loan fund accounts for the year ended 30th June 1964 together with credits and net balances. The sinking fund credits represent securities redeemed and cancelled by the National Debt Commission on account of South Australia.

**Loan Fund Accounts**  
**Gross Expenditure, Credits, and Net Balances For Year Ended**  
**30th June 1964**

| Heading                                       | Expenditure   | Credits               |                 |              | Net<br>Aggregate<br>Balance at<br>30th June |
|---|---------------|-----------------------|-----------------|--------------|---|
|   |               | Repay-<br>ments, etc. | Sinking<br>Fund | Total        |   |
| £'000   |               |                       |                 |              |   |
| Undertakings—                                 |               |                       |                 |              |   |
| Railways .....                                | 2,514         | 435                   | 766             | 1,201        | 58,423                                      |
| Harbors and jetties ....                      | 1,220         | 113                   | 262             | 375          | 20,015                                      |
| Metropolitan water supply<br>and sewers ..... | 6,348         | 1,009                 | 427             | 1,436        | 63,934                                      |
| Country water supply and<br>sewers (a) .....  | 5,362         | 508                   | 397             | 905          | 46,196                                      |
| Water conservation .....                      | 8             | (b)                   | 15              | 15           | 1,038                                       |
| Irrigation works .....                        | 150           | 34                    | 144             | 178          | 5,407                                       |
| South Eastern drainage ..                     | 508           | 12                    | 7               | 19           | 6,107                                       |
| Afforestation .....                           | 1,045         | 1,009                 | —               | 1,009        | 6,622                                       |
| Produce stores .....                          |               |                       |                 |              |   |
| Loans and advances—                           | 20            | —                     | 13              | 13           | 579   |
| Soldier settlement .....                      | —             | 44                    | —               | 44           | 3,647                                       |
| Advances to settlers, etc.                    | 536           | 207                   | 14              | 221          | 3,158                                       |
| State Bank .....                              | 1,000         | 5                     | 21              | 26           | 6,056                                       |
| Advances for housing ....                     | 300           | 1,204                 | 355             | 1,559        | 43,298                                      |
| Tramways Trust .....                          | —             | 22                    | 289             | 311          | 5,901                                       |
| Abattoirs Board .....                         | —             | 2                     | 9               | 11           | 820   |
| Electricity Trust .....                       |               |                       |                 |              |   |
| Other loans and advances                      | 2,750         | 80                    | 338             | 418          | 57,784                                      |
| Other purposes—                               |               |                       |                 |              |   |
| Roads and bridges .....                       | 198           | 3                     | —               | 3            | 460   |
| Buildings—                                    | 475           | —                     | 48              | 48           | 5,128                                       |
| Hospitals .....                               | 1,397         | 123                   | 126             | 249          | 19,205                                      |
| Schools .....                                 | 4,925         | 26                    | 449             | 475          | 40,242                                      |
| Police and courts ....                        | 1,110         | 6                     | 19              | 25           | 4,343                                       |
| Other .....                                   | 1,097         | 76                    | 94              | 170          | 6,729                                       |
| River Murray weirs, etc.                      | 120           | —                     | —               | —            | 5,463                                       |
| Leigh Creek coalfield ..                      | —             | 300                   | 35              | 335          | 4,494                                       |
| Mines Department stores,<br>etc. ....         | 182           | 46                    | 399             | 445          | 879   |
| Land repurchased for<br>settlement .....      | 2             | 36                    | —               | 36           | 956   |
| Other .....                                   | 481           | 23                    | 88              | 111          | 2,913                                       |
|   | 31,747        | 5,323                 | 4,315           | 9,638        | 419,797                                     |
| Floating conversion loans—                    |               |                       |                 |              |   |
| Expenses, etc. ....                           | 50            | 50                    | —               | 50           | —   |
| Revenue deficits funded ..                    | —             | —                     | 147             | 147          | 5,283                                       |
| <b>Total .....</b>                            | <b>31,798</b> | <b>5,373</b>          | <b>4,462</b>    | <b>9,835</b> | <b>425,080</b>                              |

(a) Includes Morgan-Whyalla water main.

(b) Less than £500.

## LOAN RAISINGS AND THE PUBLIC DEBT

**State Debts Taken Over by Commonwealth**

Under the financial agreement the Commonwealth took over on 1st July 1929 State debts existing on 30th June 1927; and all debts of each State existing on 1st July 1929 for money borrowed by that State are deemed by the agreement to be money borrowed by the Commonwealth for and on behalf of the State; and in respect of these debts, the Commonwealth assumed the liabilities of the States.

For a period of 58 years from 1st July 1927 the Commonwealth agreed to contribute the sum of £7,584,912 each year towards the interest payable on the State debts (£703,816 to South Australia). The balance of the interest payable on State debts was to be paid to the Commonwealth by the States.

**Australian Loan Council**

One of the main features of the financial agreement was the establishment of an Australian Loan Council which was set up to co-ordinate the borrowings of the Commonwealth and the States. It consists of the Prime Minister of the Commonwealth, or another Minister nominated by him in writing, as chairman, and the State Premiers, or Ministers nominated by them in writing. Each year, the Loan Council examines the loan programmes of the Commonwealth and the States and determines the total amount to be borrowed during the year. Borrowings by the Commonwealth for defence purposes are not subject to decisions of the Loan Council.

Subject to the decisions of the Loan Council the Commonwealth arranges for all borrowings for or on behalf of itself or any State, and for all conversions, renewals, redemptions, and consolidations of the securities issued on behalf of the Commonwealth and of the States.

If the Loan Council unanimously decides, however, a State may borrow outside Australia in its own name, and may issue securities for the amount so borrowed. The Commonwealth then guarantees that the State will fulfil its obligations to bond-holders in respect of the money so borrowed, and the money is deemed to be borrowed by the Commonwealth for and on behalf of the State.

Subject to any maximum limits decided upon by the Loan Council for interest, brokerage, discount, and other charges, the Commonwealth or any State may borrow within its own territory, for any purpose, money from any authorities, bodies, funds, or institutions (including savings banks) constituted or established under Commonwealth or State law or practice; borrow from the public by means of counter sales of securities; and use any available public moneys.

However, any securities issued for money so borrowed or used must be Commonwealth securities on terms approved by the Loan Council.

**National Debt Commission**

Sinking funds established by the financial agreement between the Commonwealth and the States under the provisions of the *National Debt Sinking Fund Act* 1923-1959, were designed to redeem the States' debt over differing periods of years and with contributions by the Commonwealth and States varying in accordance with the differing natures of the indebtedness.

The contributions of the Commonwealth and the States in respect of the States' debts are not accumulated but, subject to the financial agreement, are applied by the Commission to the redemption of the public debts of the States, and the

repurchase of securities issued in respect thereof. Under the provisions of the financial agreement, repurchased or redeemed securities must be cancelled, and the debts of the States are reduced accordingly.

For further information on the detailed operations of the National Debt Sinking Fund see the Official Year Book of the Commonwealth of Australia, particularly No. 37.

Contributions by the Commonwealth on behalf of South Australia, and by the State Government to the National Debt Sinking Fund, and redemptions and repurchases of securities by payment from the fund for the financial years 1962-63 and 1963-64 are given in the following tables. Corresponding figures for Australia are also stated.

### National Debt Sinking Fund

| Particulars   | 1962-63         |               | 1963-64         |               |
|---|-----------------|---------------|-----------------|---------------|
|   | South Australia | Australia     | South Australia | Australia     |
| Receipts—   | £'000           | £'000         | £'000           | £'000         |
| Contributions by Commonwealth . . . .   | 963             | 7,248         | 1,038           | 7,846         |
| Contributions by State (a) . . . . .  | 1,090           | 8,205         | 1,166           | 8,802         |
| 4½ per cent contributions by State on cancelled debt . . . . .  | 2,132           | 16,379        | 2,276           | 17,510        |
| 4 per cent contributions on funded deficits . . . . .   | 28              | 1,200         | 27              | 1,235         |
| Contributions by State on loans for wasting assets . . . . .  | 41              | 271           | 57              | 287           |
| Interest received from State in respect of repurchased securities to date of cancellation of securities . . . . . | 5               | 33            | 1               | 23            |
| Interest on the temporary investments of State funds during the year . . . .                                      | Dr. 5           | Dr. 40        | 8               | 53            |
| Special contributions in respect of loans converted at a discount . . . . .                                       | 38              | 172           | 10              | 487           |
| <b>Total receipts . . . . .</b>   | <b>4,292</b>    | <b>33,468</b> | <b>4,583</b>    | <b>36,243</b> |
| Expenditure—  |                 |               |                 |               |
| Redemptions and repurchases—  |                 |               |                 |               |
| In Australia . . . . .  | 3,786           | 27,034        | 3,876           | 30,395        |
| In London . . . . .   | 25              | 2,658         | 236             | 2,038         |
| In New York . . . . .   | 244             | 2,069         | 381             | 3,114         |
| In Canada . . . . .   | 5               | 40            | 34              | 250           |
| Discounts on conversion loans—  |                 |               |                 |               |
| In Australia . . . . .  | —               | —             | —               | —             |
| In London . . . . .   | —               | 376           | —               | —             |
| In New York . . . . .   | —               | —             | —               | —             |
| <b>Total expenditure . . . . .</b>  | <b>4,060</b>    | <b>32,177</b> | <b>4,527</b>    | <b>35,797</b> |

(a) Includes 15s. per cent contributions on Commonwealth Government debentures issued on behalf of the States.

### The Loan Fund

An overall picture of loan raisings to finance State Government loan works in South Australia during 1963-64, is given by the following statement. The total face value of new loans raised less redemptions, cancellations, and conversions shows the movement in the public debt.

## The Loan Fund

|   | £'000  | £'000   |
|---|--------|---------|
| (1) <i>Cash operations—</i>   |        |         |
| Surplus at 30th June 1963 . . . . .   |        | 405     |
| Receipts—   |        |         |
| New loan raising . . . . .  |        | 27,592  |
| Repayments . . . . .  |        | 5,373   |
|   |        | 33,370  |
| Payments . . . . .  |        | 31,672  |
|   |        | 1,698   |
| (2) <i>Movement in public debt—</i>   |        |         |
| The public debt at 30th June 1963 . . . . .   |        | 403,522 |
| Add: Face value of new loans raised—  |        |         |
| For cash . . . . .  |        | 27,718  |
| For conversion . . . . .  |        | 20,369  |
|   |        | 451,609 |
| Less: Face value of securities redeemed and cancelled by National Debt Commission . . | 4,462  |         |
| Loans converted . . . . .   | 20,369 | 24,831  |
|   |        | 426,778 |
| The public debt as at 30th June 1964 . . . . .  |        | 426,778 |

## The Public Debt

The following table gives details of the public debt and total indebtedness of South Australia as at 30th June 1964 and for nine previous years. A further table shows the annual interest payable on the public debt for these years and the average rate of interest.

**Public Debt and Total Indebtedness**  
*As at 30th June*

| Year      | Public Debt—Being Interest Bearing Securities Outstanding |          | Other Interest Bearing Indebtedness (a) | Non-Interest Bearing Indebtedness (a) | Total Indebtedness |          |
|-----------|---|----------|---|---------------------------------------|--------------------|----------|
|           | Total   | Per Head |   |                                       | Total              | Per Head |
|           | £'000   | £ s.     | £'000                                   | £'000                                 | £'000              | £ s.     |
| 1955..... | 236,462   | 288.11   | 12,560                                  | 618                                   | 249,640            | 304.12   |
| 1956..... | 256,089   | 301.16   | 16,473                                  | 513                                   | 273,075            | 321.16   |
| 1957..... | 276,440   | 316.12   | 20,404                                  | 346                                   | 297,190            | 340. 8   |
| 1958..... | 296,814   | 330.19   | 25,042                                  | 709                                   | 322,565            | 359.14   |
| 1959..... | 317,702   | 345. 0   | 29,283                                  | 936                                   | 347,921            | 377.17   |
| 1960..... | 339,105   | 358.15   | 34,601                                  | 1,163                                 | 374,869            | 396.12   |
| 1961..... | 361,019   | 377. 4   | 41,126                                  | 1,146                                 | 403,291            | 421. 7   |
| 1962..... | 381,699   | 385.16   | 49,420                                  | 1,084                                 | 432,203            | 436.17   |
| 1963..... | 403,522   | 399.18   | 60,477                                  | 1,116                                 | 465,115            | 460.19   |
| 1964..... | 426,778   | 413.14   | 68,118                                  | 1,342                                 | 496,238            | 481. 1   |

a) Gross less securities held on these accounts.



## Public Debt—Interest and Average Rate

As at 30th June

| Year     | Annual Interest on Debt in (a) |        |       |        | Average Rate Per Cent (a) |         |         |         |
|----------|--------------------------------|--------|-------|--------|---------------------------|---------|---------|---------|
|          | Australia                      | London | Other | Total  | Australia                 | London  | Other   | Total   |
|          | £'000                          | £'000  | £'000 | £'000  | £ s. d.                   | £ s. d. | £ s. d. | £ s. d. |
| 1955.... | 7,058                          | 1,134  | 148   | 8,340  | 3 11 8                    | 3 3 6   | 3 16 6  | 3 10 6  |
| 1956.... | 7,989                          | 1,127  | 150   | 9,266  | 3 13 7                    | 3 3 5   | 3 17 6  | 3 12 4  |
| 1957.... | 9,383                          | 1,014  | 152   | 10,549 | 3 17 9                    | 3 4 6   | 4 2 9   | 3 16 4  |
| 1958.... | 10,495                         | 1,002  | 198   | 11,695 | 4 0 5                     | 3 4 5   | 4 6 6   | 3 18 10 |
| 1959.... | 11,443                         | 1,107  | 247   | 12,797 | 4 1 11                    | 3 7 3   | 4 10 2  | 4 0 7   |
| 1960.... | 12,612                         | 1,092  | 291   | 13,995 | 4 4 0                     | 3 7 3   | 4 13 9  | 4 2 7   |
| 1961.... | 13,707                         | 1,102  | 425   | 15,234 | 4 5 8                     | 3 8 4   | 4 18 2  | 4 4 5   |
| 1962.... | 15,187                         | 1,090  | 488   | 16,765 | 4 9 4                     | 3 8 2   | 5 0 7   | 4 7 10  |
| 1963.... | 15,836                         | 1,174  | 615   | 17,625 | 4 8 6                     | 3 10 1  | 5 2 7   | 4 7 4   |
| 1964.... | 16,806                         | 1,267  | 596   | 18,669 | 4 8 5                     | 3 12 2  | 5 2 7   | 4 7 6   |

(a) Based on the Debt and nominal rate of interest payable at 30th June, taking no account of exchange.

Rates of interest and years of maturity on the existing public debt of South Australia as at 30th June 1964 are shown below.

## Public Debt According to Rate of Interest and Year of Maturity

As at 30th June

| Nominal Rate Per Cent | Rate of Interest |           |         | Year of Maturity  | Year of Maturity (Latest Dates in Cases of Option) |           |         |
|-----------------------|------------------|-----------|---------|-------------------|--|-----------|---------|
|                       | Redeemable in—   |           | Total   |                   | Redeemable in—                                     |           | Total   |
|                       | Australia        | Other (a) |         |                   | Australia  | Other (a) |         |
|                       | £'000            | £'000     | £'000   |                   | £'000  | £'000     | £'000   |
| 6.....                | —                | 661       | 661     | 1964-65.....      | 42,249   | —         | 42,249  |
| 5.75.....             | —                | 978       | 978     | 1965-66.....      | 50,885   | 1,870     | 52,755  |
| 5.5.....              | —                | 9,082     | 9,082   | 1966-67.....      | 35,986   | 432       | 36,418  |
| 5.375.....            | 17,586           | —         | 17,586  | 1967-68.....      | 23,075   | 6,415     | 29,490  |
| 5.....                | 8,019            | 2,298     | 10,317  | 1968-69.....      | 29,540   | —         | 29,540  |
| 5.25.....             | 96,793           | 2,031     | 98,824  | 1969-70.....      | 9,487  | 8,201     | 17,688  |
| 4.75.....             | 32,466           | 1,100     | 33,566  | 1970-71.....      | 14,047   | 2,418     | 16,465  |
| 4.625.....            | 3,729            | —         | 3,729   | 1971-72.....      | 12,178   | 2,408     | 14,587  |
| 4.5.....              | 83,450           | 967       | 84,418  | 1972-73.....      | 25,610   | 1,100     | 26,710  |
| 4.25.....             | 46,446           | —         | 46,446  | 1973-74.....      | 9,151  | —         | 9,151   |
| 4.....                | 13,199           | 4,849     | 18,048  | 1974-75.....      | 10,481   | 6,285     | 16,766  |
| 3.75.....             | 21,043           | 176       | 21,219  | 1975-76.....      | 11,735   | 1,029     | 12,764  |
| 3.5.....              | —                | 432       | 432     | 1976-77.....      | 201  | —         | 201     |
| 3.4875.....           | —                | 1         | 1       | 1977-78.....      | 210  | 1,523     | 1,734   |
| 3.25.....             | —                | 11,374    | 11,374  | 1978-79.....      | 220  | 3,069     | 3,289   |
| 3.125.....            | 31,179           | —         | 31,179  | 1979-80.....      | 14,892   | 1,145     | 16,037  |
| 3.....                | 130              | 7,985     | 8,115   | 1980-85.....      | 41,622   | 8,461     | 50,083  |
| 2.75.....             | —                | 1,884     | 1,884   | 1985-90.....      | 26,611   | —         | 26,611  |
| 2.5.....              | —                | 2,936     | 2,936   | 1990-95.....      | 1,859  | —         | 1,859   |
| 2.325.....            | 345              | —         | 345     | Variable.....     | 19,411   | —         | 19,411  |
| 1.5.....              | 2,851            | —         | 2,851   | Optional.....     | 475  | 2,397     | 2,872   |
| 1.....                | 3,377            | —         | 3,377   | Interminable..... | 98   | —         | 98      |
| 1 (b).....            | —                | —         | —       | Indefinite.....   | 1  | —         | 1       |
| Special bonds (c) ..  | 19,411           | —         | 19,411  |                   |  |           |         |
| Total.....            | 380,025          | 46,753    | 426,778 | Total.....        | 380,025  | 46,753    | 426,778 |

Note : Any discrepancies between totals and sums of components are due to rounding.

(a) £35,127,000 redeemable in London, £9,429,000 in New York, £978,000 in Canada, £701,000 in Switzerland, and £519,000 in Netherlands. Converted at rates current at the time of the several raisings.

(b) Commonwealth Debentures.

(c) Rate of interest varies from 3½ to 5½ per cent according to date of maturity.

## 12.4. SEMI-GOVERNMENT FINANCE

## REVENUE AND EXPENDITURE

Many semi-governmental authorities produce annual reports reviewing their activities and most of them publish annual financial statements. In South Australia there is no consolidated tabulation of statistics covering revenue and expenditure of semi-governmental authorities although a recent extension of public finance work is directed to this end.

## Business Undertakings

Some semi-governmental authorities are regarded as business undertakings because they seek to cover a substantial part of their costs by selling goods and services to the public. The following tables show revenue and expenditure of some of those business undertakings for the financial years 1959-60 to 1963-64.

## The Electricity Trust of South Australia

| Particulars                | 1959-60 | 1960-61 | 1961-62 | 1962-63 | 1963-64 |
|----------------------------|---------|---------|---------|---------|---------|
|                            | £'000   |         |         |         |         |
| Funds employed .....       | 80,766  | 87,154  | 92,393  | 99,333  | 105,632 |
| Income .....               | 15,367  | 15,919  | 17,029  | 18,301  | 20,033  |
| Operating expenses .....   | 11,633  | 11,945  | 12,807  | 13,912  | 14,952  |
| Surplus on operating ..... | 3,734   | 3,974   | 4,222   | 4,389   | 5,081   |
| Debenture interest .....   | 3,265   | 3,560   | 3,994   | 4,252   | 4,631   |
| Net surplus .....          | 469     | 414     | 228     | 137     | 450     |

## The South Australian Housing Trust

| Particulars                   | 1959-60 | 1960-61 | 1961-62 | 1962-63 | 1963-64 |
|-------------------------------|---------|---------|---------|---------|---------|
|                               | £'000   |         |         |         |         |
| Funds employed .....          | 61,009  | 67,386  | 73,732  | 80,400  | 87,015  |
| Income .....                  | 3,465   | 3,757   | 4,078   | 4,566   | 5,205   |
| Expenditure .....             | 1,516   | 1,584   | 1,823   | 2,026   | 2,250   |
| Interest on loan capital .... | 1,460   | 1,644   | 1,992   | 2,283   | 2,534   |
| Surplus .....                 | 489     | 529     | 263     | 257     | 421     |

## The Municipal Tramways Trust

| Particulars                    | 1959-60 | 1960-61 | 1961-62 | 1962-63 | 1963-64 |
|--------------------------------|---------|---------|---------|---------|---------|
|                                | £'000   |         |         |         |         |
| Funds employed (Net) . . . . . | 3,881   | 3,641   | 3,437   | 3,250   | 3,090   |
| Income . . . . .               | 2,820   | 2,758   | 2,715   | 2,718   | 2,737   |
| Operating expenses . . . . .   | 2,784   | 2,677   | 2,606   | 2,583   | 2,597   |
| Surplus on operating . . . . . | 36      | 81      | 109     | 135     | 140     |
| Interest charges . . . . .     | 301     | 288     | 278     | 267     | 258     |
| Deficit . . . . .              | 265     | 207     | 169     | 132     | 118     |
| Grant from S.A. Government     | 94      | 30      | 30      | 13      | 30      |
| Net deficiency . . . . .       | 171     | 177     | 139     | 119     | 88      |

## The State Bank of South Australia

| Particulars   | 1959-60 | 1960-61 | 1961-62 | 1962-63 | 1963-64 |
|---|---------|---------|---------|---------|---------|
|   | £'000   |         |         |         |         |
| Funds employed . . . . .                                | 10,204  | 11,715  | 15,529  | 20,340  | 26,338  |
| Income . . . . .  | 993     | 1,152   | 1,349   | 1,668   | 1,942   |
| Management expenses, etc.                               | 427     | 434     | 451     | 458     | 519     |
| Interest on customers' deposits . . . . .               | 104     | 150     | 194     | 242     | 229     |
| Interest on advances from the Treasurer of S.A. . . . . | 351     | 435     | 537     | 743     | 949     |
| Net profit . . . . .                                    | 111     | 133     | 167     | 225     | 245     |

## The Savings Bank of South Australia

| Particulars                               | 1959-60 | 1960-61 | 1961-62 | 1962-63 | 1963-64 |
|---|---------|---------|---------|---------|---------|
|   | £'000   |         |         |         |         |
| Funds employed . . . . .                  | 133,013 | 133,820 | 140,309 | 150,473 | 164,221 |
| Income . . . . .                          | 5,444   | 5,695   | 6,150   | 6,677   | 7,097   |
| Management expenses, etc.                 | 1,308   | 1,363   | 1,425   | 1,429   | 1,693   |
| Interest on customers' deposits . . . . . | 3,733   | 4,031   | 4,505   | 4,748   | 4,858   |
| Net profit . . . . .                      | 403     | 301     | 220     | 500     | 546     |

## GRANTS FROM STATE GOVERNMENT

The State Government makes grants to most of the statutory bodies and the following table shows grants to some semi-government authorities during the five years ended 30th June 1964. These grants represent a very large proportion of such grants made by the State Government from the Consolidated Revenue Account.

## Semi-Government Authorities—Grants From State Government

| Name   | 1959-60 | 1960-61 | 1961-62 | 1962-63 | 1963-64 |
|--|---------|---------|---------|---------|---------|
|  |         |         | £'000   |         |         |
| Adelaide Children's Hospital                               | 591     | 594     | 1,006   | 1,159   | 985     |
| Adelaide University (a) . . . .                            | 1,544   | 2,144   | 2,701   | 3,099   | 3,494   |
| Artificial Breeding Board . . .                            | —       | —       | —       | 35      | 19      |
| Australian Mineral Develop-<br>ment Laboratories . . . . . | 68      | 135     | 135     | 135     | 135     |
| Botanic Gardens . . . . .                                  | 50      | 64      | 62      | 68      | 70      |
| Electricity Trust of South<br>Australia . . . . .          | —       | 1,000   | —       | 100     | 85      |
| Fire Brigades Board . . . . .                              | 60      | 65      | 68      | 74      | 76      |
| Home for Incurables . . . . .                              | 89      | 45      | 55      | 55      | 155     |
| Institute of Medical and<br>Veterinary Science . . . . .   | 186     | 211     | 198     | 252     | 287     |
| Municipal Tramways Trust                                   | 94      | 30      | 30      | 13      | 30      |
| National Park Commissioners                                | 31      | 25      | 25      | 30      | 39      |
| Queen Victoria Maternity<br>Hospital (b) . . . . .         | 146     | 126     | 123     | 140     | 124     |
| Renmark Irrigation Trust . .                               | 50      | 50      | 50      | 50      | 150     |
| S.A. Institute of Technology<br>(a) . . . . .              | 295     | 350     | 420     | 480     | 665     |
| Waite Agricultural Research<br>Institute . . . . .         | 284     | 320     | 358     | 350     | 412     |
| Total . . . . .  | 3,488   | 5,159   | 5,231   | 6,040   | 6,726   |

(a) Includes Commonwealth grants to State for University purposes but excludes grants to Residential Colleges.

(b) Excludes grants for maintenance of X-ray tuberculosis services.

## LOAN RAISINGS AND DEBT OUTSTANDING

Details of semi-government authorities' loan raisings and debt outstandings are published in the tables below. These statistics cover loan raisings and debt of public hospitals, abattoirs boards, vermin boards, the Renmark Irrigation Trust, the Enfield General Cemetery Trust, and the Fire Brigades Board, in addition to those business undertakings mentioned above under the heading Revenue and Expenditure.

New loans raised during the year include new loan liabilities incurred during the year, loans raised to repay indebtedness to the Government, and interest capitalized. Loans raised and redeemed within the year, increases in overdrafts, and loans raised for conversion or redemption of existing debts are excluded.

Debt includes all liabilities for which arrangements have been made for repayment over a period of one year or more, and net overdrafts. Interest capitalized, and amounts due for the capital cost of assets or for services rendered which are to be repaid over a period of one year or more, have also been included. Current liabilities such as interest accrued (but not capitalized), trade creditors, amounts held in trust and other debts which are to be repaid in less than one year are not included. Net overdraft is the gross overdraft of all funds, less all bank credit balances (including fixed deposits), which do not form part of a sinking fund to repay a loan.

The following tables show new money loan raisings for the year ended 30th June 1963 and debt outstanding as at 30th June 1962 and 1963. A further table shows debt outstanding as at 30th June 1963 according to rate of interest and year of maturity.

**Semi-Government Authorities—New Money Loan Raisings and Funds Provided for Redemption of Debt**

*Year ended 30th June 1963*

| Authority              | New Loan Raisings in Australia |              |               | Funds for Redemption |            |              |
|------------------------|--------------------------------|--------------|---------------|----------------------|------------|--------------|
|                        | Government                     | Public       | Total         | Government           | Public     | Total        |
|                        | £'000                          |              |               |                      |            |              |
| Tramways .....         | —                              | —            | —             | 308                  | —          | 308          |
| Electricity Supply ... | 1,300                          | 3,253        | 4,553         | 385                  | 74         | 459          |
| Fire Brigades .....    | —                              | —            | —             | —                    | 2          | 2            |
| Industry Assistance .. | —                              | —            | —             | 1                    | —          | 1            |
| Banking .....          | 4,728                          | —            | 4,728         | 255                  | —          | 255          |
| Housing .....          | 5,015                          | 2,502        | 7,517         | 393                  | 717        | 1,110        |
| Miscellaneous .....    | 59                             | 14           | 73            | 13                   | 9          | 22           |
| <b>Total ..</b>        | <b>11,102</b>                  | <b>5,769</b> | <b>16,871</b> | <b>1,355</b>         | <b>802</b> | <b>2,157</b> |

**Semi-Government Authorities—Debt Outstanding**

*As at 30th June 1962 and 1963*

| Authority               | Debt in Australia as at        |               |                |                |               |                |
|-------------------------|--------------------------------|---------------|----------------|----------------|---------------|----------------|
|                         | 30th June 1962                 |               |                | 30th June 1963 |               |                |
|                         | Government                     | Public        | Total          | Government     | Public        | Total          |
|                         | £'000                          |               |                |                |               |                |
| Tramways .....          | 6,246                          | —             | 6,246          | 5,943          | —             | 5,943          |
| Electricity Supply ...  | 52,837                         | 34,202        | 87,039         | 53,752         | 37,380        | 91,132         |
| Fire Brigades .....     | —                              | 36            | 36             | —              | 34            | 34             |
| Hospitals .....         | 11                             | 5             | 16             | 4              | 4             | 8              |
| Industry Assistance ..  | 9                              | —             | 9              | 7              | —             | 7              |
| Banking .....           | 13,508                         | 2             | 13,510         | 18,073         | —             | 18,073         |
| Housing .....           | 61,128                         | 7,188         | 68,316         | 65,750         | 8,973         | 74,723         |
| Miscellaneous .....     | 921                            | 28            | 949            | 967            | 37            | 1,004          |
| <b>Total debt ....</b>  | <b>134,660</b>                 | <b>41,461</b> | <b>176,121</b> | <b>144,496</b> | <b>46,428</b> | <b>190,924</b> |
|                         | <b>Annual Interest Payable</b> |               |                |                |               |                |
|                         | £'000                          |               |                |                |               |                |
| <b>Total interest..</b> | <b>5,773</b>                   | <b>2,141</b>  | <b>7,914</b>   | <b>6,271</b>   | <b>2,428</b>  | <b>8,699</b>   |

**Semi-Government Authorities—Debt Outstanding According to  
Rate of Interest and Year of Maturity  
As at 30th June 1963**

| Rate of Interest              | Debt    | Year of Maturity          | Debt    |
|-------------------------------|---------|---------------------------|---------|
|                               | £'000   |                           | £'000   |
| No interest .....             | 104     | Fixed dates—              |         |
| Under 3 per cent .....        | 54      | 1963-64 .....             | 4,143   |
| 3 and under 3½ per cent ..... | 21,231  | 1964-65 .....             | 2,098   |
| 3½ and under 4 per cent ..... | 8,037   | 1965-66 .....             | 3,012   |
| 4 and under 4½ per cent ..... | 58,423  | 1966-67 .....             | 3,097   |
| 4½ and under 5 per cent ..... | 38,692  | 1967-68 .....             | 4,656   |
| 5 and under 5½ per cent ..... | 48,616  | 1968-69 .....             | 7,756   |
| 5½ and under 6 per cent ..... | 15,767  | 1969-70 .....             | 3,244   |
| 6 per cent and over .....     | —       | 1970-71 .....             | 1,869   |
| Not specified .....           | —       | 1971-72 .....             | 2,358   |
|                               |         | 1972-73 .....             | 3,432   |
|                               |         | 1973-74 .....             | 652     |
|                               |         | 1974-75 .....             | 1,747   |
|                               |         | 1975-76 .....             | 708     |
|                               |         | 1976-77 and onwards ..... | 3,361   |
|                               |         | Not stated .....          | 5,469   |
|                               |         | Instalments—              |         |
|                               |         | Yearly or less .....      | 143,207 |
|                               |         | Not stated .....          | 108     |
|                               |         | Net overdraft .....       | 7       |
| Total debt .....              | 190,924 | Total debt .....          | 190,924 |

## 12.5. LOCAL GOVERNMENT FINANCE

For the purpose of determining the scope of local government finance statistics, a local government authority is defined as:

- (i) An authority set up under a local government Act to carry out the functions of local government in a defined area (known as a municipality, city, corporate town, or district council area) and which is elected by the residents or property owners, or both, in the area.
- (ii) An authority created or acquired by a local government authority (as defined above) or by two or more local government authorities.

### REVENUE AND EXPENDITURE

At the beginning of this chapter it was mentioned that the expenditure of moneys by local government bodies was authorized by the Local Government Act, 1934-1963. This authorization appears in Part XV, sections 287 to 290, of the Act whilst section 284 sets out the revenue of a council. Section 296 (1) of this part reads as follows:

“On or before the first day of November in every year, the council shall cause to be prepared a statement of and balance-sheet of the accounts of the council for the financial year then last past.”

These statements are the basis of the statistics on receipts and payments of local government authorities published in this section on local government finance.

### Assessments

Assessments for property rating are based upon annual value or land value. Briefly, annual value is based on the estimated gross annual rental at which a ratable property would be let from year to year with an allowance, not exceeding one-fourth, to cover all outgoings. Some councils adopt the valuations of the Engineering and Water Supply Department which are based on annual value (or improved value). The land value (or unimproved value) is adopted from the assessment of land by the Commissioner of Land Tax or a council may make its own assessment. At 30th June 1963, 43 out of the total number of 141 councils based assessments on land value.

### Rating of Properties

Under the provisions of the Act, the council may declare a general rate on the property assessed for the financial year ending the thirtieth day of June next after the declaring of the rate. A differential rate may be declared, for any portion of a local government area, if at least three-quarters in number of the whole of the members of the council vote in favour of the declaring of the rate; the mayor shall not be included as one of the members of the whole number.

The Act also provides for "a particular rate for defraying the expense of watering any public street or road or place". The council may levy this watering rate without the consent of the ratepayers. However, it needs their consent to levy a special rate "if the general rate is insufficient for carrying out any purpose by this or any other Act authorized to be carried out by the council". These and other provisions are contained in Part XII.

### Government Grants

Government grants for construction and maintenance of roads are covered by Part XVI of the Act; Sections 299 (1) and (2) are as follows:

299 (1) The Governor may direct that in any financial year there shall be payable out of the Highways Fund established under the Highways Act, 1926-1938, an amount as grants to councils.

(2) Subject to Section 300, the said amount shall be divided among such councils, and in such proportions, as the Governor, on the recommendation of the Director of Local Government Department, may think fit.

Section 300 sets the division of the total grants between metropolitan and non-metropolitan councils at 25 per cent and 75 per cent. Section 300 (a) makes provision for an additional grant for roads to the council of the City of Adelaide.

The following tables show the receipts and payments of local government authorities; the first in summary form for the years 1953-54 to 1962-63 and the second table in greater detail for the year 1962-63.

## Local Government Authorities—Revenue Receipts and Payments

| Year       | Revenue Receipts      |       |                         | Revenue Payments |                   |                     |                         |
|------------|-----------------------|-------|-------------------------|------------------|-------------------|---------------------|-------------------------|
|            | Government Grants (a) | Rates | Total (Including Other) | Administration   | Roads and Bridges | Health and Sanitary | Total (Including Other) |
|            |                       |       |                         | £'000            |                   |                     |                         |
| 1953-54 .. | 1,256                 | 3,262 | 6,708                   | 495              | 3,541             | 562                 | 6,333                   |
| 1954-55 .. | 1,150                 | 3,521 | 7,107                   | 530              | 4,409             | 557                 | 7,492                   |
| 1955-56 .. | 1,238                 | 4,081 | 8,155                   | 618              | 4,973             | 632                 | 8,404                   |
| 1956-57 .. | 1,353                 | 4,782 | 9,218                   | 708              | 5,553             | 701                 | 9,389                   |
| 1957-58 .. | 1,560                 | 5,167 | 9,861                   | 752              | 5,619             | 703                 | 9,670                   |
| 1958-59 .. | 1,538                 | 5,530 | 10,540                  | 900              | 6,240             | 794                 | 10,577                  |
| 1959-60 .. | 1,487                 | 5,986 | 11,267                  | 867              | 6,587             | 895                 | 11,523                  |
| 1960-61 .. | 1,762                 | 6,538 | 12,517                  | 1,101            | (b)7,781          | 851                 | 12,873                  |
| 1961-62 .. | 1,492                 | 7,443 | 13,985                  | 1,145            | 8,428             | 923                 | 14,055                  |
| 1962-63 .. | 1,493                 | 7,972 | 14,547                  | 1,249            | 8,177             | 994                 | 14,457                  |

(a) Excludes re-imbusement for work done on behalf of Highways Department.

(b) Expenditure on drainage included in "Other" from 1961-62.

Local Government Authorities—Revenue Receipts and Payments  
for the Year 1962-63

| Particulars   | Metropolitan | Country      | Total         |
|---|--------------|--------------|---------------|
|   | £'000        |              |               |
| <b>Receipts—</b>  |              |              |               |
| <b>Taxation—</b>  |              |              |               |
| Rates, including arrears and fines .....                | 4,812        | 3,160        | 7,972         |
| Licences, dog and other .....                           | 51           | 42           | 93            |
| <b>Public works and services—</b>                       |              |              |               |
| Health activities .....                                 | 57           | 70           | 127           |
| Council property .....                                  | 364          | 214          | 578           |
| <b>Road work—</b>                                       |              |              |               |
| Reimbursement from Highways Department                  | 289          | 1,320        | 1,609         |
| Other .....   | 937          | 648          | 1,585         |
| Other .....   | 57           | 50           | 107           |
| Government grants .....                                 | 78           | 1,530        | 1,608         |
| Business undertakings .....                             | —            | 753          | 753           |
| Other .....   | 90           | 25           | 115           |
| <b>Total receipts .....</b>                             | <b>6,735</b> | <b>7,812</b> | <b>14,547</b> |
| <b>Payments—</b>  |              |              |               |
| Administration .....                                    | 714          | 535          | 1,249         |
| <b>Debt services (including business undertakings)—</b> |              |              |               |
| Interest .....  | 349          | 145          | 494           |
| Principal .....   | 314          | 512          | 826           |
| <b>Public works and services—</b>                       |              |              |               |
| Roads and bridges .....                                 | 3,221        | 4,956        | 8,177         |
| Health services .....                                   | 631          | 363          | 994           |
| Street lighting .....                                   | 211          | 96           | 307           |
| Council property .....                                  | 855          | 420          | 1,275         |
| Fire brigades .....                                     | 96           | 99           | 195           |
| Other .....   | 79           | 77           | 156           |
| Grants—Charities and other .....                        | 38           | 30           | 68            |
| Business undertakings .....                             | —            | 716          | 716           |
| Other .....   | —            | —            | —             |
| <b>Total payments .....</b>                             | <b>6,508</b> | <b>7,949</b> | <b>14,457</b> |



## LOAN RAISINGS AND DEBT OUTSTANDING

Local government authorities' loan raisings and debt outstanding are shown in the following tables. The definitions of "new loans raised" and "debt", given on page 481 under "Semi-government Finance", apply to the statistics in this section also.

The tables given below show new money loan raisings and debt outstanding for the years 1953-54 to 1962-63. A further table shows debt outstanding as at 30th June 1963 according to rate of interest.

**Local Government Authorities—New Money Loan Raisings and Funds Provided for Redemption of Debt**

| Year          | New Loan Raisings in Australia |        |       | Funds for Redemption |        |       |
|---------------|--------------------------------|--------|-------|----------------------|--------|-------|
|               | Government                     | Public | Total | Government           | Public | Total |
|               | £'000                          |        |       |                      |        |       |
| 1953-54 ..... | 586                            | 433    | 1,019 | 255                  | 98     | 353   |
| 1954-55 ..... | 446                            | 587    | 1,033 | 310                  | (a)118 | 428   |
| 1955-56 ..... | 475                            | 806    | 1,281 | 308                  | (o)179 | 487   |
| 1956-57 ..... | 258                            | 803    | 1,061 | 371                  | 266    | 637   |
| 1957-58 ..... | 397                            | 927    | 1,324 | 454                  | 177    | 631   |
| 1958-59 ..... | 470                            | 926    | 1,396 | 343                  | 229    | 572   |
| 1959-60 ..... | 331                            | 1,018  | 1,349 | 333                  | 253    | 586   |
| 1960-61 ..... | 720                            | 1,235  | 1,955 | 343                  | 286    | 629   |
| 1961-62 ..... | 433                            | 1,789  | 2,222 | 413                  | 312    | 725   |
| 1962-63 ..... | 611                            | 1,947  | 2,558 | 444                  | 375    | 819   |

(a) Excludes amounts credited to Sinking Funds.

**Local Government Authorities—Debt Outstanding and Annual Interest Payable**

| Year          | Debt in Australia |        |        | Annual Interest Payable |        |       |
|---------------|-------------------|--------|--------|-------------------------|--------|-------|
|               | Government        | Public | Total  | Government              | Public | Total |
|               | £'000             |        |        |                         |        |       |
| 1953-54 ..... | 1,036             | 1,563  | 2,599  | 8                       | 66     | 74    |
| 1954-55 ..... | 1,172             | 2,047  | 3,219  | 12                      | 88     | 100   |
| 1955-56 ..... | 1,325             | 3,132  | 4,457  | 18                      | 126    | 144   |
| 1956-57 ..... | 1,166             | 3,159  | 4,325  | 20                      | 147    | 167   |
| 1957-58 ..... | 1,130             | 3,981  | 5,111  | 24                      | 192    | 216   |
| 1958-59 ..... | 1,337             | 4,633  | 5,970  | 28                      | 229    | 257   |
| 1959-60 ..... | 1,325             | 5,365  | 6,690  | 30                      | 271    | 301   |
| 1960-61 ..... | 1,699             | 6,319  | 8,018  | 35                      | 325    | 360   |
| 1961-62 ..... | 1,727             | 7,922  | 9,649  | 46                      | 416    | 462   |
| 1962-63 ..... | 1,900             | 9,413  | 11,313 | 46                      | 502    | 548   |

**Local Government Authorities—Debt Outstanding  
According to Rate of Interest and Purpose**

*As at 30th June 1963*

| Rate of Interest              | Debt          | Purpose  | Debt          |
|-------------------------------|---------------|--|---------------|
|                               | £'000         |  | £'000         |
| No Interest .....             | 971           | Light and power .....                            | 411           |
| Under 3 per cent .....        | 1             | Water supply, sewerage and<br>drainage .....     | 2,214         |
| 3 and under 3½ per cent ..... | 145           | Roads, streets, bridges and foot-<br>paths ..... | 5,131         |
| 3½ and under 4 per cent ..... | 199           | Recreational .....                               | 792           |
| 4 and under 4½ per cent ..... | 181           | Council properties .....                         | 2,348         |
| 4½ and under 5 per cent ..... | 1,538         | Other (including not stated) ..                  | 417           |
| 5 and under 5½ per cent ..... | 3,568         |  |               |
| 5½ and under 6 per cent ..... | 4,670         |  |               |
| 6 per cent and over .....     | 40            |  |               |
| Not specified .....           | —             |  |               |
| <b>Total debt .....</b>       | <b>11,313</b> | <b>Total debt .....</b>                          | <b>11,313</b> |

## PART 13

# PRIVATE FINANCE

### 13.1. BANKING

#### LEGISLATION

Under Section 51 of the Commonwealth Constitution Act the Commonwealth Parliament has power to legislate with respect to "Banking, other than State banking; also State banking extending beyond the limits of the State concerned, the incorporation of banks, and the issue of paper money".

The principal Commonwealth Acts at present in force relating to banking are—

- (a) The *Reserve Bank Act* 1959-1965, providing for the constitution and management of the Reserve Bank and the management of the Australian note issue;
- (b) The *Commonwealth Banks Act* 1959-1961, providing for the constitution and management of the Commonwealth Banking Corporation; and
- (c) The *Banking Act* 1959, providing for the regulation of banking and the protection of the currency and public credit of Australia.

The *Banking Act* 1959 came into operation on 14th January 1960, replacing the *Banking Act* 1945-1953. It applies to all banks operating in Australia or its Territories, except State banks trading in their own State. The objects of the Act are (1) to provide a uniform legal framework for regulating the banking system (2) to safeguard depositors from loss (3) to provide for the co-ordination of banking policy under the direction of the Reserve Bank (4) to control the volume of credit in circulation and bank interest rates (5) to mobilize and to provide machinery for the control of foreign exchange and gold reserves of the Australian economy.

State banking legislation relates to the incorporation of banks and the constitution and management of State Banks. South Australian Acts at present in force relating to banking are—

The State Bank Act, 1925-1958 and

The Savings Bank of South Australia Act, 1929-1959.

### THE RESERVE BANK

The Reserve Bank of Australia functions as a Central Bank, controls the Australian note issue through the Note Issue Department, provides special banking facilities through the Rural Credits Department, and acts as banker to the Governments of the Commonwealth and some of the States.

Liabilities and assets of each department of the Reserve Bank are shown in the table below.

#### Reserve Bank of Australia: Liabilities and Assets

At 30th June 1964

| Particulars                        | Central Bank Department | Note Issue Department | Rural Credits Department | Total (a)            |
|------------------------------------|-------------------------|-----------------------|--------------------------|----------------------|
| Liabilities (£'000)                |                         |                       |                          |                      |
| Capital .....                      | 4,000                   | —                     | 4,714                    | 8,714                |
| Reserve funds .....                | 24,268                  | 4,755                 | 2,411                    | 31,434               |
| Development fund .....             | —                       | —                     | 290                      | 290                  |
| Notes on issue .....               | —                       | 428,043               | —                        | 428,043              |
| Deposits, bills payable and other— |                         |                       |                          |                      |
| Statutory reserve deposits ...     | 338,149                 | —                     | —                        | 338,149              |
| Other trading bank deposits ..     | 50,907                  | —                     | —                        | 50,907               |
| Savings bank deposits .....        | 216,154                 | —                     | —                        | 216,154              |
| Other .....                        | 163,926                 | 10,569                | 58,043                   | (a) 180,790          |
| <b>Total .....</b>                 | <b>797,404</b>          | <b>443,367</b>        | <b>65,458</b>            | <b>(a) 1,254,481</b> |
| Assets (£'000)                     |                         |                       |                          |                      |
| Gold and balances held abroad ..   | 433,047                 | 273,111               | —                        | 706,158              |
| Other overseas securities .....    | 61,279                  | 38,545                | —                        | 99,824               |
| Australian Government securities   | 205,818                 | 131,661               | —                        | 337,479              |
| All other .....                    | 97,260                  | 50                    | 65,458                   | (a) 111,020          |
| <b>Total .....</b>                 | <b>797,404</b>          | <b>443,367</b>        | <b>65,458</b>            | <b>(a) 1,254,481</b> |

(a) Inter-department accounts have been offset in totals.

Further details of the activities of the Reserve Bank are given in the Year Book of the Commonwealth of Australia.

### THE COMMONWEALTH BANKING CORPORATION

The Commonwealth Banking Corporation was established under the *Commonwealth Banks Act 1959* and came into being on 14th January 1960. It is the controlling body for the Commonwealth Trading Bank, the Commonwealth Savings Bank and the Commonwealth Development Bank.

Particulars relating to the Development Bank are given below, while details of the other two banks are included in later sections relating to all trading banks and savings banks.

### COMMONWEALTH DEVELOPMENT BANK

The Development Bank is a supplementary source of finance for development and does not compete with conventional lenders, but provides financial help when such help is thought desirable, and finance is not otherwise available on suitable terms. The primary consideration of the bank's operations in deciding whether finance should be made available is the prospects of success and not necessarily the value of security available. In South Australia all the major private banks and the State Bank of South Australia are agents of the Development Bank for the receipt of loan applications.

The capital of the Development Bank (£30,857,000 at 30th June 1964) consists of the capital of the Mortgage Bank and Industrial Finance Department of the Commonwealth Bank immediately prior to 14th January 1960, £5,000,000 provided by the Reserve Bank, £10,000,000 provided by the Commonwealth Government in the 1961-62 Budget, and such other sums as are provided by the Commonwealth Development Bank reserve fund. The net profits of the bank are paid to this reserve fund.

### TRADING BANKS

#### **Banks Originating in South Australia**

With a subscribed capital of £250,000 in 50,000 shares of £5 each, the first trading bank promoted in South Australia was the Bank of Adelaide which was incorporated by an Act of Parliament, and assented to on the 5th December 1865. The bank formally opened for business on 11th December of the same year. The Bank of Adelaide now has branches in all mainland States.

Pursuant to the State Advances Act of 1895 the State Bank of South Australia was constituted and commenced business in 1896. The original Act directed that advances were to be made on first mortgage to farmers, other primary producers and local government authorities. In 1925 legislation was enacted which enlarged the scope of the activities of the bank by making provision for loans on overdraft and all business of general banking. The State Bank also administers the under-mentioned Acts on behalf of the State—

Advances for Homes Act, 1928-1958.

Advances to Settlers Act, 1930-1958.

Loans to Producers Act, 1927-1962.

Advances for Wire-netting and Vermin Proof Materials under the Vermin Act, 1931-1962.

Loans for Fencing and Water Piping Act, 1938-1952.

Frost Relief Act, 1927.

Student Hostels (Advances) Act, 1961.

The State Bank of South Australia does not operate branches or agencies outside the State.

### Assets

The following table gives some particulars of assets held by trading banks in Australia. The figures quoted are averages of assets at the close of business on each Wednesday in June 1965.

#### Trading Banks in Australia: Assets, June 1965

*Excludes Inter-branch Accounts and Contingencies*

| Assets   | Common-wealth Trading Bank | Private Banks    | Other Cheque-paying Banks | Total            |
|--|----------------------------|------------------|---------------------------|------------------|
|  | £'000                      |                  |                           |                  |
| Gold, bullion and Australian notes                           | 12,671                     | 55,898           | 2,827                     | 71,396           |
| Cash with Reserve Bank .....                                 | 2,041                      | 9,334            | 1,415                     | 12,790           |
| Australian public securities—                                |                            |                  |                           |                  |
| Commonwealth and State ....                                  | 109,972                    | 335,932          | 41,193                    | 487,097          |
| Local and semi-governmental authorities .....                | 3,939                      | 454              | 1,269                     | 5,662            |
| Statutory Reserve Deposit Account with Reserve Bank .....    | 57,582                     | 270,458          | 547                       | 328,587          |
| Loans to authorized dealers in short term money market ..... | 7,727                      | 30,973           | 8,165                     | 46,865           |
| Other loans, advances and bills discounted .....             | 210,463                    | 1,105,088        | 162,005                   | 1,477,556        |
| Bank premises, furniture and sites..                         | 4,583                      | 54,570           | 9,102                     | 68,255           |
| Other assets .....   | 20,798                     | 121,133          | 8,156                     | 150,087          |
| <b>Total assets .....</b>                                    | <b>429,776</b>             | <b>1,983,840</b> | <b>234,679</b>            | <b>2,648,295</b> |

### Branches and Agencies

Of the 15 trading banks which operate in Australia, the 9 banks listed below conduct business in South Australia:

#### Government banks:

Commonwealth Trading Bank  
State Bank of South Australia

#### Private banks:

Australia and New Zealand Bank Ltd.  
Bank of Adelaide  
Bank of New South Wales  
Commercial Bank of Australia Ltd.  
Commercial Banking Co. of Sydney Ltd.  
English, Scottish and Australian Bank Ltd.  
National Bank of Australasia Ltd.

At 30th June 1964 there were 403 branches and 316 agencies in South Australia, compared with Australian totals of 4,255 branches and 1,735 agencies.

The following table shows that in recent years there has been a considerable expansion in the number of metropolitan branches, but virtually no change in the number of country branches.

**Trading Bank Branches and Agencies: South Australia**  
*At 30th June*

| Bank                              | Branches |      |      |      |      | Agencies |
|-----------------------------------|----------|------|------|------|------|----------|
|                                   | 1960     | 1961 | 1962 | 1963 | 1964 | 1964     |
| Commonwealth Trading Bank ..      | 26       | 26   | 27   | 37   | 37   | 31       |
| State Bank of South Australia ... | 36       | 35   | 34   | 35   | 35   | 16       |
| Private banks .....               | 290      | 296  | 309  | 318  | 331  | 269      |
| Total—Metropolitan area           | 131      | 134  | 147  | 167  | 180  | 148      |
| Country .....                     | 221      | 223  | 223  | 223  | 223  | 168      |
| Total State .....                 | 352      | 357  | 370  | 390  | 403  | 316      |

**Interest Rates**

The following table sets out interest rates on fixed deposits and maximum interest rates on overdrafts applying in South Australia at 30th June each year from 1959 to 1965. The sharp rise in interest rates following the credit restrictions of November 1960 can be clearly seen.

**Trading Banks: Interest Rates in South Australia**  
*At 30th June*

| At<br>30th June | Fixed Deposits     |          |          |           |           | Overdrafts<br>(Maximum<br>Rate) |
|-----------------|--------------------|----------|----------|-----------|-----------|---------------------------------|
|                 | 30 days            | 3 months | 6 months | 12 months | 24 months |                                 |
|                 | Per Cent per Annum |          |          |           |           |                                 |
| 1959....        | (a)                | 2½       | 2½       | 2½        | 3½        | 6                               |
| 1960....        | (a)                | 2½       | 2½       | 2½        | 3½        | 6                               |
| 1961....        | (a)                | 4        | 4        | 4½        | (a)       | 7                               |
| 1962....        | (a)                | 3½       | 3½       | 4         | (a)       | 7                               |
| 1963....        | (a)                | 3½       | 3½       | 3½        | (a)       | 6½                              |
| 1964....        | 3½ (b)             | 3½       | 3½       | 4         | (a)       | 7                               |
| 1965....        | 4½ (b)             | 4½       | 4½       | 4½        | 4½        | 7½                              |

(a) Not applicable.

(b) On deposits of £50,000 or more only.

**Deposits, Advances, Etc.**

Details of deposits and advances of trading banks in South Australia are given in the next table. Deposits not bearing interest are on current account and may be withdrawn on demand. Deposits bearing interest include some deposits on current account, but most are deposits for fixed terms—usually 3, 6, 12 or 24 months. The minimum term for fixed deposits was reduced from 3 months to 30 days for large amounts, following an announcement to this effect from the Reserve Bank on 7th April 1964.

Long-term trends in two relationships (a) deposits not bearing interest to total deposits and (b) loans, advances, etc. to total deposits—show considerable fluctuations. During the 1930's non-interest-bearing deposits were less than 30% of total deposits (reaching a low of 23.9% in 1933) but this proportion rose steeply during and after the Second World War to a peak of 74.1% in

1953. This has subsequently dropped steadily to 58.3% in 1964, reflecting a similar pattern throughout Australia, although in this period the proportion of non-interest-bearing deposits has regularly been somewhat lower in this State than the Australian average. In the 1930's, loans and advances were regularly made at a rate of over 70% of total deposits, and in two years loans and advances actually exceeded deposits. However, during the war there was a reduction in advances made coupled with a rapid increase in deposits, so that by 1949 loans and advances were only 29% of deposits. Subsequently this proportion has again increased, until it exceeded 60% in 1963 and 1964. Total loans and advances have risen to almost five times the 1949 level.

**Trading Banks: Average Weekly Deposits and Advances in South Australia**  
*June Quarter 1960 to 1964*

| June Quarter | Deposits         |                      |         | Loans, Advances, Etc. (a) | Proportion to Total Deposits  |                           |
|--------------|------------------|----------------------|---------|---------------------------|-------------------------------|---------------------------|
|              | Bearing Interest | Not Bearing Interest | Total   |                           | Deposits Not Bearing Interest | Loans, Advances, Etc. (a) |
|              | £'000            | £'000                | £'000   | £'000                     | %                             | %                         |
| 1960....     | 43,444           | 89,303               | 132,747 | 74,587                    | 67.3                          | 56.2                      |
| 1961....     | 49,137           | 85,787               | 134,924 | 73,674                    | 63.6                          | 54.6                      |
| 1962....     | 55,517           | 85,231               | 140,748 | 80,754                    | 60.6                          | 57.4                      |
| 1963....     | 59,383           | 86,063               | 145,446 | 90,581                    | 59.2                          | 62.3                      |
| 1964....     | 68,560           | 95,682               | 164,242 | 99,908                    | 58.3                          | 60.8                      |

(a) Excludes loans to authorized dealers in the short-term money market. Includes bills discounted.

Separate details for 1964 for each of the Government banks and for all private banks are as follows:

**Trading Banks: Deposits and Advances**  
*June Quarter 1964*

| Bank                                | Deposits         |                      |                | Loans, Advances, Etc. (a) |
|-------------------------------------|------------------|----------------------|----------------|---------------------------|
|                                     | Bearing Interest | Not Bearing Interest | Total          |                           |
|                                     | £'000            |                      |                |                           |
| Commonwealth Trading Bank ....      | 4,506            | 8,610                | 13,116         | 10,101                    |
| State Bank of South Australia ..... | 6,560            | 9,229                | 15,789         | 30,769                    |
| Private trading banks .....         | 57,494           | 77,843               | 135,337        | 59,038                    |
| <b>Total .....</b>                  | <b>68,560</b>    | <b>95,682</b>        | <b>164,242</b> | <b>99,908</b>             |

(a) Excludes loans to authorized dealers in the short-term money market. Includes bills discounted.

The following table relates to trading bank advances outstanding for all banks in South Australia and the Northern Territory except the State Bank of South Australia. Advances are classified according to type of borrower in July of each year from 1961 to 1964.



**Trading Banks<sup>(a)</sup> in South Australia and Northern Territory**

*Advances to Resident Borrowers (b) by Type of Borrower*

*As at Second Wednesday in July*

| Classification                                    | 1961        | 1962        | 1963        | 1964        |
|---|-------------|-------------|-------------|-------------|
|   | £m          |             |             |             |
| <b>Business advances—</b>                         |             |             |             |             |
| <b>Agriculture, grazing and dairying—</b>         |             |             |             |             |
| Mainly sheep grazing .....                        | 7.4         | 7.9         | 8.2         | 8.9         |
| Mainly wheat growing .....                        | 3.0         | 3.4         | 3.8         | 4.2         |
| Mainly dairying and pig raising .....             | 1.4         | 1.4         | 1.8         | 1.9         |
| Other .....                                       | 3.3         | 4.1         | 4.7         | 5.2         |
| <b>Total agriculture, etc. ....</b>               | <b>15.1</b> | <b>16.8</b> | <b>18.5</b> | <b>20.2</b> |
| <b>Manufacturing .....</b>                        | <b>12.8</b> | <b>9.8</b>  | <b>9.2</b>  | <b>9.5</b>  |
| <b>Transport, storage and communications ..</b>   | <b>2.1</b>  | <b>0.8</b>  | <b>0.9</b>  | <b>1.2</b>  |
| <b>Finance—</b>                                   |             |             |             |             |
| Building and housing societies .....              | 0.3         | 0.3         | 0.3         | 0.1         |
| Pastoral finance companies .....                  | 1.0         | 0.7         | 0.5         | 0.9         |
| Hire-purchase and other finance companies .....   | 1.2         | 0.7         | 0.8         | 1.4         |
| Other .....                                       | 0.4         | 0.7         | 0.6         | 1.0         |
| <b>Total finance .....</b>                        | <b>2.9</b>  | <b>2.4</b>  | <b>2.2</b>  | <b>3.4</b>  |
| <b>Commerce—</b>                                  |             |             |             |             |
| Retail trade .....                                | 9.1         | 8.5         | 8.2         | 8.1         |
| Wholesale trade (c) .....                         | 6.6         | 8.9         | 7.9         | 8.8         |
| <b>Total commerce .....</b>                       | <b>15.7</b> | <b>17.4</b> | <b>16.1</b> | <b>16.9</b> |
| <b>Building and construction .....</b>            | <b>1.5</b>  | <b>1.7</b>  | <b>2.1</b>  | <b>2.3</b>  |
| <b>Other business .....</b>                       | <b>3.4</b>  | <b>3.9</b>  | <b>4.8</b>  | <b>5.6</b>  |
| <b>Unclassified .....</b>                         | <b>0.2</b>  | <b>1.3</b>  | <b>2.3</b>  | <b>2.2</b>  |
| <b>All business advances—</b>                     |             |             |             |             |
| To companies .....                                | 32.1        | 30.5        | 30.2        | 33.5        |
| Other .....                                       | 21.6        | 23.6        | 25.9        | 27.8        |
| <b>Total business advances ..</b>                 | <b>53.7</b> | <b>54.1</b> | <b>56.1</b> | <b>61.3</b> |
| <b>Advances to public authorities .....</b>       | <b>0.2</b>  | <b>0.2</b>  | <b>0.3</b>  | <b>0.2</b>  |
| <b>Personal advances—</b>                         |             |             |             |             |
| Building or purchasing own home .....             | 4.3         | 4.8         | 5.5         | 5.7         |
| Other .....                                       | 2.9         | 3.9         | 5.0         | 5.8         |
| <b>Total personal advances ..</b>                 | <b>7.2</b>  | <b>8.7</b>  | <b>10.5</b> | <b>11.5</b> |
| <b>Advances to non-profit organizations .....</b> | <b>0.8</b>  | <b>0.9</b>  | <b>0.9</b>  | <b>1.0</b>  |
| <b>Total advances to resident borrowers</b>       | <b>61.9</b> | <b>63.9</b> | <b>67.8</b> | <b>74.0</b> |

(a) Covers advances by the Commonwealth Trading Bank and all private trading banks, but excludes advances by the State Bank of South Australia.

(b) "Resident borrowers" include institutions carrying on business, and individuals permanently residing in Australia or Papua-New Guinea. Advances to "non-resident borrowers" in 1964 amounted to less than £50,000.

(c) Includes temporary advances to woolbuyers.

**Debits to Customers' Accounts**

Debits to customers' accounts generally represent the total of all cheques drawn by customers of the banks. The average weekly debits to customers' accounts of all cheque-paying banks, including the Rural Credits Department of the Reserve Bank and the Commonwealth Bank, in South Australia in recent years was as follows:

|                   | £'000  |
|-------------------|--------|
| 1959-60 . . . . . | 53,467 |
| 1960-61 . . . . . | 58,044 |
| 1961-62 . . . . . | 58,259 |
| 1962-63 . . . . . | 65,896 |
| 1963-64 . . . . . | 77,388 |
| 1964-65 . . . . . | 85,127 |

These figures are the averages of debits during weeks ending on Wednesdays.

**SAVINGS BANKS****Savings Bank of South Australia**

The first savings bank to conduct business in South Australia was the Savings Bank of South Australia which commenced operations on 11th March 1848 following the enactment of an ordinance in 1847. In 1848 the bank had 214 depositors, with depositors' funds amounting to £5,313. By 1875 the number of depositors had grown to 22,662, depositors' balances amounted to £816,827, and agencies had been established in 30 townships throughout the colony.

The Savings Bank of South Australia does not operate branches or agencies in other Australian States, although it has appointed agents to act for it in other States and in the United Kingdom. At 30th June 1964 there were 121 branches and 738 agencies in South Australia and in addition there were 840 school bank agencies.

The total value of depositors' balances first exceeded £100 million in 1956, and has subsequently increased rapidly to exceed £150 million by 1964. At this time mortgage loans outstanding totalled almost £50 million following record mortgage loans of £9,104,000 in 1963-64. The major portion of these loans (£7,379,000) was to depositors for building or purchasing homes, while other mortgage loans included £1,189,000 for purchase or development of rural properties. Further details of operations in recent years are as follows.

**Savings Bank of South Australia: Summary of Business**

| Year    | Operative<br>Accounts<br>(a) | Amount<br>Deposited<br>During<br>Year | Amount<br>Withdrawn<br>During<br>Year | Depositors'<br>Balances<br>(a) | Mortgage<br>Loans<br>(a) | Government<br>Securities<br>Held (a) |
|---------|------------------------------|---------------------------------------|---------------------------------------|--------------------------------|--------------------------|--------------------------------------|
|         | No.                          | £'000                                 | £'000                                 | £'000                          | £'000                    | £'000                                |
| 1960-61 | 844,782                      | 106,160                               | 109,781                               | 124,305                        | 33,781                   | 81,407                               |
| 1961-62 | 847,906                      | 110,354                               | 108,639                               | 130,433                        | 37,858                   | 82,321                               |
| 1962-63 | 847,614                      | 118,824                               | 113,902                               | 139,960                        | 42,486                   | 86,539                               |
| 1963-64 | 858,072                      | 138,269                               | 130,328                               | 152,136                        | 48,467                   | 92,089                               |
| 1964-65 | 870,983                      | 159,732                               | 155,342                               | 161,420                        | 55,352                   | 97,657                               |

(a) Balance at end of year.

### Development of Savings Banks

Post offices in South Australia acted as agencies for the Savings Bank of South Australia until the establishment of the Commonwealth Bank in 1912 when they switched to act as agencies for this bank.

Savings bank business was conducted entirely by these two government banks until 1956, when the first of the private banks entered the field. At present savings banking facilities in South Australia are provided by the nine banks listed below—

#### Government:

Commonwealth Savings Bank  
Savings Bank of South Australia

#### Private:

Australia and New Zealand Savings Bank Ltd.  
Bank of Adelaide Savings Bank Ltd.  
Bank of New South Wales Savings Bank Ltd.  
Commercial Savings Bank of Australia Ltd.  
Commercial Banking Co. Savings Bank Ltd.  
English, Scottish and Australian Savings Bank Ltd.  
National Bank Savings Bank Ltd.

The prime object of the foundation of savings banks in Australia was the encouragement of thrift, and deposits as small as one shilling are still accepted. Generally, depositors cannot operate on their savings accounts by means of cheques, although most savings banks extend this facility to non-profit organizations such as friendly, co-operative and charitable societies, and in addition the Savings Bank of South Australia provides similar facilities for other depositors. Savings bank accounts have the advantages that deposits may be withdrawn on demand and that depositors receive interest on their minimum monthly balances. No charge is made by the banks for keeping the accounts.

### Assets

Under the provisions of the *Banking Act* 1959 all savings banks, except State banks, which are subject to the Act are required to maintain in prescribed investments an amount that together with cash on hand in Australia is not less than the amount on deposit in Australia with the savings bank. These prescribed investments include deposits with the Reserve Bank, deposits with or loans to other banks, Commonwealth or State securities, loans for housing and loans to authorized dealers in the short-term money market.

A savings bank must hold at least 65% of depositors' funds in cash or approved securities.

Under the Act, a savings bank may not accept deposits from a profit-making body unless it is acting as a trustee for a non-profit-making beneficiary.

Details of assets of all savings banks in Australia at 30th June 1965 are as follows:

## Savings Banks: Assets in Australia, 30th June 1965

(Excludes inter-branch accounts)

| Assets   | Common-wealth Savings Bank | State Savings Banks | Trustee Savings Banks (a) | Private Savings Banks | Total            |
|--|----------------------------|---------------------|---------------------------|-----------------------|------------------|
|  |                            |                     | £'000                     |                       |                  |
| Coin, bullion and Australian notes                 | 1,527                      | 2,718               | 131                       | 1,005                 | 5,381            |
| Deposits with Reserve Bank . . . .                 | 110,305                    | 29,923              | 250                       | 74,661                | 215,139          |
| Deposits in Australia with trading banks . . . . . | 12,600                     | 32,529              | 2,730                     | 10,910                | 58,769           |
| Australian public securities—                      |                            |                     |                           |                       |                  |
| Commonwealth and States . . .                      | 579,804                    | 183,249             | 8,418                     | 261,586               | 1,033,057        |
| Local and semi-governmental authorities . . . . .  | 139,450                    | 181,211             | 14,425                    | 211,074               | 546,160          |
| Loans, advances and bills discounted (b)—          |                            |                     |                           |                       |                  |
| Housing . . . . .                                  | 241,701                    | 177,590             | 7,366                     | 165,964               | 592,621          |
| Other . . . . .                                    | 31,735                     | 17,821              | 2,324                     | 13,981                | 65,861           |
| All other assets . . . . .                         | 22,040                     | 18,574              | 1,831                     | 15,738                | 58,183           |
| <b>Total assets . . . . .</b>                      | <b>1,139,162</b>           | <b>643,615</b>      | <b>37,475</b>             | <b>754,919</b>        | <b>2,575,171</b> |

(a) Trustee banks do not operate in South Australia.

(b) Excludes loans to authorized dealers on the short-term money market.

## Branches and Agencies

The number of branches of the government banks has increased steadily over recent years, whereas the number of branches of private banks increased suddenly during 1961-62 when several banks commenced operations in this State, and has since risen much less rapidly.

## Savings Banks: Branches and Agencies in South Australia

At 30th June

| Bank                              | Branches   |            |            |            |            | Agencies     |
|-----------------------------------|------------|------------|------------|------------|------------|--------------|
|                                   | 1960       | 1961       | 1962       | 1963       | 1964       | 1964         |
| Commonwealth Savings Bank . . .   | 39         | 47         | 53         | 61         | 64         | 915          |
| Savings Bank of South Australia . | 97         | 101        | 110        | 117        | 121        | 739          |
| Private banks . . . . .           | 39         | 39         | 265        | 318        | 331        | 579          |
| <b>Total—Metropolitan area</b>    | <b>83</b>  | <b>93</b>  | <b>189</b> | <b>231</b> | <b>248</b> | <b>1,227</b> |
| <b>Country . . . . .</b>          | <b>92</b>  | <b>94</b>  | <b>239</b> | <b>265</b> | <b>268</b> | <b>1,006</b> |
| <b>Total State . . . . .</b>      | <b>175</b> | <b>187</b> | <b>428</b> | <b>496</b> | <b>516</b> | <b>2,233</b> |

## Deposits

Until 1961, the total of depositors' balances in savings banks per head of population was higher in South Australia than in any other State. Although deposits per head are now higher in Victoria than in South Australia, the figure for this State is still well above the Australian average, as can be seen from the table below.

## Savings Banks: Accounts and Deposits, Australia and South Australia

| At<br>30th June | South Australia              |          |                                       | Australia                    |          |                                       |
|-----------------|------------------------------|----------|---------------------------------------|------------------------------|----------|---------------------------------------|
|                 | Accounts<br>Operative<br>(a) | Deposits | Deposits<br>per Head of<br>Population | Accounts<br>Operative<br>(a) | Deposits | Deposits<br>per Head of<br>Population |
|                 | '000                         | £m       | £                                     | '000                         | £m       | £                                     |
| 1960....        | 931                          | 166.0    | 175.6                                 | 8,687                        | 1,522.7  | 148.2                                 |
| 1961....        | 963                          | 166.7    | 172.0                                 | 9,074                        | 1,577.5  | 150.1                                 |
| 1962....        | 1,019                        | 181.0    | 182.9                                 | 9,599                        | 1,734.9  | 162.1                                 |
| 1963....        | 1,104                        | 208.1    | 206.2                                 | 10,323                       | 1,969.8  | 180.5                                 |
| 1964....        | 1,181                        | 237.9    | 230.6                                 | 11,051                       | 2,238.1  | 201.0                                 |

(a) Excludes school bank and inoperative accounts.

The Savings Bank of South Australia has always held most of the total of depositors' balances in this State, although its share of total on deposit has dropped from about 75% in 1961 to 64% in 1964. In that time the private banks have increased their share from less than 2% in 1961 to almost 14% in 1964.

## Savings Bank Deposits: South Australia

| At 30th June | Commonwealth<br>Savings Bank | Savings Bank of<br>South Australia | Private<br>Savings Banks | Total |
|--------------|------------------------------|------------------------------------|--------------------------|-------|
|              | £m                           |                                    |                          |       |
| 1960.....    | 39.8                         | 123.9                              | 2.3                      | 166.0 |
| 1961.....    | 39.4                         | 124.3                              | 3.0                      | 166.7 |
| 1962.....    | 41.9                         | 130.4                              | 8.7                      | 181.0 |
| 1963.....    | 46.5                         | 140.0                              | 21.6                     | 208.1 |
| 1964.....    | 52.9                         | 152.1                              | 32.9                     | 237.9 |

The next table gives an indication of the amount of business conducted by banks during a year. It shows that in each of the last five years, both the amount deposited and the amount withdrawn during the year exceeded the total amount on deposit at the end of the year.

## Movements in Savings Bank Deposits: South Australia

| Year    | Amount on<br>Deposit at<br>Beginning<br>of Year | Deposits<br>during<br>Year (a) | Withdrawals<br>during<br>Year (a) | Interest<br>Added<br>during<br>Year | Increase in<br>Depositors'<br>Balances<br>during<br>Year | Amount on<br>Deposit at<br>End of<br>Year |
|---------|---|--------------------------------|-----------------------------------|-------------------------------------|--|---|
|         | £m  |                                |                                   |                                     |  |   |
| 1959-60 | 157.2   | 181.5                          | 177.5                             | 4.8                                 | 8.8  | 166.0                                     |
| 1960-61 | 166.0   | 190.2                          | 194.7                             | 5.2                                 | 0.7  | 166.7                                     |
| 1961-62 | 166.7   | 206.7                          | 198.3                             | 5.9                                 | 14.3   | 181.0                                     |
| 1962-63 | 181.0   | 245.1                          | 224.5                             | 6.5                                 | 27.1   | 208.1                                     |
| 1963-64 | 208.1   | 289.8                          | 266.3                             | 6.3                                 | 29.8   | 237.9                                     |

(a) Includes inter-branch transfers.

### Interest Rates

At 30th June 1965 the interest rate on both ordinary savings accounts and special society cheque accounts varied from 3½% to 3¾% on balances up to £3,000. On deposits in excess of this amount, no interest was allowed for ordinary savings accounts, and a reduced rate applied to society accounts. Interest is calculated on the lowest balance in the account each month.

### School Banking

Special banking facilities for school children were introduced to South Australia with the inauguration of the School Banking Department of the Savings Bank of South Australia on 28th April 1908. For many years this bank was the only one engaged in this field, but in recent years the Commonwealth Savings Bank and some private banks have commenced similar services. However, the Savings Bank of South Australia has sole access to public schools, and retains a major share of school banking business.

With a view to encouraging thrift in school children, deposits as small as one penny are accepted.

Details of school banking in this State are as follows:—

|                          | Agencies | Operative<br>Accounts | Depositors'<br>Balances<br>£ |
|--------------------------|----------|-----------------------|------------------------------|
| 30th June 1963 . . . . . | 861      | 168,289               | 1,621,228                    |
| 1964 . . . . .           | 877      | 173,160               | 1,704,751                    |

## 13.2. INSURANCE

### LIFE INSURANCE

The activities of life insurance companies operating in South Australia have been regulated by Commonwealth legislation since 1945. Under the *Life Insurance Act* 1945-1961, every company transacting life insurance business must be registered and must lodge a deposit of up to £50,000, as security for policy holders, with the Commonwealth Treasurer. The Act is administered by the Insurance Commissioner who has wide powers of inquiry into the activities of any registered company.

Each company must establish at least one statutory fund and all moneys received in respect of life insurance business must be paid to, and form part of the assets of these funds. An actuarial investigation must be conducted at least once every five years, with the distribution of shareholders' dividends and policyholders' bonuses subject to sufficient surplus being revealed by such investigation. All premiums must be actuarially approved and the Commissioner has powers to suppress policies or proposals which he deems misleading.

Companies are required to furnish to the Commissioner certain accounting reports and statistical returns and it is from these returns that the statistical details in this section are obtained. The individual returns cover operations for the accounting year ending in the calendar year shown. For a majority of companies the closing date is 31st December, but a number balance earlier in the year.

During 1963 there were 33 companies operating in South Australia. All 33 conducted ordinary life insurance business; 23 also undertook superannuation

business, *i.e.* the issuing of policies to the trustees of funds established for the provision of superannuation or retirement benefits, and 6 recorded industrial business whereby premiums are collected at intervals of less than two months.

### Policies in Force

There has been a rapid growth in life insurance business in the post war years. For policies in force at the end of 1945, the sum assured amounted to £65 million; by 1949 the figure had passed £100 million and the £250 million mark was reached in 1956. In 1963 life insurances in force exceeded £500 million.

The table below illustrates the growth in life insurance business over the last 10 years. Although total business has been increasing, industrial business has been static, with the number of policies actually declining. The heavy relative decline in this form of business has been due to the high cost of collecting premiums and to the development of superannuation and group schemes.

### Life Insurance: Policies in Force, South Australia

| 31st<br>December | Ordinary (including Superannuation) |             |                 |                 | Industrial |             |                 |                 |
|------------------|-------------------------------------|-------------|-----------------|-----------------|------------|-------------|-----------------|-----------------|
|                  | Policies                            | Sum Assured | Bonus Additions | Annual Premiums | Policies   | Sum Assured | Bonus Additions | Annual Premiums |
|                  | No.                                 | £'000       | £'000           | £'000           | No.        | £'000       | £'000           | £'000           |
| 1954.....        | 283,703                             | 159,470     | 13,233          | 5,702           | 407,775    | 29,077      | 832             | 1,433           |
| 1955.....        | 298,616                             | 183,295     | 14,667          | 6,514           | 401,777    | 30,146      | 863             | 1,465           |
| 1956.....        | 312,706                             | 207,482     | 16,342          | 7,288           | 397,506    | 31,296      | 980             | 1,503           |
| 1957.....        | 327,978                             | 237,772     | 18,401          | 8,237           | 386,368    | 31,788      | 1,054           | 1,511           |
| 1958.....        | 341,088                             | 267,308     | 20,910          | 9,032           | 378,679    | 32,553      | 1,156           | 1,533           |
| 1959.....        | (a)389,071                          | 302,716     | 24,045          | 9,934           | 369,621    | 32,993      | 1,288           | 1,538           |
| 1960.....        | 408,183                             | 344,669     | 27,847          | 11,024          | 357,065    | 33,622      | 1,430           | 1,551           |
| 1961.....        | 424,267                             | 386,654     | 31,709          | 12,037          | 340,649    | 34,128      | 1,538           | 1,555           |
| 1962.....        | 438,417                             | 433,441     | 37,471          | 13,165          | 326,302    | 35,377      | 1,742           | 1,586           |
| 1963.....        | 449,824                             | 480,527     | 43,817          | 14,299          | 312,496    | 36,709      | 2,031           | 1,619           |

(a) Some "Voluntary Group" policies, previously counted as one policy, were converted to single policies for each person insured.

Details of policies in force at the end of 1963 are presented in the following table according to the type of policy and the nature of the business. An endowment insurance provides for the payment of a stipulated sum upon the death of the insured or upon his reaching a certain age. Payment under an endowment policy is dependent on his reaching the specified age.

### Life Insurance: Policies in Force, South Australia, at end of 1963

| Type of Policy         | Ordinary    |                 | Superannuation |                 | Industrial  |                 |
|------------------------|-------------|-----------------|----------------|-----------------|-------------|-----------------|
|                        | Sum Assured | Annual Premiums | Sum Assured    | Annual Premiums | Sum Assured | Annual Premiums |
|                        | £'000       |                 |                |                 |             |                 |
| Whole life insurances  | 201,297     | 4,610           | 4,026          | 118             | 2,502       | 133             |
| Endowment insurances   | 154,805     | 6,383           | 58,974         | 2,350           | 32,993      | 1,424           |
| Other insurances ..... | 49,692      | 297             | 2,361          | 11              |             |                 |
| Endowment .....        | 6,308       | 420             | 3,064          | 110             | 1,214       | 62              |
| Total .....            | 412,102     | 11,710          | 68,425         | 2,589           | 36,709      | 1,619           |

Of the 33 companies undertaking ordinary business in 1963, 10 accounted for 93% of business registered at the end of the year, with the five largest accounting for 77%. Although 27 companies had superannuation policies registered, 10 companies accounted for 99%, and 3 for 70% of all superannuation business.

**New Policies**

A total of 57,522 new life insurance policies, with an assured value of £82,592,000, were issued in 1963. The number of new policies has actually fallen in the last two years, after reaching a peak of 61,190 in 1961. However, the value (*i.e.*, amount assured) of new policies has risen continuously since the end of the Second World War—from £7,408,000 in 1945 to £16,538,000 in 1950, £35,229,000 in 1955 and £65,976,000 in 1960. At the same time, industrial policies have become relatively less important, and in 1963 accounted for little more than 5% of total value, compared with about 25% in 1945.

The number and value of new ordinary superannuation and industrial policies issued during the last 5 years is shown in the next table. It can be seen that the average amount assured is much lower on industrial policies—in 1963 the average value of new policies being ordinary £1,657, superannuation £2,717 and industrial £341.

**Life Insurance: New Policies Issued**

| Policy               | 1959                   | 1960     | 1961   | 1962   | 1963   |        |
|----------------------|------------------------|----------|--------|--------|--------|--------|
|                      | Number Issued          |          |        |        |        |        |
| Ordinary.....        | } 33,675               | { 38,542 | 39,149 | 39,463 | 39,385 |        |
| Superannuation ..... |                        |          | 4,122  | 4,538  | 4,624  | 4,693  |
| Industrial .....     |                        |          | 17,361 | 17,503 | 15,728 | 13,444 |
| Total .....          | 52,859                 | 60,025   | 61,190 | 59,815 | 57,522 |        |
|                      | Amount Assured (£'000) |          |        |        |        |        |
| Ordinary.....        | } 52,671               | { 55,361 | 59,762 | 63,786 | 65,252 |        |
| Superannuation ..... |                        |          | 7,305  | 8,348  | 10,655 | 12,752 |
| Industrial .....     |                        |          | 3,049  | 3,310  | 3,704  | 4,588  |
| Total .....          | 55,720                 | 65,976   | 71,814 | 78,818 | 82,592 |        |

Annual premiums on new policies issued in 1963 amounted to £2,231,000 and of this amount £1,364,000 was for endowment insurances and £711,000 for whole of life insurances. Details of amount issued and premiums payable for the various types of policy issued in 1963 are shown below.

**Life Insurance: New Business, South Australia, 1963**

| Type of Policy         | Ordinary    |                 | Superannuation |                 | Industrial  |                 |
|------------------------|-------------|-----------------|----------------|-----------------|-------------|-----------------|
|                        | Sum Assured | Annual Premiums | Sum Assured    | Annual Premiums | Sum Assured | Annual Premiums |
|                        | £'000       |                 |                |                 |             |                 |
| Whole life insurances  | 31,576      | 655             | 1,543          | 43              | 222         | 13              |
| Endowment insurances   | 19,247      | 823             | 9,322          | 367             | 4,333       | 174             |
| Other insurances ..... | 13,673      | 56              | 1,066          | 3               | —           | 1               |
| Endowment .....        | 756         | 66              | 821            | 28              | 33          | 2               |
| Total .....            | 65,252      | 1,600           | 12,752         | 441             | 4,588       | 190             |



**Life Insurance Policies Discontinued**

The following table gives details of policies discontinued according to reason for discontinuance. The item "transfer" represents the net balance from the transfer of policies between the South Australian register and those of other States. Alterations to existing policies which result in policies being replaced, sometimes by an increased number of policies, are included in "other".

**Life Insurance: Policies Discontinued or Reduced, South Australia, 1963**

| Reason for Discontinuance | Ordinary      |               | Superannuation |              | Industrial    |              |
|---------------------------|---------------|---------------|----------------|--------------|---------------|--------------|
|                           | Policies      | Sum Assured   | Policies       | Sum Assured  | Policies      | Sum Assured  |
|                           | No.           | £'000         | No.            | £'000        | No.           | £'000        |
| Death .....               | 1,875         | 1,260         | 261            | 254          | 1,388         | 92           |
| Maturity .....            | 5,810         | 1,505         | 553            | 312          | 14,986        | 808          |
| Surrender .....           | 9,634         | 8,874         | 1,515          | 3,083        | 7,352         | 1,206        |
| Forfeiture .....          | 7,953         | 11,195        | 2,469          | 729          | 3,877         | 1,172        |
| Transfer .....            | 546           | 916           | 108            | 148          | 175           | —4           |
| Other .....               | 479           | 1,516         | 1,556          | 1,126        | —528          | —18          |
| <b>Total .....</b>        | <b>26,297</b> | <b>25,266</b> | <b>6,462</b>   | <b>5,652</b> | <b>27,250</b> | <b>3,256</b> |

**Annuity Business**

Life insurance companies also issue annuity policies but this form of business is at present a relatively minor aspect of life insurance activity. At the end of 1963 there were 253 annuities in force involving annual payments of £84,800.

**Premiums and Claims**

Details of premium income and of cash payments made on behalf of policies are shown in the following table. This table does not show revenue from investment nor management and commission expenses and accordingly is not a revenue and expenditure table.

**Life Insurance: Premiums and Policy Payments, South Australia<sup>(a)</sup>**

| Year      | Premiums and Considerations for Annuities | Payments            |          |            |           |              | Total |
|-----------|---|---------------------|----------|------------|-----------|--------------|-------|
|           |   | Death or Disability | Maturity | Surrenders | Annuities | Cash Bonuses |       |
|           |   |                     |          |            |           |              |       |
|           |   |                     |          | £'000      |           |              |       |
| 1959..... | 11,378                                    | 1,223               | 2,096    | 1,050      | 27        | 12           | 4,408 |
| 1960..... | 12,538                                    | 1,443               | 2,433    | 1,245      | 26        | 12           | 5,159 |
| 1961..... | 13,622                                    | 1,592               | 2,860    | 1,600      | 27        | 20           | 6,099 |
| 1962..... | 14,797                                    | 1,753               | 2,941    | 1,652      | 27        | 20           | 6,393 |
| 1963..... | 16,115                                    | 2,104               | 3,225    | 1,934      | 27        | 22           | 7,312 |

(a) Includes Northern Territory.

**Loans Outstanding**

A considerable proportion of the assets of life insurance companies is held as loans, particularly loans on the mortgage of real estate. In the table below

details are given of mortgages on South Australian and Northern Territory real estate, loans on policies registered in, and "other" loans to persons resident in these areas. Only those loans which form assets of the statutory funds have been included since 1961.

**Life Insurance: Loans Outstanding, South Australia<sup>(a)</sup>**

| Nature of Collateral          | 1959          | 1960          | 1961            | 1962          | 1963          |
|-------------------------------|---------------|---------------|-----------------|---------------|---------------|
| Mortgage of real estate ..... | 26,202        | 29,673        | £'000<br>31,565 | 32,887        | 31,604        |
| Policies—                     |               |               |                 |               |               |
| Advances of premiums.....     | 790           | 934           | 1,067           | 1,185         | 831           |
| Other.....                    | 2,302         | 2,743         | 3,603           | 3,889         | 4,213         |
| Other collateral .....        | 385           | 367           | 147             | 115           | 107           |
| <b>Total .....</b>            | <b>29,679</b> | <b>33,717</b> | <b>36,382</b>   | <b>38,076</b> | <b>36,755</b> |

(a) Includes Northern Territory.

**GENERAL INSURANCE**

General insurance in South Australia is conducted entirely by private organizations. The State Government maintains the Government Accident Insurance Office, but its activities are confined to carrying certain government insurance—largely workmen's compensation.

Companies, or firms of persons, carrying on general insurance business are required, under the State Stamp Duties Act, 1923-1960, to take out an annual licence, the fee for which varies with premium income. In addition such companies or persons must, under the *Commonwealth Insurance Act* 1932-1960, have a deposit in the form of approved securities with the Commonwealth Treasurer.

There were 176 companies licensed to write general insurance business in South Australia in 1963-64, 76 of which had head offices overseas. Business was recorded by 165 companies, with 35 of these accounting for 67% of total premiums collected. The majority of companies are members of the Fire & Accident Underwriters Association and are known as "tariff" companies. These companies maintain uniform policies and premiums.

Statistics in this section are compiled from annual returns submitted by the companies. The return from each company gives details for the 12 months ending on the company's normal balancing date within the year shown.

The following table gives details of revenue and expenditure for general insurance over the last 5 years. The tables contain selected items of statistics and should not be combined and construed as profit and loss statements or revenue accounts. The first table shows premiums and investment income earned by the companies. Premiums represent the full amount receivable in respect of policies issued and renewed in the year less returns, rebates, and bonuses, paid or credited to policy holders in the year. They are not adjusted to provide for premiums unearned at the end of the year and consequently the amounts shown differ from "earned premium income" for the year. Premiums have increased over the period covered by the table and hence have been greater than earned premium income in each year.

Investment income relates to interest, dividends, rents, etc., from investments made within the State.

## General Insurance: Revenue, South Australia

| Source of Revenue   | 1959-60 | 1960-61 | 1961-62 | 1962-63 | 1963-64   |
|---|---------|---------|---------|---------|-----------|
|   | £'000   |         |         |         |           |
| <i>Premiums—</i>  |         |         |         |         |           |
| Fire and sprinkler leakage . . .                          | 2,304   | 2,709   | 2,698   | 3,105   | 3,476     |
| Householders' comprehensive                               | 1,163   | 1,320   | 1,442   | 1,565   | (a) 1,788 |
| Loss of profits . . . . .                                 | 237     | 263     | 281     | 285     | 305       |
| Hailstone . . . . .                                       | 34      | 160     | 111     | 114     | 150       |
| Marine . . . . .  | 578     | 613     | 586     | 671     | 772       |
| <i>Motor vehicle—</i>                                     |         |         |         |         |           |
| Compulsory third party .                                  | 1,690   | 1,891   | 2,422   | 2,663   | 2,934     |
| Other . . . . .   | 4,310   | 5,018   | 4,878   | 5,218   | 6,079     |
| Employers' liability and workmen's compensation . . . . . | 1,877   | 2,274   | 2,386   | 2,705   | 2,852     |
| Personal accident . . . . .                               | 751     | 772     | 838     | 945     | 928       |
| Public risk, third party . . . . .                        | 209     | 242     | 286     | 324     | 436       |
| Burglary . . . . .  | 158     | 197     | 213     | 229     | (a) 191   |
| Television . . . . .                                      | 128     | 110     | 80      | 111     | 101       |
| Other . . . . .   | 397     | 410     | 450     | 540     | 589       |
| Total premiums . . . . .                                  | 13,836  | 15,979  | 16,671  | 18,475  | 20,601    |
| <i>Revenue from investments . . . . .</i>                 | 152     | 203     | 199     | 274     | 279       |
| Total revenue . . . . .                                   | 13,988  | 16,182  | 16,870  | 18,749  | 20,880    |

(a) Some business previously included as "Burglary" now classified as "Householders' comprehensive".

Details of claims and other expenditure are given below. Claims include provision for outstanding claims and represent claims incurred during the year. Other expenses mainly represent payments made during the year. Taxation payments will therefore be based on income earned in previous years.

## General Insurance: Expenses, South Australia

| Type of Expense   | 1959-60 | 1960-61 | 1961-62 | 1962-63 | 1963-64 |
|---|---------|---------|---------|---------|---------|
|   | £'000   |         |         |         |         |
| <i>Claims—</i>  |         |         |         |         |         |
| Fire and sprinkler leakage . . .                          | 554     | 675     | 696     | 639     | 717     |
| Householders' comprehensive                               | 227     | 240     | 275     | 401     | (a) 362 |
| Loss of profits . . . . .                                 | 52      | 4       | 56      | 12      | 5       |
| Hailstone . . . . .                                       | 32      | 41      | 16      | 34      | 11      |
| Marine . . . . .  | 238     | 206     | 198     | 214     | 314     |
| <i>Motor vehicle—</i>                                     |         |         |         |         |         |
| Compulsory third party .                                  | 1,453   | 1,750   | 1,792   | 2,152   | 2,369   |
| Other . . . . .   | 2,510   | 3,092   | 2,903   | 3,373   | 3,900   |
| Employers' liability and workmen's compensation . . . . . | 1,389   | 1,620   | 1,706   | 1,893   | 1,807   |
| Personal accident . . . . .                               | 295     | 327     | 360     | 400     | 453     |
| Public risk, third party . . . . .                        | 97      | 75      | 103     | 106     | 118     |
| Burglary . . . . .  | 54      | 84      | 82      | 88      | (a) 95  |
| Television . . . . .                                      | 16      | 53      | 65      | 85      | 64      |
| Other . . . . .   | 210     | 175     | 161     | 265     | 279     |
| Total claims . . . . .                                    | 7,127   | 8,342   | 8,413   | 9,662   | 10,494  |
| <i>Other expenses—</i>                                    |         |         |         |         |         |
| Contributions to fire brigades                            | 231     | 255     | 268     | 294     | 338     |
| Commission and agents' charges . . . . .                  | 1,677   | 1,903   | 1,900   | 2,125   | 2,302   |
| Management . . . . .                                      | 2,750   | 3,152   | 3,434   | 3,553   | 3,821   |
| Taxation . . . . .  | 454     | 552     | 597     | 558     | 605     |
| Total expenses . . . . .                                  | 12,239  | 14,204  | 14,612  | 16,192  | 17,560  |

(a) Some business previously included as "Burglary" now classified as "Householders' comprehensive".

Under the Fire Brigades Act, 1936-1958, insurance companies contribute approximately 60% of the cost of maintaining the services of the Fire Brigades Board.

Compulsory insurance for workmen's compensation and motor vehicle third party risks is provided for under State legislation.

Employers, unless specifically exempted, are required under the Workmen's Compensation Act, 1932-1963, to effect an insurance cover providing compensation for workmen suffering injuries in the course of their employment. Details of workmen's compensation provisions are given in Part 7.4, page 244.

Under the Motor Vehicles Act, 1959-1963, all vehicles other than those belonging to the Crown must be covered by a third party policy protecting the owner against any liability for death or injury to others resulting from use of the vehicle. Particulars are given in Part 11.1, page 442.

### 13.3. OTHER PRIVATE FINANCE

#### THE STOCK EXCHANGE OF ADELAIDE

In the 1860's, Green's Buildings in King William Street became a favourite location for trading in the bank, insurance, railway, shipping, gold, copper and silver shares of South Australia and of Victoria. The Adelaide Stock Exchange and the Stock Exchange of South Australia came into existence, and they amalgamated to form the Stock Exchange of Adelaide on 2nd September 1887, with membership limited to 65. The new exchange began in Pirie Street and moved to King William Street, near Grenfell Street, in 1882. At this stage, 70 vestibule members enjoyed the right to do business with the 70 full members. The present building was erected and occupied by the Exchange in 1901.

In 1904 the Exchange was formed into a limited liability company with 72 shares of £200 each, reducing to the present membership of 60 in 1955. Trading was conducted on the call system until the end of 1961 when post trading came into operation.

Basically the Exchange provides facilities for trading in securities, with transactions being conducted by brokers who constitute its membership. The Exchange operates under a set of rules and regulations which govern both the behaviour of companies, through the various listing requirements, and the conduct of members. Management is by a committee of six, elected by members, with a president and vice-president being elected from the six.

Lists of quotations are issued by the Exchange twice daily and lists of dividends and new issues are produced weekly. The *Official Record* providing enlarged and additional information is published monthly. Transfer marking and noting services are available to members of the Exchange and to the public through solicitors and accountants.

A visitors gallery overlooking the trading floor enables members of the public and organized parties to witness proceedings.

## The Stock Exchange of Adelaide

| Particulars   | Year Ended 20th March |           |           |           |
|---|-----------------------|-----------|-----------|-----------|
|   | 1962                  | 1963      | 1964      | 1965      |
| Nominal value of listed securities ..   | 4,622,000             | 4,892,000 | 5,142,000 | 5,335,000 |
| Turnover of securities—   |                       |           |           |           |
| Commonwealth loans, semi-government loans, debentures and unsecured notes ..... | 3,848                 | 4,096     | 3,375     | 3,022     |
| Shares (all classes) .....  | 17,225                | 16,263    | 20,570    | 17,188    |
| Total turnover .....  | 21,073                | 20,359    | 23,945    | 20,210    |

## BUILDING SOCIETIES

The operations of building societies in South Australia are regulated by the Building Societies Act, 1881-1938. The Act is administered by the Public Actuary with whom all building societies must be registered.

The societies fall into two categories—permanent societies and Starr-Bowkett societies.

Permanent societies, as their name implies, have no fixed arrangement for termination of operations. They derive their funds from the issue of shares and by receiving deposits and loans. An additional source of funds for certain permanent societies has been provided by the Commonwealth-State Housing Agreement (see page 298). Advances for the purpose of building or acquiring homes are made to members upon security of their shares, and to members and other persons by way of mortgage.

Starr-Bowkett societies have a limited life and are financed by members' subscriptions. As subscriptions accumulate, interest-free advances are made to members, with priority being determined by ballot. When all members have received a loan the society is wound up with share capital being returned to shareholders as loans are repaid.

## Building Societies: Societies, Shareholders and Borrowers, South Australia

| Year    | Societies |               | Shareholders |               | Borrowers |               |
|---------|-----------|---------------|--------------|---------------|-----------|---------------|
|         | Permanent | Starr-Bowkett | Permanent    | Starr-Bowkett | Permanent | Starr-Bowkett |
| 1959-60 | 5         | 20            | 17,952       | 6,895         | 2,833     | 2,161         |
| 1960-61 | 5         | 21            | 17,956       | 6,879         | 3,076     | 2,273         |
| 1961-62 | 5         | 21            | 18,164       | 6,690         | 3,110     | 2,298         |
| 1962-63 | 5         | 21            | 17,781       | 6,479         | 3,296     | 2,337         |
| 1963-64 | 5         | 21            | 18,993       | 6,355         | 3,585     | 2,427         |

Details of assets and liabilities of these societies, given in the following table, are compiled from individual returns with a variety of balancing dates. The figures for each year represent the aggregate of returns with balancing dates in that year.

**Building Societies: Assets and Liabilities, South Australia**

| Particulars                            | 1959-60      | 1960-61      | 1961-62      | 1962-63      | 1963-64      |
|--|--------------|--------------|--------------|--------------|--------------|
|  | £'000        |              |              |              |              |
| <b>Assets—</b>                         |              |              |              |              |              |
| Advances on mortgages and shares ..... | 4,326        | 4,997        | 5,557        | 6,265        | 6,983        |
| Land and buildings .....               | 158          | 159          | 175          | 175          | 166          |
| Other investments .....                | 146          | 139          | 138          | 148          | 160          |
| Cash and deposits .....                | 77           | 92           | 76           | 96           | 178          |
| Other .....                            | 5            | 5            | 5            | 6            | 16           |
| <b>Total assets .....</b>              | <b>4,712</b> | <b>5,392</b> | <b>5,951</b> | <b>6,690</b> | <b>7,503</b> |
| <b>Liabilities—</b>                    |              |              |              |              |              |
| Subscriptions .....                    | 2,867        | 2,999        | 3,178        | 3,383        | 3,666        |
| Loans due to Government (a) .....      | 853          | 1,271        | 1,652        | 2,071        | 2,488        |
| Deposits .....                         | 580          | 649          | 691          | 784          | 860          |
| Reserves and profits .....             | 341          | 365          | 393          | 422          | 456          |
| Bank overdraft .....                   | 39           | 66           | 2            | 2            | —            |
| Other .....                            | 32           | 42           | 35           | 28           | 33           |
| <b>Total liabilities .....</b>         | <b>4,712</b> | <b>5,392</b> | <b>5,951</b> | <b>6,690</b> | <b>7,503</b> |

(a) Loans made to permanent building societies under the Commonwealth-State Housing Agreement.

Details of financial transactions by building societies during 1963-64 are given below.

**Building Societies: Transactions, South Australia, 1963-64**

| Particulars                       | Permanent  | Starr-Bowkett | Total      |
|-----------------------------------|------------|---------------|------------|
|                                   | £'000      |               |            |
| <b>Income—</b>                    |            |               |            |
| Interest on mortgage loans .....  | 309        | —             | 309        |
| Other .....                       | 26         | 21            | 47         |
| <b>Total .....</b>                | <b>335</b> | <b>21</b>     | <b>356</b> |
| <b>Expenses—</b>                  |            |               |            |
| Interest on borrowed funds .....  | 254        | —             | 254        |
| Administration and taxation ..... | 63         | 13            | 76         |
| <b>Total .....</b>                | <b>317</b> | <b>13</b>     | <b>330</b> |
| <b>Deposits—</b>                  |            |               |            |
| Received .....                    | 397        | —             | 397        |
| Repaid .....                      | 320        | —             | 320        |
| <b>Government housing funds—</b>  |            |               |            |
| Received .....                    | 452        | —             | 452        |
| Repaid .....                      | 66         | —             | 66         |
| <b>Advances—</b>                  |            |               |            |
| Paid .....                        | 1,346      | 205           | 1,551      |
| Repaid .....                      | 618        | 198           | 816        |

## CO-OPERATIVE SOCIETIES

For the purpose of collecting the statistics in this section co-operative societies have been defined as producing, manufacturing, marketing or distribution societies which substantially fulfil the following conditions—

1. The greater part of the business of such a society to be transacted with its own shareholders.
2. Any distribution of surplus after payment of dividend on share capital to be amongst suppliers or customers in proportion to the business transacted with the society.
3. Limitation of voting power to one vote per person.
4. Dividend on share capital not to exceed 10%.

All such societies must be registered under the Industrial and Provident Societies Act, 1923-1958. The Registrar of Industrial and Provident Societies must approve the rules of each society before it may be registered.

Co-operative societies may be classified under three broad headings—those serving producers, those serving consumers, and those fulfilling both functions. In the table below societies and members have been classified under these headings.

## Co-operative Societies: Societies and Membership, South Australia

| Particulars                               | 1959-60        | 1960-61        | 1961-62        | 1962-63        | 1963-64        |
|---|----------------|----------------|----------------|----------------|----------------|
| <b>Societies—</b>                         |                |                |                |                |                |
| Producers' societies .....                | 35             | 36             | 36             | 36             | 37             |
| Consumers' societies .....                | 20             | 20             | 20             | 19             | 19             |
| Producers' and consumers' societies ..... | 14             | 14             | 14             | 14             | 14             |
| <b>Total .....</b>                        | <b>69</b>      | <b>70</b>      | <b>70</b>      | <b>69</b>      | <b>70</b>      |
| <b>Members—</b>                           |                |                |                |                |                |
| Producers' societies .....                | 14,997         | 15,318         | 15,703         | 16,239         | 16,530         |
| Consumers' societies .....                | 98,737         | 92,726         | 97,539         | 88,783         | 93,382         |
| Producers' and consumers' societies ..... | 2,911          | 2,987          | 3,163          | 3,261          | 3,312          |
| <b>Total members ....</b>                 | <b>116,645</b> | <b>111,031</b> | <b>116,405</b> | <b>108,283</b> | <b>113,224</b> |

Of the 37 producers' societies operating in 1963-64, 6 were co-operative wineries or distilleries, 10 represented dairy producers, and 11 were associated with fruit and vegetable production. Eight of the remaining 10 societies were associated with other rural production. Of the 19 operative consumers' societies, 9 were trading as general storekeepers, the remainder offering specialist products or services. Producer-consumer societies were generally associated with the fruitgrowing industry.

Particulars of the aggregate income and expenditure of co-operative societies for the last five years are given in the following table.

## Co-operative Societies: Income and Expenditure, South Australia

| Particulars                              | 1959-60       | 1960-61       | 1961-62       | 1962-63       | 1963-64       |
|--|---------------|---------------|---------------|---------------|---------------|
|  | £'000         |               |               |               |               |
| <b>Income—</b>                           |               |               |               |               |               |
| Sales .....                              | 16,964        | 18,539        | 20,601        | 20,282        | 20,907        |
| Other .....                              | 1,218         | 1,346         | 1,240         | 1,503         | 1,734         |
| <b>Total .....</b>                       | <b>18,182</b> | <b>19,885</b> | <b>21,841</b> | <b>21,785</b> | <b>22,641</b> |
| <b>Expenditure—</b>                      |               |               |               |               |               |
| Purchases .....                          | 13,575        | 14,825        | 16,848        | 15,665        | 16,649        |
| Working expenses .....                   | 3,603         | 3,880         | 4,151         | 4,234         | 4,527         |
| Interest on borrowed funds ..            | 163           | 188           | 220           | 236           | 241           |
| Distribution of surplus—                 |               |               |               |               |               |
| Rebates and bonuses ...                  | 776           | 771           | 867           | 1,555         | 1,229         |
| Dividends to shareholders                | 120           | 131           | 135           | 142           | 152           |
| Provision and other appropriations ..... | 91            | 117           | 144           | 287           | 341           |
| <b>Total .....</b>                       | <b>18,328</b> | <b>19,912</b> | <b>22,365</b> | <b>22,119</b> | <b>23,139</b> |

Details of the liabilities and assets of the societies in each category for 1963-64 are given below. The six co-operative wineries and distilleries accounted for 40% of producer society assets. Consumers' societies recorded total sales of £6,913,322 for the year.

## Co-operative Societies: Liabilities and Assets, South Australia, 1963-64

| Particulars                      | Producers' Societies | Consumers' Societies | Producers' and Consumers' Societies | Total         |
|----------------------------------|----------------------|----------------------|-------------------------------------|---------------|
|                                  | £'000                |                      |                                     |               |
| <b>Liabilities—</b>              |                      |                      |                                     |               |
| Capital .....                    | 752                  | 1,817                | 343                                 | 2,912         |
| Loan capital .....               | 2,482                | 1,284                | 1,021                               | 4,787         |
| Bank overdraft .....             | 984                  | 33                   | 421                                 | 1,438         |
| Sundry creditors .....           | 756                  | 299                  | 483                                 | 1,538         |
| Accumulated profits .....        | 335                  | 413                  | 1                                   | 749           |
| Reserves and reserve funds (a)   | 1,434                | 521                  | 349                                 | 2,304         |
| Other (b) .....                  | 2,426                | 28                   | 450                                 | 2,904         |
| <b>Total .....</b>               | <b>9,169</b>         | <b>4,395</b>         | <b>3,068</b>                        | <b>16,632</b> |
| <b>Assets—</b>                   |                      |                      |                                     |               |
| Land and buildings .....         | 1,948                | 1,090                | 774                                 | 3,812         |
| Fittings, plant and machinery .. | 1,718                | 126                  | 328                                 | 2,172         |
| Stock .....                      | 3,147                | 1,093                | 303                                 | 4,543         |
| Sundry debtors .....             | 1,433                | 220                  | 530                                 | 2,183         |
| Cash .....                       | 233                  | 121                  | 114                                 | 468           |
| Profit and loss account .....    | 34                   | 1                    | —                                   | 35            |
| Other (c) .....                  | 656                  | 1,744                | 1,019                               | 3,419         |
| <b>Total .....</b>               | <b>9,169</b>         | <b>4,395</b>         | <b>3,068</b>                        | <b>16,632</b> |

(a) Excludes provision for depreciation and bad debts.

(b) Includes amounts due to members.

(c) Includes investments and advances to members.



## ESTATES OF DECEASED PERSONS

The following table shows the number and value of estates for which probate or administration was granted by the Supreme Court during the five years to 1964. The table generally relates to property located in South Australia and not to the domicile of the deceased. The net value of the estate is arrived at after allowing for liabilities but no allowance is made for State succession duties or Commonwealth estate duty.

## Estates of Deceased Persons: South Australia

| Year      | Estates | Gross Value of Estates |          | Net Value of Estates | Average Net Value per Estate |
|-----------|---------|------------------------|----------|----------------------|------------------------------|
|           |         | Real                   | Personal |                      |                              |
|           | No.     | £'000                  | £'000    | £'000                | £                            |
|           |         |                        | Males    |                      |                              |
| 1960..... | 2,311   | 6,526                  | 11,132   | 16,618               | 7,191                        |
| 1961..... | 2,173   | 5,080                  | 10,004   | 14,109               | 6,493                        |
| 1962..... | 2,345   | 5,965                  | 12,308   | 17,156               | 7,316                        |
| 1963..... | 2,412   | 6,947                  | 13,448   | 18,412               | 7,633                        |
| 1964..... | 2,766   | 7,279                  | 14,811   | 20,666               | 7,471                        |
|           |         |                        | Females  |                      |                              |
| 1960..... | 1,646   | 2,956                  | 5,043    | 7,552                | 4,588                        |
| 1961..... | 1,675   | 3,000                  | 5,156    | 7,684                | 4,587                        |
| 1962..... | 1,713   | 3,083                  | 5,450    | 8,044                | 4,696                        |
| 1963..... | 1,715   | 2,995                  | 5,202    | 7,672                | 4,473                        |
| 1964..... | 1,927   | 3,355                  | 7,276    | 9,998                | 5,188                        |
|           |         |                        | Persons  |                      |                              |
| 1960..... | 3,957   | 9,482                  | 16,175   | 24,170               | 6,108                        |
| 1961..... | 3,848   | 8,080                  | 15,160   | 21,793               | 5,663                        |
| 1962..... | 4,058   | 9,048                  | 17,758   | 25,200               | 6,210                        |
| 1963..... | 4,127   | 9,942                  | 18,650   | 26,084               | 6,320                        |
| 1964..... | 4,693   | 10,634                 | 22,087   | 30,664               | 6,534                        |

## REAL ESTATE MORTGAGES

The Real Property Act, 1886-1963, provides for the registration of mortgages on real estate and details of new loans and discharges are given in the following table.

## Mortgages: Real Estate, South Australia

| Year          | New Loans |         | Discharges |        |
|---------------|-----------|---------|------------|--------|
|               | Number    | £'000   | Number     | £'000  |
| 1955-56 ..... | 17,539    | 38,246  | 12,561     | 16,857 |
| 1956-57 ..... | 17,995    | 42,452  | 12,321     | 15,673 |
| 1957-58 ..... | 21,039    | 44,346  | 14,478     | 20,361 |
| 1958-59 ..... | 24,395    | 56,963  | 16,715     | 21,536 |
| 1959-60 ..... | 28,874    | 62,168  | 19,454     | 25,396 |
| 1960-61 ..... | 29,187    | 82,401  | 20,093     | 28,213 |
| 1961-62 ..... | 28,070    | 68,536  | 21,331     | 29,891 |
| 1962-63 ..... | 33,929    | 93,991  | 25,607     | 37,393 |
| 1963-64 ..... | 37,813    | 103,549 | 29,002     | 46,558 |

With the exception of 1961-62, new loans have increased over the period covered by the table. The number of new loans in 1963-64 was 115% higher than in 1955-56, and during this period the average amount of each new loan has increased from £2,181 to £2,738.

**INSTALMENT CREDIT FOR RETAIL SALES**

The post-war era has seen extensive development in the use of instalment credit schemes in retail merchandising. Instalment credit is defined as covering all schemes under which repayment is made by regular predetermined instalments, such as hire-purchase, time payment, budget accounts and certain personal loans. Lay-bys and credit accounts not involving regular repayments are excluded.

Care should be taken in relating figures in this section to those for retail sales, as the following statistics include certain sales to final purchasers, such as plant, machinery and tractors, which are not covered by the survey of retail sales. Transactions specifically excluded are the financing of sales of land and buildings, property improvements, services such as repair work and travel facilities, and rental and leasing schemes.

Although of declining relative importance, hire-purchase remains the principal form of instalment credit. The distinguishing feature of a hire-purchase agreement is that ownership of the goods does not pass to the purchaser until the final instalment has been paid. Hire-purchase transactions include the letting of goods with an option to purchase and agreements to purchase by instalments, irrespective of whether the instalments are described as rent, hire or otherwise. Hire-purchase transactions are regulated by State legislation through the Hire-Purchase Agreements Act, 1960-1962, which provides for the content of hire-purchase agreements and for the rights and duties of parties to such agreements.

Details of instalment credit arranged during 1963-64 are given below according to the nature of the commodity financed. In this and the following table the motor vehicle group includes new and used motor cars, motor cycles, commercial vehicles, tractors, caravans, motor parts and accessories. Plant and machinery includes farm machinery and implements, earth moving equipment, aircraft, industrial plant and machinery, business machines, and commercial refrigeration. Included in household and personal goods are furniture and furnishings, domestic refrigerators, electrical goods, musical instruments, bicycles, and other household and personal goods.

All amounts shown in this section are in £'million correct to one decimal place. Discrepancies due to rounding may therefore exist between totals and the sums of components.

**Instalment Credit for Retail Sales: New Agreements  
South Australia and Northern Territory, 1963-64**

| Particulars                     | Unit      | Motor Vehicles, Tractors, Etc. | Plant and Machinery | Household and Personal Goods | Total |
|---------------------------------|-----------|--------------------------------|---------------------|------------------------------|-------|
| <b>Hire-purchase—</b>           |           |                                |                     |                              |       |
| Number of agreements.....       | '000      | 45.2                           | 3.6                 | 88.8                         | 137.6 |
| Value of goods (a) .....        | £ million | 31.0                           | 3.0                 | 7.6                          | 41.6  |
| Amount financed (a) .....       | £ million | 19.9                           | 2.0                 | 6.3                          | 28.2  |
| <b>Other instalment credit—</b> |           |                                |                     |                              |       |
| Amount financed (a) .....       | £ million | 4.0                            | —                   | 8.9                          | 12.9  |

(a) Excludes hiring charges, interest, and insurance.

Instalment credit transactions may be divided into two classes of business; retail business and non-retail finance business. The former category covers retailers providing their own finance and subsidiaries set up by retailers primarily for the purpose of financing their own sales. All other businesses engaged in instalment credit financing of retail sales, irrespective of whether their main activity is finance, constitute non-retail finance business.

In the following table amounts financed in recent years are shown by class of business. The figures relate to the type of business undertaking the agreement, even if the agreement is subsequently assigned, discounted or mortgaged with another type of business.

Of the £22.6 million provided by non-retail finance businesses for motor vehicle purchases in 1963-64, £10.2 million was for new vehicles and £12.4 million for used vehicles.

**Instalment Credit for Retail Sales: Amount Financed<sup>(a)</sup>**  
**South Australia and Northern Territory**

| Year                          | Motor Vehicles,<br>Tractors, Etc. | Plant and<br>Machinery | Household and<br>Personal Goods | Total |
|-------------------------------|-----------------------------------|------------------------|---------------------------------|-------|
|                               | £m                                | £m                     | £m                              | £m    |
| Retail Businesses             |                                   |                        |                                 |       |
| 1959-60 .....                 | 1.4                               | 0.3                    | 13.2                            | 14.9  |
| 1960-61 .....                 | 1.4                               | 0.3                    | 12.5                            | 14.3  |
| 1961-62 .....                 | 1.3                               | 0.2                    | 11.4                            | 12.9  |
| 1962-63 .....                 | 1.2                               | 0.2                    | 11.9                            | 13.3  |
| 1963-64 .....                 | 1.3                               | 0.1                    | 11.3                            | 12.8  |
| Non-Retail Finance Businesses |                                   |                        |                                 |       |
| 1959-60 .....                 | 22.4                              | 1.2                    | 7.1                             | 30.7  |
| 1960-61 .....                 | 19.1                              | 1.7                    | 5.6                             | 26.4  |
| 1961-62 .....                 | 14.7                              | 1.5                    | 3.4                             | 19.6  |
| 1962-63 .....                 | 19.2                              | 1.8                    | 3.4                             | 24.4  |
| 1963-64 .....                 | 22.6                              | 1.9                    | 3.9                             | 28.4  |
| All Businesses                |                                   |                        |                                 |       |
| 1959-60 .....                 | 23.8                              | 1.5                    | 20.3                            | 45.6  |
| 1960-61 .....                 | 20.6                              | 2.0                    | 18.2                            | 40.7  |
| 1961-62 .....                 | 16.0                              | 1.6                    | 14.8                            | 32.5  |
| 1962-63 .....                 | 20.4                              | 1.9                    | 15.4                            | 37.7  |
| 1963-64 .....                 | 23.9                              | 2.0                    | 15.2                            | 41.1  |

(a) Excludes hiring charges, interest and insurance.

Particulars of instalment credit provided by both classes of business were first collected in 1957, and details of balances outstanding in that and subsequent years are given below. Information has been obtained from non-retail finance businesses only since 1953 when balances outstanding stood at £8.3 million, with £12.7 million in 1954, £16.5 million in 1955, and £19.5 million in 1956.

Instalment Credit for Retail Sales: Balances Outstanding<sup>(a)</sup>

South Australia and Northern Territory

At 30th June

| Particulars                         | 1957      | 1958(b) | 1959 | 1960 | 1961 | 1962 | 1963 | 1964 |
|-------------------------------------|-----------|---------|------|------|------|------|------|------|
|                                     | £ million |         |      |      |      |      |      |      |
| Type of business—                   |           |         |      |      |      |      |      |      |
| Retail businesses .....             | 7.1       | 9.4     | 10.2 | 16.7 | 20.5 | 19.9 | 19.9 | 18.6 |
| Non-retail finance businesses ..... | 22.7      | 26.2    | 29.6 | 40.1 | 40.7 | 35.5 | 37.8 | 42.4 |
| Total .....                         | 29.8      | 35.6    | 39.8 | 56.8 | 61.2 | 55.4 | 57.6 | 61.0 |
| Type of credit—                     |           |         |      |      |      |      |      |      |
| Hire-purchase .....                 | 29.0      | 34.2    | 37.1 | 50.9 | 51.4 | 42.9 | 42.2 | 43.8 |
| Other instalment credit .....       | 0.8       | 1.4     | 2.7  | 5.9  | 9.8  | 12.5 | 15.5 | 17.2 |
| Total .....                         | 29.8      | 35.6    | 39.8 | 56.8 | 61.2 | 55.4 | 57.6 | 61.0 |

(a) Includes hiring charges, interest and insurance.

(b) At 30th September.

Figures for cross-classification by type of business and type of credit are not available, but non-retail finance businesses still largely undertake hire-purchase contracts, and accounted for approximately 85% of hire-purchase balances outstanding in 1964. On the other hand retail businesses favour other forms of instalment credit, of which they were financing approximately two thirds in 1964.

## APPENDIX A

# STATISTICAL SUMMARY

In the next 22 pages, a historical summary of some of the more important statistics relating to South Australia is shown. This is intended to present a general picture of the development of the State, with details being given (wherever they are available) for every 5th year for the period 1836-1926, and for each single year thereafter. Naturally the range of statistics available for the early years of the colony is very limited, and in addition it is not always possible to achieve perfect comparability in presenting details covering a period of almost 130 years.

The first year shown on each page is the earliest for which any series on that page is available. Blanks at the top of some columns indicate that information relating to these particular series either was not collected or is not available for these early years, or is not available on a basis comparable to more recent statistics.

All major breaks in series are covered by footnotes, but minor changes are not so recorded, and the statistics should be interpreted with this in mind. An example can be quoted from the table on deaths from principal causes (page 517) where comparability is affected somewhat by changes in classification, particularly in 1950, but no footnote to this effect has been included.

The following standard symbols have been used throughout the summary:

"n.a." Not available.

"—" Nil.

"p" Preliminary information subject to revision.

## STATISTICAL SUMMARY

## POPULATION

| Year         | Population Estimate at 31st December |            |             |                            | Population Growth |                                 |              |                                |
|--------------|--------------------------------------|------------|-------------|----------------------------|-------------------|---------------------------------|--------------|--------------------------------|
|              | South Australia                      |            |             | Adelaide Metropolitan Area | Natural Increase  | Rate of Natural Increase<br>(a) | Net Increase | Rate of Population Growth<br>% |
|              | Males                                | Females    | Persons     | Persons                    |                   |                                 |              |                                |
| 1836.....    | 309                                  | 237        | 546         |                            |                   |                                 | 546          |                                |
| 1841.....    | 8,755                                | 6,730      | 15,485      |                            |                   |                                 | 855          | 5.84                           |
| 1846.....    | 14,711                               | 11,182     | 25,893 (b)  | 13,871                     | 577               | 22.29                           | 3,433        | 15.29                          |
| 1851.....    | 37,321                               | 29,217     | 66,538 (b)  | 32,810                     | 1,786             | 26.85                           | 2,838        | 4.46                           |
| 1856.....    | 56,264                               | 51,622     | 107,886 (b) | 36,524                     | 3,341             | 30.97                           | 10,499       | 10.78                          |
| 1861.....    | 67,409                               | 63,403     | 130,812 (b) | 44,857                     | 3,589             | 28.00                           | 5,230        | 4.17                           |
| 1866.....    | 88,024                               | 80,883     | 168,907 (b) | 54,251                     | 4,029             | 24.39                           | 7,430        | 4.60                           |
| 1871.....    | 97,019                               | 91,625     | 188,644 (b) | 61,361                     | 4,704             | 25.21                           | 4,098        | 2.22                           |
| 1876.....    | 116,894                              | 107,666    | 224,560 (b) | 71,794                     | 4,674             | 21.51                           | 14,484       | 6.89                           |
| 1881.....    | 152,453                              | 133,518    | 285,971 (b) | 103,942                    | 6,696             | 23.81                           | 9,578        | 3.47                           |
| 1886.....    | 160,814                              | 145,896    | 306,710     | n.a.                       | 6,943             | 22.54                           | -2,603       | -0.84                          |
| 1891.....    | 168,826                              | 155,895    | 324,721     | 132,575                    | 6,526             | 20.23                           | 5,774        | 1.81                           |
| 1896.....    | 179,024                              | 173,043    | 352,067     | 150,929                    | 5,974             | 16.95                           | 99           | 0.03                           |
| 1901.....    | (c)180,440                           | (c)178,890 | (c)359,330  | 163,430                    | (c) 5,105         | 14.29                           | (c) 2,080    | 0.58                           |
| 1906.....    | 184,803                              | 181,710    | 366,513     | 175,641                    | 5,049             | 13.90                           | 3,892        | 1.07                           |
| 1911.....    | 214,061                              | 205,331    | 419,392     | 199,183                    | 7,019             | 17.05                           | 12,530       | 3.08                           |
| 1916(d)..... | 212,585                              | 229,253    | 441,838     | 219,285                    | 6,780             | 15.35                           | -4,147       | -0.93                          |
| 1921.....    | 251,170                              | 250,572    | 501,742     | 259,588                    | 6,992             | 14.07                           | 10,736       | 2.19                           |
| 1926.....    | 285,013                              | 275,912    | 560,925     | 305,509                    | 6,606             | 11.92                           | 13,877       | 2.54                           |
| 1927.....    | 289,303                              | 280,327    | 569,630     | 314,331                    | 6,364             | 11.26                           | 8,705        | 1.55                           |
| 1928.....    | 289,639                              | 282,948    | 572,587     | 316,394                    | 6,261             | 10.96                           | 2,957        | 0.52                           |
| 1929.....    | 288,597                              | 284,376    | 572,973     | 310,916                    | 5,626             | 9.83                            | 386          | 0.07                           |
| 1930.....    | 288,618                              | 285,849    | 574,467     | 310,526                    | 5,133             | 8.96                            | 1,494        | 0.26                           |
| 1931.....    | 289,397                              | 287,682    | 577,079     | 310,458                    | 4,191             | 7.28                            | 2,612        | 0.45                           |
| 1932.....    | 290,254                              | 289,039    | 579,293     | 311,840                    | 3,564             | 6.16                            | 2,214        | 0.38                           |
| 1933.....    | 291,727                              | 291,019    | 582,746     | 313,000                    | 3,996             | 6.88                            | 3,453        | 0.60                           |
| 1934.....    | 292,531                              | 291,958    | 584,489     | 314,000                    | 3,056             | 5.24                            | 1,743        | 0.30                           |
| 1935.....    | 293,667                              | 293,095    | 586,762     | 315,000                    | 3,107             | 5.31                            | 2,273        | 0.39                           |
| 1936.....    | 294,835                              | 294,935    | 589,770     | 317,000                    | 3,447             | 5.86                            | 3,008        | 0.51                           |
| 1937.....    | 295,653                              | 296,144    | 591,797     | 318,000                    | 3,738             | 6.34                            | 2,027        | 0.34                           |
| 1938.....    | 297,604                              | 298,238    | 595,842     | 321,500                    | 3,871             | 6.53                            | 4,045        | 0.68                           |
| 1939(d)..... | 299,212                              | 300,101    | 599,313     | 323,000                    | 3,879             | 6.50                            | 3,471        | 0.58                           |
| 1940(d)..... | 297,885                              | 301,171    | 599,056     | 330,000                    | 4,309             | 7.19                            | -257         | -0.04                          |
| 1941(d)..... | 301,645                              | 304,721    | 606,366     | 350,000                    | 4,677             | 7.78                            | 7,310        | 1.22                           |
| 1942(d)..... | 303,511                              | 307,467    | 610,978     | 355,000                    | 4,566             | 7.50                            | 4,612        | 0.76                           |
| 1943(d)..... | 305,655                              | 310,372    | 616,027     | 360,000                    | 6,663             | 10.86                           | 5,049        | 0.83                           |
| 1944(d)..... | 308,853                              | 314,177    | 623,030     | 365,000                    | 7,327             | 11.83                           | 7,003        | 1.14                           |
| 1945(d)..... | 312,588                              | 318,294    | 630,882     | 372,000                    | 7,984             | 12.73                           | 7,852        | 1.26                           |
| 1946(d)..... | 317,238                              | 323,180    | 640,418     | 380,000                    | 9,352             | 14.72                           | 9,536        | 1.51                           |
| 1947(d)..... | 325,399                              | 329,233    | 654,632     | 388,000                    | 10,102            | 15.62                           | 14,214       | 2.22                           |
| 1948.....    | 335,085                              | 335,530    | 670,615     | 399,000                    | 9,122             | 13.79                           | 15,983       | 2.44                           |
| 1949.....    | 349,600                              | 346,018    | 695,618     | 415,500                    | 9,669             | 14.21                           | 25,003       | 3.73                           |
| 1950.....    | 364,705                              | 358,138    | 722,843     | 433,500                    | 10,566            | 14.89                           | 27,225       | 3.91                           |
| 1951.....    | 375,188                              | 368,597    | 743,785     | 447,500                    | 10,279            | 14.03                           | 20,942       | 2.90                           |
| 1952.....    | 388,433                              | 380,137    | 768,570     | 464,000                    | 10,834            | 14.35                           | 24,785       | 3.33                           |
| 1953.....    | 397,610                              | 388,055    | 785,665     | 476,000                    | 11,194            | 14.42                           | 17,095       | 2.22                           |
| 1954.....    | 409,733                              | 398,517    | 808,250     | 491,300                    | 11,048            | 13.87                           | 22,585       | 2.87                           |
| 1955.....    | 423,042                              | 411,619    | 834,661     | 508,900                    | 10,958            | 13.36                           | 26,411       | 3.27                           |
| 1956.....    | 436,807                              | 425,145    | 861,952     | 526,400                    | 11,371            | 13.40                           | 27,291       | 3.27                           |
| 1957.....    | 448,411                              | 437,841    | 886,252     | 541,300                    | 11,960            | 13.68                           | 24,300       | 2.82                           |
| 1958.....    | 458,401                              | 449,652    | 908,053     | 554,300                    | 12,304            | 13.72                           | 21,801       | 2.46                           |
| 1959.....    | 471,868                              | 462,629    | 934,497     | 570,300                    | 12,429            | 13.49                           | 26,444       | 2.91                           |
| 1960.....    | 483,802                              | 473,220    | 957,022     | 582,100                    | 13,162            | 13.93                           | 22,525       | 2.41                           |
| 1961.....    | 495,778                              | 484,977    | 980,755     | 591,700                    | 14,584            | 15.04                           | 23,733       | 2.48                           |
| 1962.....    | 504,571                              | 495,122    | 999,693     | 596,800                    | 13,129            | 13.27                           | 18,938       | 1.93                           |
| 1963.....    | 514,458                              | 505,716    | 1,020,174   | 603,900                    | 13,166            | 13.05                           | 20,481       | 2.05                           |
| 1964.....    | 526,847                              | 517,815    | 1,044,662   | 612,200                    | 11,960            | 11.59                           | 24,488       | 2.40                           |

(a) Excess of births over deaths per 1,000 of mean population.

(b) At date of census.

(c) Northern Territory included prior to 1901, but subsequently excluded.

(d) During the 1914-18 war, defence personnel leaving the State were treated as departures, but during the 1939-45 war they were retained in the population and troops of other States and Countries were excluded.

DEMOGRAPHY

| Year | Births |          | Infant Deaths (a) |          | Deaths |          |                                 |        |               |
|------|--------|----------|-------------------|----------|--------|----------|---------------------------------|--------|---------------|
|      | Number | Rate (b) | Number            | Rate (c) | Number | Rate (b) | Rates from Principal Causes (b) |        |               |
|      |        |          |                   |          |        |          | Diseases of the Heart           | Cancer | Tuber-culosis |
| 1846 | 937    | 36.19    |                   |          | 360    | 14.02    |                                 |        |               |
| 1851 | 2,759  | 41.47    | 539               | 195.36   | 973    | 14.62    |                                 |        |               |
| 1856 | 4,488  | 41.60    | 610               | 135.92   | 1,147  | 10.63    |                                 | 0.05   | 0.98          |
| 1861 | 5,551  | 43.30    | 1,064             | 191.68   | 1,962  | 15.30    |                                 | 0.08   | 1.25          |
| 1866 | 6,782  | 41.06    | 1,385             | 204.22   | 2,753  | 16.67    |                                 | 0.16   | 1.25          |
| 1871 | 7,082  | 37.95    | 851               | 120.16   | 2,378  | 12.74    |                                 | 0.18   | 1.05          |
| 1876 | 8,224  | 37.84    | 1,228             | 149.32   | 3,550  | 16.34    |                                 | 0.35   | 1.22          |
| 1881 | 10,708 | 38.08    | 1,364             | 127.38   | 4,012  | 14.27    |                                 | 0.32   | 1.16          |
| 1886 | 11,177 | 36.29    | 1,409             | 126.06   | 4,234  | 13.75    |                                 | 0.34   | 1.34          |
| 1891 | 10,737 | 33.36    | 976               | 90.77    | 4,211  | 13.08    |                                 | 0.49   | 1.31          |
| 1896 | 10,012 | 28.44    | 1,015             | 101.02   | 4,038  | 11.47    |                                 | 0.53   | 1.17          |
| 1901 | 9,079  | 25.41    | 909               | 100.12   | 3,974  | 11.12    |                                 | 0.60   | 1.06          |
| 1906 | 8,921  | 24.57    | 675               | 75.66    | 3,872  | 10.66    |                                 | 0.77   | 1.08          |
| 1911 | 11,057 | 28.86    | 670               | 60.60    | 4,038  | 9.81     | 1.04                            | 0.74   | 0.85          |
| 1916 | 11,857 | 26.85    | 868               | 73.21    | 5,077  | 11.50    | 1.29                            | 0.81   | 0.93          |
| 1921 | 11,974 | 24.09    | 784               | 65.48    | 4,982  | 10.02    | 1.13                            | 0.92   | 0.80          |
| 1926 | 11,483 | 20.73    | 509               | 44.33    | 4,877  | 8.81     | 1.00                            | 0.96   | 0.71          |
| 1927 | 11,492 | 20.33    | 614               | 53.43    | 5,128  | 9.07     | 1.03                            | 0.94   | 0.64          |
| 1928 | 11,408 | 19.98    | 542               | 47.51    | 5,147  | 9.02     | 1.07                            | 1.01   | 0.60          |
| 1929 | 10,665 | 18.63    | 436               | 40.88    | 5,039  | 8.80     | 1.10                            | 1.11   | 0.60          |
| 1930 | 9,984  | 17.42    | 483               | 48.38    | 4,851  | 8.46     | 1.05                            | 1.04   | 0.51          |
| 1931 | 9,079  | 15.77    | 330               | 36.35    | 4,888  | 8.49     | 1.39                            | 1.20   | 0.58          |
| 1932 | 8,521  | 14.74    | 312               | 36.62    | 4,957  | 8.58     | 1.48                            | 1.13   | 0.48          |
| 1933 | 8,900  | 15.32    | 286               | 32.13    | 4,904  | 8.44     | 1.40                            | 1.17   | 0.52          |
| 1934 | 8,459  | 14.50    | 301               | 35.58    | 5,403  | 9.26     | 1.64                            | 1.12   | 0.48          |
| 1935 | 8,270  | 14.13    | 289               | 34.95    | 5,163  | 8.82     | 1.76                            | 1.04   | 0.44          |
| 1936 | 8,911  | 15.16    | 277               | 31.09    | 5,464  | 9.29     | 1.87                            | 1.26   | 0.40          |
| 1937 | 8,985  | 15.24    | 297               | 33.06    | 5,247  | 8.90     | 1.77                            | 1.23   | 0.44          |
| 1938 | 9,410  | 15.86    | 287               | 30.50    | 5,539  | 9.34     | 2.02                            | 1.30   | 0.37          |
| 1939 | 9,618  | 16.11    | 336               | 34.93    | 5,739  | 9.61     | 2.21                            | 1.18   | 0.38          |
| 1940 | 10,017 | 16.72    | 356               | 35.54    | 5,708  | 9.53     | 2.25                            | 1.25   | 0.37          |
| 1941 | 10,965 | 18.24    | 356               | 32.47    | 6,288  | 10.46    | 2.62                            | 1.26   | 0.37          |
| 1942 | 11,278 | 18.51    | 448               | 39.72    | 6,712  | 11.02    | 2.73                            | 1.25   | 0.41          |
| 1943 | 13,145 | 21.43    | 482               | 36.67    | 6,482  | 10.57    | 2.82                            | 1.31   | 0.35          |
| 1944 | 13,311 | 21.49    | 387               | 29.07    | 5,984  | 9.66     | 2.64                            | 1.27   | 0.30          |
| 1945 | 14,033 | 22.38    | 394               | 28.08    | 6,049  | 9.65     | 2.87                            | 1.23   | 0.32          |
| 1946 | 15,813 | 24.90    | 428               | 27.07    | 6,461  | 10.17    | 3.03                            | 1.29   | 0.29          |
| 1947 | 16,317 | 25.23    | 396               | 24.27    | 6,215  | 9.61     | 2.86                            | 1.28   | 0.30          |
| 1948 | 15,870 | 24.00    | 472               | 29.74    | 6,748  | 10.20    | 3.08                            | 1.42   | 0.28          |
| 1949 | 16,042 | 23.58    | 444               | 27.68    | 6,373  | 9.37     | 2.90                            | 1.23   | 0.21          |
| 1950 | 17,306 | 24.39    | 416               | 24.04    | 6,740  | 9.50     | 3.05                            | 1.24   | 0.19          |
| 1951 | 17,463 | 23.84    | 428               | 24.51    | 7,184  | 9.81     | 3.24                            | 1.24   | 0.15          |
| 1952 | 17,884 | 23.69    | 413               | 23.09    | 7,050  | 9.34     | 3.10                            | 1.29   | 0.12          |
| 1953 | 18,156 | 23.39    | 375               | 20.65    | 6,962  | 8.97     | 3.00                            | 1.27   | 0.06          |
| 1954 | 18,227 | 22.89    | 388               | 21.29    | 7,179  | 9.01     | 3.11                            | 1.22   | 0.08          |
| 1955 | 18,494 | 22.55    | 431               | 23.30    | 7,536  | 9.19     | 3.12                            | 1.28   | 0.06          |
| 1956 | 18,964 | 22.35    | 377               | 19.88    | 7,593  | 8.95     | 3.24                            | 1.16   | 0.05          |
| 1957 | 19,536 | 22.35    | 403               | 20.63    | 7,576  | 8.67     | 2.91                            | 1.29   | 0.05          |
| 1958 | 20,047 | 22.35    | 449               | 22.40    | 7,743  | 8.63     | 2.93                            | 1.26   | 0.07          |
| 1959 | 20,372 | 22.12    | 422               | 20.71    | 7,943  | 8.62     | 2.89                            | 1.22   | 0.05          |
| 1960 | 20,966 | 22.19    | 397               | 18.94    | 7,804  | 8.26     | 3.06                            | 1.21   | 0.04          |
| 1961 | 22,399 | 23.10    | 448               | 20.00    | 7,815  | 8.06     | 2.92                            | 1.26   | 0.06          |
| 1962 | 21,361 | 21.59    | 409               | 19.15    | 8,232  | 8.32     | 3.05                            | 1.36   | 0.03          |
| 1963 | 21,367 | 21.18    | 399               | 18.67    | 8,201  | 8.13     | 2.99                            | 1.27   | 0.04          |
| 1964 | 20,866 | 20.22    | 397               | 19.03    | 8,906  | 8.63     | 3.25                            | 1.33   | 0.01          |

(a) Under one year of age from 1871, under two years of age in prior years.  
 (b) Rate per 1,000 of mean population.  
 (c) Rate per 1,000 live births registered.

## STATISTICAL SUMMARY

## SOCIAL DEVELOPMENT

## Marriages and Divorces; Law and Order

| Year      | Marriages |          | Divorces<br>(b) | Bank-<br>ruptcies | Court Convictions    |                                 | Police             |                                     |
|-----------|-----------|----------|-----------------|-------------------|----------------------|---------------------------------|--------------------|-------------------------------------|
|           | Total     | Rate (a) |                 |                   | Supreme<br>Court (c) | Magis-<br>trate's<br>Courts (d) | Active<br>Strength | Expen-<br>diture<br>by State<br>(e) |
|           |           |          |                 |                   |                      |                                 |                    | £'000                               |
| 1841..... |           |          |                 | 36                | 37                   |                                 |                    |                                     |
| 1846..... | 220       | 8.50     |                 | 16                | 40                   |                                 |                    |                                     |
| 1851..... | 189       | 2.84     |                 | 106               | 103                  |                                 | 127                |                                     |
| 1856..... | 1,171     | 10.85    |                 | 88                | 85                   | 2,919                           | 174                |                                     |
| 1861..... | 1,158     | 9.03     |                 | 115               | 62                   | 3,025                           | 151                |                                     |
| 1866..... | 1,299     | 7.86     |                 | 252               | 107                  | 4,341                           | 208                | 45                                  |
| 1871..... | 1,250     | 6.70     |                 | 247               | 91                   | 4,864                           | 187                | 37                                  |
| 1876..... | 1,852     | 8.52     |                 | 200               | 129                  | 7,905                           | 257                | 54                                  |
| 1881..... | 2,308     | 8.21     |                 | 696               | 213                  | 13,231                          | 371                | 82                                  |
| 1886..... | 1,976     | 6.42     | 10              | 535               | 121                  | 6,808                           | 401                | 89                                  |
| 1891..... | 2,315     | 7.21     | 5               | 142               | 85                   | 6,918                           | 388                | 86                                  |
| 1896..... | 2,183     | 6.20     | 6               | 240               | 110                  | 5,149                           | 347                | 75                                  |
| 1901..... | 2,304     | 6.45     | 6               | 165               | 98                   | 4,968                           | 359                | 76                                  |
| 1906..... | 2,679     | 7.38     | 3               | 172               | 92                   | 5,249                           | 373                | 76                                  |
| 1911..... | 4,036     | 9.80     | 20              | 190               | 74                   | 7,303                           | 423                | 92                                  |
| 1916..... | 3,602     | 8.16     | 14              | 324               | 52                   | 7,145                           | 541                | 131                                 |
| 1921..... | 4,383     | 8.82     | 88              | 155               | 97                   | 8,968                           | 566                | 195                                 |
| 1926..... | 4,503     | 8.13     | 71              | 439               | 174                  | 21,417                          | 633                | 250                                 |
| 1927..... | 4,501     | 7.96     | 97              | 493               | 196                  | 22,876                          | 645                | 262                                 |
| 1928..... | 4,146     | 7.26     | 113             | 446               | 264                  | 18,665                          | 717                | 275                                 |
| 1929..... | 3,719     | 6.50     | 106             | 306               | 261                  | 17,353                          | 802                | 315                                 |
| 1930..... | 3,312     | 5.78     | 146             | 622               | 304                  | 15,609                          | 785                | 328                                 |
| 1931..... | 3,069     | 5.33     | 138             | 996               | 274                  | 14,760                          | 763                | 320                                 |
| 1932..... | 3,636     | 6.29     | 134             | 654               | 236                  | 14,705                          | 743                | 293                                 |
| 1933..... | 3,973     | 6.84     | 163             | 570               | 224                  | 13,060                          | 740                | 275                                 |
| 1934..... | 4,310     | 7.39     | 188             | 626               | 206                  | 13,728                          | 719                | 275                                 |
| 1935..... | 4,845     | 8.28     | 211             | 597               | 172                  | 14,838                          | 705                | 278                                 |
| 1936..... | 5,182     | 8.81     | 213             | 551               | 171                  | 14,920                          | 701                | 285                                 |
| 1937..... | 5,340     | 9.06     | 206             | 468               | 183                  | 17,297                          | 692                | 299                                 |
| 1938..... | 5,489     | 9.25     | 243             | 461               | 172                  | 18,341                          | 712                | 320                                 |
| 1939..... | 5,670     | 9.50     | 241             | 630               | 179                  | 20,429                          | 724                | 327                                 |
| 1940..... | 6,950     | 11.60    | 309             | 437               | 163                  | 18,364                          | 723                | 339                                 |
| 1941..... | 6,855     | 11.40    | 273             | 284               | 177                  | 21,990                          | 707                | 344                                 |
| 1942..... | 8,129     | 13.34    | 312             | 222               | 211                  | (f)                             | 680                | 348                                 |
| 1943..... | 6,263     | 10.21    | 452             | 93                | 208                  | 22,502                          | 674                | 356                                 |
| 1944..... | 6,019     | 9.72     | 503             | 49                | 158                  | 22,079                          | 704                | 367                                 |
| 1945..... | 5,321     | 8.49     | 617             | 24                | 203                  | 20,554                          | 771                | 385                                 |
| 1946..... | 6,700     | 10.55    | 654             | 23                | 231                  | 20,585                          | 830                | 410                                 |
| 1947..... | 6,668     | 10.31    | 695             | 32                | 246                  | 24,491                          | 833                | 444                                 |
| 1948..... | 6,704     | 10.14    | 630             | 32                | 185                  | 24,164                          | 869                | 526                                 |
| 1949..... | 6,247     | 9.18     | 590             | 52                | 205                  | 22,834                          | 928                | 604                                 |
| 1950..... | 6,585     | 9.28     | 661             | 44                | 207                  | 25,496                          | 942                | 699                                 |
| 1951..... | 6,646     | 9.07     | 637             | 53                | 307                  | 28,675                          | 913                | 823                                 |
| 1952..... | 6,241     | 8.27     | 581             | 76                | 328                  | 27,432                          | 952                | 1,037                               |
| 1953..... | 6,149     | 7.92     | 628             | 91                | 330                  | 30,229                          | 982                | 1,215                               |
| 1954..... | 6,190     | 7.77     | 594             | 89                | 312                  | 25,482                          | 986                | 1,308                               |
| 1955..... | 6,226     | 7.59     | 624             | 106               | 340                  | 29,264                          | 969                | 1,258                               |
| 1956..... | 6,277     | 7.40     | 567             | 150               | 362                  | 28,221                          | 1,018              | 1,530                               |
| 1957..... | 6,581     | 7.53     | 529             | 244               | 459                  | 30,658                          | 1,143              | 1,651                               |
| 1958..... | 6,505     | 7.25     | 483             | 278               | 457                  | 32,621                          | 1,183              | 1,838                               |
| 1959..... | 6,614     | 7.18     | 503             | 366               | 499                  | 34,203                          | 1,243              | 2,042                               |
| 1960..... | 6,607     | 6.99     | 610             | 368               | 580                  | 42,531                          | 1,301              | 2,250                               |
| 1961..... | 6,804     | 7.02     | 718             | 561               | 606                  | 52,155                          | 1,376              | 2,522                               |
| 1962..... | 7,021     | 7.10     | 685             | 620               | 718                  | 53,531                          | 1,466              | 2,825                               |
| 1963..... | 7,302     | 7.24     | 765             | 584               | 745                  | 57,524                          | 1,441              | 2,913                               |
| 1964..... | 7,765     | 7.52     | 887             | 675               | 629                  | 55,806                          | 1,496              | 3,123                               |

(a) Rate per 1,000 of mean population.

(b) Dissolutions made absolute.

(c) Distinct persons only.

(d) Each type of offence counted separately when there are multiple charges against an individual.

(e) Net expenditure from 1939, previously gross expenditure.

(f) Year ended 30th June from 1943.



SOCIAL DEVELOPMENT

Education

| Year | Number of Schools |         | Number of Scholars |          |               |                 | University of Adelaide |  | Total State Expenditure on Education |
|------|-------------------|---------|--------------------|----------|---------------|-----------------|------------------------|--|--------------------------------------|
|      | Public            | Private | Public Schools     |          |               | Private Schools | Students               | Receipts (including Government Grants) |                                      |
|      |                   |         | Primary (a)        | High (a) | Technical (b) |                 |                        |  |                                      |
|      |                   |         |                    |          |               |                 | £'000                  | £'000                                  |                                      |
| 1851 | 115               |         | 3,031              |          |               |                 |                        | 3                                      |                                      |
| 1856 | 147               |         | 6,516              |          |               |                 |                        | 12                                     |                                      |
| 1861 | 219               | 236     | 10,711             |          |               |                 |                        | 15                                     |                                      |
| 1866 | 292               | n.a.    | 14,690             |          |               |                 |                        | 22                                     |                                      |
| 1871 | 307               | n.a.    | 15,791             |          |               |                 |                        | 24                                     |                                      |
| 1876 | 281               | 326     | 25,889             |          |               |                 | 58                     | 58                                     |                                      |
| 1881 | 405               | 363     | 36,888             |          |               |                 | 74                     | 51                                     |                                      |
| 1886 | 504               | n.a.    | 44,405             |          |               |                 | 197                    | 13                                     |                                      |
| 1891 | 552               | 285     | 47,094             |          |               |                 | 246                    | 12                                     |                                      |
| 1896 | 639               | 232     | 59,944             |          |               |                 | 320                    | 12                                     |                                      |
| 1901 | 706               | 230     | 63,183             |          |               |                 | 591                    | 19                                     |                                      |
| 1906 | 708               | 215     | 57,270             |          |               | 9,753           | 626                    | 23                                     |                                      |
| 1911 | 743               | 184     | 53,494             | 1,800    | 2,811         | 12,596          | 641                    | 20                                     |                                      |
| 1916 | 857               | (c)222  | 63,935             | 3,047    | 3,571         | (c)14,748       | 491                    | 27                                     |                                      |
| 1921 | 973               | 177     | 77,111             | 3,067    | 6,045         | 15,870          | 1,338                  | 88                                     |                                      |
| 1926 | 1,019             | 195     | 79,204             | 6,527    | 7,216         | 18,543          | 1,575                  | 110                                    |                                      |
| 1927 | 1,028             | 193     | 80,298             | 7,472    | 7,748         | 18,088          | 1,724                  | 119                                    |                                      |
| 1928 | 1,043             | 191     | 81,231             | 8,060    | 7,750         | 17,867          | 1,778                  | 111                                    |                                      |
| 1929 | 1,068             | 196     | 80,618             | 8,861    | 8,324         | 17,997          | 1,813                  | 126                                    |                                      |
| 1930 | 1,074             | 195     | 80,332             | 9,558    | 7,783         | 17,142          | 2,085                  | 161                                    |                                      |
| 1931 | 1,075             | 193     | 81,218             | 10,503   | 6,585         | 15,951          | 2,092                  | 109                                    |                                      |
| 1932 | 1,087             | 190     | 80,905             | 9,880    | 6,302         | 15,965          | 2,084                  | 112                                    |                                      |
| 1933 | 1,107             | 195     | 80,215             | 9,683    | 6,808         | 15,703          | 2,123                  | 123                                    |                                      |
| 1934 | 1,111             | 192     | 78,753             | 8,778    | 7,457         | 16,171          | 2,066                  | 119                                    |                                      |
| 1935 | 1,123             | 193     | 77,714             | 8,936    | 8,339         | 16,427          | 2,072                  | 115                                    |                                      |
| 1936 | 1,100             | 190     | 75,411             | 9,280    | 8,654         | 17,007          | 2,025                  | 210                                    |                                      |
| 1937 | 1,091             | 193     | 72,849             | 9,722    | 9,247         | 17,381          | 2,113                  | 168                                    |                                      |
| 1938 | 1,078             | 184     | 69,664             | 9,701    | 9,610         | 17,036          | 2,307                  | 161                                    |                                      |
| 1939 | 1,054             | 188     | 66,861             | 10,608   | 9,721         | 17,207          | 2,354                  | 143                                    |                                      |
| 1940 | 1,060             | 182     | 65,682             | 10,546   | 9,980         | 19,974          | 2,443                  | 209                                    |                                      |
| 1941 | 1,006             | 181     | 63,303             | 10,761   | 10,518        | 20,098          | 2,211                  | 150                                    |                                      |
| 1942 | 950               | 178     | 61,326             | 10,173   | 9,768         | 19,207          | 1,799                  | 164                                    |                                      |
| 1943 | 897               | 172     | 59,764             | 11,196   | 10,952        | 20,690          | 1,897                  | 268                                    |                                      |
| 1944 | 909               | 168     | 59,460             | 12,265   | 12,534        | 21,001          | 2,132                  | 202                                    |                                      |
| 1945 | 837               | 159     | 60,029             | 11,583   | 14,178        | 22,031          | 2,599                  | 190                                    |                                      |
| 1946 | 811               | 157     | 61,242             | 11,870   | 16,175        | 22,317          | 3,723                  | 254                                    |                                      |
| 1947 | 782               | 155     | 63,853             | 11,723   | 16,665        | 21,954          | 4,045                  | 335                                    |                                      |
| 1948 | 773               | 154     | 66,653             | 11,550   | 18,145        | 23,202          | 4,266                  | 310                                    |                                      |
| 1949 | 759               | 157     | 71,337             | 11,922   | 18,664        | 23,666          | 4,126                  | 304                                    |                                      |
| 1950 | 743               | 158     | 76,369             | 12,732   | 18,910        | 25,112          | 4,069                  | 436                                    |                                      |
| 1951 | 728               | 156     | 81,642             | 14,106   | 18,961        | 26,921          | 3,720                  | 526                                    |                                      |
| 1952 | 716               | 155     | 89,630             | 15,121   | 20,206        | 28,851          | 3,612                  | 693                                    |                                      |
| 1953 | 723               | 157     | 97,262             | 16,933   | 20,542        | 29,798          | 3,565                  | 815                                    |                                      |
| 1954 | 716               | 166     | 105,022            | 17,972   | 21,785        | 30,853          | 3,555                  | 794                                    |                                      |
| 1955 | 701               | 165     | 111,909            | 19,485   | 23,078        | 32,957          | 3,617                  | 927                                    |                                      |
| 1956 | 699               | 171     | 118,365            | 22,134   | 25,647        | 35,326          | 3,828                  | 1,066                                  |                                      |
| 1957 | 694               | 171     | 123,132            | 24,734   | 27,482        | 36,591          | 4,424                  | 1,184                                  |                                      |
| 1958 | 689               | 171     | 128,340            | 28,538   | 32,747        | 38,589          | 4,816                  | 1,802                                  |                                      |
| 1959 | 683               | 172     | 132,769            | 33,449   | 34,390        | 40,449          | 5,300                  | 2,027                                  |                                      |
| 1960 | 697               | 173     | 135,522            | 38,414   | 31,373        | 42,125          | 5,723                  | 2,335                                  |                                      |
| 1961 | 707               | 176     | 138,650            | 42,447   | 32,205        | 42,834          | 6,250                  | 3,199                                  |                                      |
| 1962 | 701               | 176     | 140,710            | 47,139   | 33,525        | 44,160          | 6,824                  | 3,510                                  |                                      |
| 1963 | 702               | 178     | 144,248            | 50,402   | 35,369        | 44,500          | 7,416                  | 3,903                                  |                                      |
| 1964 | 707               | 181     | 149,491            | 54,937   | 39,748        | 45,435          | 8,203                  | 4,969                                  |                                      |

(a) Net enrolment. Includes correspondence scholars and scholars receiving junior technical education.

(b) Net enrolment plus correspondence scholars. Includes Institute of Technology.

(c) Private schools compulsorily registered—previous years incomplete.

## SOCIAL DEVELOPMENT

## Health

| Year      | General Hospitals   |                  |           |        | Mental Hospitals       |                         | Medical Practitioners Registered | Nurses Registered |
|-----------|---------------------|------------------|-----------|--------|------------------------|-------------------------|----------------------------------|-------------------|
|           | Number of Hospitals | Patients Treated | Revenue   |        | Admissions During Year | Patients at end of Year |                                  |                   |
|           |                     |                  | State Aid | Total  |                        |                         |                                  |                   |
|           |                     |                  | £'000     | £'000  |                        |                         |                                  |                   |
| 1846..... | 1                   |                  |           |        | 10                     | 6                       | 22                               |                   |
| 1851..... | 1                   | 413              |           |        | 9                      | 11                      | 68                               |                   |
| 1856..... | 1                   | 559              |           |        | 69                     | 73                      | 101                              |                   |
| 1861..... | 1                   | 795              |           |        | 68                     | 167                     | 111                              |                   |
| 1866..... | 1                   | 1,257            |           |        | 88                     | 224                     | 85                               |                   |
| 1871..... | 1                   | 1,433            |           |        | 111                    | 324                     | 77                               |                   |
| 1876..... | 1                   | 2,282            |           |        | 149                    | 427                     | 94                               |                   |
| 1881..... | 1                   | 2,258            |           |        | 199                    | 606                     | 113                              |                   |
| 1886..... | 1                   | 2,022            |           |        | 207                    | 744                     | 152                              |                   |
| 1891..... | 1                   | 2,301            |           |        | 224                    | 815                     | 177                              |                   |
| 1896..... | 1                   | 2,633            |           |        | 195                    | 934                     | 279                              |                   |
| 1901..... | 1                   | 3,554            |           |        | 214                    | 988                     | 341                              |                   |
| 1906..... | 9                   | 4,476            |           |        | 231                    | 994                     | 242                              |                   |
| 1911..... | 21                  | 8,547            | 48        | 66     | 273                    | 1,084                   | 299                              |                   |
| 1916..... | 27                  | 12,453           | 65        | 93     | 302                    | 1,158                   | 326                              |                   |
| 1921..... | 31                  | 15,642           | 127       | 199    | 272                    | 1,190                   | 360                              |                   |
| 1926..... | 45                  | 22,438           | 233       | 365    | 249                    | 1,282                   | 445                              | 1,271             |
| 1927..... | 46                  | 24,480           | 250       | 376    | 272                    | 1,306                   | 476                              | 1,309             |
| 1928..... | 47                  | 25,167           | 226       | 370    | 280                    | 1,350                   | 437                              | 1,399             |
| 1929..... | 49                  | 25,787           | 300       | 458    | 260                    | 1,374                   | 445                              | 1,472             |
| 1930..... | 50                  | 26,114           | 225       | 368    | 260                    | 1,404                   | 445                              | 1,565             |
| 1931..... | 51                  | 26,505           | 178       | 287    | 250                    | 1,395                   | 457                              | 1,601             |
| 1932..... | 52                  | 28,780           | 177       | 296    | 250                    | 1,410                   | 461                              | 1,650             |
| 1933..... | 52                  | 29,306           | 203       | 339    | 271                    | 1,465                   | 464                              | 1,687             |
| 1934..... | 52                  | 31,686           | 189       | 330    | 267                    | 1,519                   | 461                              | 1,757             |
| 1935..... | 52                  | 31,878           | 184       | 326    | 269                    | 1,572                   | 480                              | 1,826             |
| 1936..... | 52                  | 34,014           | 191       | 365    | 272                    | 1,627                   | 477                              | 1,886             |
| 1937..... | 52                  | 35,477           | 207       | 388    | 270                    | 1,709                   | 509                              | 1,977             |
| 1938..... | 52                  | 37,285           | 251       | 446    | 254                    | 1,747                   | 792                              | 2,068             |
| 1939..... | 55                  | 39,146           | 269       | 465    | 286                    | 1,800                   | 804                              | 2,239             |
| 1940..... | 56                  | 41,392           | 287       | 509    | 240                    | 1,847                   | 802                              | 2,359             |
| 1941..... | 55                  | 40,593           | 303       | 531    | 247                    | 1,905                   | 814                              | 2,562             |
| 1942..... | 55                  | 40,137           | 312       | 600    | 219                    | 1,892                   | 839                              | 2,768             |
| 1943..... | 57                  | 41,620           | 321       | 651    | 197                    | 1,889                   | 846                              | 2,914             |
| 1944..... | 58                  | 43,582           | 381       | 739    | 276                    | 1,925                   | 866                              | 3,006             |
| 1945..... | (a)                 | (a)              | (a)       | (a)    | (a)                    | (a)                     | 883                              | 3,153             |
| 1946..... | 58                  | 46,696           | 418       | 849    | 302                    | 2,024                   | 947                              | 3,314             |
| 1947..... | 59                  | 52,388           | 567       | 1,067  | 332                    | 2,107                   | 983                              | 3,380             |
| 1948..... | 59                  | 50,480           | 691       | 1,238  | 330                    | 2,165                   | 1,012                            | 3,589             |
| 1949..... | 60                  | 53,558           | 835       | 1,532  | 398                    | 2,213                   | 1,053                            | 3,808             |
| 1950..... | 59                  | 54,334           | 1,055     | 1,859  | 379                    | 2,310                   | 1,111                            | 4,018             |
| 1951..... | 60                  | 57,401           | 1,347     | 2,251  | 452                    | 2,411                   | 1,172                            | 4,199             |
| 1952..... | 61                  | 59,374           | 1,869     | 3,055  | 426                    | 2,425                   | 1,244                            | 4,461             |
| 1953..... | 62                  | 61,681           | 2,337     | 3,721  | 498                    | 2,534                   | 1,202                            | 4,585             |
| 1954..... | 62                  | 62,138           | 2,170     | 3,693  | 548                    | 2,644                   | 1,265                            | 4,724             |
| 1955..... | 63                  | 64,310           | 2,762     | 4,409  | 516                    | 2,612                   | 1,348                            | 4,884             |
| 1956..... | 65                  | 69,295           | 4,107     | 5,851  | 553                    | 2,658                   | 1,395                            | 5,026             |
| 1957..... | 65                  | 73,249           | 5,685     | 7,725  | 543                    | 2,594                   | 1,469                            | 5,122             |
| 1958..... | 64                  | 75,282           | 5,213     | 7,686  | 659                    | 2,667                   | 1,507                            | 5,475             |
| 1959..... | 65                  | 79,426           | 5,130     | 7,819  | 712                    | 2,643                   | 1,601                            | 5,583             |
| 1960..... | 65                  | 82,948           | 5,237     | 8,415  | 680                    | 2,564                   | 1,681                            | 5,817             |
| 1961..... | 66                  | 87,386           | 5,078     | 8,707  | 748                    | 2,506                   | 1,739                            | 6,123             |
| 1962..... | 65                  | 89,409           | 5,183     | 9,175  | 609                    | 2,409                   | 1,821                            | 6,523             |
| 1963..... | 66                  | 94,144           | 5,003     | 9,653  | 578                    | 2,221                   | 1,883                            | 6,879             |
| 1964..... | 66                  | 99,491           | 6,047     | 10,583 | 557                    | 2,075                   | 2,002                            | 7,255             |

(a) Year ended 30th June from 1946.

SOCIAL DEVELOPMENT

Social Welfare

| Year    | Public Relief<br>Expenditure<br>£'000 | Children's<br>Welfare<br>Expenditure<br>£'000 | Pensions and Benefits Paid in South Australia<br>by Commonwealth Government |   |                                  |   |                                       | Pensioners                   |                              |
|---------|---------------------------------------|---|---|---|----------------------------------|---|---------------------------------------|------------------------------|------------------------------|
|         |                                       |   | Age and<br>Invalid<br>Pensions<br>£'000                                     | War and<br>Service<br>Pensions<br>£'000 | Child<br>Endow-<br>ment<br>£'000 | National<br>Health<br>Services<br>£'000 | Total<br>(Includes<br>other)<br>£'000 | Age and<br>Invalid<br>Number | War and<br>Service<br>Number |
| 1895-96 | 15.0                                  | 14.2  |   |   |                                  |   |                                       |                              |                              |
| 1900-01 | 18.3                                  | 17.7  |   |   |                                  |   |                                       |                              |                              |
| 1905-06 | 20.0                                  | 19.1  |   |   |                                  |   |                                       |                              |                              |
| 1910-11 | 14.5                                  | 23.2  |   |   |                                  |   |                                       | 7,237                        |                              |
| 1915-16 | 34.9                                  | 33.5  | 272   | 10                                      |                                  |   |                                       | 10,993                       | 794                          |
| 1916-17 | 38.0                                  | 37.3  | 352   | 115                                     |                                  |   | 526                                   | 11,301                       | 4,272                        |
| 1917-18 | 36.7                                  | 39.1  | 364   | 264                                     |                                  |   | 685                                   | 11,703                       | 10,119                       |
| 1918-19 | 36.2                                  | 39.7  | 441   | 411                                     |                                  |   | 908                                   | 11,782                       | 14,959                       |
| 1919-20 | 42.0                                  | 42.2  | 449   | 445                                     |                                  |   | 951                                   | 12,086                       | 16,794                       |
| 1920-21 | 50.9                                  | 47.5  | 455   | 514                                     |                                  |   | 1,030                                 | 12,320                       | 14,663                       |
| 1921-22 | 47.1                                  | 49.2  | 462   | 445                                     |                                  |   | 968                                   | 12,513                       | 14,210                       |
| 1922-23 | 43.1                                  | 48.6  | 471   | 438                                     |                                  |   | 968                                   | 12,759                       | 14,341                       |
| 1923-24 | 45.5                                  | 49.0  | 571   | 447                                     |                                  |   | 1,076                                 | 13,141                       | 14,848                       |
| 1924-25 | 50.7                                  | 49.3  | 587   | 466                                     |                                  |   | 1,112                                 | 13,519                       | 15,542                       |
| 1925-26 | 58.8                                  | 50.3  | 702   | 489                                     |                                  |   | 1,248                                 | 14,098                       | 16,144                       |
| 1926-27 | 64.9                                  | 51.4  | 727   | 503                                     |                                  |   | 1,287                                 | 14,666                       | 16,589                       |
| 1927-28 | 103.0                                 | 56.1  | 768   | 501                                     |                                  |   | 1,328                                 | 15,581                       | 16,835                       |
| 1928-29 | 149.1                                 | 54.9  | 824   | 493                                     |                                  |   | 1,373                                 | 16,774                       | 16,581                       |
| 1929-30 | 220.9                                 | 57.4  | 899   | 499                                     |                                  |   | 1,450                                 | 18,291                       | 16,791                       |
| 1930-31 | 770.9                                 | 51.8  | 991   | 497                                     |                                  |   | 1,537                                 | 20,602                       | 16,653                       |
| 1931-32 | 961.1                                 | 47.6  | 939   | 454                                     |                                  |   | 1,424                                 | 21,897                       | 15,801                       |
| 1932-33 | 750.3                                 | 45.5  | 913   | 422                                     |                                  |   | 1,363                                 | 21,461                       | 15,517                       |
| 1933-34 | 679.5                                 | 44.4  | 948   | 427                                     |                                  |   | 1,402                                 | 22,805                       | 15,352                       |
| 1934-35 | 638.5                                 | 43.9  | 1,034   | 446                                     |                                  |   | 1,508                                 | 24,517                       | 15,248                       |
| 1935-36 | 581.7                                 | 44.7  | 1,149   | 471                                     |                                  |   | 1,649                                 | 26,134                       | 15,997                       |
| 1936-37 | 543.3                                 | 44.7  | 1,261   | 518                                     |                                  |   | 1,811                                 | 27,308                       | 16,340                       |
| 1937-38 | 497.7                                 | 46.8  | 1,434   | 538                                     |                                  |   | 2,005                                 | 28,039                       | 16,865                       |
| 1938-39 | 494.8                                 | 47.0  | 1,418   | 549                                     |                                  |   | 2,004                                 | 28,857                       | 16,680                       |
| 1939-40 | 531.1                                 | 49.6  | 1,454   | 552                                     |                                  |   | 2,043                                 | 29,521                       | 16,145                       |
| 1940-41 | 194.9                                 | 50.7  | 1,516   | 544                                     |                                  |   | 2,096                                 | 29,642                       | 15,424                       |
| 1941-42 | 144.1                                 | 53.3  | 1,637   | 554                                     | 860                              |   | 3,081                                 | 28,422                       | 15,296                       |
| 1942-43 | 116.4                                 | 56.7  | 1,814   | 637                                     | 905                              |   | 3,538                                 | 27,423                       | 16,333                       |
| 1943-44 | 107.4                                 | 65.8  | 1,844   | 827                                     | 954                              |   | 4,038                                 | 27,530                       | 18,472                       |
| 1944-45 | 107.7                                 | 71.6  | 1,812   | 919                                     | 935                              |   | 4,138                                 | 27,507                       | 22,071                       |
| 1945-46 | 119.3                                 | 77.6  | 2,335   | 1,136                                   | 1,427                            | 122                                     | 5,631                                 | 29,512                       | 30,687                       |
| 1946-47 | 125.4                                 | 98.9  | 2,551   | 1,346                                   | 1,598                            | 428                                     | 6,606                                 | 32,387                       | 35,117                       |
| 1947-48 | 130.6                                 | 112.2   | 3,142   | 1,523                                   | 1,606                            | 385                                     | 7,354                                 | 34,229                       | 38,505                       |
| 1948-49 | 139.7                                 | 127.8   | 3,585   | 1,859                                   | 2,012                            | 527                                     | 8,721                                 | 35,470                       | 42,931                       |
| 1949-50 | 136.5                                 | 143.7   | 3,944   | 2,089                                   | 2,469                            | 610                                     | 9,983                                 | 36,524                       | 47,303                       |
| 1950-51 | 139.5                                 | 168.8   | 4,300   | 2,607                                   | 3,782                            | 1,061                                   | 12,608                                | 36,582                       | 51,589                       |
| 1951-52 | 168.3                                 | 223.4   | 5,180   | 3,221                                   | 4,149                            | 1,777                                   | 15,266                                | 37,363                       | 54,758                       |
| 1952-53 | 222.8                                 | 233.4   | 6,308   | 3,565                                   | 4,770                            | 2,077                                   | 17,939                                | 39,700                       | 58,591                       |
| 1953-54 | 229.3                                 | 237.8   | 7,075   | 3,843                                   | 4,577                            | 2,440                                   | 19,101                                | 42,216                       | 61,039                       |
| 1954-55 | 243.6                                 | 245.6   | 7,655   | 4,389                                   | 4,714                            | 2,912                                   | 20,780                                | 45,147                       | 63,767                       |
| 1955-56 | 272.8                                 | 276.5   | 8,859   | 4,537                                   | 5,499                            | 3,070                                   | 23,161                                | 47,754                       | 66,535                       |
| 1956-57 | 343.2                                 | 247.0   | 9,622   | 4,786                                   | 5,250                            | 3,355                                   | 24,463                                | 50,209                       | 68,291                       |
| 1957-58 | 433.0                                 | 272.8   | 10,716  | 5,332                                   | 5,430                            | 3,852                                   | 27,128                                | 52,699                       | 69,852                       |
| 1958-59 | 385.2                                 | 337.3   | 11,575  | 5,430                                   | 6,309                            | 4,934                                   | 30,230                                | 55,181                       | 71,331                       |
| 1959-60 | 320.9                                 | 389.1   | 13,183  | 5,696                                   | 5,897                            | 5,988                                   | 32,726                                | 57,336                       | 72,013                       |
| 1960-61 | 345.7                                 | 457.4   | 14,269  | 6,449                                   | 7,046                            | 6,405                                   | 36,385                                | 60,483                       | 72,695                       |
| 1961-62 | 386.7                                 | 553.8   | 16,422  | 6,676                                   | 6,336                            | 7,284                                   | 39,697                                | 64,374                       | 74,454                       |
| 1962-63 | 346.5                                 | 564.9   | 16,976  | 7,433                                   | 6,430                            | 8,032                                   | 41,696                                | 64,156                       | 73,239                       |
| 1963-64 | 346.6                                 | 637.8   | 18,060  | 8,113                                   | 7,958                            | 8,540                                   | 45,757                                | 65,573                       | 72,518                       |

Note:—Unemployment relief payments paid by State Government and included in Public Relief to 1939-40. Unemployment benefits from 1945-46 paid by Commonwealth Government and included in Total Pensions and Benefits Paid.

## EMPLOYMENT AND UNEMPLOYMENT

| Year    | Total Wage and Salary Earners (a) |         | Factory Employment (b) |         | Rural Employment (c) |         | Unemployment Benefits  |             | Unemployed Registered (At 30th June) |
|---------|-----------------------------------|---------|------------------------|---------|----------------------|---------|------------------------|-------------|--------------------------------------|
|         | Males                             | Females | Males                  | Females | Males                | Females | Average No. on Benefit | Amount Paid |                                      |
|         | '000                              | '000    | '000                   | '000    | '000                 | '000    |                        | £'000       |                                      |
| 1911    |                                   |         | 22.6                   | 5.3     |                      |         |                        |             |                                      |
| 1912    |                                   |         | 23.1                   | 5.4     |                      |         |                        |             |                                      |
| 1913    |                                   |         | 23.3                   | 5.2     |                      |         |                        |             |                                      |
| 1914    |                                   |         | 22.1                   | 4.8     |                      |         |                        |             |                                      |
| 1915    |                                   |         | 20.8                   | 4.7     |                      |         |                        |             |                                      |
| 1916-17 |                                   |         | 20.8                   | 5.2     |                      |         |                        |             |                                      |
| 1917-18 |                                   |         | 21.3                   | 5.3     |                      |         |                        |             |                                      |
| 1918-19 |                                   |         | 22.4                   | 5.5     |                      |         |                        |             |                                      |
| 1919-20 |                                   |         | 23.4                   | 6.0     |                      |         |                        |             | 232                                  |
| 1920-21 |                                   |         | 24.5                   | 5.9     |                      |         |                        |             | 688                                  |
| 1921-22 |                                   |         | 25.0                   | 6.2     |                      |         |                        |             | 880                                  |
| 1922-23 |                                   |         | 28.0                   | 6.7     |                      |         |                        |             | 443                                  |
| 1923-24 |                                   |         | 30.3                   | 7.0     | 37.9                 | 3.5     |                        |             | 491                                  |
| 1924-25 |                                   |         | 31.2                   | 7.1     | 38.4                 | 3.3     |                        |             | 718                                  |
| 1925-26 |                                   |         | 33.1                   | 6.9     | 38.8                 | 3.2     |                        |             | 1,391                                |
| 1926-27 |                                   |         | 34.1                   | 7.0     | 38.8                 | 2.7     |                        |             | 1,900                                |
| 1927-28 |                                   |         | 32.3                   | 6.8     | 38.7                 | 2.5     |                        |             | 5,009                                |
| 1928-29 |                                   |         | 30.4                   | 6.4     | 38.8                 | 2.2     |                        |             | 8,825                                |
| 1929-30 |                                   |         | 26.5                   | 5.7     | 38.4                 | 2.3     |                        |             | 11,297                               |
| 1930-31 |                                   |         | 19.3                   | 4.6     | 38.9                 | 2.6     |                        |             | 23,588                               |
| 1931-32 |                                   |         | 18.9                   | 4.9     | 39.2                 | 2.8     |                        |             | 23,738                               |
| 1932-33 |                                   |         | 20.9                   | 5.4     | 39.7                 | 3.1     |                        |             | 20,516                               |
| 1933-34 |                                   |         | 23.7                   | 5.7     | 40.0                 | 3.4     |                        |             | 16,559                               |
| 1934-35 |                                   |         | 27.3                   | 6.2     | 41.4                 | 3.1     |                        |             | 13,111                               |
| 1935-36 |                                   |         | 31.4                   | 7.1     | 41.7                 | 2.6     |                        |             | 10,970                               |
| 1936-37 |                                   |         | 33.4                   | 7.3     | 42.3                 | 3.0     |                        |             | 8,033                                |
| 1937-38 |                                   |         | 36.3                   | 7.8     | 41.4                 | 2.9     |                        |             | 7,737                                |
| 1938-39 |                                   |         | 35.4                   | 8.0     | 41.3                 | 2.5     |                        |             | 8,574                                |
| 1939-40 |                                   |         | 36.3                   | 8.7     | 38.7                 | 2.8     |                        |             | 5,978                                |
| 1940-41 |                                   |         | 40.1                   | 10.8    | n.a.                 | n.a.    |                        |             | 1,745                                |
| 1941-42 |                                   |         | 49.9                   | 15.3    | n.a.                 | n.a.    |                        |             | —                                    |
| 1942-43 |                                   |         | 52.8                   | 20.0    | 29.6                 | 5.1     |                        |             | —                                    |
| 1943-44 |                                   |         | 50.7                   | 18.9    | 32.9                 | 6.5     |                        |             | —                                    |
| 1944-45 |                                   |         | 49.1                   | 16.4    | 33.6                 | 6.2     |                        |             | —                                    |
| 1945-46 |                                   |         | 49.5                   | 13.7    | 35.7                 | 5.5     | 778                    | 73.2        | 3,147                                |
| 1946-47 |                                   |         | 56.7                   | 14.0    | 38.1                 | 5.0     | 200                    | 20.1        | 1,310                                |
| 1947-48 |                                   |         | 59.1                   | 14.3    | 38.1                 | 5.8     | 51                     | 4.0         | 778                                  |
| 1948-49 |                                   |         | 60.9                   | 14.9    | 38.1                 | 5.5     | 14                     | 0.6         | 654                                  |
| 1949-50 |                                   |         | 63.1                   | 15.3    | 38.6                 | 7.0     | 326                    | 33.1        | 431                                  |
| 1950-51 |                                   |         | 66.8                   | 16.2    | 36.9                 | 6.1     | 6                      | 0.4         | 406                                  |
| 1951-52 |                                   |         | 68.0                   | 15.9    | 37.4                 | 4.7     | 17                     | 1.0         | 1,613                                |
| 1952-53 |                                   |         | 67.1                   | 13.4    | 38.3                 | 5.0     | 841                    | 132.0       | 2,343                                |
| 1953-54 | 178.6                             | 55.7    | 70.7                   | 14.8    | 37.8                 | 5.6     | 270                    | 50.2        | 964                                  |
| 1954-55 | 183.9                             | 60.1    | 73.7                   | 15.9    | 37.6                 | 5.0     | 66                     | 12.4        | 1,207                                |
| 1955-56 | 194.0                             | 64.0    | 76.1                   | 16.4    | 37.3                 | 4.7     | 77                     | 11.1        | 1,948                                |
| 1956-57 | 193.3                             | 64.1    | 75.5                   | 16.4    | 36.4                 | 3.9     | 681                    | 113.7       | 3,363                                |
| 1957-58 | 194.4                             | 66.0    | 75.9                   | 16.6    | 35.2                 | 2.7     | 1,534                  | 305.5       | 5,082                                |
| 1958-59 | 201.1                             | 68.4    | 77.4                   | 16.7    | 35.0                 | 3.6     | 1,641                  | 362.4       | 3,958                                |
| 1959-60 | 206.4                             | 72.6    | 81.3                   | 17.7    | 33.8                 | 2.6     | 1,223                  | 249.1       | 4,547                                |
| 1960-61 | 207.5                             | 72.3    | 81.9                   | 18.1    | 34.0                 | 2.3     | 1,610                  | 342.8       | 9,035                                |
| 1961-62 | 211.2                             | 76.7    | 81.8                   | 17.3    | 33.7                 | 2.1     | 3,643                  | 892.8       | 6,886                                |
| 1962-63 | 219.6                             | 80.9    | 86.7                   | 18.6    | 33.3                 | 1.9     | 2,244                  | 592.3       | 6,479                                |
| 1963-64 | 229.1                             | 86.0    | 90.9                   | 19.9    | 33.2                 | 1.4     | 1,513                  | 375.5       | 4,339                                |

(a) At June; includes all industries except rural, defence and female private domestics.

(b) Average employment including working proprietors during the year.

(c) Permanent employees only.

WAGES

| Year      | State Living Wage (a) |         | Commonwealth Basic Wage (a) |         | Minimum Weekly Wage Rates (b) |         | Average Weekly Wage of Factory Employees (c) |         |
|-----------|-----------------------|---------|-----------------------------|---------|-------------------------------|---------|--|---------|
|           | Males                 | Females | Males                       | Females | Males                         | Females | Males  | Females |
|           | s. d.                 | s. d.   | s. d.                       | s. d.   | s. d.                         | s. d.   | s. d.  | s. d.   |
| 1911..... |                       |         | 51 0                        |         |                               |         | 43 9   | 15 11   |
| 1912..... |                       |         | 51 0                        |         |                               |         | 46 8   | 15 11   |
| 1913..... |                       |         | 51 0                        |         |                               |         | 49 0   | 16 11   |
| 1914..... |                       |         | 55 6                        |         | 54 5                          | 24 1    | 50 6   | 17 4    |
| 1915..... |                       |         | 63 6                        |         | 54 8                          | 24 6    | 49 3   | 16 4    |
| 1916..... | 54 0                  |         | 61 6                        |         | 59 0                          | 24 10   | n.a.   | n.a.    |
| 1917..... | 54 0                  |         | 58 6                        |         | 63 1                          | 27 9    | 55 10  | 18 0    |
| 1918..... | 63 0                  | 27 6    | 64 0                        |         | 65 6                          | 29 5    | 58 11  | 19 11   |
| 1919..... | 63 0                  | 30 0    | 70 0                        |         | 70 5                          | 33 3    | 60 8   | 21 6    |
| 1920..... | 75 0                  | 30 0    | 89 6                        |         | 82 8                          | 40 7    | 62 3   | 24 8    |
| 1921..... | 79 6                  | 35 0    | 79 6                        |         | 89 5                          | 45 2    | 73 1   | 28 9    |
| 1922..... | 77 6                  | 35 0    | 79 6                        |         | 87 6                          | 44 0    | 78 1   | 30 7    |
| 1923..... | 78 6                  | 35 0    | 85 6                        |         | 90 9                          | 46 4    | 78 0   | 31 11   |
| 1924..... | 82 0                  | 38 0    | 84 0                        |         | 91 10                         | 46 6    | 81 9   | 33 9    |
| 1925..... | 85 6                  | 39 6    | 86 0                        |         | 94 4                          | 48 10   | 83 9   | 35 2    |
| 1926..... | 85 6                  | 39 6    | 85 6                        |         | 95 8                          | 50 0    | 86 8   | 36 3    |
| 1927..... | 85 6                  | 39 6    | 88 0                        |         | 96 7                          | 49 11   | 91 9   | 38 5    |
| 1928..... | 85 6                  | 39 6    | 85 0                        |         | 96 2                          | 50 11   | 94 2   | 39 6    |
| 1929..... | 85 6                  | 39 6    | 88 6                        |         | 97 2                          | 51 4    | 93 4   | 40 0    |
| 1930..... | 75 0                  | 39 6    | 78 0                        |         | 92 8                          | 51 2    | 92 7   | 39 11   |
| 1931..... | 63 0                  | 31 6    | 58 1                        |         | 75 0                          | 43 11   | 84 4   | 36 1    |
| 1932..... | 63 0                  | 31 6    | 57 2                        |         | 72 7                          | 40 11   | 74 6   | 31 8    |
| 1933..... | 63 0                  | 31 6    | 59 7                        |         | 73 5                          | 41 0    | 73 3   | 31 0    |
| 1934..... | 63 0                  | 31 6    | 63 0                        |         | 75 6                          | 41 11   | 72 1   | 30 6    |
| 1935..... | 66 0                  | 31 6    | 67 0                        |         | 77 11                         | 42 5    | 73 9   | 31 3    |
| 1936..... | 66 0                  | 33 0    | 69 0                        |         | 79 6                          | 43 4    | 74 11  | 31 3    |
| 1937..... | 74 0                  | 36 6    | 74 0                        |         | 85 10                         | 46 10   | 78 11  | 32 0    |
| 1938..... | 74 0                  | 36 6    | 76 0                        |         | 87 1                          | 47 9    | 81 6   | 32 11   |
| 1939..... | 78 0                  | 38 0    | 77 0                        |         | 94 1                          | 49 7    | 84 11  | 33 3    |
| 1940..... | 84 0                  | 41 0    | 80 0                        |         | 98 6                          | 52 1    | 86 0   | 34 11   |
| 1941..... | 87 0                  | 43 6    | 84 0                        |         | 105 9                         | 55 5    | 93 2   | 38 11   |
| 1942..... | 94 0                  | 46 2    | 93 0                        |         | 115 0                         | 60 3    | 112 7  | 51 9    |
| 1943..... | 94 0                  | 46 2    | 94 0                        |         | 116 1                         | 61 3    | 120 8  | 60 6    |
| 1944..... | 94 0                  | 46 2    | 93 0                        |         | 115 9                         | 65 4    | 121 1  | 65 7    |
| 1945..... | 94 0                  | 46 2    | 93 0                        |         | 116 0                         | 67 2    | 117 5  | 63 5    |
| 1946..... | 98 6                  | 55 0    | 102 0                       |         | 124 1                         | 76 0    | 117 7  | 60 0    |
| 1947..... | 106 0                 | 59 0    | 106 0                       |         | 137 10                        | 80 10   | 127 5  | 65 2    |
| 1948..... | 117 0                 | 66 6    | 116 0                       |         | 152 2                         | 95 1    | 148 2  | 76 8    |
| 1949..... | 125 0                 | 68 6    | 126 0                       |         | 164 5                         | 101 0   | 169 11                                       | 87 7    |
| 1950..... | 158 0                 | 118 6   | 158 0                       | 118 6   | 197 11                        | 142 1   | 187 5  | 99 0    |
| 1951..... | 195 0                 | 146 0   | 195 0                       | 146 0   | 236 0                         | 170 3   | 224 4  | 123 10  |
| 1952..... | 229 0                 | 171 6   | 229 0                       | 171 6   | 270 10                        | 196 9   | 275 6  | 156 0   |
| 1953..... | 231 0                 | 173 0   | 231 0                       | 173 0   | 273 6                         | 199 1   | 300 0  | 173 9   |
| 1954..... | 231 0                 | 173 0   | 231 0                       | 173 0   | 281 7                         | 199 11  | 317 1  | 179 3   |
| 1955..... | 231 0                 | 173 0   | 231 0                       | 173 0   | 285 0                         | 201 9   | 339 8  | 183 6   |
| 1956..... | 241 0                 | 180 6   | 241 0                       | 180 6   | 296 4                         | 209 3   | 355 11                                       | 191 1   |
| 1957..... | 251 0                 | 188 0   | 251 0                       | 188 0   | 306 11                        | 219 6   | 366 8  | 195 2   |
| 1958..... | 256 0                 | 192 0   | 256 0                       | 192 0   | 312 5                         | 223 9   | 373 2  | 206 4   |
| 1959..... | 271 0                 | 203 0   | 271 0                       | 203 0   | 339 11                        | 239 2   | 381 8  | 209 0   |
| 1960..... | 271 0                 | 203 0   | 271 0                       | 203 0   | 342 2                         | 242 11  | 418 6  | 221 4   |
| 1961..... | 283 0                 | 212 0   | 283 0                       | 212 0   | 354 7                         | 252 0   | 432 9  | 227 9   |
| 1962..... | 283 0                 | 212 0   | 283 0                       | 212 0   | 356 6                         | 252 4   | 438 7  | 234 8   |
| 1963..... | 283 0                 | 212 0   | 283 0                       | 212 0   | 363 8                         | 255 1   | 457 1  | 238 7   |
| 1964..... | 303 0                 | 227 0   | 303 0                       | 227 0   | 386 4                         | 272 2   | 472 6  | 252 4   |

(a) At end of year.

(b) Adult rates, at end of year, for all industries excluding rural.

(c) Excludes drawings of working proprietors.

## STATISTICAL SUMMARY

## PRICES

| Year       | Retail Price Indexes: Adelaide |       |            |              |         |            | Agricultural Produce at Principal Markets |                        |                   |
|------------|--------------------------------|-------|------------|--------------|---------|------------|---|------------------------|-------------------|
|            | "C" Series (a)                 |       |            | Consumer (b) |         |            | Wheat<br>(Per Bushel)<br>(c)              | Barley<br>(Per Bushel) | Wool<br>(Per Lb.) |
|            | Food and Groceries             | Rent  | All Groups | Food         | Housing | All Groups |   |                        |                   |
| 1901 ..... | 575                            |       |            |              |         |            | <i>s. d.</i>                              | <i>s. d.</i>           | <i>d.</i>         |
| 1906 ..... | 549                            |       |            |              |         |            |   |                        |                   |
| 1911 ..... | 570                            |       |            |              |         |            | 3 5½                                      | 3 9                    | 8.48              |
| 1912 ..... | 645                            |       |            |              |         |            | 3 9½                                      | 4 0                    | 7.63              |
| 1913 ..... | 626                            |       |            |              |         |            | 3 7                                       | 3 9                    | 8.88              |
| 1914 ..... | 683                            | 611   | 699        |              |         |            | 3 8                                       | 2 6                    | 8.65              |
| 1915 ..... | 858                            | 574   | 780        |              |         |            | 7 3                                       | 5 6                    | 8.37              |
| 1916 ..... | 835                            | 573   | 798        |              |         |            | 4 9                                       | 3 3                    | 10.77             |
| 1917 ..... | 805                            | 606   | 832        |              |         |            | 4 9                                       | 3 8                    | 13.67             |
| 1918 ..... | 862                            | 656   | 887        |              |         |            | 4 9                                       | 4 5                    | 14.35             |
| 1919 ..... | 1,012                          | 707   | 1,018      |              |         |            | 5 6                                       | 5 5                    | 14.57             |
| 1920 ..... | 1,225                          | 783   | 1,164      |              |         |            | 9 0                                       | 6 0                    | 14.11             |
| 1921 ..... | 941                            | 819   | 989        |              |         |            | 8 0                                       | 4 5                    | 13.46             |
| 1922 ..... | 937                            | 852   | 954        |              |         |            | 5 0½                                      | 3 10                   | 11.95             |
| 1923 ..... | 1,019                          | 887   | 1,008      |              |         |            | 4 11                                      | 3 9                    | 17.76             |
| 1924 ..... | 1,002                          | 942   | 1,015      |              |         |            | 4 8                                       | 3 4                    | 22.00             |
| 1925 ..... | 1,029                          | 963   | 1,028      |              |         |            | 6 1                                       | 5 5                    | 22.97             |
| 1926 ..... | 1,045                          | 927   | 1,026      |              |         |            | 6 2½                                      | 4 0                    | 14.94             |
| 1927 ..... | 1,030                          | 942   | 1,018      |              |         |            | 5 3½                                      | 3 7½                   | 14.82             |
| 1928 ..... | 993                            | 1,022 | 1,027      |              |         |            | 5 5½                                      | 4 11½                  | 17.36             |
| 1929 ..... | 1,055                          | 986   | 1,037      |              |         |            | 4 8½                                      | 3 9½                   | 14.97             |
| 1930 ..... | 937                            | 916   | 952        |              |         |            | 4 4                                       | 3 1                    | 9.09              |
| 1931 ..... | 789                            | 755   | 837        |              |         |            | 2 3½                                      | 2 3                    | 6.82              |
| 1932 ..... | 761                            | 691   | 802        |              |         |            | 3 2                                       | 2 11½                  | 6.88              |
| 1933 ..... | 731                            | 694   | 789        |              |         |            | 2 9½                                      | 2 2½                   | 7.32              |
| 1934 ..... | 767                            | 700   | 806        |              |         |            | 2 7½                                      | 2 5                    | 13.64             |
| 1935 ..... | 780                            | 736   | 820        |              |         |            | 3 0½                                      | 2 8½                   | 8.19              |
| 1936 ..... | 798                            | 795   | 839        |              |         |            | 3 10                                      | 2 2½                   | 11.92             |
| 1937 ..... | 826                            | 832   | 859        |              |         |            | 5 1½                                      | 4 0½                   | 13.66             |
| 1938 ..... | 861                            | 868   | 888        |              |         |            | 3 6½                                      | 3 6½                   | 11.28             |
| 1939 ..... | 897                            | 888   | 906        |              |         |            | 2 3½                                      | 2 8½                   | 9.10              |
| 1940 ..... | 900                            | 892   | 936        |              |         |            | 4 0½                                      | 3 6½                   | 11.94             |
| 1941 ..... | 905                            | 893   | 988        |              |         |            | 4 5½                                      | 4 10½                  | 11.85             |
| 1942 ..... | 1,046                          | 893   | 1,075      |              |         |            | 4 6½                                      | 3 3½                   | 11.75             |
| 1943 ..... | 1,003                          | 893   | 1,102      |              |         |            | 5 3½                                      | 4 6                    | 13.65             |
| 1944 ..... | 993                            | 892   | 1,098      |              |         |            | 6 2½                                      | 4 3½                   | 13.58             |
| 1945 ..... | 1,002                          | 892   | 1,102      |              |         |            | 5 7½                                      | 5 5½                   | 13.45             |
| 1946 ..... | 1,006                          | 894   | 1,120      |              |         |            | 8 0½                                      | 6 4                    | 13.49             |
| 1947 ..... | 1,067                          | 897   | 1,165      |              |         |            | 9 11½                                     | 8 11                   | 22.05             |
| 1948 ..... | 1,230                          | 903   | 1,277      |              |         |            | 15 5½                                     | 16 10½                 | 35.88             |
| 1949 ..... | 1,351                          | 912   | 1,393      | 56.1         | 68.7    | 61.6       | 12 5                                      | 8 4½                   | 44.14             |
| 1950 ..... | 1,494                          | 929   | 1,521      | 60.7         | 71.6    | 66.2       | 14 5                                      | 11 3½                  | 57.77             |
| 1951 ..... | 1,931                          | 949   | 1,833      | 70.1         | 75.9    | 74.7       | 14 7½                                     | 11 8½                  | 129.16            |
| 1952 ..... | 2,380                          | 1,055 | 2,159      | 90.9         | 85.0    | 91.4       | 16 6                                      | 16 3½                  | 64.53             |
| 1953 ..... | 2,444                          | 1,155 | 2,246      | 100.0        | 100.0   | 100.0      | 16 9½                                     | 16 1½                  | 74.98             |
| 1954 ..... | 2,525                          | 1,174 | 2,277      | 103.5        | 109.9   | 102.3      | 14 6½                                     | 10 2                   | 75.22             |
| 1955 ..... | 2,657                          | 1,247 | 2,354      | 106.1        | 113.0   | 103.5      | 13 4½                                     | 13 7½                  | 65.68             |
| 1956 ..... | 2,871                          | 1,358 | 2,466      | 110.9        | 120.8   | 106.9      | 13 6                                      | 10 7½                  | 56.38             |
| 1957 ..... | 2,710                          | 1,468 | 2,463      | 114.7        | 129.2   | 111.1      | 14 6                                      | 11 0                   | 73.82             |
| 1958 ..... | 2,768                          | 1,592 | 2,536      | 111.8        | 133.9   | 111.9      | 14 6½                                     | 11 10½                 | 56.11             |
| 1959 ..... | 2,998                          | 1,674 | 2,647      | 117.5        | 137.1   | 114.5      | 14 0½                                     | 11 2½                  | 45.64             |
| 1960 ..... |                                |       |            | 123.1        | 140.0   | 118.0      | 14 7½                                     | 10 1½                  | 53.82             |
| 1961 ..... | Not calculated                 |       |            | 132.2        | 148.7   | 122.9      | 15 0½                                     | 9 1½                   | 48.17             |
| 1962 ..... |                                |       |            | 127.6        | 153.5   | 122.5      | 15 1½                                     | 11 2½                  | 49.91             |
| 1963 ..... |                                |       |            | 126.0        | 154.9   | 122.1      | 14 8½                                     | 11 1½                  | 53.84             |
| 1964 ..... |                                |       |            | 129.1        | 158.5   | 123.5      | 14 4                                      | 11 1½                  | 65.06             |

(a) Base: Average all groups six capital cities 1923 to 1927 = 1,000.

(b) Base of each group 1953-54 = 100

(c) Bulk wheat from 1962, previously bagged; price of bagged wheat in 1963 was 15s. 5½d.

METEOROLOGY

| Year | Rainfall                 |       |              |       | Evaporation | Sunshine | Temperature     |                 |      |
|------|--------------------------|-------|--------------|-------|-------------|----------|-----------------|-----------------|------|
|      | Agricultural Areas (a)   |       | Adelaide     |       |             |          | Adelaide        |                 |      |
|      | Wheat-growing Season (b) | Total | Days of Rain | Total | Total       | Total    | Extreme Maximum | Extreme Minimum | Mean |
|      |                          |       |              |       |             |          |                 |                 |      |
| 1841 |                          |       | 93           | 17.96 |             |          |                 |                 |      |
| 1846 |                          |       | 114          | 26.89 |             |          |                 |                 |      |
| 1851 |                          |       | 128          | 30.95 |             |          |                 |                 |      |
| 1856 |                          |       | 118          | 24.93 |             |          |                 |                 |      |
| 1861 | 20.66                    | 27.83 | 147          | 24.04 |             |          | 109.0           | 35.0            | 63.4 |
| 1866 | 19.89                    | 21.86 | 116          | 20.11 |             |          | 109.5           | 37.2            | 63.8 |
| 1871 | 18.53                    | 23.55 | 137          | 23.25 | 52.94       |          | 111.4           | 37.4            | 64.0 |
| 1876 | 13.66                    | 15.74 | 110          | 13.43 | 60.95       |          | 114.2           | 32.5            | 62.5 |
| 1881 | 15.07                    | 18.13 | 135          | 18.02 | 55.97       |          | 105.8           | 35.2            | 62.1 |
| 1886 | 15.20                    | 17.36 | 141          | 14.42 | 55.93       | 2,588.0  | 112.4           | 35.6            | 62.7 |
| 1891 | 13.34                    | 16.13 | 113          | 14.01 | 52.03       | 2,752.7  | 102.7           | 36.2            | 62.2 |
| 1896 | 12.32                    | 16.92 | 121          | 15.17 | 52.65       | 2,643.9  | 111.2           | 34.4            | 63.4 |
| 1901 | 16.11                    | 18.26 | 124          | 18.01 | 58.81       | 2,522.6  | 110.0           | 35.2            | 63.5 |
| 1906 | 16.43                    | 19.49 | 127          | 26.53 | 55.13       | 2,366.4  | 113.1           | 36.1            | 63.7 |
| 1911 | 10.35                    | 14.83 | 127          | 16.03 | 48.14       | 2,415.0  | 102.8           | 34.9            | 62.9 |
| 1916 | 19.18                    | 21.18 | 142          | 28.16 | 55.53       | 2,511.9  | 107.5           | 38.3            | 62.0 |
| 1921 | 13.43                    | 19.72 | 100          | 22.64 | 58.19       | 2,658.0  | 109.6           | 37.0            | 64.7 |
| 1926 | 13.65                    | 15.11 | 116          | 22.20 | 57.99       | 2,688.6  | 104.1           | 37.4            | 63.1 |
| 1927 | 9.04                     | 11.39 | 101          | 16.92 | 59.67       | 2,670.8  | 110.0           | 36.1            | 63.0 |
| 1928 | 8.95                     | 12.50 | 107          | 19.43 | 60.44       | 2,750.2  | 108.7           | 35.4            | 63.4 |
| 1929 | 8.79                     | 12.05 | 119          | 17.51 | 59.82       | 2,544.9  | 104.2           | 35.0            | 62.2 |
| 1930 | 11.06                    | 12.59 | 116          | 18.65 | 66.24       | 2,744.1  | 112.4           | 36.9            | 64.9 |
| 1931 | 12.76                    | 14.38 | 145          | 22.26 | 59.74       | 2,534.5  | 114.6           | 37.6            | 62.3 |
| 1932 | 14.61                    | 17.80 | 141          | 25.04 | 52.84       | 2,351.9  | 110.3           | 36.8            | 62.6 |
| 1933 | 11.40                    | 13.79 | 130          | 22.12 | 55.52       | 2,487.7  | 107.7           | 36.7            | 62.2 |
| 1934 | 11.67                    | 13.44 | 115          | 20.24 | 61.63       | 2,528.3  | 110.5           | 37.7            | 64.4 |
| 1935 | 11.73                    | 14.80 | 140          | 23.45 | 57.69       | 2,411.2  | 107.8           | 37.9            | 62.9 |
| 1936 | 9.44                     | 13.39 | 123          | 19.34 | 60.03       | 2,430.8  | 103.7           | 37.1            | 62.8 |
| 1937 | 11.94                    | 16.62 | 128          | 23.01 | 62.62       | 2,294.1  | 105.9           | 37.7            | 63.3 |
| 1938 | 9.62                     | 12.95 | 119          | 19.26 | 66.18       | 2,425.9  | 106.6           | 36.0            | 63.2 |
| 1939 | 13.45                    | 16.88 | 139          | 23.29 | 65.99       | 2,521.2  | 117.7           | 34.7            | 63.3 |
| 1940 | 8.19                     | 10.53 | 116          | 16.16 | 66.86       | 2,564.6  | 110.1           | 36.5            | 62.6 |
| 1941 | 11.80                    | 17.61 | 126          | 22.56 | 63.14       | 2,471.8  | 110.0           | 37.9            | 62.5 |
| 1942 | 16.51                    | 18.89 | 133          | 25.44 | 65.91       | 2,422.2  | 112.5           | 38.2            | 63.2 |
| 1943 | 10.71                    | 13.47 | 135          | 17.84 | 62.81       | 2,416.7  | 112.2           | 36.8            | 61.6 |
| 1944 | 9.16                     | 11.18 | 114          | 17.13 | 64.29       | 2,333.7  | 103.4           | 32.5            | 62.3 |
| 1945 | 11.19                    | 14.10 | 105          | 17.85 | 59.94       | 2,431.2  | 107.0           | 34.0            | 62.0 |
| 1946 | 10.32                    | 20.29 | 135          | 22.59 | 54.51       | 2,301.0  | 106.4           | 35.6            | 61.3 |
| 1947 | 13.87                    | 18.64 | 145          | 21.89 | 61.93       | 2,311.3  | 105.3           | 38.0            | 62.5 |
| 1948 | 12.51                    | 14.06 | 122          | 21.40 | 63.85       | 2,401.7  | 110.1           | 37.2            | 61.3 |
| 1949 | 12.48                    | 14.71 | 119          | 18.23 | 58.74       | 2,317.7  | 100.4           | 36.6            | 60.5 |
| 1950 | 11.29                    | 14.59 | 91           | 16.06 | 65.25       | 2,677.5  | 104.0           | 38.4            | 62.6 |
| 1951 | 16.94                    | 18.88 | 135          | 25.44 | 64.78       | 2,338.7  | 104.9           | 36.6            | 62.5 |
| 1952 | 16.27                    | 18.63 | 128          | 19.99 | 59.97       | 2,459.2  | 105.5           | 34.9            | 60.4 |
| 1953 | 12.92                    | 15.87 | 121          | 20.00 | 67.40       | 2,584.7  | 106.4           | 39.0            | 61.9 |
| 1954 | 11.24                    | 13.83 | 109          | 16.73 | 66.13       | 2,502.6  | 103.0           | 38.1            | 62.0 |
| 1955 | 15.71                    | 19.36 | 134          | 24.58 | 66.03       | 2,396.1  | 109.0           | 38.4            | 62.1 |
| 1956 | 18.18                    | 20.46 | 154          | 27.24 | 64.50       | 2,378.6  | 100.9           | 39.4            | 61.6 |
| 1957 | 8.67                     | 10.06 | 110          | 16.71 | 68.34       | 2,672.5  | 105.7           | 38.2            | 62.2 |
| 1958 | 14.21                    | 16.25 | 121          | 17.57 | 65.81       | 2,454.7  | 102.2           | 34.2            | 61.6 |
| 1959 | 6.28                     | 9.53  | 88           | 11.32 | 68.89       | 2,591.9  | 110.0           | 37.5            | 63.2 |
| 1960 | 15.59                    | 18.94 | 129          | 23.07 | 63.22       | 2,355.6  | 107.2           | 36.4            | 61.3 |
| 1961 | 11.99                    | 13.45 | 122          | 14.91 | n.a.        | 2,586.3  | 105.5           | 37.2            | 64.0 |
| 1962 | 10.24                    | 13.59 | 125          | 17.96 | n.a.        | 2,559.1  | 108.8           | 39.5            | 63.0 |
| 1963 | 14.93                    | 16.95 | 118          | 24.43 | 63.76       | 2,369.1  | 103.8           | 38.0            | 62.6 |
| 1964 | 15.85                    | 17.81 | 135          | 21.89 | 59.32       | 2,220.1  | 104.5           | 36.1            | 61.3 |

(a) From 1905 rainfall is the weighted average over agricultural areas, previously average of 50 selected stations.

(b) 8 months April to November inclusive.

## STATISTICAL SUMMARY

## LAND TENURE AND CULTIVATION

| Year    | Land Tenure             |             |            | Rural Holdings | Area of Rural Holdings | Area under Crop |            | Area of Pastures Top-dressed | Area Under Irrigation |
|---------|-------------------------|-------------|------------|----------------|------------------------|-----------------|------------|------------------------------|-----------------------|
|         | Alienated and Set Apart | Under Lease |            |                |                        | Manured         | Total      |                              |                       |
|         |                         | Pastoral    | Total      |                |                        |                 |            |                              |                       |
|         | '000 Acres              | '000 Acres  | '000 Acres | No.            | '000 Acres             | '000 Acres      | '000 Acres | '000 Acres                   | '000 Acres            |
| 1836-37 | 61                      |             |            |                |                        |                 |            |                              |                       |
| 1841-42 | 307                     |             |            |                |                        |                 | 7          |                              |                       |
| 1846-47 | 440                     |             |            |                |                        |                 | 33         |                              |                       |
| 1851-52 | 707                     | 9,799       |            |                |                        |                 | 81         |                              |                       |
| 1856-57 | 1,580                   | 14,620      |            |                |                        |                 | 203        |                              |                       |
| 1861-62 | 2,381                   | 29,457      |            |                |                        |                 | 401        |                              |                       |
| 1866-67 | 3,426                   | 26,785      |            |                |                        |                 | 604        |                              |                       |
| 1871-72 | 4,622                   | 45,376      |            |                |                        |                 | 838        |                              |                       |
| 1876-77 | 6,839                   | 89,385      |            |                |                        |                 | 1,229      |                              |                       |
| 1881-82 | 9,869                   | 119,846     |            |                |                        |                 | 2,156      |                              |                       |
| 1886-87 | 9,528                   | 126,541     |            |                |                        |                 | 2,285      |                              |                       |
| 1891-92 | 8,594                   | 97,388      |            |                |                        |                 | 1,928      |                              |                       |
| 1896-97 | 8,671                   | 112,186     |            |                |                        |                 | 2,052      |                              |                       |
| 1901-02 | 8,089                   | 68,916      | 85,577     |                |                        | 827             | 2,237      |                              |                       |
| 1906-07 | 8,947                   | 76,686      | 94,970     |                |                        | 1,555           | 2,157      |                              |                       |
| 1911-12 | 11,654                  | 91,547      | 111,002    | 27,120         | 116,168                | 2,495           | 2,965      |                              |                       |
| 1916-17 | 13,882                  | 97,159      | 115,638    | 29,278         | 129,668                | 2,857           | 3,627      |                              |                       |
| 1921-22 | 14,117                  | 102,842     | 120,663    | 29,693         | 134,206                | 2,957           | 3,379      |                              |                       |
| 1926-27 | 14,993                  | 101,962     | 120,830    | 29,654         | 135,580                | 3,534           | 3,884      | 162                          | 35.4                  |
| 1927-28 | 15,246                  | 101,424     | 120,168    | 29,675         | 135,640                | 3,815           | 4,192      | 210                          | 38.4                  |
| 1928-29 | 15,698                  | 100,425     | 119,349    | 29,953         | 134,782                | 4,251           | 4,660      | 250                          | 39.2                  |
| 1929-30 | 16,060                  | 98,062      | 116,824    | 30,246         | 132,675                | 4,600           | 4,967      | 302                          | 40.0                  |
| 1930-31 | 16,272                  | 94,176      | 113,117    | 30,449         | 129,569                | 4,921           | 5,426      | 215                          | 43.5                  |
| 1931-32 | 16,306                  | 93,854      | 112,842    | 30,648         | 129,369                | 4,214           | 5,220      | 139                          | 42.8                  |
| 1932-33 | 16,253                  | 97,412      | 116,281    | 30,724         | 132,673                | 4,408           | 5,167      | 151                          | 42.6                  |
| 1933-34 | 16,200                  | 99,659      | 118,593    | 30,986         | 134,847                | 4,386           | 5,079      | 212                          | 42.9                  |
| 1934-35 | 16,086                  | 102,084     | 121,506    | 31,123         | 137,918                | 3,950           | 4,629      | 361                          | 39.6                  |
| 1935-36 | 15,909                  | 102,513     | 122,120    | 31,262         | 138,330                | 3,905           | 4,463      | 536                          | 42.7                  |
| 1936-37 | 15,757                  | 101,091     | 120,871    | 31,321         | 136,978                | 4,001           | 4,578      | 904                          | 42.3                  |
| 1937-38 | 15,451                  | 107,017     | 127,013    | 31,277         | 142,836                | 4,229           | 4,736      | 997                          | 44.3                  |
| 1938-39 | 15,297                  | 109,304     | 129,140    | 31,280         | 144,682                | 4,281           | 4,724      | 1,095                        | 43.6                  |
| 1939-40 | 15,132                  | 109,920     | 129,811    | 31,244         | 145,979                | 4,001           | 4,542      | 1,075                        | 44.5                  |
| 1940-41 | 14,766                  | 109,551     | 129,663    | 30,961         | 144,207                | 3,777           | 4,254      | 1,049                        | 46.3                  |
| 1941-42 | 14,554                  | 114,034     | 134,483    | 30,565         | 145,634                | 3,480           | 3,975      | 1,055                        | 45.8                  |
| 1942-43 | 14,157                  | 110,879     | 131,560    | 27,934         | 145,443                | 2,625           | 3,437      | 945                          | n.a.                  |
| 1943-44 | 14,023                  | 110,808     | 131,899    | 27,826         | 144,526                | 1,926           | 2,761      | 705                          | n.a.                  |
| 1944-45 | 13,936                  | 113,157     | 134,398    | 27,867         | 137,486                | 2,289           | 3,179      | 725                          | n.a.                  |
| 1945-46 | 13,914                  | 113,617     | 135,010    | 27,635         | 142,505                | 3,036           | 3,824      | 854                          | 42.2                  |
| 1946-47 | 13,973                  | 114,162     | 135,602    | 28,040         | 146,173                | 3,377           | 3,884      | 1,112                        | 46.1                  |
| 1947-48 | 14,067                  | 114,201     | 135,503    | 27,597         | 142,393                | 3,377           | 3,851      | 1,391                        | 42.6                  |
| 1948-49 | 14,142                  | 115,324     | 136,548    | 28,110         | 146,723                | 3,279           | 3,757      | 1,741                        | 48.2                  |
| 1949-50 | 14,473                  | 115,630     | 137,132    | 27,900         | 146,563                | 3,122           | 3,617      | 1,792                        | 49.1                  |
| 1950-51 | 14,528                  | 115,672     | 136,956    | 28,248         | 151,731                | 3,252           | 3,676      | 1,859                        | 79.1                  |
| 1951-52 | 14,447                  | 115,795     | 137,811    | 28,698         | 151,785                | 3,173           | 3,696      | 2,150                        | 58.4                  |
| 1952-53 | 14,557                  | 115,843     | 137,722    | 28,860         | 152,689                | 3,139           | 3,581      | 2,322                        | 57.1                  |
| 1953-54 | 14,670                  | 118,059     | 140,008    | 29,220         | 150,315                | 3,336           | 3,778      | 2,826                        | 62.1                  |
| 1954-55 | 14,791                  | 114,505     | 136,340    | 28,092         | 149,379                | 3,470           | 3,895      | 3,142                        | 69.5                  |
| 1955-56 | 14,950                  | 117,122     | 139,062    | 28,585         | 149,965                | 3,405           | 3,972      | 3,499                        | 71.0                  |
| 1956-57 | 15,782                  | 117,076     | 139,010    | 27,936         | 149,931                | 3,400           | 3,979      | 3,677                        | 66.1                  |
| 1957-58 | 15,830                  | 117,306     | 139,142    | 27,971         | 152,045                | 3,463           | 3,907      | 4,005                        | 81.2                  |
| 1958-59 | 15,955                  | 117,417     | 139,918    | 28,105         | 152,312                | 3,692           | 4,148      | 3,716                        | 85.1                  |
| 1959-60 | 16,066                  | 116,876     | 139,556    | 28,527         | 155,437                | 3,679           | 4,059      | 3,471                        | 100.9                 |
| 1960-61 | 16,179                  | 121,946     | 144,616    | 28,711         | 156,456                | 4,326           | 4,966      | 3,300                        | 102.0                 |
| 1961-62 | 16,281                  | 123,211     | 145,819    | 28,886         | 156,897                | 4,063           | 4,509      | 3,583                        | 108.4                 |
| 1962-63 | 16,364                  | 123,176     | 145,833    | 28,922         | 156,697                | 4,415           | 4,932      | 3,750                        | 112.8                 |
| 1963-64 | 16,413                  | 123,134     | 145,847    | 28,711         | 158,905                | 4,788           | 5,380      | 3,993                        | 117.9                 |



RURAL PRODUCTION

Crop Areas and Yields

| Year        | Cereals for Grain |                   |            |                   |            |                   | Hay<br>(a) | Orchards<br>(b) (c) | Vineyards<br>(b) |
|-------------|-------------------|-------------------|------------|-------------------|------------|-------------------|------------|---------------------|------------------|
|             | Wheat             |                   | Barley     |                   | Oats       |                   |            |                     |                  |
|             | Area              | Yield per<br>Acre | Area       | Yield per<br>Acre | Area       | Yield per<br>Acre | Area       | Area                | Area             |
|             | '000 Acres        | Bush.             | '000 Acres | Bush.             | '000 Acres | Bush.             |            | '000 Acres          |                  |
| 1841-42..   | 4                 | 20.77             | 1          | 20.00             | 1          | 25.00             |            |                     |                  |
| 1846-47..   | 26                | 20.00             | 3          | 30.00             | 2          | 20.00             |            |                     | 0.1              |
| 1851-52..   | 54                | 12.65             | 5          | 16.49             | 3          | 21.79             |            |                     | 0.3              |
| 1856-57..   | 162               | 25.00             | 8          | 21.18             | 3          | 20.00             | 23         | 1.0                 | 0.8              |
| 1861-62..   | 311               | 10.98             | 11         | 15.81             | 2          | 20.24             | 63         | 1.8                 | 3.9              |
| 1866-67..   | 458               | 14.34             | 12         | 20.13             | 4          | 22.29             | 111        | 2.2                 | 6.4              |
| 1871-72..   | 693               | 5.73              | 17         | 9.53              | 4          | 10.85             | 98         | 2.8                 | 5.5              |
| 1876-77..   | 1,084             | 5.40              | 10         | 10.64             | 3          | 10.65             | 92         | 3.3                 | 4.6              |
| 1881-82..   | 1,769             | 4.57              | 12         | 11.48             | 3          | 10.66             | 333        | 4.4                 | 4.2              |
| 1886-87 (d) | 1,970             | 5.50              | 17         | 13.04             | 8          | 12.48             | 317        | n.a.                | 5.3              |
| 1891-92..   | 1,552             | 4.15              | 11         | 9.35              | 13         | 6.40              | 304        | 8.9                 | 12.3             |
| 1896-97..   | 1,693             | 1.66              | 14         | 7.44              | 40         | 4.72              | 339        | 11.7                | 18.3             |
| 1901-02..   | 1,743             | 4.60              | 16         | 15.68             | 35         | 13.54             | 370        | 16.3                | 20.9             |
| 1906-07..   | 1,686             | 10.36             | 28         | 17.47             | 57         | 15.72             | 298        | 18.2                | 22.6             |
| 1911-12..   | 2,191             | 9.29              | 41         | 17.25             | 108        | 12.51             | 521        | 23.2                | 24.0             |
| 1916-17..   | 2,778             | 16.46             | 104        | 16.74             | 152        | 12.13             | 483        | 28.8                | 29.2             |
| 1921-22..   | 2,384             | 10.46             | 171        | 19.19             | 125        | 10.37             | 559        | 32.3                | 41.4             |
| 1926-27..   | 2,768             | 12.84             | 257        | 18.05             | 152        | 11.26             | 496        | 31.6                | 50.3             |
| 1927-28..   | 2,941             | 8.18              | 219        | 13.67             | 197        | 7.00              | 533        | 31.0                | 50.7             |
| 1928-29..   | 3,446             | 7.79              | 247        | 18.53             | 207        | 8.40              | 498        | 30.8                | 51.8             |
| 1929-30..   | 3,646             | 6.40              | 305        | 15.25             | 278        | 5.63              | 544        | 30.1                | 52.3             |
| 1930-31..   | 4,181             | 8.34              | 252        | 15.72             | 218        | 9.52              | 613        | 29.6                | 52.2             |
| 1931-32..   | 4,071             | 11.81             | 242        | 18.87             | 206        | 11.08             | 539        | 29.1                | 52.5             |
| 1932-33..   | 4,067             | 10.43             | 314        | 19.31             | 174        | 10.27             | 461        | 29.1                | 52.5             |
| 1933-34..   | 3,822             | 9.26              | 307        | 17.09             | 265        | 7.88              | 507        | 28.9                | 52.9             |
| 1934-35..   | 3,188             | 8.61              | 317        | 17.94             | 367        | 6.57              | 561        | 29.2                | 53.4             |
| 1935-36..   | 2,989             | 10.58             | 394        | 16.49             | 300        | 7.94              | 566        | 29.1                | 54.2             |
| 1936-37..   | 3,058             | 9.39              | 305        | 13.99             | 415        | 5.70              | 539        | 29.8                | 56.1             |
| 1937-38..   | 3,162             | 13.73             | 411        | 21.02             | 332        | 8.91              | 562        | 29.9                | 57.4             |
| 1938-39..   | 3,080             | 10.28             | 457        | 16.50             | 267        | 9.00              | 519        | 28.9                | 58.0             |
| 1939-40..   | 2,735             | 15.02             | 504        | 19.78             | 349        | 11.64             | 532        | 29.1                | 58.2             |
| 1940-41..   | 2,560             | 6.97              | 471        | 10.14             | 473        | 3.87              | 404        | 29.4                | 58.4             |
| 1941-42..   | 2,326             | 13.12             | 478        | 24.49             | 291        | 13.04             | 558        | 29.5                | 58.0             |
| 1942-43..   | 2,009             | 18.18             | 298        | 20.20             | 263        | 12.81             | 426        | 29.5                | 58.2             |
| 1943-44..   | 1,534             | 13.49             | 261        | 19.34             | 224        | 10.22             | 312        | 25.5                | 57.3             |
| 1944-45..   | 1,623             | 5.70              | 360        | 8.85              | 334        | 3.94              | 428        | 26.5                | 56.9             |
| 1945-46..   | 2,165             | 9.72              | 442        | 17.12             | 370        | 8.60              | 484        | 27.2                | 57.4             |
| 1946-47..   | 2,519             | 11.08             | 502        | 16.78             | 252        | 11.01             | 329        | 28.1                | 58.2             |
| 1947-48..   | 2,375             | 13.70             | 562        | 27.32             | 309        | 17.47             | 296        | 28.3                | 58.9             |
| 1948-49..   | 2,063             | 12.67             | 698        | 17.35             | 287        | 9.23              | 234        | 29.7                | 59.8             |
| 1949-50..   | 1,896             | 14.95             | 694        | 18.34             | 261        | 13.25             | 295        | 26.9                | 60.3             |
| 1950-51..   | 1,848             | 16.74             | 765        | 21.87             | 271        | 13.02             | 261        | 28.7                | 62.0             |
| 1951-52..   | 1,613             | 16.92             | 832        | 20.23             | 387        | 13.95             | 257        | 29.4                | 61.2             |
| 1952-53..   | 1,544             | 21.97             | 938        | 27.63             | 369        | 18.05             | 214        | 28.6                | 60.6             |
| 1953-54..   | 1,528             | 19.90             | 1,122      | 25.40             | 280        | 15.42             | 262        | 29.8                | 62.1             |
| 1954-55..   | 1,689             | 18.63             | 1,020      | 18.02             | 340        | 13.27             | 257        | 30.5                | 60.6             |
| 1955-56..   | 1,609             | 17.96             | 1,042      | 23.61             | 425        | 17.13             | 326        | 33.0                | 59.9             |
| 1956-57..   | 1,438             | 21.85             | 1,222      | 27.83             | 427        | 19.47             | 299        | 34.0                | 57.4             |
| 1957-58..   | 1,331             | 11.20             | 1,212      | 14.48             | 427        | 8.01              | 291        | 35.3                | 57.4             |
| 1958-59..   | 1,407             | 22.76             | 1,332      | 28.27             | 481        | 24.93             | 420        | 37.2                | 56.7             |
| 1959-60..   | 1,549             | 7.70              | 1,290      | 9.19              | 505        | 4.95              | 245        | 37.4                | 56.9             |
| 1960-61..   | 1,969             | 23.56             | 1,556      | 27.15             | 512        | 22.41             | 393        | 37.7                | 56.9             |
| 1961-62..   | 2,229             | 15.19             | 1,271      | 16.75             | 324        | 13.57             | 209        | 38.5                | 57.8             |
| 1962-63..   | 2,595             | 14.77             | 1,053      | 17.10             | 416        | 13.88             | 287        | 40.4                | 58.3             |
| 1963-64..   | 2,802             | 19.26             | 1,123      | 21.67             | 501        | 18.27             | 358        | 41.7                | 58.7             |

(a) Wheat only to 1906-07, thence all kinds.

(b) Bearing and non-bearing.

(c) From 1949-50, private orchards and those no longer worked have been omitted.

(d) Statistics not collected and particulars estimated.

## RURAL PRODUCTION

## Livestock and Associated Produce; Farm Machinery

| Year       | Livestock Numbers |        |            |        | Wool Production<br>'000 Lb. | Milk Production<br>'000 Gal. | Slaughtering    |                   | Farm Machinery |                   |                  |
|------------|-------------------|--------|------------|--------|-----------------------------|------------------------------|-----------------|-------------------|----------------|-------------------|------------------|
|            | Sheep             | Cattle |            | Horses |                             |                              | Sheep and Lambs | Cattle and Calves | Tractors       | Shearing Machines | Milking Machines |
|            |                   | Total  | Dairy Cows |        |                             |                              |                 |                   |                |                   |                  |
|            | '000              | '000   | '000       | '000   |                             |                              | '000            | '000              | Number         | Number            | Number           |
| 1841-42 .. | 250               | 21     |            | 1      |                             |                              |                 |                   |                |                   |                  |
| 1846-47 .. | 681               | 57     |            | 2      |                             |                              |                 |                   |                |                   |                  |
| 1851-52 .. | 1,250             | 100    |            | 7      |                             |                              |                 |                   |                |                   |                  |
| 1856-57 .. | 1,962             | 273    |            | 22     |                             |                              |                 |                   |                |                   |                  |
| 1861-62 .. | 3,038             | 265    |            | 53     | 13,164                      |                              |                 |                   |                |                   |                  |
| 1866-67 .. | 3,912             | 124    |            | 71     | 19,740                      |                              |                 |                   |                |                   |                  |
| 1871-72 .. | 4,412             | 143    |            | 78     | 25,909                      |                              |                 |                   |                |                   |                  |
| 1876-77 .. | 6,133             | 219    |            | 107    | 42,445                      |                              |                 |                   |                |                   |                  |
| 1881-82 .. | 6,804             | 294    |            | 157    | 48,762                      |                              |                 |                   |                |                   |                  |
| 1886-87 .. | 6,542             | 285    |            | 166    | 50,561                      |                              |                 |                   |                |                   |                  |
| 1891-92 .. | 7,646             | 399    | 80         | 189    | 57,613                      |                              |                 |                   |                |                   |                  |
| 1896-97 .. | 6,324             | 337    | 84         | 180    | 51,936                      |                              |                 |                   |                |                   |                  |
| 1901-02 .. | 5,012             | 225    | 75         | 165    | 44,553                      |                              |                 |                   |                |                   |                  |
| 1906-07 .. | 6,625             | 326    | 98         | 207    | 48,928                      |                              |                 |                   |                |                   |                  |
| 1911-12 .. | 6,172             | 394    | 122        | 260    | 60,345                      | 28,000                       | 1,276           | 87                |                |                   |                  |
| 1916-17 .. | 5,091             | 289    | 114        | 257    | 37,534                      | 30,000                       | 686             | 62                |                |                   |                  |
| 1921-22 .. | 6,257             | 419    | 166        | 268    | 57,764                      | 41,400                       | 1,208           | 95                |                |                   |                  |
| 1926-27 .. | 7,284             | 340    | 127        | 234    | 72,365                      | 40,400                       | 1,091           | 143               | 1,820          |                   | 420              |
| 1927-28 .. | 7,542             | 316    | 118        | 224    | 78,370                      | 37,900                       | 1,210           | 142               | 2,503          |                   | 389              |
| 1928-29 .. | 7,080             | 263    | 109        | 206    | 74,616                      | 35,700                       | 1,263           | 128               | 2,979          |                   | 370              |
| 1929-30 .. | 6,186             | 205    | 104        | 189    | 67,301                      | 34,800                       | 1,243           | 118               | 3,730          |                   | 356              |
| 1930-31 .. | 5,981             | 219    | 110        | 184    | 63,479                      | 39,000                       | 1,309           | 90                | 3,991          |                   | 367              |
| 1931-32 .. | 6,609             | 265    | 128        | 185    | 67,021                      | 50,000                       | 1,379           | 81                | 3,992          |                   | 380              |
| 1932-33 .. | 7,713             | 313    | 149        | 190    | 75,728                      | 58,500                       | 1,279           | 89                | 4,067          |                   | 391              |
| 1933-34 .. | 7,941             | 353    | 164        | 197    | 79,289                      | 54,400                       | 1,495           | 104               | 4,072          |                   | 389              |
| 1934-35 .. | 7,885             | 346    | 170        | 199    | 77,791                      | 53,400                       | 1,591           | 140               | 4,122          |                   | 378              |
| 1935-36 .. | 7,946             | 335    | 174        | 197    | 81,709                      | 59,000                       | 1,643           | 154               | 4,292          |                   | 354              |
| 1936-37 .. | 7,905             | 328    | 170        | 201    | 76,604                      | 63,700                       | 1,697           | 166               | 4,563          |                   | 409              |
| 1937-38 .. | 8,904             | 324    | 165        | 197    | 86,606                      | 69,100                       | 1,589           | 167               | 5,312          |                   | 532              |
| 1938-39 .. | 9,937             | 319    | 165        | 196    | 102,888                     | 72,500                       | 2,007           | 160               | 5,969          |                   | 684              |
| 1939-40 .. | 9,941             | 351    | 173        | 190    | 105,266                     | 77,300                       | 2,094           | 151               | 6,154          |                   | 829              |
| 1940-41 .. | 10,263            | 377    | 179        | 182    | 106,647                     | 78,800                       | 2,164           | 157               | 6,351          |                   | 1,090            |
| 1941-42 .. | 10,246            | 399    | 179        | 171    | 105,124                     | 78,900                       | 2,070           | 154               | n.a.           |                   | n.a.             |
| 1942-43 .. | 10,371            | 424    | 185        | 165    | 108,637                     | 78,600                       | 2,272           | 171               | 6,705          | 2,976             | 1,659            |
| 1943-44 .. | 10,360            | 415    | 188        | 154    | 115,464                     | 78,200                       | 2,480           | 189               | 7,064          | 3,297             | 1,963            |
| 1944-45 .. | 8,474             | 391    | 187        | 133    | 106,708                     | 72,200                       | 3,065           | 175               | 8,044          | 3,770             | 2,206            |
| 1945-46 .. | 6,787             | 374    | 176        | 116    | 73,604                      | 79,400                       | 2,017           | 148               | 9,211          | 3,978             | 2,349            |
| 1946-47 .. | 7,959             | 424    | 187        | 109    | 93,020                      | 93,900                       | 1,662           | 146               | 9,456          | 4,306             | 2,839            |
| 1947-48 .. | 9,055             | 445    | 197        | 101    | 116,450                     | 92,500                       | 1,665           | 148               | 9,664          | 4,932             | 3,238            |
| 1948-49 .. | 9,366             | 461    | 203        | 94     | 114,905                     | 91,300                       | 2,011           | 189               | 11,271         | 5,817             | 3,665            |
| 1949-50 .. | 9,477             | 464    | 203        | 83     | 121,249                     | 89,400                       | 2,317           | 201               | 13,709         | 6,846             | 4,198            |
| 1950-51 .. | 10,167            | 433    | 184        | 71     | 125,384                     | 83,500                       | 2,022           | 218               | 16,128         | 8,134             | 4,590            |
| 1951-52 .. | 11,470            | 437    | 176        | 63     | 135,484                     | 86,500                       | 1,547           | 216               | 18,184         | 9,054             | 4,909            |
| 1952-53 .. | 12,037            | 483    | 183        | 57     | 158,658                     | 84,200                       | 2,353           | 187               | 19,750         | 9,733             | 5,418            |
| 1953-54 .. | 11,838            | 491    | 192        | 52     | 145,509                     | 85,000                       | 2,637           | 220               | 20,842         | 10,302            | 5,876            |
| 1954-55 .. | 12,817            | 524    | 199        | 49     | 155,761                     | 90,700                       | 2,799           | 233               | 23,110         | 11,452            | 6,363            |
| 1955-56 .. | 13,585            | 566    | 195        | 44     | 173,697                     | 90,300                       | 2,358           | 227               | 24,345         | 12,134            | 6,920            |
| 1956-57 .. | 14,984            | 622    | 195        | 41     | 188,808                     | 89,900                       | 2,329           | 252               | 26,012         | 12,690            | 7,208            |
| 1957-58 .. | 15,237            | 597    | 191        | 36     | 185,843                     | 80,600                       | 3,278           | 283               | 27,288         | 13,280            | 7,344            |
| 1958-59 .. | 15,634            | 576    | 188        | 33     | 186,842                     | 82,100                       | 3,145           | 287               | 28,532         | 13,778            | 7,537            |
| 1959-60 .. | 14,025            | 500    | 170        | 30     | 198,289                     | 78,600                       | 3,899           | 238               | 28,965         | 13,973            | 7,575            |
| 1960-61 .. | 14,952            | 561    | 170        | 27     | 177,413                     | 87,000                       | 2,784           | 174               | 30,674         | 14,317            | 7,589            |
| 1961-62 .. | 16,415            | 659    | 183        | 26     | 206,984                     | 95,500                       | 3,140           | 201               | 31,788         | 14,532            | 7,707            |
| 1962-63 .. | 15,737            | 679    | 190        | 25     | 207,344                     | 95,400                       | 3,467           | 254               | 31,671         | 14,595            | 7,553            |
| 1963-64 .. | 16,402            | 694    | 185        | (a)    | 210,500                     | 97,500                       | 2,996           | 279               | 33,231         | 14,885            | 7,438            |

(a) Not collected.

MINING AND FACTORY PRODUCTION

| Year | Mining                                    |           |          |                         | Factories                |  |                 |
|------|---|-----------|----------|-------------------------|--------------------------|--|-----------------|
|      | Quantities of Principal Minerals Produced |           |          | Value of Production (a) | Number of Establishments | Value of Land and Buildings, Plant and Machinery | Value of Output |
|      | Copper Ore and Concentrate                | Coal      | Iron Ore |                         |                          |  |                 |
| Tons | '000 Tons                                 | '000 Tons | £'000    |                         | £'000                    | £'000  |                 |
| 1846 | 6,461                                     |           |          | 142                     |                          |  |                 |
| 1851 | 7,717                                     |           |          | 311                     |                          |  |                 |
| 1856 | 11,791                                    |           |          | 412                     |                          |  |                 |
| 1861 | 11,259                                    |           |          | 460                     |                          |  |                 |
| 1866 | 23,287                                    |           |          | 829                     |                          |  |                 |
| 1871 | 26,522                                    |           |          | 674                     |                          |  |                 |
| 1876 | 28,145                                    |           |          | 602                     |                          |  |                 |
| 1881 | 25,462                                    |           |          | 421                     |                          |  |                 |
| 1886 | 18,417                                    |           |          | 277                     |                          |  |                 |
| 1891 | 16,627                                    |           | 7        | 276                     |                          |  |                 |
| 1896 | 4,951                                     |           | —        | 248                     |                          |  |                 |
| 1901 | 8,605                                     |           | —        | 340                     |                          |  |                 |
| 1906 | 8,208                                     |           | 75       | 826                     |                          |  |                 |
| 1911 | 5,922                                     |           | 42       | 450                     | 1,314                    | 5,580  | 12,416          |
| 1916 | 7,279                                     |           | 188      | 1,252                   | 1,266                    | 6,391  | 13,994          |
| 1921 | 1,532                                     |           | 507      | 1,043                   | 1,438                    | 8,969  | 22,358          |
| 1926 | 231                                       |           | 584      | 1,462                   | 1,791                    | 15,843   | 35,437          |
| 1927 | 201                                       |           | 722      | 1,627                   | 1,807                    | 16,950   | 36,888          |
| 1928 | 192                                       |           | 618      | 1,378                   | 1,860                    | 18,207   | 35,426          |
| 1929 | 277                                       |           | 848      | 1,635                   | 1,844                    | 19,317   | 33,677          |
| 1930 | 99  |           | 928      | 1,441                   | 1,814                    | 19,224   | 30,313          |
| 1931 | 22  |           | 289      | 649                     | 1,644                    | 18,602   | 19,997          |
| 1932 | —   |           | 538      | 943                     | 1,662                    | 17,657   | 19,292          |
| 1933 | 72  |           | 721      | 1,228                   | 1,710                    | 17,366   | 20,941          |
| 1934 | 207                                       |           | 1,244    | 1,862                   | 1,733                    | 17,151   | 22,919          |
| 1935 | 256                                       |           | 1,869    | 2,700                   | 1,803                    | 17,241   | 25,699          |
| 1936 | 451                                       |           | 1,887    | 2,752                   | 1,895                    | 17,549   | 31,904          |
| 1937 | 340                                       |           | 1,866    | 2,764                   | 1,916                    | 17,264   | 34,528          |
| 1938 | 254                                       |           | 2,245    | 3,307                   | 1,980                    | 17,782   | 36,240          |
| 1939 | 110                                       |           | 2,572    | 3,827                   | 2,067                    | 18,460   | 35,005          |
| 1940 | 308                                       |           | 2,313    | 3,724                   | 2,265                    | 20,645   | 37,697          |
| 1941 | 605                                       |           | 2,240    | 3,763                   | 2,230                    | 25,872   | 43,600          |
| 1942 | 392                                       |           | 2,122    | 3,413                   | 2,167                    | 33,474   | 59,896          |
| 1943 | 102                                       | 2         | 2,183    | 3,385                   | 2,134                    | 35,322   | 67,581          |
| 1944 | 135                                       | 35        | 2,029    | 3,225                   | 2,149                    | 36,045   | 67,578          |
| 1945 | 134                                       | 41        | 1,520    | 2,629                   | 2,182                    | 34,833   | 65,106          |
| 1946 | —   | 135       | 1,818    | 3,213                   | 2,395                    | 37,465   | 66,223          |
| 1947 | —   | 193       | 2,146    | 3,797                   | 2,707                    | 37,068   | 86,703          |
| 1948 | 4   | 240       | 2,035    | 3,998                   | 2,865                    | 40,930   | 104,571         |
| 1949 | 3   | 345       | 1,448    | 3,364                   | 2,927                    | 45,010   | 124,072         |
| 1950 | —   | 261       | 2,350    | 4,798                   | 3,046                    | 49,218   | 141,572         |
| 1951 | 2   | 388       | 2,401    | 5,458                   | 3,141                    | 50,061   | 192,623         |
| 1952 | 5   | 418       | 2,684    | 6,047                   | 3,245                    | 60,684   | 232,853         |
| 1953 | 2   | 448       | 2,591    | 6,203                   | 3,339                    | 72,015   | 234,813         |
| 1954 | 3   | 495       | 2,867    | 8,580                   | 3,577                    | 83,367   | 265,311         |
| 1955 | —   | 455       | 3,044    | (b)20,710               | 3,750                    | 94,277   | 293,061         |
| 1956 | 12  | 481       | 3,587    | 23,927                  | 3,908                    | 111,950  | 316,961         |
| 1957 | 39  | 609       | 3,389    | 23,176                  | 4,063                    | 127,190  | 325,105         |
| 1958 | 52  | 755       | 3,353    | 23,538                  | 4,168                    | 140,420  | 332,098         |
| 1959 | 66  | 690       | 3,423    | 24,666                  | 4,235                    | 151,027  | 342,757         |
| 1960 | 30  | 885       | 3,437    | 25,435                  | 4,684                    | 175,873  | 385,702         |
| 1961 | 8   | 1,115     | 3,991    | 29,121                  | 5,042                    | 200,829  | 401,628         |
| 1962 | 4   | 1,392     | 3,510    | 26,979                  | 5,519                    | 224,800  | 401,797         |
| 1963 | 16  | 1,512     | 4,242    | 31,216                  | 5,766                    | 253,286  | 457,037         |
| 1964 | 54  | 1,736     | 4,367    | 33,798                  | 5,826                    | 280,454  | 530,893         |

(a) Value at site of production. Quarries included from 1916.

(b) Comparability affected by revaluation of iron ore.

## GROSS VALUE OF RURAL PRODUCTION

| Year    | Agricultural |        |                        |        | Pastoral |        | Dairying | Total Rural Production |
|---------|--------------|--------|------------------------|--------|----------|--------|----------|------------------------|
|         | Wheat        | Barley | Vine and Orchard Fruit | Total  | Wool (a) | Total  |          |                        |
|         | £'000        | £'000  | £'000                  | £'000  | £'000    | £'000  | £'000    | £'000                  |
| 1908-09 | 4,243        | 129    | 637                    | 7,086  | 1,929    | 2,788  | 755      | 11,040                 |
| 1909-10 | 4,817        | 120    | 665                    | 7,381  | 2,197    | 3,115  | 746      | 11,683                 |
| 1910-11 | 4,210        | 87     | 786                    | 7,093  | 2,257    | 3,544  | 858      | 12,002                 |
| 1911-12 | 3,858        | 127    | 800                    | 7,482  | 1,918    | 2,894  | 847      | 11,768                 |
| 1912-13 | 3,851        | 233    | 935                    | 7,908  | 2,116    | 3,130  | 822      | 12,421                 |
| 1913-14 | 3,105        | 162    | 816                    | 6,200  | 1,995    | 2,933  | 852      | 10,568                 |
| 1914-15 | 1,279        | 123    | 577                    | 4,102  | 1,439    | 1,731  | 800      | 7,171                  |
| 1915-16 | 8,107        | 261    | 1,122                  | 12,406 | 1,630    | 1,220  | 905      | 15,059                 |
| 1916-17 | 10,864       | 299    | 827                    | 13,838 | 2,137    | 5,600  | 1,379    | 21,454                 |
| 1917-18 | 6,814        | 341    | 1,208                  | 10,292 | 2,974    | 6,134  | 1,437    | 18,558                 |
| 1918-19 | 6,308        | 631    | 1,430                  | 11,346 | 3,629    | 5,887  | 1,546    | 19,505                 |
| 1919-20 | 6,741        | 726    | 1,766                  | 13,728 | 3,666    | 5,224  | 1,707    | 21,597                 |
| 1920-21 | 13,704       | 840    | 1,906                  | 19,982 | 2,937    | 5,624  | 2,333    | 29,143                 |
| 1921-22 | 6,288        | 613    | 1,745                  | 11,610 | 2,876    | 4,148  | 1,839    | 18,637                 |
| 1922-23 | 7,076        | 682    | 1,884                  | 13,146 | 4,344    | 5,896  | 1,979    | 22,113                 |
| 1923-24 | 8,062        | 533    | 1,981                  | 14,156 | 5,306    | 7,739  | 2,485    | 25,480                 |
| 1924-25 | 9,286        | 824    | 2,199                  | 15,318 | 5,976    | 8,138  | 2,153    | 26,805                 |
| 1925-26 | 8,989        | 828    | 1,676                  | 14,154 | 4,296    | 6,465  | 2,086    | 23,814                 |
| 1926-27 | 9,526        | 843    | 2,042                  | 15,091 | 4,469    | 6,070  | 1,948    | 24,179                 |
| 1927-28 | 6,624        | 748    | 1,697                  | 11,628 | 5,669    | 7,292  | 2,062    | 22,232                 |
| 1928-29 | 6,423        | 869    | 1,955                  | 11,940 | 4,654    | 6,236  | 1,905    | 21,188                 |
| 1929-30 | 5,121        | 724    | 1,908                  | 10,529 | 2,549    | 4,091  | 1,946    | 17,528                 |
| 1930-31 | 4,046        | 446    | 1,621                  | 7,854  | 1,804    | 2,900  | 1,561    | 13,167                 |
| 1931-32 | 8,581        | 682    | 1,721                  | 12,645 | 1,921    | 2,726  | 1,570    | 17,722                 |
| 1932-33 | 6,548        | 685    | 1,732                  | 10,460 | 2,309    | 2,917  | 1,827    | 16,015                 |
| 1933-34 | 5,466        | 640    | 1,809                  | 9,767  | 4,506    | 5,304  | 1,554    | 17,388                 |
| 1934-35 | 5,159        | 777    | 1,940                  | 9,982  | 2,655    | 3,853  | 1,545    | 16,244                 |
| 1935-36 | 6,568        | 729    | 1,977                  | 11,431 | 4,058    | 5,443  | 1,898    | 19,563                 |
| 1936-37 | 7,477        | 883    | 2,095                  | 13,022 | 4,360    | 6,157  | 2,155    | 22,183                 |
| 1937-38 | 7,832        | 1,520  | 2,482                  | 14,727 | 4,071    | 5,722  | 2,645    | 24,120                 |
| 1938-39 | 4,290        | 1,023  | 2,027                  | 10,004 | 3,901    | 6,163  | 2,586    | 19,806                 |
| 1939-40 | 8,346        | 1,762  | 2,319                  | 15,066 | 5,235    | 7,396  | 2,793    | 26,244                 |
| 1940-41 | 4,190        | 1,160  | 2,437                  | 10,084 | 5,266    | 7,379  | 3,040    | 21,567                 |
| 1941-42 | 6,957        | 2,245  | 2,362                  | 15,071 | 5,147    | 6,937  | 3,367    | 26,508                 |
| 1942-43 | 9,700        | 1,355  | 3,240                  | 17,711 | 6,180    | 8,458  | 3,959    | 31,545                 |
| 1943-44 | 6,383        | 1,094  | 4,579                  | 16,044 | 6,533    | 9,139  | 4,404    | 31,502                 |
| 1944-45 | 3,033        | 966    | 3,142                  | 11,774 | 5,982    | 8,964  | 4,440    | 27,405                 |
| 1945-46 | 8,745        | 2,478  | 3,865                  | 20,217 | 4,137    | 7,267  | 4,980    | 34,699                 |
| 1946-47 | 13,843       | 3,799  | 4,141                  | 25,604 | 8,546    | 11,301 | 5,475    | 45,053                 |
| 1947-48 | 25,077       | 13,114 | 4,839                  | 49,738 | 16,303   | 18,743 | 6,263    | 77,807                 |
| 1948-49 | 16,225       | 5,121  | 5,043                  | 32,069 | 20,134   | 23,818 | 6,720    | 65,763                 |
| 1949-50 | 20,417       | 7,262  | 5,308                  | 40,853 | 28,134   | 31,529 | 8,074    | 83,797                 |
| 1950-51 | 22,793       | 9,902  | 6,860                  | 48,935 | 66,247   | 69,947 | 7,750    | 129,814                |
| 1951-52 | 22,644       | 13,853 | 10,191                 | 60,253 | 36,197   | 43,017 | 10,573   | 117,293                |
| 1952-53 | 28,651       | 21,064 | 9,580                  | 69,580 | 48,579   | 54,577 | 11,764   | 139,991                |
| 1953-54 | 21,969       | 14,402 | 10,394                 | 57,871 | 44,434   | 52,975 | 12,119   | 127,269                |
| 1954-55 | 20,796       | 11,622 | 8,713                  | 52,457 | 41,602   | 50,530 | 12,518   | 119,511                |
| 1955-56 | 19,257       | 12,613 | 10,168                 | 55,285 | 39,911   | 50,441 | 15,413   | 125,343                |
| 1956-57 | 22,423       | 17,011 | 11,633                 | 64,997 | 57,289   | 69,059 | 14,502   | 152,682                |
| 1957-58 | 10,485       | 9,786  | 12,217                 | 45,044 | 42,354   | 55,514 | 13,192   | 117,668                |
| 1958-59 | 21,896       | 19,945 | 11,992                 | 70,429 | 33,797   | 49,568 | 16,051   | 140,003                |
| 1959-60 | 8,248        | 5,500  | 10,697                 | 35,546 | 42,691   | 61,675 | 14,727   | 115,875                |
| 1960-61 | 34,000       | 18,989 | 12,262                 | 80,719 | 35,242   | 47,225 | 15,153   | 147,043                |
| 1961-62 | 25,757       | 11,476 | 13,525                 | 62,011 | 42,901   | 55,925 | 14,924   | 136,726                |
| 1962-63 | 28,143       | 9,576  | 12,930                 | 64,209 | 46,257   | 63,693 | 13,984   | 147,521                |
| 1963-64 | 38,830       | 13,199 | 14,905                 | 82,898 | 56,705   | 75,233 | 17,215   | 179,401                |

(a) Shares of profits from sale of wool under war time disposal schemes excluded.

NET VALUE OF PRODUCTION

| Year    | Rural        |          |          |         | Mining and Quarrying (a) | Other Primary (a) | Factories | Total Value of Production |
|---------|--------------|----------|----------|---------|--------------------------|-------------------|-----------|---------------------------|
|         | Agricultural | Pastoral | Dairying | Total   |                          |                   |           |                           |
|         | £'000        | £'000    | £'000    | £'000   | £'000                    | £'000             | £'000     | £'000                     |
| 1925-26 | 9,687        | 5,749    | 1,494    | 17,324  | 1,342                    | 769               | 12,674    | 32,109                    |
| 1926-27 | 9,877        | 5,349    | 1,478    | 17,049  | 1,462                    | 809               | 13,655    | 32,975                    |
| 1927-28 | 6,831        | 6,431    | 1,573    | 15,429  | 1,627                    | 892               | 13,488    | 31,436                    |
| 1928-29 | 6,420        | 5,456    | 1,361    | 13,757  | 1,378                    | 820               | 12,568    | 28,523                    |
| 1929-30 | 5,261        | 3,398    | 1,494    | 10,595  | 1,635                    | 842               | 10,977    | 24,049                    |
| 1930-31 | 2,184        | 2,342    | 1,142    | 6,026   | 1,441                    | 652               | 7,755     | 15,874                    |
| 1931-32 | 8,340        | 2,225    | 1,217    | 12,129  | 649                      | 678               | 6,962     | 20,418                    |
| 1932-33 | 6,282        | 2,388    | 1,419    | 10,379  | 943                      | 728               | 7,855     | 19,905                    |
| 1933-34 | 5,910        | 4,561    | 1,139    | 11,884  | 1,228                    | 722               | 8,641     | 22,476                    |
| 1934-35 | 6,376        | 3,181    | 1,121    | 11,060  | 1,862                    | 730               | 9,557     | 23,209                    |
| 1935-36 | 7,337        | 4,603    | 1,393    | 13,621  | 2,369                    | 744               | 11,670    | 28,404                    |
| 1936-37 | 9,057        | 5,217    | 1,388    | 16,134  | 2,437                    | 842               | 12,272    | 31,685                    |
| 1937-38 | 9,160        | 4,857    | 1,891    | 16,235  | 2,470                    | 879               | 13,820    | 33,425                    |
| 1938-39 | 5,489        | 5,055    | 1,944    | 12,951  | 2,954                    | 861               | 13,679    | 30,446                    |
| 1939-40 | 9,741        | 6,207    | 2,194    | 18,706  | 3,443                    | 965               | 14,404    | 37,518                    |
| 1940-41 | 6,145        | 6,213    | 2,102    | 14,931  | 3,329                    | 1,031             | 16,916    | 36,207                    |
| 1941-42 | 9,657        | 5,780    | 2,138    | 18,091  | 3,297                    | 1,247             | 24,566    | 47,201                    |
| 1942-43 | 12,247       | 7,132    | 3,104    | 23,344  | 2,950                    | 1,396             | 28,366    | 56,056                    |
| 1943-44 | 11,043       | 7,789    | 3,495    | 23,532  | 2,975                    | 1,480             | 28,411    | 56,398                    |
| 1944-45 | 6,998        | 7,695    | 3,456    | 19,557  | 2,935                    | 1,443             | 27,265    | 51,200                    |
| 1945-46 | 14,968       | 6,198    | 3,826    | 26,320  | 2,378                    | 1,708             | 25,602    | 56,008                    |
| 1946-47 | 19,762       | 9,585    | 4,242    | 35,285  | 2,969                    | 2,062             | 31,066    | 71,383                    |
| 1947-48 | 41,950       | 16,930   | 4,985    | 65,916  | 3,518                    | 2,429             | 38,670    | 110,533                   |
| 1948-49 | 23,951       | 21,456   | 5,256    | 52,773  | 3,597                    | 2,925             | 43,721    | 103,016                   |
| 1949-50 | 32,790       | 28,558   | 6,819    | 70,488  | 2,941                    | 2,907             | 52,353    | 128,689                   |
| 1950-51 | 36,402       | 65,797   | 6,314    | 110,712 | 4,188                    | 3,472             | 67,809    | 186,181                   |
| 1951-52 | 46,903       | 38,965   | 8,858    | 96,896  | 4,646                    | 4,431             | 83,247    | 189,219                   |
| 1952-53 | 51,244       | 49,918   | 9,427    | 112,870 | 5,153                    | 5,181             | 89,189    | 212,393                   |
| 1953-54 | 41,700       | 47,423   | 10,257   | 101,648 | 5,037                    | 5,799             | 100,221   | 212,706                   |
| 1954-55 | 39,181       | 45,220   | 10,665   | 96,898  | 7,101                    | 5,851             | 111,028   | 220,877                   |
| 1955-56 | 41,271       | 44,625   | 13,274   | 101,215 | (b)18,651                | 6,075             | 120,936   | 246,877                   |
| 1956-57 | 49,688       | 62,093   | 12,511   | 126,277 | 21,504                   | 5,983             | 126,766   | 280,530                   |
| 1957-58 | 32,317       | 44,863   | 7,825    | 86,752  | 20,625                   | 5,144             | 133,285   | 245,806                   |
| 1958-59 | 50,570       | 38,425   | 9,362    | 100,347 | 21,229                   | 5,627             | 139,810   | 267,013                   |
| 1959-60 | 24,246       | 50,067   | 9,141    | 85,225  | 22,155                   | 5,347             | 162,974   | 275,702                   |
| 1960-61 | 58,324       | 36,118   | 8,463    | 104,421 | 22,887                   | 5,506             | 170,062   | 302,876                   |
| 1961-62 | 45,467       | 45,628   | 9,913    | 102,242 | 26,312                   | 5,455             | 173,914   | 307,923                   |
| 1962-63 | 46,679       | 51,995   | 9,870    | 109,414 | 24,801                   | 5,787             | 189,571   | 329,573                   |
| 1963-64 | 62,542       | 62,989   | 10,676   | 137,360 | 28,918                   | 6,139             | 213,678   | 386,124                   |

(a) To 1934-35, local value, i.e. gross value less marketing costs.

(b) Comparability affected by revaluation of iron ore.

## STATISTICAL SUMMARY

## TRADE

## Direct Oversea Exports

| Year         | Value of Exports |                 |        |        |        | Proportion of Total Exports Classified by Principal Countries of Destination |               |          |          |               |
|--------------|------------------|-----------------|--------|--------|--------|--|---------------|----------|----------|---------------|
|              | Total            | Wheat and Flour | Barley | Wool   | Mining | U.K.   | Other British | U.S.A.   | Japan    | Other Foreign |
|              | £'000            | £'000           | £'000  | £'000  | £'000  | Per Cent   | Per Cent      | Per Cent | Per Cent | Per Cent      |
| 1861.....    | 919              | 38              |        | 651    | 181    | 89.46  | 10.54         |          |          |               |
| 1866.....    | 1,419            | 73              |        | 759    | 515    | 81.48  | 15.68         | 2.44     |          | 0.40          |
| 1871.....    | 1,815            | 289             |        | 974    | 372    | 89.62  | 7.79          |          |          | 2.59          |
| 1876.....    | 2,964            | 1,073           |        | 1,442  | 329    | 89.58  | 8.06          | 0.07     |          | 2.29          |
| 1881.....    | 3,156            | 923             |        | 1,748  | 244    | 82.03  | 15.71         | —        |          | 2.26          |
| 1886.....    | 2,938            | 210             |        | 1,754  | 563    | 86.90  | 6.00          | 0.04     |          | 7.06          |
| 1891.....    | 5,598            | 1,364           |        | 1,888  | 1,857  | 80.82  | 12.77         | 0.90     | 0.01     | 5.50          |
| 1896.....    | 4,055            | 111             |        | 1,519  | 1,939  | 56.39  | 23.25         | 0.28     | 1.38     | 18.70         |
| 1901.....    | 4,433            | 1,116           |        | 1,104  | 1,626  | 51.62  | 25.04         | 0.10     | 0.07     | 23.17         |
| 1906.....    | 6,871            | 2,390           |        | 1,680  | 1,787  | 51.68  | 17.82         | 0.24     | —        | 30.26         |
| 1911.....    | 10,175           | 3,835           | 1      | 2,004  | 3,097  | 45.96  | 11.66         | 0.13     | 0.04     | 42.21         |
| 1915-16..... | 6,136            | 1,756           | 10     | 1,412  | 2,374  | 42.92  | 12.37         | 21.15    | 0.00     | 23.56         |
| 1920-21..... | 17,774           | 11,938          | 587    | 3,017  | 414    | 59.87  | 8.12          | 1.16     | 0.00     | 30.85         |
| 1925-26..... | 19,450           | 7,412           | 137    | 4,432  | 5,373  | 51.94  | 11.55         | 1.16     | 6.88     | 28.47         |
| 1926-27..... | 17,123           | 7,094           | 351    | 4,148  | 3,485  | 44.30  | 11.09         | 0.93     | 2.25     | 41.43         |
| 1927-28..... | 18,030           | 5,415           | 232    | 4,894  | 4,495  | 45.87  | 11.43         | 1.80     | 2.23     | 38.67         |
| 1928-29..... | 14,812           | 3,911           | 211    | 4,232  | 4,013  | 44.64  | 20.01         | 1.12     | 0.43     | 33.80         |
| 1929-30..... | 15,009           | 3,867           | 78     | 2,244  | 4,605  | 58.25  | 9.63          | 1.59     | 3.30     | 27.23         |
| 1930-31..... | 10,253           | 3,039           | 343    | 1,503  | 2,828  | 54.15  | 8.51          | 0.78     | 2.38     | 34.20         |
| 1931-32..... | 12,247           | 5,902           | 413    | 1,621  | 1,641  | 58.75  | 4.49          | 0.63     | 3.34     | 32.79         |
| 1932-33..... | 12,817           | 5,225           | 320    | 2,290  | 1,894  | 61.74  | 3.06          | 0.14     | 7.92     | 27.14         |
| 1933-34..... | 12,686           | 2,731           | 294    | 3,763  | 2,781  | 66.60  | 4.74          | 0.48     | 5.07     | 23.11         |
| 1934-35..... | 11,836           | 4,140           | 346    | 2,440  | 2,160  | 61.66  | 8.35          | 0.77     | 7.26     | 21.96         |
| 1935-36..... | 15,346           | 4,510           | 354    | 3,781  | 3,430  | 67.44  | 9.81          | 1.11     | 6.66     | 14.98         |
| 1936-37..... | 16,748           | 4,945           | 432    | 4,072  | 3,660  | 68.26  | 7.17          | 2.23     | 2.73     | 19.61         |
| 1937-38..... | 19,057           | 6,924           | 747    | 3,268  | 3,954  | 71.37  | 7.94          | 0.99     | 1.01     | 18.69         |
| 1938-39..... | 14,841           | 3,030           | 279    | 3,461  | 3,553  | 67.76  | 14.37         | 1.06     | 1.59     | 15.22         |
| 1939-40..... | 15,958           | 2,486           | 364    | 5,226  | 3,159  | 75.40  | 9.66          | 0.88     | 1.91     | 12.15         |
| 1940-41..... | 13,197           | 4,308           | 113    | 3,028  | 1,303  | 50.46  | 19.18         | 15.48    | 5.29     | 9.16          |
| 1941-42..... | 14,812           | 1,931           | 169    | 5,559  | 3,110  | 32.02  | 21.26         | 34.14    | 1.01     | 8.23          |
| 1942-43..... | 9,423            | 2,043           | 61     | 3,229  | 1,042  | 45.27  | 32.67         | 15.12    | —        | 6.94          |
| 1943-44..... | 15,585           | 5,252           | 205    | 4,151  | 1,157  | 40.36  | 31.47         | 8.61     | —        | 19.56         |
| 1944-45..... | 19,167           | 6,588           | 57     | 4,059  | 2,794  | 42.34  | 25.42         | 13.18    | —        | 19.06         |
| 1945-46..... | 20,154           | 3,704           | 359    | 7,341  | 3,275  | 25.45  | 26.25         | 26.43    | 0.00     | 21.87         |
| 1946-47..... | 32,512           | 6,152           | 1,499  | 7,765  | 8,069  | 39.47  | 28.29         | 8.86     | 0.01     | 23.37         |
| 1947-48..... | 52,902           | 12,253          | 8,015  | 12,327 | 8,730  | 39.01  | 29.61         | 8.51     | 0.00     | 22.87         |
| 1948-49..... | 69,335           | 19,495          | 5,476  | 19,523 | 12,115 | 44.37  | 24.91         | 8.04     | 0.07     | 22.61         |
| 1949-50..... | 63,932           | 11,614          | 5,282  | 24,773 | 11,631 | 42.42  | 23.05         | 7.63     | 2.95     | 23.95         |
| 1950-51..... | 107,674          | 18,426          | 7,331  | 54,928 | 14,947 | 39.58  | 14.68         | 14.41    | 5.90     | 25.43         |
| 1951-52..... | 97,251           | 21,077          | 9,518  | 32,903 | 21,498 | 39.36  | 21.77         | 14.65    | 4.60     | 19.62         |
| 1952-53..... | 122,948          | 18,031          | 15,488 | 43,567 | 28,004 | 45.12  | 12.99         | 12.93    | 8.17     | 20.79         |
| 1953-54..... | 110,249          | 15,259          | 12,233 | 39,409 | 27,030 | 41.66  | 16.44         | 10.57    | 6.35     | 24.98         |
| 1954-55..... | 95,079           | 12,037          | 7,897  | 34,597 | 25,310 | 40.78  | 19.03         | 11.57    | 5.05     | 23.57         |
| 1955-56..... | 97,666           | 13,133          | 7,035  | 35,032 | 26,986 | 38.70  | 18.12         | 10.71    | 6.71     | 25.76         |
| 1956-57..... | 122,924          | 16,279          | 9,268  | 49,462 | 31,854 | 31.73  | 15.73         | 13.09    | 13.62    | 25.83         |
| 1957-58..... | 99,882           | 12,434          | 8,591  | 36,541 | 25,124 | 31.50  | 17.61         | 9.32     | 11.23    | 30.29         |
| 1958-59..... | 90,916           | 11,828          | 10,202 | 31,604 | 19,341 | 34.81  | 16.53         | 8.50     | 13.25    | 26.91         |
| 1959-60..... | 90,826           | 9,514           | 6,126  | 37,415 | 19,042 | 32.08  | 13.98         | 7.91     | 12.91    | 33.07         |
| 1960-61..... | 99,279           | 18,299          | 9,609  | 32,164 | 22,102 | 27.55  | 15.14         | 4.71     | 18.11    | 34.49         |
| 1961-62..... | 121,988          | 23,910          | 11,711 | 41,553 | 25,687 | 25.83  | 14.11         | 8.56     | 14.80    | 36.70         |
| 1962-63..... | 106,472          | 16,302          | 3,484  | 41,699 | 23,778 | 25.87  | 15.73         | 8.69     | 16.45    | 33.26         |
| 1963-64..... | 161,080          | 38,169          | 6,914  | 53,699 | 31,745 | 26.63  | 13.74         | 5.99     | 17.59    | 36.05         |

TRADE

Direct Oversea Imports; Retail Sales

| Year    | Value of Imports |   | Proportion of Total Imports Classified by Principal Countries of Origin |               |          |               | Value of Retail Sales of Goods |       |
|---------|------------------|---|---|---------------|----------|---------------|--------------------------------|-------|
|         | Total            | Metals, Metal Manufactures, and Machinery | U.K.  | Other British | U.S.A.   | Other Foreign | Motor Vehicles, etc.           | Total |
|         | £'000            | £'000                                     | Per Cent  | Per Cent      | Per Cent | Per Cent      | £'m                            | £'m   |
| 1861    | 1,378            | 155                                       | 80.14   | 11.26         | 0.32     | 8.28          |                                |       |
| 1866    | 2,097            | 285                                       | 89.69   | 6.33          | 1.80     | 2.18          |                                |       |
| 1871    | 1,446            | 171                                       | 81.85   | 11.67         | 1.45     | 5.03          |                                |       |
| 1876    | 3,214            | 542                                       | 81.30   | 12.27         | 1.44     | 4.99          |                                |       |
| 1881    | 3,566            | 511                                       | 79.06   | 13.72         | 3.80     | 3.42          |                                |       |
| 1886    | 2,501            | 385                                       | 78.90   | 8.46          | 6.82     | 5.82          |                                |       |
| 1891    | 4,031            | 822                                       | 71.36   | 7.77          | 7.91     | 12.96         |                                |       |
| 1896    | 3,238            | 599                                       | 68.59   | 8.35          | 7.82     | 15.24         |                                |       |
| 1901    | 3,927            | 716                                       | 56.91   | 9.11          | 14.17    | 19.81         |                                |       |
| 1906    | 3,983            | 1,052                                     | 63.10   | 12.70         | 10.17    | 14.03         |                                |       |
| 1911    | 6,245            | 2,066                                     | 58.60   | 10.83         | 12.81    | 17.76         |                                |       |
| 1915-16 | 5,152            | 1,408                                     | 47.68   | 15.80         | 19.81    | 16.71         |                                |       |
| 1920-21 | 12,382           | 3,279                                     | 42.07   | 13.66         | 21.25    | 23.02         |                                |       |
| 1925-26 | 14,080           | 5,301                                     | 43.30   | 14.53         | 27.84    | 14.33         |                                |       |
| 1926-27 | 15,507           | 6,387                                     | 42.72   | 13.19         | 29.98    | 14.11         |                                |       |
| 1927-28 | 12,509           | 4,694                                     | 44.51   | 11.12         | 27.62    | 16.75         |                                |       |
| 1928-29 | 11,306           | 3,954                                     | 42.31   | 13.84         | 25.88    | 17.97         |                                |       |
| 1929-30 | 9,360            | 2,957                                     | 42.01   | 13.82         | 26.12    | 18.05         |                                |       |
| 1930-31 | 3,916            | 901                                       | 36.96   | 19.93         | 16.66    | 26.45         |                                |       |
| 1931-32 | 2,822            | 448                                       | 37.88   | 29.42         | 14.00    | 18.70         |                                |       |
| 1932-33 | 3,761            | 570                                       | 35.49   | 29.32         | 14.34    | 20.85         |                                |       |
| 1933-34 | 3,679            | 846                                       | 41.48   | 22.82         | 14.84    | 20.86         |                                |       |
| 1934-35 | 3,966            | 1,148                                     | 42.91   | 19.69         | 15.75    | 21.65         |                                |       |
| 1935-36 | 5,420            | 1,808                                     | 38.65   | 18.73         | 21.16    | 21.46         |                                |       |
| 1936-37 | 5,438            | 1,839                                     | 42.50   | 19.20         | 15.79    | 22.51         |                                |       |
| 1937-38 | 7,474            | 2,953                                     | 36.49   | 17.70         | 23.19    | 22.62         |                                |       |
| 1938-39 | 5,851            | 1,962                                     | 37.74   | 20.56         | 17.13    | 24.57         |                                |       |
| 1939-40 | 6,718            | 1,628                                     | 34.89   | 25.21         | 14.43    | 25.47         |                                |       |
| 1940-41 | 5,462            | 1,579                                     | 38.09   | 27.17         | 12.01    | 22.73         |                                |       |
| 1941-42 | 7,462            | 2,582                                     | 28.11   | 34.70         | 12.36    | 24.83         |                                |       |
| 1942-43 | 5,859            | 1,790                                     | 20.56   | 46.11         | 14.44    | 18.89         |                                |       |
| 1943-44 | 4,781            | 1,064                                     | 24.97   | 32.40         | 33.53    | 9.10          |                                |       |
| 1944-45 | 4,657            | 694                                       | 24.49   | 40.45         | 19.91    | 15.15         |                                |       |
| 1945-46 | 8,778            | 1,811                                     | 62.28   | 16.70         | 10.13    | 10.89         |                                |       |
| 1946-47 | 11,938           | 3,394                                     | 35.25   | 30.26         | 13.79    | 20.65         |                                |       |
| 1947-48 | 22,954           | 6,370                                     | 37.96   | 25.93         | 15.45    | 20.61         |                                |       |
| 1948-49 | 30,457           | 10,839                                    | 49.33   | 23.75         | 9.02     | 17.90         |                                |       |
| 1949-50 | 45,755           | 22,167                                    | 52.15   | 17.96         | 8.81     | 21.08         |                                |       |
| 1950-51 | 56,001           | 25,223                                    | 48.31   | 18.19         | 8.42     | 25.08         |                                |       |
| 1951-52 | 93,031           | 40,225                                    | 39.99   | 17.49         | 9.37     | 33.14         |                                |       |
| 1952-53 | 43,275           | 20,728                                    | 43.53   | 16.56         | 11.71    | 28.16         | 42.2                           | 178.1 |
| 1953-54 | 51,472           | 23,571                                    | 50.63   | 19.41         | 8.93     | 21.03         | 48.8                           | 196.0 |
| 1954-55 | 64,804           | 31,572                                    | 49.18   | 16.70         | 13.28    | 20.83         | 56.7                           | 218.4 |
| 1955-56 | 62,752           | 32,328                                    | 49.17   | 13.94         | 11.70    | 25.18         | 61.8                           | 235.7 |
| 1956-57 | 45,407           | 20,268                                    | 44.01   | 19.12         | 12.26    | 24.54         | 62.4                           | 243.5 |
| 1957-58 | 47,103           | 20,396                                    | 46.37   | 19.32         | 11.91    | 22.33         | 62.7                           | 246.3 |
| 1958-59 | 45,346           | 20,267                                    | 42.08   | 20.27         | 11.50    | 26.08         | 69.0                           | 262.6 |
| 1959-60 | 59,747           | 28,981                                    | 43.89   | 15.83         | 12.15    | 28.06         | 80.1                           | 298.4 |
| 1960-61 | 71,382           | 36,285                                    | 32.66   | 19.65         | 17.61    | 30.01         | 78.1                           | 302.6 |
| 1961-62 | 51,693           | 23,387                                    | 31.95   | 18.91         | 21.87    | 27.17         | 71.6                           | 297.4 |
| 1962-63 | 69,913           | 35,910                                    | 31.83   | 16.63         | 22.92    | 28.62         | 89.9                           | 329.2 |
| 1963-64 | 89,825           | 47,151                                    | 24.75   | 13.62         | 30.63    | 31.00         | 104.5                          | 365.3 |

## TRANSPORT AND COMMUNICATIONS

## Public Transport

| Year      | Railways              |                  |           | Trams and Buses       |           | Civil Aviation        |                    | Shipping<br>(Entering<br>S.A.)<br>'000 Net<br>Tons |
|-----------|-----------------------|------------------|-----------|-----------------------|-----------|-----------------------|--------------------|--|
|           | Passengers<br>Carried | Goods<br>Carried | Revenue   | Passengers<br>Carried | Revenue   | Passengers<br>Carried | Freight<br>Carried |  |
|           | '000                  | '000 Tons        | £'000     | '000                  | £'000     | '000                  | Short Tons         |  |
| 1841..... |                       |                  |           |                       |           |                       |                    | 18   |
| 1846..... |                       |                  |           |                       |           |                       |                    | 25   |
| 1851..... |                       |                  |           |                       |           |                       |                    | 75   |
| 1856..... | 248                   | 32               | 22        |                       |           |                       |                    | 114  |
| 1861..... | 310                   | 145              | 93        |                       |           |                       |                    | 103  |
| 1866..... | 425                   | 171              | 118       |                       |           |                       |                    | 169  |
| 1871..... | 394                   | 228              | 117       |                       |           |                       |                    | 187  |
| 1876..... | 1,400                 | 387              | 201       |                       |           |                       |                    | 347  |
| 1881..... | 2,902                 | 683              | 418       |                       |           |                       |                    | 641  |
| 1886..... | 3,962                 | 779              | 549       |                       |           |                       |                    | 771  |
| 1891..... | 5,296                 | 1,427            | 1,224     |                       |           |                       |                    | 1,288  |
| 1896..... | 5,436                 | 1,057            | 987       |                       |           |                       |                    | 1,661  |
| 1901..... | 8,864                 | 1,628            | 1,237     |                       |           |                       |                    | 1,967  |
| 1906..... | 10,715                | 1,732            | 1,350     |                       |           |                       |                    | 2,785  |
| 1911..... | 16,620                | 2,731            | 2,015     | 34,013                | 240       |                       |                    | 3,625  |
| 1916..... | 20,513                | 2,397            | 1,965     | 43,372                | 324       |                       |                    | 2,566  |
| 1921..... | 23,788                | 2,682            | 2,942     | 55,324                | 555       |                       |                    | 2,887  |
| 1926..... | 25,752                | 3,563            | 4,262     | 66,207                | 661       |                       |                    | 4,526  |
| 1927..... | 25,985                | 3,687            | 4,144     | 67,570                | 675       |                       |                    | 5,123  |
| 1928..... | 20,881                | 3,418            | 4,000     | 68,546                | 696       |                       |                    | 4,873  |
| 1929..... | 17,886                | 2,762            | 3,619     | 66,578                | 678       |                       |                    | 4,640  |
| 1930..... | 17,862                | 2,669            | 3,299     | 59,853                | 757       |                       |                    | 5,024  |
| 1931..... | 15,453                | 2,175            | 2,601     | 52,756                | 722       |                       |                    | 4,166  |
| 1932..... | 15,608                | 2,430            | 2,757     | 48,467                | 660       |                       |                    | 4,139  |
| 1933..... | 16,074                | 2,401            | 2,745     | 48,154                | 643       |                       |                    | 4,375  |
| 1934..... | 16,325                | 2,155            | 2,571     | 47,021                | 628       |                       |                    | 4,387  |
| 1935..... | 16,660                | 2,347            | 2,669     | 48,118                | 639       |                       |                    | 4,974  |
| 1936..... | 17,431                | 2,482            | 2,891     | 50,625                | 674       |                       |                    | 5,318  |
| 1937..... | 17,777                | 2,400            | 3,022     | 52,082                | 699       |                       |                    | 5,292  |
| 1938..... | 17,632                | 2,897            | 3,299     | 51,674                | 692       |                       |                    | 5,711  |
| 1939..... | 17,529                | 2,661            | 3,133     | 52,906                | 711       | 9                     | 108                | 5,761  |
| 1940..... | 17,642                | 2,700            | 3,184     | 52,928                | 714       | n.a.                  | n.a.               | 4,629  |
| 1941..... | 20,360                | 2,770            | 3,530     | 56,518                | 768       | n.a.                  | n.a.               | 3,047  |
| 1942..... | 28,513                | 3,128            | 4,964     | 69,132                | 946       | n.a.                  | n.a.               | 2,447  |
| 1943..... | 30,864                | 3,460            | 5,832     | 85,133                | 1,154     | n.a.                  | n.a.               | 1,589  |
| 1944..... | 27,356                | 3,673            | 6,002     | 91,312                | 1,223     | n.a.                  | n.a.               | 1,814  |
| 1945..... | 24,820                | 3,502            | 5,484     | 95,035                | 1,281     | n.a.                  | n.a.               | 1,868  |
| 1946..... | 23,119                | 2,997            | 4,897     | 90,239                | 1,235     | n.a.                  | n.a.               | 1,733  |
| 1947..... | 19,827                | 3,093            | 4,622     | 91,238                | 1,297     | 160                   | 2,048              | 3,086  |
| 1948..... | 19,067                | 3,396            | 5,110     | 89,661                | 1,331     | 230                   | 3,966              | 3,651  |
| 1949..... | 18,210                | 3,544            | 5,885     | 82,939                | 1,542     | 263                   | 5,573              | 4,365  |
| 1950..... | 17,385                | 3,425            | (a) 6,549 | 77,999                | 1,467     | 266                   | 6,941              | 5,217  |
| 1951..... | 17,178                | 3,519            | 7,358     | 78,141                | 1,619     | 298                   | 8,363              | 5,283  |
| 1952..... | 18,269                | 4,966            | 9,511     | 75,436                | 1,842     | 323                   | 7,745              | 5,529  |
| 1953..... | 17,565                | 4,172            | 12,488    | 66,571                | (b) 2,116 | 295                   | 9,028              | 5,900  |
| 1954..... | 17,605                | 4,457            | 12,924    | 66,972                | 2,072     | 272                   | 11,457             | 6,108  |
| 1955..... | 16,849                | 4,497            | 13,261    | 66,446                | 2,134     | 310                   | 12,514             | 6,123  |
| 1956..... | 16,434                | 4,436            | 13,331    | 63,515                | 2,334     | 329                   | 12,539             | 6,282  |
| 1957..... | 17,406                | 4,518            | 14,066    | 62,190                | 2,289     | 334                   | 12,003             | 6,360  |
| 1958..... | 17,564                | 4,166            | 13,516    | 60,083                | 2,494     | 337                   | 10,143             | 6,569  |
| 1959..... | 16,805                | 4,227            | 13,089    | 59,613                | 2,528     | 402                   | 9,802              | 6,744  |
| 1960..... | 17,038                | 4,059            | 12,826    | 58,168                | 2,820     | 463                   | 9,990              | 6,745  |
| 1961..... | 15,574                | 4,537            | 13,942    | 56,155                | 2,758     | 449                   | 9,254              | 7,613  |
| 1962..... | 15,176                | 4,638            | 13,992    | 55,093                | 2,715     | 446                   | 8,591              | 7,646  |
| 1963..... | 14,922                | 4,530            | 13,913    | 58,039                | 2,718     | 493                   | 9,035              | 7,886  |
| 1964..... | 15,227                | 5,213            | 14,837    | 58,571                | 2,617     | 548                   | 9,621              | 9,486  |

(a) Excludes Treasury grant from 1950.

(b) Excludes Government grant from 1953.



TRANSPORT AND COMMUNICATIONS

Private Transport and Communications

| Year | Motor Vehicles on Register |                     |            | Drivers' and Riders' Licences in Force | Telephone Services in Operation | Radio Licences Existing | Post Office Revenue |               |           |
|------|----------------------------|---------------------|------------|--|---------------------------------|-------------------------|---------------------|---------------|-----------|
|      | Cars and Station Waggons   | Cycles and Scooters | Total      |  |                                 |                         | Postal, Etc.        | Telegraph (a) | Telephone |
|      | Number                     | Number              | Number     | Number                                 | Number                          | Number                  | £'000               | £'000         | £'000     |
| 1851 |                            |                     |            |  |                                 |                         | 7                   |               |           |
| 1856 |                            |                     |            |  |                                 |                         | 9                   |               |           |
| 1861 |                            |                     |            |  |                                 |                         | 16                  | 7             |           |
| 1866 |                            |                     |            |  |                                 |                         | 28                  | 12            |           |
| 1871 |                            |                     |            |  |                                 |                         | 29                  | 11            |           |
| 1876 |                            |                     |            |  |                                 |                         | 57                  | 32            |           |
| 1881 |                            |                     |            |  |                                 |                         | 83                  | 61            |           |
| 1886 |                            |                     |            |  |                                 |                         | 107                 | 80            |           |
| 1891 |                            |                     |            |  |                                 |                         | 113                 | 101           |           |
| 1896 |                            |                     |            |  |                                 |                         | 125                 | 121           |           |
| 1901 |                            |                     |            |  |                                 |                         | 141                 | 131           |           |
| 1906 |                            |                     |            |  |                                 | 1,831                   | 171                 | 91            | 30        |
| 1911 |                            |                     |            |  |                                 | 6,086                   | 245                 | 117           | 46        |
| 1916 |                            |                     |            |  |                                 | 10,184                  | 242                 | 138           | 106       |
| 1921 | 13,178                     | 7,269               | 21,407     |  | 15,984                          |                         | 381                 | 210           | 234       |
| 1926 | 42,540                     | 11,811              | 62,540     | 79,659                                 | 33,547                          | 12,105                  | 433                 | 201           | 452       |
| 1927 | 50,603                     | 12,532              | 74,096     | 88,695                                 | 37,132                          | 15,904                  | 464                 | 223           | 513       |
| 1928 | 54,892                     | 12,321              | 79,637     | 92,198                                 | 40,407                          | 20,247                  | 405                 | 175           | 625       |
| 1929 | 58,227                     | 13,609              | 85,472     | 82,973                                 | 42,186                          | 23,927                  | 438                 | 180           | 625       |
| 1930 | (b)50,391                  | (b) 9,872           | (b)72,590  | 94,381                                 | 42,868                          | 25,651                  | 435                 | 170           | 633       |
| 1931 | 45,140                     | 10,045              | 67,324     | 106,053                                | 39,552                          | 32,075                  | 440                 | 141           | 584       |
| 1932 | 46,558                     | 9,736               | 68,932     | 81,300                                 | 37,815                          | 43,268                  | 436                 | 136           | 530       |
| 1933 | 46,413                     | 10,455              | 71,065     | 89,507                                 | 37,339                          | 55,639                  | 456                 | 159           | 538       |
| 1934 | 48,939                     | 10,470              | 76,676     | 96,916                                 | 37,713                          | 72,337                  | 467                 | 162           | 538       |
| 1935 | 49,496                     | 10,741              | 77,394     | 93,258                                 | 38,652                          | 81,629                  | 477                 | 169           | 560       |
| 1936 | 53,728                     | 11,110              | 84,253     | 92,227                                 | 39,911                          | 93,881                  | 508                 | 164           | 599       |
| 1937 | 56,101                     | 10,802              | 88,631     | 135,320                                | 41,467                          | 105,045                 | 524                 | 178           | 640       |
| 1938 | 60,537                     | 10,213              | 95,735     | 137,627                                | 43,307                          | 115,571                 | 549                 | 187           | 685       |
| 1939 | 59,345                     | 9,492               | 94,577     | 138,089                                | 45,224                          | 120,584                 | 557                 | 200           | 709       |
| 1940 | 58,184                     | 9,215               | 91,898     | 129,950                                | 46,767                          | 127,995                 | 570                 | 212           | 758       |
| 1941 | 54,528                     | 7,262               | 86,172     | 122,280                                | 47,962                          | 136,457                 | 626                 | 229           | 761       |
| 1942 | 53,558                     | 5,882               | 82,023     | 106,455                                | 48,747                          | 144,209                 | 794                 | 276           | 866       |
| 1943 | 56,608                     | 6,329               | 86,651     | 113,556                                | 49,152                          | 153,356                 | 929                 | 409           | 979       |
| 1944 | 59,271                     | 7,139               | 91,316     | 105,951                                | 50,161                          | 155,717                 | 1,024               | 408           | 1,012     |
| 1945 | 61,372                     | 8,793               | 97,124     | 117,310                                | 51,266                          | 159,881                 | 1,046               | 415           | 1,050     |
| 1946 | 64,370                     | 11,418              | 107,238    | 137,979                                | 53,126                          | 170,782                 | 960                 | 407           | 1,085     |
| 1947 | 67,449                     | 13,029              | 115,226    | 149,304                                | 56,449                          | 189,484                 | 994                 | 437           | 1,173     |
| 1948 | 75,741                     | 15,353              | 127,458    | 159,814                                | 60,249                          | 205,595                 | 1,095               | 473           | 1,254     |
| 1949 | 84,331                     | 18,506              | 143,539    | 172,063                                | 64,008                          | 219,832                 | 1,172               | 424           | 1,381     |
| 1950 | 97,501                     | 20,427              | 163,888    | 192,469                                | 69,907                          | 234,984                 | 1,273               | 585           | 1,768     |
| 1951 | 108,941                    | 23,441              | 183,553    | 215,157                                | 74,457                          | 253,480                 | 1,469               | 775           | 2,136     |
| 1952 | 120,523                    | 23,982              | 200,449    | 232,119                                | 80,919(c)210,795                |                         | 1,936               | 909           | 2,794     |
| 1953 | 129,663                    | 23,383              | 214,270    | 252,216                                | 86,977                          | 215,096                 | 2,043               | 596           | 3,035     |
| 1954 | 139,704                    | 22,541              | 226,866    | 265,727                                | 93,104                          | 221,262                 | 2,156               | 556           | 3,364     |
| 1955 | 150,597                    | 21,322              | 236,233    | 281,091                                | 100,171                         | 226,801                 | 2,335               | 514           | 3,633     |
| 1956 | 159,821                    | 20,614              | 246,587    | 299,158                                | 107,649                         | 231,367                 | 2,517               | 538           | 4,033     |
| 1957 | 168,591                    | 19,490              | 255,609    | 315,044                                | 114,390                         | 235,583                 | 2,790               | 679           | 4,496     |
| 1958 | 179,216                    | 18,836              | 266,563    | 328,833                                | 122,311                         | 244,622                 | 2,938               | 693           | 4,975     |
| 1959 | 187,052                    | 16,732              | 270,934    | 340,973                                | 131,060                         | 249,540                 | 3,123               | 711           | 5,262     |
| 1960 | (d)216,906                 | (d)17,487           | (d)312,161 | 369,584                                | 138,019                         | 250,971                 | 3,680               | 743           | 6,352     |
| 1961 | 226,876                    | 16,564              | 319,422    | 393,869                                | 144,502                         | 250,605                 | 3,865               | 822           | 7,272     |
| 1962 | 241,637                    | 15,207              | 332,734    | 397,803                                | 152,785                         | 250,265                 | 3,881               | 717           | 7,802     |
| 1963 | 259,904                    | 13,967              | 350,590    | 414,656                                | 162,012                         | 261,115                 | 4,161               | 796           | 8,254     |
| 1964 | 239,685                    | 12,595              | 370,762    | 439,061                                | 173,314                         | 264,707                 | 4,354               | 926           | 9,590     |

(a) Includes telephone to 1901, and radio to 1948 (licence fees then excluded from Post Office revenue).

(b) Vehicles in actual use on roads from 1930.

(c) All receivers at the one address covered by one licence from 1952.

(d) New series commenced in 1960.

## STATISTICAL SUMMARY

## PUBLIC FINANCE

| Year  | State Government |              |                 |             |          | State Taxation | Local Government Revenue |                   |       |
|-------|------------------|--------------|-----------------|-------------|----------|----------------|--------------------------|-------------------|-------|
|       | Total Revenue    | Expenditure  |                 | Public Debt |          |                | From Rates               | Government Grants | Total |
|       |                  | From Revenue | From Loan (Net) | Total       | Per Head |                |                          |                   |       |
| £'000 | £'000            | £'000        | £'000           | £ s.        | £'000    | £'000          | £'000                    | £'000             |       |
| 1841  | 25               | 90           |                 |             |          |                |                          |                   |       |
| 1846  | 47               | 39           |                 |             |          |                |                          |                   |       |
| 1851  | 223              | 184          |                 |             |          | 101            |                          |                   |       |
| 1856  | 480              | 580          |                 | 295         | 2 15     | 163            |                          | 57                |       |
| 1861  | 559              | 483          |                 | 867         | 6 12     | 141            | 23                       | 20                |       |
| 1866  | 950              | 1,064        |                 | 776         | 4 12     | 239            | 30                       | 81                |       |
| 1871  | 778              | 759          |                 | 2,168       | 11 10    | 249            | 40                       | 37                |       |
| 1876  | 1,320            | 1,323        |                 | 3,837       | 17 2     | 460            | 59                       | 40                |       |
| 1881  | 2,172            | 2,054        |                 | 11,197      | 39 3     | 584            | 94                       | 68                |       |
| 1886  | 2,279            | 2,383        | 1,400           | 18,340      | 59 6     | 802            | 104                      | 54                |       |
| 1891  | 2,732            | 2,603        | 484             | 21,657      | 67 18    | 827            | 138                      | 127               |       |
| 1896  | 2,521            | 2,509        | 443             | 24,216      | 68 16    | 800            | 132                      | 97                |       |
| 1901  | 2,824            | 2,847        | 422             | 26,064      | 73 4     | 602            | 151                      | 111               |       |
| 1906  | 2,806            | 2,719        | 450             | 30,083      | 82 18    | 367            | 174                      | 99                |       |
| 1911  | 4,181            | 3,964        | 1,876           | (a)28,032   | 68 5     | 546            | 241                      | 168               |       |
| 1916  | 4,357            | 4,741        | 2,186           | 39,524      | 89 14    | 702            | 326                      | 151               |       |
| 1921  | 7,151            | 7,544        | 4,675           | 52,363      | 105 7    | 1,622          | 493                      | 290               |       |
| 1926  | 10,474           | 10,461       | 6,430           | 80,261      | 145 1    | 2,714          | 820                      | 471               |       |
| 1927  | 10,785           | 11,835       | 6,074           | 86,560      | 153 4    | 2,885          | 902                      | 470               |       |
| 1928  | 11,347           | 11,622       | 4,932           | 90,612      | 158 12   | 3,736          | 954                      | 516               |       |
| 1929  | 10,841           | 11,772       | 3,528           | 91,654      | 161 18   | 3,768          | 988                      | 564               |       |
| 1930  | 10,551           | 12,177       | 2,488           | 93,419      | 163 0    | 3,488          | 971                      | 502               |       |
| 1931  | 10,726           | 12,540       | 3,291           | 99,527      | 172 17   | 3,400          | 836                      | 199               |       |
| 1932  | 10,482           | 11,545       | 284             | 101,599     | 175 15   | 3,076          | 792                      | 251               |       |
| 1933  | 10,161           | 11,170       | 3,519           | 103,707     | 178 10   | 2,733          | 786                      | 314               |       |
| 1934  | 10,188           | 11,032       | 1,680           | 105,419     | 180 14   | 2,925          | 787                      | 245               |       |
| 1935  | 11,002           | 10,965       | 566             | 105,350     | 180 1    | 3,267          | 605                      | 279               |       |
| 1936  | 11,409           | 11,260       | 1,251           | 105,698     | 179 17   | 3,267          | 833                      | 255               |       |
| 1937  | 11,739           | 11,600       | 826             | 106,594     | 180 18   | 3,610          | 837                      | 293               |       |
| 1938  | 12,461           | 12,334       | 615             | 107,451     | 181 4    | 3,998          | 872                      | 305               |       |
| 1939  | 12,304           | 12,701       | 421             | 108,887     | 182 11   | 4,199          | 889                      | 384               |       |
| 1940  | 12,756           | 12,918       | 627             | 109,344     | 182 10   | 4,620          | 918                      | 343               |       |
| 1941  | 12,925           | 13,008       | 1,274           | 109,780     | 182 13   | 4,420          | 925                      | 288               |       |
| 1942  | 15,002           | 13,712       | 132             | 109,190     | 179 10   | 4,791          | 955                      | 169               |       |
| 1943  | 15,193           | 14,960       | Cr. 820         | 108,429     | 176 17   | (b)1,545       | 976                      | 138               |       |
| 1944  | 15,545           | 15,530       | Cr. 448         | 108,305     | 174 16   | 1,689          | 962                      | 150               |       |
| 1945  | 16,113           | 16,113       | Cr. 41          | 108,871     | 173 10   | 1,972          | 968                      | 183               |       |
| 1946  | 16,343           | 16,343       | 1,709           | 110,749     | 174 8    | 2,055          | 1,020                    | 226               |       |
| 1947  | 17,193           | 17,253       | 2,211           | 114,130     | 176 12   | 2,271          | 1,136                    | 348               |       |
| 1948  | 18,843           | 19,156       | 2,482           | 118,852     | 179 15   | 2,431          | 1,305                    | 462               |       |
| 1949  | 21,845           | 22,129       | 4,641           | 124,720     | 183 12   | 3,030          | 1,484                    | 553               |       |
| 1950  | 29,360           | 29,550       | 8,670           | 133,175     | 187 14   | 3,472          | 1,624                    | 748               |       |
| 1951  | 33,672           | 33,443       | 16,936          | 148,388     | 202 12   | 4,346          | 1,915                    | 981               |       |
| 1952  | 42,638           | 42,549       | 26,437          | 173,436     | 229 14   | 5,150          | 2,343                    | 1,289             |       |
| 1953  | 49,101           | 49,076       | 20,442          | 194,853     | 251 3    | 5,340          | 2,880                    | 1,153             |       |
| 1954  | 52,376           | 50,566       | 19,940          | 214,723     | 269 8    | 6,909          | 3,262                    | 1,934             |       |
| 1955  | 51,884           | 54,118       | 21,456          | 236,462     | 288 11   | 7,919          | 3,521                    | 1,918             |       |
| 1956  | 59,403           | 60,832       | 21,333          | 256,090     | 301 16   | 8,497          | 4,081                    | 2,190             |       |
| 1957  | 65,761           | 65,810       | 21,896          | 276,440     | 316 12   | 9,733          | 4,782                    | 2,367             |       |
| 1958  | 70,642           | 71,042       | 18,576          | 296,814     | 331 0    | 10,172         | 5,167                    | 2,424             |       |
| 1959  | 72,680           | 73,707       | 20,721          | 317,702     | 345 0    | 10,576         | 5,530                    | 2,474             |       |
| 1960  | 80,277           | 80,589       | 21,716          | 339,105     | 358 15   | 11,522         | 5,986                    | 2,739             |       |
| 1961  | 86,279           | 85,091       | 22,825          | 361,019     | 372 9    | 12,101         | 6,538                    | (c)1,762          |       |
| 1962  | 93,202           | 92,696       | 21,887          | 381,699     | 385 16   | 12,951         | 7,443                    | 1,492             |       |
| 1963  | 97,584           | 97,294       | 21,023          | 403,522     | 399 19   | 13,845         | 7,972                    | 1,608             |       |
| 1964  | 105,503          | 103,878      | 22,109          | 426,778     | 413 14   | 15,310         |                          |                   |       |

(a) Debt of Northern Territory and Port Augusta-Oodnadatta railway transferred to Commonwealth Government.

(b) Uniform taxation in force.

(c) Excludes reimbursement for work done on behalf of Highways and Local Government Department from 1961.

PRIVATE FINANCE

| Year | Banking             |          |                       | Life Insurance               |                                    | General Insurance Revenue | Membership of—         |                    |                    |
|------|---------------------|----------|-----------------------|------------------------------|------------------------------------|---------------------------|------------------------|--------------------|--------------------|
|      | Cheque Paying Banks |          | Savings Bank Deposits | Value of New Policies Issued | Value of all Policies in Existence |                           | Co-operative Societies | Friendly Societies | Building Societies |
|      | Advances            | Deposits |                       |                              |                                    |                           |                        |                    |                    |
|      | £'000               | £'000    | £'000                 | £'000                        | £'000                              | £'000                     | Number                 | Number             | Number             |
| 1846 |                     | 92       |                       |                              |                                    |                           |                        |                    |                    |
| 1851 |                     | 213      | 14                    |                              |                                    |                           |                        |                    |                    |
| 1856 |                     | 710      | 53                    |                              |                                    |                           |                        |                    |                    |
| 1861 | 1,432               | 740      | 121                   |                              |                                    |                           |                        |                    |                    |
| 1866 | 3,120               | 1,402    | 249                   |                              |                                    |                           |                        |                    |                    |
| 1871 | 2,857               | 1,522    | 491                   |                              |                                    |                           |                        |                    |                    |
| 1876 | 4,724               | 3,316    | 851                   |                              |                                    |                           |                        |                    |                    |
| 1881 | 6,742               | 4,943    | 1,249                 |                              |                                    |                           |                        |                    |                    |
| 1886 | 9,613               | 4,962    | 1,653                 |                              |                                    |                           |                        |                    |                    |
| 1891 | 8,148               | 7,775    | 2,158                 |                              |                                    |                           |                        |                    |                    |
| 1896 | 4,735               | 7,672    | 2,836                 |                              |                                    |                           |                        |                    |                    |
| 1901 | 4,273               | 6,219    | 3,796                 |                              |                                    |                           |                        |                    |                    |
| 1906 | 5,306               | 7,799    | 4,767                 |                              |                                    |                           |                        |                    |                    |
| 1911 | 8,485               | 11,128   | 7,436                 |                              |                                    |                           | 10,248                 |                    | 9,572              |
| 1916 | 10,162              | 13,632   | 10,035                |                              |                                    |                           | 13,270                 | 65,540             | 8,962              |
| 1921 | 13,648              | 22,099   | 16,317                | 3,000                        | 20,136                             | 653                       | 28,762                 | 70,155             | 10,621             |
| 1926 | 15,836              | 25,787   | 21,779                | 4,671                        | 30,122                             | 1,022                     | 41,539                 | 77,791             | 17,011             |
| 1927 | 19,079              | 26,777   | 23,601                | 4,833                        | 31,844                             | 1,142                     | 42,386                 | 78,422             | 18,003             |
| 1928 | 19,306              | 26,286   | 24,942                | 4,900                        | 33,554                             | 1,123                     | 44,000                 | 78,284             | 19,208             |
| 1929 | 23,081              | 23,023   | 25,228                | 4,649                        | 34,734                             | 1,108                     | 45,176                 | 77,785             | 19,161             |
| 1930 | 23,706              | 22,434   | 24,012                | 4,066                        | 34,156                             | 1,004                     | 45,346                 | 76,363             | 16,663             |
| 1931 | 22,059              | 22,478   | 21,422                | 3,133                        | 32,508                             | 813                       | 45,791                 | (a)                | 14,081             |
| 1932 | 20,616              | 24,252   | 21,567                | 3,530                        | 32,452                             | 820                       | 47,189                 | 72,133             | 11,869             |
| 1933 | 21,099              | 24,785   | 22,515                | 3,778                        | 33,041                             | 826                       | 42,614                 | 71,275             | 10,814             |
| 1934 | 21,262              | 25,816   | 23,438                | 3,924                        | 33,893                             | 825                       | 42,746                 | 70,881             | 9,715              |
| 1935 | 22,143              | 25,635   | 24,185                | 4,580                        | 35,565                             | 849                       | 44,080                 | 71,043             | 9,617              |
| 1936 | 21,880              | 26,199   | 25,309                | 5,396                        | 37,992                             | 930                       | 45,592                 | 71,658             | 9,257              |
| 1937 | 20,978              | 28,876   | 26,506                | 6,256                        | 41,164                             | 1,064                     | 49,456                 | 73,131             | 9,418              |
| 1938 | 22,122              | 29,360   | 27,244                | 6,035                        | 43,884                             | 1,217                     | 52,064                 | 74,703             | 10,364             |
| 1939 | 22,509              | 29,340   | 27,397                | 5,717                        | 46,292                             | 1,263                     | 53,320                 | 74,486             | 10,569             |
| 1940 | 20,848              | 30,896   | 26,563                | 5,045                        | 48,193                             | 1,292                     | 53,943                 | 75,481             | 10,532             |
| 1941 | 19,774              | 32,091   | 27,510                | 5,708                        | 50,912                             | 1,321                     | n.a.                   | 76,357             | n.a.               |
| 1942 | 18,041              | 36,988   | 30,616                | 4,906                        | 53,214                             | 1,401                     | n.a.                   | 77,233             | n.a.               |
| 1943 | 16,287              | 43,246   | 38,563                | 5,392                        | 56,295                             | 1,353                     | n.a.                   | 78,600             | n.a.               |
| 1944 | 15,664              | 50,101   | 48,592                | 6,709                        | 60,868                             | 1,302                     | n.a.                   | 79,530             | n.a.               |
| 1945 | 15,985              | 54,249   | 56,995                | 7,408                        | 65,382                             | 1,301                     | 64,924                 | 80,403             | 16,894             |
| 1946 | 15,780              | 46,698   | 65,865                | 11,403                       | 73,615                             | 1,353                     | 70,620                 | 80,419             | 18,665             |
| 1947 | 19,837              | 49,826   | 67,900                | 12,468                       | 82,512                             | 1,686                     | 80,150                 | 79,827             | 19,774             |
| 1948 | 19,793              | 59,929   | 73,613                | 13,277                       | 91,877                             | 2,186                     | 84,470                 | 78,246             | 20,815             |
| 1949 | 20,693              | 71,279   | 81,176                | 14,501                       | 102,145                            | 2,877                     | 87,733                 | 76,761             | 22,017             |
| 1950 | 25,206              | 79,568   | 87,695                | 16,538                       | 113,808                            | 3,656                     | 92,066                 | 75,168             | 22,646             |
| 1951 | 31,055              | 103,372  | 97,849                | 22,449                       | 130,966                            | 4,649                     | 92,424                 | 71,591             | 22,782             |
| 1952 | 44,582              | 107,315  | 103,726               | 24,237                       | 149,247                            | 6,185                     | 96,134                 | 67,563             | 23,016             |
| 1953 | 39,787              | 123,630  | 113,875               | 25,835                       | 167,729                            | 7,297                     | 100,323                | 63,922             | 23,801             |
| 1954 | 47,984              | 125,401  | 122,949               | 29,770                       | 188,547                            | 8,083                     | 107,069                | 61,345             | 23,814             |
| 1955 | 53,370              | 125,398  | 131,691               | 35,229                       | 213,441                            | 9,161                     | 109,667                | 59,149             | 24,397             |
| 1956 | 54,258              | 120,522  | 135,756               | 37,651                       | 238,777                            | 10,295                    | 114,018                | 57,216             | 24,266             |
| 1957 | 62,809              | 133,449  | 142,401               | 44,735                       | 269,560                            | 11,917                    | 109,636                | 55,499             | (b)                |
| 1958 | 62,985              | 131,350  | 148,858               | 47,068                       | 299,861                            | 12,328                    | b)                     | 54,181             | 24,321             |
| 1959 | 62,462              | 136,299  | 157,152               | 58,257                       | 338,203                            | 13,112                    | 112,844                | 53,114             | 24,665             |
| 1960 | 74,587              | 132,747  | 165,998               | 65,976                       | 378,290                            | 13,988                    | 116,645                | 52,239             | 24,847             |
| 1961 | 73,674              | 134,924  | 166,743               | 71,814                       | 420,781                            | 16,182                    | 111,031                | 51,551             | 24,835             |
| 1962 | 80,754              | 140,748  | 180,988               | 78,818                       | 468,818                            | 16,870                    | 116,405                | 51,198             | 24,854             |
| 1963 | 90,581              | 145,446  | 208,078               | 82,591                       | 517,236                            | 18,749                    | 108,283                | 50,765             | 24,260             |
| 1964 | 99,908              | 164,242  | 237,902               |                              |                                    | 20,880                    | 113,224                | 50,946             | 25,348             |

(a) Membership at 30th June from 1932, previously 31st December.

(b) Balance dates of societies do not coincide; from this year figures are aggregates of members at balance dates within the year ended 30th June.

## APPENDIX B

# PRINCIPAL EVENTS

### CHRONOLOGICAL LIST OF IMPORTANT EVENTS IN SOUTH AUSTRALIA SINCE 1836

- 1836**—Ships carrying migrants began arriving in South Australia, the first migrants landing at Kangaroo Island on 20th July. The first South Australian newspaper was published in London. The colony's first school was opened on Kangaroo Island. The Surveyor-General, Col. Light, arrived in November and commenced the survey of Adelaide. Governor Hindmarsh arrived in H.M.S. *Buffalo* and proclaimed South Australia a Province on 28th December.
- 1837**—Col. Light completed the survey of Adelaide and designed the city's present layout. The first Adelaide land allotments were made. The first newspaper was published in South Australia. The South Australian Supreme Court was established. The first hospital was opened in North Terrace, Adelaide.
- 1838**—The first mobs of cattle arrived overland from New South Wales and the first overland drive of sheep was made later in the year. The first export from South Australia, a small clip of wool, was dispatched. The first German settlers under the leadership of Pastor Kavel arrived in South Australia. Formation of first police force.
- 1839**—Col. Light died at Thebarton and was buried in Light Square. The first road in South Australia was built between Adelaide and Port Adelaide. Adelaide Chamber of Commerce was founded.
- 1840**—Eyre started his overland journey to Western Australia. The Municipality of Adelaide was incorporated, the first in Australia. McLaren Wharf, Port Adelaide, was opened by Governor Gawler.

- 1841—The first South Australian mine (for silver-lead) was opened near Glen Osmond. Assisted migration was suspended because of a depression. Governor Gawler was recalled and the South Australian Company Board of Colonization Commissioners was wound up by the British Government. Eyre arrived at Albany in Western Australia.
- 1842—The registration of births, deaths and marriages was commenced. Portions of South Australia were divided for the first time into counties. Copper was discovered at Kapunda. Legislative Council constituted.
- 1843—The stripper was invented by Ridley. A flour mill was built at Hindmarsh.
- 1844—The first Colonial Census was held, and showed a population of 17,366.
- 1845—Copper was discovered at Burra. Sturt explored the north-eastern part of the State. Gold was found for the first time in South Australia, near Montacute. Assisted migration resumed.
- 1846—The first pastoral leases were granted.
- 1847—The first winery in the Barossa Valley commenced operation. St Peter's College was established.
- 1848—Opening of The Savings Bank of South Australia. First ferry across the River Murray commenced operations at Wellington.
- 1849—The Central Board of Main Roads was established.
- 1850—An Act granting representative government to South Australia was passed by the British Parliament.
- 1851—The Central Board of Education was set up.
- 1852—The first overland gold escort arrived in Adelaide.
- 1853—W. R. Randell's *Mary Ann* and Francis Cadell's *Lady Augusta* initiated the navigation of the Murray.
- 1854—The State's first railway (horse-drawn) was built from Goolwa to Port Elliot.
- 1855—The first South Australian postage stamps were issued.
- 1856—The first telegraph line was opened from Adelaide to Port Adelaide. The new Constitution Act embodying the principle of responsible government was proclaimed; it provided for Parliament to consist of two Houses—a Legislative Council and a House of Assembly. The first steam railway from Adelaide to Port Adelaide was constructed. The population of the State passed 100,000.
- 1857—A railway to Smithfield and Gawler was opened.
- 1858—The Real Property Act, which embodied the principles of conveyancing formulated by Torrens, came into operation. First telegraph line to Melbourne opened.
- 1859—A jetty over 1,200 feet in length was constructed at Glenelg. Copper was discovered at Wallaroo.
- 1860—Water was supplied to the City of Adelaide by means of a main connected with the reservoir at Thorndon Park.
- 1861—Copper was discovered at Moonta. Water was laid on to houses in Adelaide. John McDouall Stuart set out to cross the continent from south to north. The South Australian boundary was shifted west to coincide with the boundary of Western Australia.
- 1862—Stuart reached Chamber's Bay on the coast of the Northern Territory.

- 1863**—The administration of the Northern Territory was taken over by South Australia. The shops of Adelaide were lit for the first time with gas.
- 1865**—Annual leases of pastoral lands were sold by auction for the first time. The Bank of Adelaide was founded.
- 1866**—Camels were introduced by Sir Thomas Elder for the purposes of exploration. The Adelaide Town Hall was opened.
- 1867**—South Australia was visited by Alfred, Duke of Edinburgh, who laid the foundation stone of the General Post Office.
- 1869**—The foundation stone of St. Peters Cathedral was laid. Prince Alfred College was opened. Adelaide Chamber of Manufactures was founded.
- 1870**—The construction of the transcontinental telegraph from Port Darwin was commenced. John Forrest and party made the first of two journeys of exploration from Perth.
- 1872**—The transcontinental telegraph from Port Darwin was completed and the first direct telegram from London arrived.
- 1873**—The eight-hour working day was adopted. The first Health Act, establishing a Central Board of Health, was passed.
- 1874**—The University of Adelaide was founded.
- 1875**—The State Education Act was passed. The first Forestry Board was established.
- 1876**—Telegraph communication with New Zealand was established. The Smith brothers invented the "stump jump" plough. South Australia became the first State to give legal recognition to trade unions.
- 1877**—The overland telegraph line from Port Augusta to Eucla was completed and the first telegram from Perth was transmitted. The Adelaide Bridge was completed.
- 1878**—The provisions of the Education Act relating to compulsory school attendance were brought into force in the Adelaide school district. The first tramway in any Australian city commenced carrying passengers to Kensington and North Adelaide. It was horse-drawn.
- 1879**—The foundation stone of the Adelaide University was laid. First bridge across River Murray in South Australia opened at Murray Bridge. The State's population passed 250,000.
- 1881**—First reclamation of swamp areas of River Murray. The Art Gallery was opened by His Royal Highness Prince Albert Victor. The construction of the weir which created the Torrens Lake was completed.
- 1882**—Establishment of Fire Brigades Board.
- 1883**—The Telephone Exchange commenced operations.
- 1884**—The Largs Bay Fort was opened. The Adelaide Trades and Labour Council, the first delegates' society, was inaugurated.
- 1885**—The Broken Hill silver mines were opened. Roseworthy Agricultural College was founded. A column was erected on the Mount Lofty summit as a prominent landmark for mariners.
- 1887**—An Act authorizing payment to members of Parliament was passed. The Renmark Irrigation Colony was established. The first express trains ran between Adelaide and Melbourne. The Jubilee Exhibition opened. Stock Exchange of Adelaide formed by amalgamation of Adelaide Stock Exchange and Stock Exchange of South Australia.

- 1888**—The totalizator was legally authorized by an Act of Parliament.
- 1889**—The School of Mines and Industries was opened. Smelting of silver-lead ore from Broken Hill commenced at Port Pirie.
- 1890**—The first South Australian built locomotive was completed.
- 1892**—Education was made free to the compulsory age and standard.
- 1894**—An Act granting the franchise to women was passed by Parliament. Inauguration of industrial arbitration by the establishment of Boards of Conciliation.
- 1896**—The State Bank of South Australia was opened. Women voted for the first time at the general election. The Happy Valley Reservoir was opened. One of Adelaide's most severe droughts commenced, and continued for several years.
- 1899**—The second referendum concerning the establishment of Federation was held. In South Australia, 65,990 electors voted for federation and 17,053 against. The first military contingent left South Australia for the Boer War.
- 1900**—Adelaide was for the first time lit with electric light. The Commonwealth of Australia Constitution Act received the Royal Assent and a Proclamation was issued uniting the States as the Commonwealth of Australia as from the 1st January 1901. The Conservatorium of Music was opened. The first Workmen's Compensation Act was passed.
- 1901**—The early closing of shops was introduced. The first Commonwealth Parliament was elected. The Duke and Duchess of York arrived in the *Ophir*. The Commonwealth Customs Act came into force. The Electric Light Works was opened. Iron Knob was connected to Whyalla by railway.
- 1902**—Flinders column, at Mount Lofty, was dedicated to the public by the Governor, Lord Tennyson.
- 1905**—First kindergarten in South Australia was opened.
- 1906**—The military cadet system was inaugurated.
- 1907**—High schools were established in a number of country centres. The Municipal Tramways Trust was incorporated. The first Commonwealth basic wage judgement—the "Harvester" award—was made.
- 1908**—Penny Savings Banks bank accounts for children were established. The Outer Harbor was opened. The Adelaide High School was established.
- 1909**—The Adelaide Electric Tramways commenced operations. The payment of old age pensions by the Commonwealth was commenced.
- 1910**—The payment of invalid pensions by the Commonwealth was commenced. The first recorded monoplane flight in Australia was made by F. C. Custance at Bolivar.
- 1911**—"Penny Postage" to all parts of the British Empire was introduced. The Federal Defence Act came into operation. The administration of the Northern Territory was transferred to the Commonwealth.
- 1913**—Medical inspection of school children was introduced. The Commonwealth Bank was formally opened. The Metropolitan Abattoirs was established.

- 1914**—The South Australian quota of the first military expeditionary force embarked at Outer Harbor. South Australia experienced its most severe drought.
- 1915**—The prices of commodities were fixed by a commission. A referendum approved the closing of liquor bars at 6 p.m. Women were appointed as justices of the peace for the first time. The first shipment was made of iron ore from Whyalla to the steelworks in Newcastle. The first women police were appointed. Opal was discovered at Coober Pedy.
- 1916**—A referendum proposing compulsory military service abroad was defeated. The first Public Service Commissioner was appointed. The first State living wage with general application was declared.
- 1917**—German private schools in South Australia were closed. The East-West transcontinental railway was completed and the first train ran to Perth.
- 1918**—Wool clip was purchased by the British Government at a flat rate of 1s. 3½d. per lb.
- 1919**—Captain Butler flew across Gulf St. Vincent from Adelaide to Minlaton to carry the first mail by air in South Australia. The Soldier Settlement Bill was passed by the South Australian Parliament. The first Lord Mayor of Adelaide was elected.
- 1920**—Sir Ross Smith and party arrived at Adelaide by non-stop flight from Melbourne. A Peace Exhibition was held at the Jubilee Exhibition Buildings. The Prince of Wales visited South Australia.
- 1921**—The State's population passed 500,000.
- 1922**—The first lock on the River Murray was completed and opened at Blanchetown.
- 1923**—The Government approved an extensive re-organization of the railway system.
- 1924**—Public Debt Commissioners were appointed. Air mail between Adelaide and Sydney was inaugurated. The Waite Agricultural Research Institute was established. First radio stations commenced broadcasting.
- 1925**—The Show Grounds at Wayville were opened. The first Commonwealth election at which voting was compulsory took place. The foundation stone of Adelaide Teachers Training College was laid.
- 1926**—The South Australian barley exhibit won all prizes at the Brewers' Exhibition in London. The State Bank opened for general banking business. The construction of a 3ft. 6in. gauge railway from Oodnadatta to Alice Springs was approved. The State petrol tax was declared invalid following a Commonwealth writ against the State.
- 1927**—The extension of the North-South railway was commenced. The first train arrived at Renmark following the opening of the Paringa Bridge. The Duke and Duchess of York arrived in South Australia.
- 1929**—The first air mail left Adelaide for Perth. The first train to Alice Springs left Adelaide. Compulsory military training was abolished and replaced by a voluntary system. The electric tram service to Glenelg was commenced.



- 1930**—All officers of the South Australian Public Service over the age of 65 years were compulsorily retired. The State Finance Committee was appointed. The South Australian basic wage was reduced by 1s. 9d. to 12s. 6d. per day. The Unemployed Relief Council was appointed. The Transport Control Board was appointed.
- 1931**—The City Bridge was opened. The Financial Plan formulated at the Premiers' Conference was adopted and the Financial Emergency Act was passed. The Commonwealth basic wage was reduced by 10% for 12 months but was to be adjusted in accordance with a retail price index. The State basic wage was reduced from 12s. 6d. to 10s. 6d. per day. The basic wage for females was reduced, first from 39s. 6d. to 35s. 0d. and later to 31s. 6d.
- 1932**—The boundaries and names of a number of local government areas were changed while others were abolished following the report of a commission.
- 1933**—Wool auction values for the season rose 7d. to 14d. per lb. The Farmers Assistance Board, the Betting Control Board and the Metropolitan and Export Abattoirs Board were appointed.
- 1934**—Water restrictions were in force from May until the following January.
- 1935**—The Nomenclature Act of 1935 restored the former German names to a number of towns whose names had been changed in 1917.
- 1936**—The centenary year of the State's foundation was celebrated. A contract was signed for the completion of Parliament House and the foundation stone was laid by the Governor, Sir Winston Dugan.
- 1937**—The South Australian Housing Trust was appointed. A new Commonwealth basic wage of 74s. 0d. per week which incorporated a "prosperity" loading was declared. The first trolleybus service was inaugurated. The Mount Bold reservoir with a capacity of 6,662 million gallons was filled, almost doubling Adelaide's water storage. Schools were closed and other precautions were taken as a result of an epidemic of poliomyelitis.
- 1938**—The first dwelling to be built by the South Australian Housing Trust was completed.
- 1939**—The State's worst heat wave and disastrous bush fires were experienced during the first two months of the year. A record high temperature of 117.7°F was recorded in Adelaide. The new Parliament House was opened by His Excellency the Governor-General, Lord Gowrie.
- 1940**—The Goolwa Barrage was completed at a cost of £700,000. The Birkenhead Bridge was opened. A rapid development of secondary industry took place as munition annexes were added to existing factories and new factories were opened.
- 1941**—Scriptural instruction in State schools was commenced. The first naval vessel built in South Australia was launched. The first blast furnace to be built at Whyalla went into operation. Child endowment payments were inaugurated. Pay-roll tax was commenced.
- 1942**—Daylight saving of one hour was introduced for almost three months. Wages and prices were pegged and profits and interest rates were restricted. Racing and bookmaking were prohibited. Rationing of tea, liquors and clothing was commenced. Widows' pensions were instituted. The uniform Income Tax Act came into force. The first coal was obtained from Leigh Creek.

- 1943**—Price stabilization legislation came into force. Butter rationing commenced. Wage and price subsidies were introduced and the prices of tea, potatoes and other commodities were reduced in order to bring price indexes and wages to a lower level. Racing was resumed but betting shops remained closed.
- 1944**—The rationing of meat began. The Morgan-Whyalla pipeline was officially opened. The first State election with compulsory voting took place. Water restrictions, including a ban on the use of water sprinklers, were imposed. First output of Leigh Creek coal for electricity generation.
- 1945**—Unemployment and sickness benefits came into operation. Restrictions were imposed on the use of gas and electricity for domestic and industrial purposes.
- 1946**—Commonwealth munition factories were taken over by various private firms. The payment of government subsidies to hospitals commenced. Restrictions on the use of gas and electricity were again imposed. The South Australian Electricity Trust took over the property and functions of the Adelaide Electric Supply Co. Many foundries closed down for approximately six months because of an industrial dispute. A strike by gas workers took place.
- 1947**—The fruit fly was detected in metropolitan orchards and efforts were made to eliminate it by stripping gardens and orchards. Sugar rationing was abolished. Conciliation commissioners were appointed following an amendment to the Commonwealth Conciliation and Arbitration Act. Severe restrictions were imposed on imports from North America in order to effect "dollar" savings.
- 1948**—Restrictions on the use of gas and electricity were imposed on a number of occasions during the year because of the shortage of coal. The preparation of the Woomera rocket range commenced. The number of hours constituting a working week was reduced to 40 by an Arbitration Court award. Serious bush fires occurred in January. Severe storms during April resulted in widespread damage including the destruction of the Glenelg jetty. A referendum on Commonwealth price control was defeated. The free medicine scheme came into operation. Clothing and meat rationing were abolished. The control of prices was handed to the States by the Commonwealth. Full-scale production of the "Holden" car commenced.
- 1949**—Petrol rationing by the Commonwealth was declared illegal but was resumed later in the year under a State Act. An Australia wide strike lasting nearly 7 weeks took place in the black coal industry. A water pipeline to the Woomera rocket range was completed. The Commonwealth and South Australian Governments ratified an agreement for the standardization of railway gauges.
- 1950**—Petrol, butter and tea rationing were discontinued. The Commonwealth free drugs scheme came into operation. A railways strike lasting nearly 4 weeks took place. The basic wage was increased by £1 per week. Water restrictions were imposed in December and remained in force until June 1951.
- 1951**—Serious bush fires occurred in January. Wool prices reached a record high level. The distribution of free milk to school children was introduced. The employees of the Adelaide abattoirs were dismissed following an industrial dispute but work was resumed approximately four weeks later.

- 1952**—The hospital benefits scheme came into operation. Price control on clothing was removed in South Australia. Severe import restrictions were gazetted. Installations for the bulk handling of grain were opened at Ardrossan. The Port Pirie smelters were closed from December until February 1953 as a result of an industrial dispute. Compulsory Chest X-rays were introduced.
- 1953**—The remaining controls on building were removed. Port Pirie became the first country town to be proclaimed a city. The medical benefits scheme came into operation. Automatic quarterly cost-of-living adjustments to the basic wage were discontinued. The size of the State Cabinet was increased from 6 to 8 Ministers.
- 1954**—A severe earthquake occurred and caused damage to many houses in Adelaide on 1st March. Queen Elizabeth Hospital at Woodville was officially named by Her Majesty Queen Elizabeth II during her visit to South Australia. The Port Augusta power station was opened. The construction of dwellings in Elizabeth was commenced. The Radium Hill mines and treatment works were officially opened. Water from the River Murray was pumped into metropolitan reservoirs through the Mannum pipeline.
- 1955**—The Adelaide Airport at West Beach was opened. The Mannum-Adelaide pipeline was officially opened. A strike lasting approximately six weeks took place at the Metropolitan Abattoirs. The sulphuric acid plant at Port Adelaide commenced operations. Uranium treatment at Port Pirie also commenced. Damage was caused by a plague of grasshoppers. The South Australian Co-operative Bulk Handling Co. took over the bulk handling silo. The new satellite town at Elizabeth was officially opened.
- 1956**—The River Murray was flooded for several months and caused considerable damage in irrigation and reclaimed areas. The Town Planning Committee was appointed. A pyrites plant at Nairne was opened. Charges for beds in public wards at the Royal Adelaide Hospital were made for the first time. An atomic missile was exploded at Maralinga. Start of poliomyelitis vaccination programme using Salk vaccine.
- 1957**—The centenary of responsible government in South Australia was celebrated. Long service leave legislation was passed by the South Australian Parliament.
- 1958**—Visit of Queen Elizabeth, the Queen Mother, to South Australia. Introduction of parking meters to Adelaide. South Para reservoir opened and connected to Adelaide water supply. Final run by a street tram in Adelaide, following conversion to diesel bus transport.
- 1959**—Drilling commenced at State's deep oil exploration well at Innamincka. Master plan for beautification of Adelaide's parklands commenced. South Australia ceased to be a claimant State for special grants from Commonwealth Grants Commission. Full-scale television transmission commenced. Sir Thomas Playford reached a record term as Premier in a British country. Record low rainfall for Adelaide (11.32 inches during year). Aborigines became eligible for age, invalid and widows' pensions.

- 1960**—Closing of banks on Saturday mornings. First Adelaide Festival of Arts held (March 12-26). Discovery of high grade limesand deposits near Coffin Bay. Opening of Thomas Playford power station at Port Augusta. Addition of removable spillway gates to South Para reservoir increased storage capacity to 11,300 million gallons.
- 1961**—First United Kingdom Trade Commissioner to be appointed to South Australia commenced duties. Compulsory driving tests introduced. The trailer ship *Troubridge* made its first run from Port Adelaide to Kingscote and Port Lincoln. Sturt's Desert Pea declared State's official floral emblem. Production ceased at Radium Hill uranium mine. Post trading replaced call system at stock exchange.
- 1962**—Tanker *P. J. Adams* of 32,000 tons—the largest ship built in Australia to this time—launched at Whyalla. Deliveries of bulk wheat from farms exceeded the quantity of bagged grain for the first time. Myponga reservoir completed and linked to Happy Valley reservoir. Duplication of Morgan-Whyalla pipeline commenced. Storage capacity of Mount Bold reservoir increased to 10,440 million gallons. Search for oil and gas stepped up with drilling and seismic exploration extending from Innamincka in the far north-east of the State to Mount Schank in the extreme south-east. World record price of 12,500 guineas paid for a Merino ram at Adelaide Royal Show. Conduct of public examinations at candidates' own schools approved.
- 1963**—Population of the State passed 1,000,000 mark. Port Stanvac oil refinery "on stream". School leaving age increased to 15 years. Three weeks' annual leave for employees governed by State awards and determinations introduced. Ratifying legislation passed for construction of Chowilla dam—to be the largest in Australia with a capacity of 4.75 million acre-feet. First direct dialling for an overseas telephone call from South Australia. Major gas flow from Gidgealpa No. 2 well.
- 1964**—Work commenced on conversion of Port Pirie-Broken Hill railway to standard gauge. Construction of new blast furnace at Whyalla commenced. Bridge over River Murray at Blanchetown opened. First gas from Port Stanvac refinery piped for use in Adelaide's gas supply. Record wind gust (92 m.p.h.) and all-time low barometric reading (29.09 inches) registered at Adelaide on 12th July. New world land speed record set by Donald Campbell on Lake Eyre. Contracts let for building of two 47,000 ton ships at Whyalla. New motor body building and assembly plant officially opened at Tonsley Park.
- 1965**—Tenders called for first on-site construction work for Chowilla dam. Election of first Labor State Government since 1933. First country television station opened at Port Pirie. Steel works including a basic oxygen steel making plant opened at Whyalla. First tenders let for Torrens Island power structure, part of an eventual £150 million complex to produce a third of the State's power supply. First woman judge in Australia appointed to Supreme Court of South Australia. Legislation passed to enable women to sit on juries. The size of the State Cabinet was increased from 8 to 9 Ministers. The new university at Bedford Park was named "The Flinders University of South Australia"; first students to be enrolled in March 1966. Proposed government controlled lottery in South Australia approved in a referendum. The 49,000 ton bulk carrier *Darling River* launched at Whyalla.

## APPENDIX C

### RECENT INFORMATION

In this section details are given of some important developments which have occurred recently.

More up-to-date statistics than those shown in this volume are regularly incorporated in various statistical publications as they become available. A List of Publications is set out on page 561.

#### PART 1—NATURAL ENVIRONMENT

*Weather Conditions in South Australia (page 20)*—Areas in the northern portion of the State which were severely drought-affected at the end of 1965 received good rains in January and February 1966, some falls of over 3 inches being recorded.

#### PART 3—CONSTITUTION AND GOVERNMENT

*Commonwealth Ministry (page 43)*—The Rt. Hon. Sir Robert G. Menzies K.T., C.H., Q.C. resigned as Prime Minister on 21st January 1966 and the Rt. Hon. H. E. Holt formed a new Ministry. Members of this, the 34th Ministry, are as follows:

##### Holt Ministry from 26th January 1966

*Prime Minister*

The Rt. Hon. H. E. Holt, M.P. (Vic.)

*Minister for Trade and Industry*

The Rt. Hon. J. McEwen, M.P. (Vic.)

*Treasurer*

The Hon. W. McMahan, M.P. (N.S.W.)

*Minister for External Affairs*

The Rt. Hon. P.M.C. Hasluck, M.P. (W.A.)

*Minister for Primary Industry*

The Hon. C. F. Adermann, M.P. (Qld.)

*Minister for Defence*

The Hon. A. Fairhall, M.P. (N.S.W.)

*Minister for Supply*

Senator the Hon. N. H. D. Henty (Tas.)

*Vice-President of the Executive Council; and Postmaster-General*

The Hon. A. S. Hulme, M.P. (Qld.)

*Minister for National Development*

The Hon. D. E. Fairbairn, D.F.C., M.P. (N.S.W.)

*Minister for Territories*

The Hon. C. E. Barnes, M.P. (Qld.)

*Minister for Works; and under the Prime Minister, Minister in Charge,  
Commonwealth Activities in Education and Research*

Senator the Hon. J. G. Gorton (Vic.)

*Minister for Labour and National Service*

The Hon. L. H. E. Bury, M.P. (N.S.W.)

(The above Ministers constitute the Cabinet.)

*Minister for Shipping and Transport*

The Hon. G. Freeth, M.P. (W.A.)

*Minister for Immigration*

The Hon. H. F. Opperman, O.B.E., M.P. (Vic.)

*Minister for Civil Aviation*

The Hon. R. W. C. Swartz, M.B.E., E.D., M.P. (Qld.)

*Attorney-General*

The Hon. B. M. Sneddon, Q.C., M.P. (Vic.)

*Minister for Health*

The Hon. A. J. Forbes, M.C., M.P. (S.A.)

*Minister for the Interior*

The Hon. J. D. Anthony, M.P. (N.S.W.)

*Minister of the Navy*

The Hon. F. C. Chaney, A.F.C., M.P. (W.A.)

*Minister for Air, and Minister assisting the Treasurer*

The Hon. P. Howson, M.P. (Vic.)

*Minister for Customs and Excise*

Senator the Hon. K. M. Anderson (N.S.W.)

*Minister for Repatriation*

Senator the Hon. G. C. McKellar (N.S.W.)

*Minister for Social Services*

The Hon. I. M. Sinclair, M.P. (N.S.W.)

*Minister for Housing*

Senator the Hon. Dame Annabelle Rankin, D.B.E. (Qld.)

*Minister for the Army*

The Hon. J. M. Fraser, M.P. (Vic.)

**PART 7—LABOUR**

*State Industrial Tribunals (page 224)*—The Industrial Code Amendment Act, 1966, substantially changed the South Australian industrial tribunals. Under this new legislation the Industrial Court comprises a President only. The Court has power to deal with legal matters only, *e.g.* appeals in connection with prosecutions, determination of questions of law, interpretation of awards, etc.

Industrial matters are determined by the Industrial Commission of South Australia. This is constituted by the President and two Commissioners (Full Bench) or by any one of them. Important cases are heard by the Full Bench.

Conciliation Committees take the place of the old Industrial Boards. These committees consist of an equal number of representatives of employers and employees with one of the Commissioners as Chairman. Important matters in dispute before these Committees can be dealt with by the Full Bench of the Commission. There is an appeal from a Committee to the Commission comprising the President, the other Commissioner and the Registrar.

The Board of Industry is replaced by the Full Bench of the Commission.

Power is given to the President, a Commissioner or the Registrar, to hear claims for the recovery of sums due under awards. There is no power to award costs against either party. Where the amount of the claim exceeds \$60 (£30), there is an appeal to the President. Judgments are enforceable in the same manner as judgments of the Local Court.

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REMAINDER OF STATE

### STATISTICAL DIVISIONS OF SOUTH AUSTRALIA

REFERENCE

- Statistical Divisions ..... CENTRAL
- Railways ..... ————
- Main Roads ..... ————
- Main Arterial Routes ..... ————
- Secondary Roads ..... ————
- Principal Tracks ..... ————

SCALE  
MILES 20 10 5 0 40 60 80 100

