

South Australian Year Book



1972

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SOUTH AUSTRALIAN

YEAR BOOK

1972



Malcolm Harrington

A view of the Boulevard Café on tree-lined North Terrace during the Adelaide Festival of Arts held in March 1972. This feature was made possible by an amendment to the Licensing Act, 1969-1971, to provide a special licence for the supply of liquor at Festival functions.





*South
Australian
Year Book*

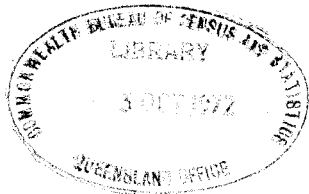
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SOUTH AUSTRALIAN OFFICE

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PREFACE

The *South Australian Year Book* is published as a general reference work presenting an authoritative and comprehensive statistical and descriptive portrayal of South Australia. As such it embraces studies of the historical and geographical background and of the social, physical and financial development of the State culminating in a picture of South Australia as it is today.

This volume, the seventh issue of the Year Book, includes special articles on the Birds of South Australia, the Overland Telegraph Line and the Heysen Trail. Other items of special interest are travel to work and school, multiple job holding, abortions and co-operative credit societies. To make room for the additional material and in accordance with normal practice with related publications, some chapters or portions of chapters have been condensed but in such cases appropriate cross-references are given indicating in which earlier volumes the more complete information may be found. A list of special articles which appeared in previous issues is shown on page 651.

Other 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 *Pocket Year Book of South Australia* containing 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. The full list of these publications appears on page 653. This office also maintains an Information Service which, on request, supplies available statistical information and advice on which publications are appropriate.

Individual Year Books and a comprehensive range of statistics are also published by the Commonwealth Statistician covering the whole of Australia (but giving information about the States) and by the other Deputy Commonwealth Statisticians for their States. The details of such publications are available at each office of the Bureau.

I gratefully acknowledge the valuable assistance given by contributors of special articles and by the various government departments and firms who supplied the photographs and plates used. I also appreciate the continuing interest in this project shown by the Government Printer and his staff. My special thanks are tendered to Mr I. R. Collins, B.Ec., A.A.S.A., under whose direction the Year Book was compiled by Mr G. D. Carey, B.Ec., A.A.S.A. (Senior).

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EXPLANATORY NOTES

Symbols Used

<i>n.a.</i>	not available
..	not applicable
<i>n.e.c.</i>	not elsewhere classified
<i>n.e.i.</i>	not elsewhere included
<i>n.e.s.</i>	not elsewhere specified
—	nil or less than half the final digit shown
*	figures not yet available
<i>p</i>	preliminary
———	break in continuity of series (where drawn across a column between two consecutive figures)

In general, statistics in this volume relate to South Australia. A few tables, which are appropriately footnoted, include details for the Northern Territory.

Values are shown in Australian dollars (\$) or \$A) or cents unless another currency is specified.

In tables where figures have been rounded, discrepancies between totals and sums of components are because of rounding.

PART 1

NATURAL ENVIRONMENT

1.1 DESCRIPTION

Size and Location

The State of South Australia has the Indian Ocean to the south and is flanked on the other sides by land. It lies south of the 26th parallel of south 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, while to the south, between the river and the sea, the boundary lies approximately two miles to the west of this meridian.

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; its coastline, excluding islands, measures approximately 2,200 miles. 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 economic use and over one-half is devoted to extensive pastoral pursuits. Approximately 99 per cent of the population live south of the 32nd parallel.

Standard Time

In terms of the Standard Time Act 1898 South Australia has used 'the mean time of the meridian of longitude one hundred and forty-two and a half degrees east of Greenwich' as standard time since 1 May 1899. This time, known in Australia as Central Standard Time, is nine hours thirty minutes ahead of Greenwich Mean Time, one hour thirty minutes ahead of Western Standard Time used in Western Australia and thirty minutes behind Eastern Standard Time used by States on the east coast of Australia.

Before 1 February 1895 the meridian of Adelaide $138^{\circ} 35'$ east (*i.e.* 9 hours 14 minutes ahead of Greenwich) was used to determine standard time in South Australia and subsequently from 1 February 1895 to 30 April 1899 the meridian 135° (*i.e.* 9 hours ahead of Greenwich) was used.

In several years during the 1939-45 War daylight saving in summer time was introduced by the Commonwealth Government under National Security Regulations. Summer time was fixed at one hour in advance of standard time from 2 a.m. on 1 January 1942 to 2 a.m. on 29 March 1942, from 2 a.m. on 27 September 1942 to 2 a.m. on 28 March 1943 and from 2 a.m. on 3 October 1943 to 2 a.m. on 26 March 1944.

Under the Daylight Saving Act, 1971 daylight saving was introduced for the first time since the 1939-45 War at 2 a.m. on 31 October 1971 and remained in force until 2 a.m. on 27 February 1972. During this period 'South Australian summer time', one hour ahead of South Australian Standard Time, was adopted.

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 per cent of the State is less than 500 feet above sea level and over 80 per cent less than 1,000 feet. Even the dominant mountains, the Mount Lofty-Flinders Ranges system, nowhere exceed 4,000 feet and have at no point proved 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, approximately 300 miles in circumference and covering 1,680 square miles, is the predominant island off the South Australian coastline. There are, however, approximately 100 islands in all, relatively few of which are utilised.

The effect of the vast ocean area to the south is a more temperate climate than would be suggested by the latitude, while the trend of the coastline exposes the coastal areas to the westerly rain-bearing 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, the highest peak, being 2,384 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 Peak of 3,822 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 which results in 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 (4,723 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 seventy 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 narrower steeper-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 50 feet below mean 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 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 Nullabor 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 have played an important role in the industrial development of the State. The basin areas are important as sources of artesian water and are the areas in which important oil and natural gas discoveries have 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.

A more complete discussion on the geology of South Australia was included on pages 3-18 of the *South Australian Year Book* 1970.

Earthquakes

The most active area of the Australian continent is that of the South Australian seismic zones. The South Australian area has been monitored since 1962 by a small network of stations operated by the University of Adelaide.

The South Australian epicentres occur mainly in two belts, the major one being within the Adelaide Geosyncline and referred to as the Adelaide seismic zone. It extends from Kangaroo Island through the Mt Lofty and Flinders Ranges to Leigh Creek in the north. The epicentres generally follow the ranges and also the western boundary of the Upper Proterozoic Sequence and the fold trends in that part of the Geosyncline curving around to the east of Lake Torrens. The other main South Australian seismic zone is on Eyre Peninsula.

A discussion on earthquakes in South Australia was included on pages 18-19 of the *South Australian Year Book* 1970.

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 the State. In South Australia daily weather reporting stations are established at nearly eighty representative localities and there are over 900 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 and for aircraft flight forecasts provided by the Adelaide Airport. 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
	Per cent	Per cent
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 30 square miles in the Mount Lofty Ranges.

Over the southern half of South Australia the main source of rain is 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 in the vicinity of Stirling, where the average annual rainfall 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 the map on page 6 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 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 been less than 3 inches.

Seasonal Distribution of Rainfall

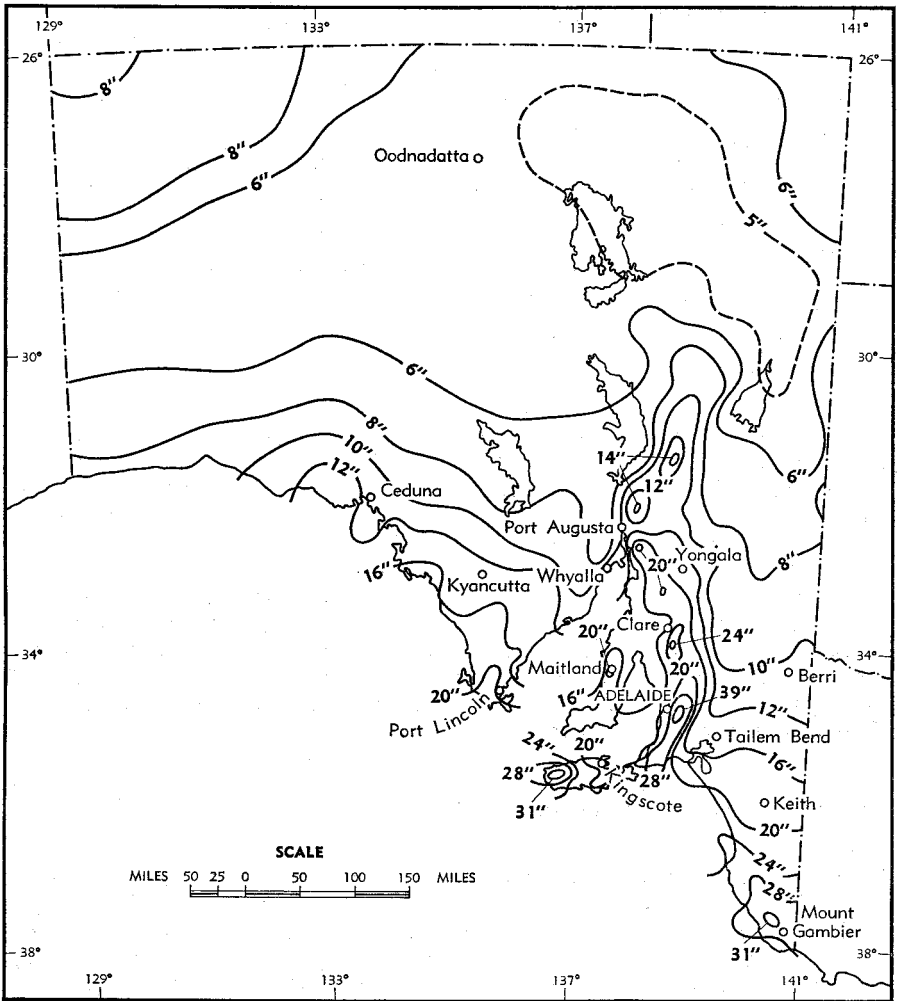
Those areas of the State with the higher average annual totals also show a marked winter maximum of rainfall. From November to March the fall is slight, but is rarely completely absent. However, a high rate of evaporation during the summer means that in general these summer rains are not significant from the agricultural point of view. The first significant falls generally arrive during April or May; June, July and August are usually the wettest months, with rains tending 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 year 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 seventeen selected recording stations are shown in the table on page 7. The average number of rain days (*i.e.* days receiving one point or more of rain) is also shown.

SOUTH AUSTRALIA
AVERAGE ANNUAL RAINFALL

All years of records
Isohyets in inches



Average Rainfall and Days of Rain: Selected Stations, South Australia

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
AVERAGE RAINFALL (a) (Points)													
Adelaide	76	79	94	171	271	287	260	244	200	172	121	104	2,079
Berri	66	86	46	66	110	102	95	106	105	96	78	75	1,031
Ceduna	48	65	67	81	162	161	162	144	104	102	79	89	1,264
Clare	97	96	96	186	295	316	317	311	281	216	140	120	2,471
Keith	69	88	82	132	222	204	213	220	201	167	125	106	1,829
Kingscote	57	73	71	143	239	291	308	252	181	143	95	75	1,928
Kyancutta	46	75	51	84	144	157	167	163	124	103	91	81	1,286
Maitland	68	86	80	170	252	273	260	243	196	166	112	87	1,993
Mount Gambier ...	128	113	142	245	336	381	422	391	303	248	181	162	3,052
Oodnadatta	63	78	49	24	43	54	30	24	29	41	33	46	514
Port Augusta	59	66	66	75	104	107	77	88	88	91	71	63	955
Port Lincoln	53	60	75	143	226	294	306	260	192	137	91	70	1,907
Port Pirie	71	70	70	113	158	164	126	139	133	119	89	82	1,334
Stirling	151	149	169	373	564	696	643	611	482	380	243	195	4,656
Tailem Bend	68	87	82	108	170	157	156	161	154	140	112	111	1,506
Whyalla	75	87	66	68	103	100	85	96	97	91	85	82	1,035
Yongala	78	78	64	100	143	163	155	178	148	126	105	96	1,434
AVERAGE NUMBER OF DAYS OF RAIN (b)													
Adelaide.....	4	4	5	10	13	15	16	16	13	11	8	6	121
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	6	7	7	13	15	17	18	18	15	14	11	9	150
Tailem 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	12	14	13	9	8	7	5	97

(a) For all years of record to end of 1970.

(b) Other than for Adelaide (see page 16) figures relate to standard 30 year period 1931-1960.

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 an hour over a five 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 (18 February 1946)	8.10in.
Carpa (18 February 1946)	7.83in.
Hesso (18 February 1946)	7.36in.
Wilmington (1 March 1921)	7.12in.
Wynbring (28 February 1921)	7.00in.

Other Yorke Peninsula towns besides Ardrossan also recorded over 7 inches on 18 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 more than twenty other centres in Queensland 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 126 days of snow experienced over a period of 130 years to the end of 1970. While most falls have occurred during the months June to September, snow has been experienced as early as 25 April (1916) and as late as 3 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 areas of South Australia are prone to localised 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 and far north of the State where, because of 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 worst 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, 1959 and 1967 in the settled areas.

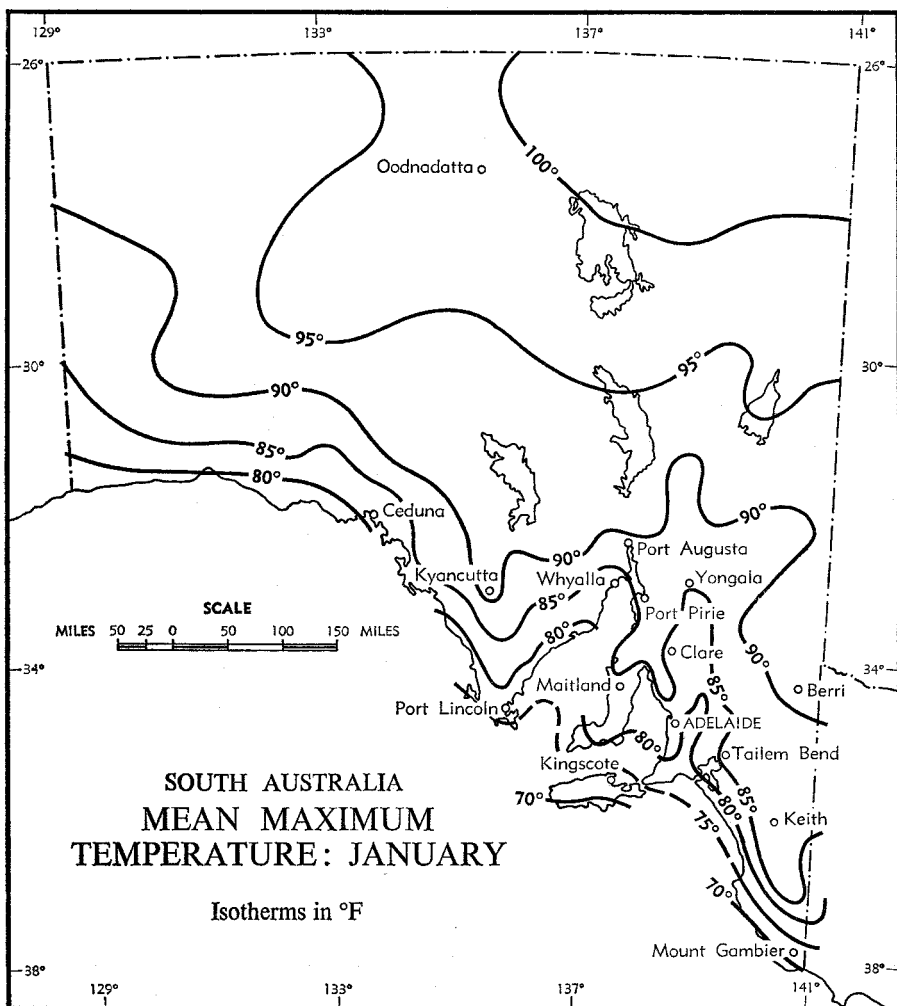
The driest year in terms of actual rainfall was 1967, when an all-time low figure for the year of 10.11 inches was recorded in Adelaide. However, the 1914 drought is generally recognised as being the most severe experienced, and in that year districts where drought was almost unknown were seriously affected. 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.

A more detailed discussion with special reference to rainfall deciles appeared in the *South Australian Year Book 1967*. Further details of droughts appear in the Bureau of Meteorology publications *Droughts in Australia* by J. C. Foley (Bulletin No. 43) and *Rainfall Deciles as Drought Indicators* by W. J. Gibbs and J. V. Maher (Bulletin No. 48).

Rainfall Probability

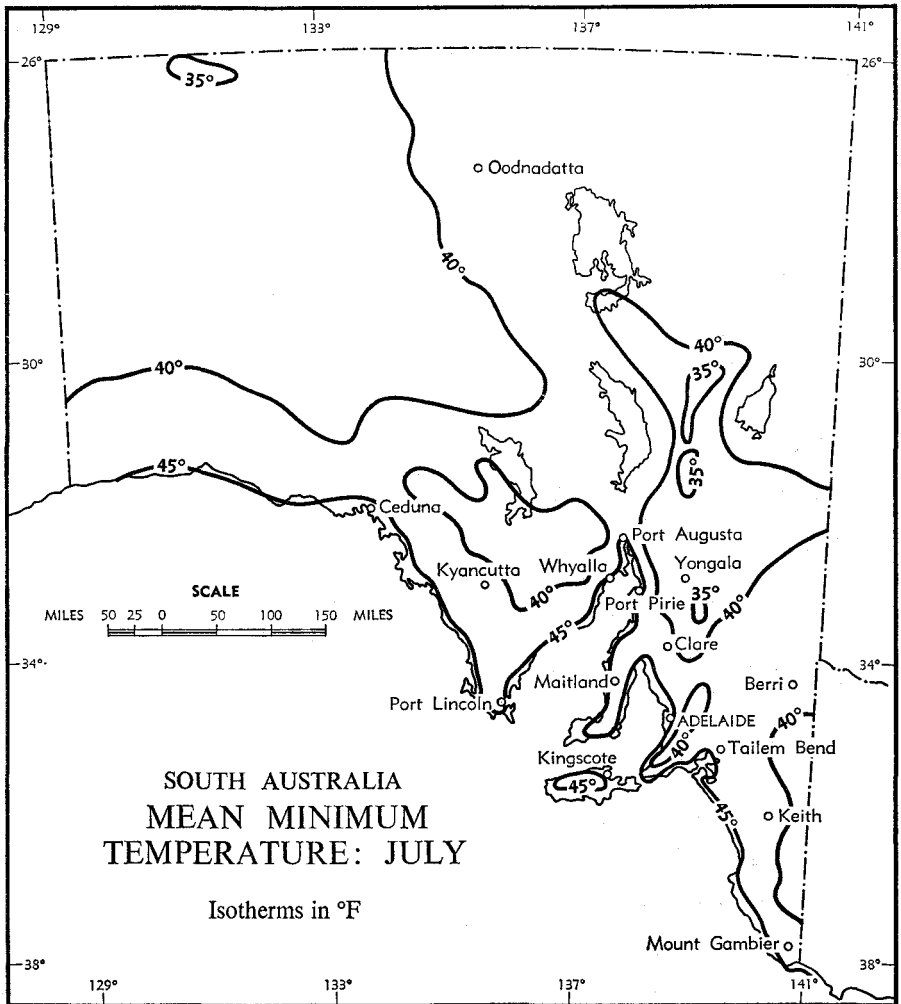
A special article on rainfall probability, *i.e.* the likelihood, expressed as a percentage, that a minimum rainfall will be received during a stipulated period, was included on pages 6-9 of the *South Australian Year Book 1966*.



TEMPERATURE

Seasonal Temperature Conditions

Air 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 temperature in a mid-winter month (July) are shown on the maps on page 9 and this page 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 twenty days annually during which the maximum temperature exceeds 100°F; while it is only on the extreme south-east coastal fringe and Kangaroo Island where the average number of such 'century days' is less than five a 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.

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 vegetation 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 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 drying affect of this air mass.

Monthly mean maximum and minimum temperatures at seventeen selected recording stations within the State are shown in the following tables. These are based as nearly as possible on a standard period for comparison purposes.

Mean Maximum Temperatures: Selected Stations, South Australia

Recording Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
	(°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.....	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	61.0	59.8	61.8	67.9	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 Temperatures: Selected Stations, South Australia

Recording Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
	(°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	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 recorded in South Australia was 123.2°F at Oodnadatta on 2 January 1960, and the lowest 17.4°F at Yongala on 16 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.

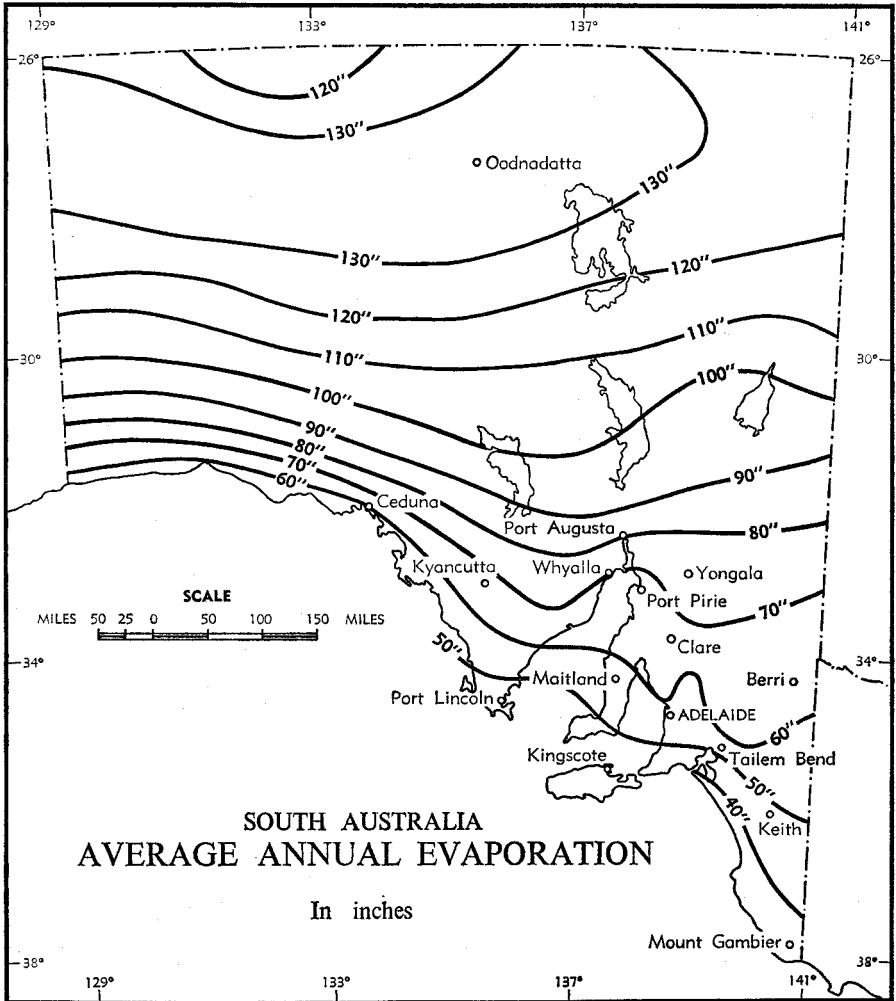
The average index of mean relative humidity has been derived from the ratio of the average 9 a.m. vapour pressure to the saturation vapour pressure at the average mean temperature. Being thus related to the mean temperature this value of relative humidity is a good approximation of the daily mean.

With an average index of mean relative humidity of under 35 per cent in summer increasing to about 50 per cent 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 per cent to 55 per cent in summer, increasing to about 70 per cent to 80 per cent in winter.

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 just over 2,500 hours a year.

December and January tend to be the sunniest months with daily averages reaching a maximum of about ten and a half hours over interior districts. During the June and July winter months daily averages are still as high as seven hours in the far north interior, but over the southern coastal fringe the daily average of just over eight hours for summer is reduced to about three 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 11 April 1948 when the wind averaged over 40 mph for six hours in central and south-eastern districts, and the naval frigate *Barcoo* was grounded at Glenelg and the Glenelg jetty was wrecked. Frequent gusts over 70 mph and a strongest gust of 81 mph were recorded in Adelaide.

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—99 mph at Woomera on 4 November 1969, 92 mph at Leigh Creek on 3 December 1953 and also at Adelaide on 13 July 1964.

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.

However, early in 1967 a change-over to the standard American Class A pan was made. These pans, 4 feet in diameter and 12 inches deep, are placed above ground level on wooden stands.

The annual average evaporation using the sunken tank method has varied 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 on page 13). About half the area of the State has an evaporation rate exceeding 100 inches 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).

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. 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.

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.

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 12 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 fourteen days out of fifteen exceeded 90°F and of those fourteen days nine exceeded 100°F. During this heat wave the record temperature of 116.3°F recorded on 26 January 1858 was exceeded, first on 10 January 1939 when the temperature reached 116.9°F and then two days later on 12 January when the highest ever temperature of 117.7°F was recorded.

July is the coldest month, when the mean maximum is only 59°F with the extreme lowest minimum being 32°F on 24 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 monthly fall from January to March is under an inch and completely rainless months in this period are not uncommon. In fact, each of the five months December to April has at some time been recorded as completely dry, and in the period January to March 1893 there were sixty-nine consecutive rainless days. On the other hand, heavy rain is occasionally experienced at this time of the year and on 7 February 1925 rainfall was 5.57 inches—a record for one day.

Each month from May to September rainfall 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 132-year annual rainfall average is 20.79 inches, and annual totals have ranged from a low of 10.11 inches in 1967 to a high of 30.95 inches in 1851.

Other Conditions

Relative humidity in Adelaide is at its lowest in January when the average 9 a.m. reading (which approximates the average for the whole twenty-four hours) is 39 per cent. This low value of the relative humidity reduces the severity of heat waves in Adelaide. 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 per cent in June and July.

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	114	114	114	114	114	103	103	103
	°F	°F	°F	°F	°F	%	%	%
January ...	85.4	117.7	61.5	45.1	73.5	40	59	29
February ...	84.9	113.6	61.8	45.5	73.3	43	57	30
March ...	80.5	110.5	59.0	43.9	69.7	47	62	29
April ...	72.9	98.6	54.6	39.6	63.7	56	72	37
May ...	65.6	89.5	50.4	36.9	58.0	67	77	49
June ...	60.5	78.1	46.9	32.5	53.7	75	84	63
July ...	58.9	74.0	44.9	32.0	51.9	76	87	66
August ...	61.6	85.0	46.0	32.3	53.8	70	80	54
September ...	66.1	95.1	48.1	32.7	57.1	60	72	44
October ...	71.8	102.9	51.5	36.1	61.7	51	67	29
November ...	77.5	113.5	55.2	40.8	66.3	44	58	31
December ...	82.1	114.6	58.8	43.0	70.5	40	56	31
Year .	72.3	117.7	53.2	32.0	62.7	56	87	29

(2) Rainfall and Wind

Month	Rainfall				Wind			
	Mean	Highest Monthly and Yearly Total	Highest in One Day	Mean Days of Rain	Average Speed	Highest Gust	Prevailing Direction	
							9 a.m.	3 p.m.
Years of Record	132	132	132	132	19	54	54	54
	In	In	In	No.	MPH	MPH		
January ..	0.76	3.31	2.30	4	7.8	72	SW	SW
February ..	0.79	6.09	5.57	4	7.5	66	NE	SW
March ...	0.94	4.59	3.50	5	6.9	78	S	SW
April ...	1.71	5.81	3.15	10	6.9	81	NE	SW
May ...	2.71	7.75	2.75	13	7.0	70	NE	NW
June ...	2.87	8.58	2.11	15	7.4	67	NE	N
July ...	2.60	5.44	1.75	16	7.3	92	NE	NW
August ...	2.44	6.20	2.23	16	7.9	75	NE	SW
September ...	2.00	5.83	1.59	13	8.0	69	NNE	SW
October ...	1.72	5.24	2.24	11	8.4	75	NNE	SW
November ...	1.21	4.45	2.96	8	8.4	81	SW	SW
December ...	1.04	3.98	2.42	6	8.2	75	SW	SW
Year .	20.79	30.95	5.57	121	7.6	92	NE	SW

(3) Other Conditions

Month	Mean Daily Sunshine	Clear Days (a)	Mean Amount of Cloud (b)	Days of Fog	Days of Lightning	Amount of Evaporation (c)	Vapour Pressure 9 a.m.	Mean Barometric Pressure (d)
	Years of Record	89	56	103	71	99	95	103	114
	Hours	No.		No.	No.	In	In	Mb
January ..	10.0	12.4	3.1	0.0	2.1	9.29	0.353	1013.3
February ...	9.3	10.9	3.3	0.0	1.7	7.52	0.363	1014.3
March ...	7.8	10.9	3.5	0.0	1.7	6.26	0.347	1017.2
April ...	5.9	6.6	4.5	0.0	1.4	3.78	0.335	1019.8
May ...	4.8	4.6	5.1	0.4	1.5	2.30	0.319	1020.1
June ...	4.2	4.0	5.3	1.1	1.5	1.47	0.291	1019.7
July ...	4.3	3.6	5.2	1.3	1.5	1.47	0.278	1020.0
August ...	5.2	4.9	4.9	0.6	1.7	2.09	0.286	1019.1
September ...	6.1	5.7	4.6	0.2	1.8	3.18	0.293	1017.6
October ...	7.2	5.7	4.5	0.0	2.7	5.03	0.303	1016.0
November ...	8.5	6.6	4.2	0.0	3.0	6.78	0.308	1015.1
December ...	9.4	9.0	3.7	0.0	2.2	8.62	0.229	1013.3
Year .	6.9	85.8	4.3	3.6	22.8	57.79	0.311	1017.1

(a) With less than two-eighths cloud. (b) Scale 0 (clear) to 8 (overcast) at 9 a.m. and 3 p.m. daily.

(c) From Standard Australian Tank (period 1870-1966).

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

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.

WEATHER CONDITIONS IN SOUTH AUSTRALIA: 1970 AND 1971

Summer 1969-70

Inland pastoral areas for the most part received only about one-quarter of their normal summer rains with large areas in the north and north-west being rainless. Throughout the settled areas there was generally a deficit which was as high as 50 per cent over the Western and Upper Murray districts. Of the settled areas, only the Central and South East districts recorded near normal rains.

Very few heat waves were experienced during the summer, but one notable state-wide hot spell began at the end of January and extended into early February.

Autumn 1970

Following a dry Summer, Autumn rains over the inland pastoral areas staged a recovery over most of the Far North and North East districts while the North West district continued to be dry. Although rainfall was generally below normal in the settled areas, sufficient rain had been received in most areas by the end of May to be classed as an 'opening' amount. The worst served agricultural areas were the Far West, the Upper North, County Light and the western section of the Murray Mallee in all of which there was a 30 to 40 per cent deficit. Temperatures were generally below normal apart from a short period in the middle of April.

Winter 1970

Rainfall was well below normal in the pastoral areas. Good falls of rain over the agricultural areas in the last week of August compensated to a large extent for the marked lack of rainfall in June and July. Falls were about normal in the settled areas and above normal in the Lower South East.

Temperatures were slightly above normal in June and July and below normal during August.

Spring 1970

All the pastoral interiors except the northern half of the Far North District and the adjacent parts of the North East District recorded above normal spring rain. Most totals in these above-normal areas were 20 to 40 per cent above, while over most of the North-East there were many aggregates of twice the normal and some almost four times the normal. Throughout the settled areas although there was a deficit of up to 25 per cent around the Central Districts, the remaining districts recorded near normal spring totals. However, amounts of up to 75 per cent above normal were gauged over the settled areas in the districts adjacent to the North East Pastoral District.

Brief hot spells were experienced late in the Spring but for the most part, day temperatures were below normal. Although a very severe frost, which destroyed many ripening cereal crops in the Murray Districts, occurred on October 15, most night temperatures were not abnormally low.

Summer 1970-71

Summer rainfalls over the pastoral districts were between half and one-eighth of the normal amounts and most of the meagre falls were during the early part of the season.

Throughout the settled areas the only worthwhile rains also occurred in December. In these areas, too, there was a deficit, this being most pronounced in the Western District (down 70 per cent) the Upper North and Murray Districts (down approximately 50 per cent). Other summer totals over the settled areas were between 20 and 40 per cent below normal.

Widespread hot spells with day temperatures well into the century occurred early in December, early in January and around the middle of February. However, much of December and January was cool or mild and most of February was warm.

Autumn 1971

Rainfall aggregates over the North West Interior District were below normal except along the eastern and southern fringes, the largest deficits, of around 60 per cent, being recorded over the extreme north-west corner. The Far North District received up to double normal autumn rains, as did the North East with the exception of its extreme southern section where the totals were close to normal.

Throughout the settled or agricultural areas rainfall was generally well above average. Many totals in the southern parts of the Western, Lower North and Central Districts were double normal amounts; the other districts of the settled areas had aggregates of between 25 and 50 per cent above normal. Although some rain fell over the settled areas in March and May, by far the heaviest monthly amounts were gauged during April, particularly in the second half of the month.

During the first two weeks of April, almost all day temperatures throughout the State were unseasonably high and 10 or more degrees above normal. Although this trend was not maintained during the remainder of April nor during May, mean maximum temperatures were mostly 2 or 3 degrees above normal. Mean minima were also all above normal by 1 to 3 degrees over the interiors and between 2 and 5 degrees over the settled areas. No frosts were reported during Autumn until the second half of May and then occurrences were generally confined to the Central and Northern Highlands.

Winter 1971

Following the useful rains of Autumn some pastoral areas received further worthwhile falls throughout the Winter. However, the north-west corner of the North West District and the north-east corner of the Far North District recorded winter deficits of around 30 to 50 per cent. The eastern half of the North West, the western half of the Far North and the northern part of the North East recorded good surpluses while the remaining sections of these three districts had close to normal winter rains. Most of the rain fell during June and August.

Throughout the settled areas there were isolated pockets along the eastern Mount Lofty Ranges and over the eastern section of the Upper South East District where the winter rainfalls were as much as 30 per cent below normal. However, over the remainder of the settled areas, winter aggregates were generally slightly above normal with a few surpluses of up to 50 per cent being recorded along the coastal section of the Upper and Lower North Districts. Although August was the wettest month, both June and July yielded useful amounts.

Mean winter maximum temperatures which were mainly in the mid to upper 50s over the southern parts of the State and in the mid to upper 60s over the northern parts were generally 1 to 1½ degrees below normal. Mean minima were mainly normal, in the low 40s, but for the Far West coast and the extreme north-eastern section, means were 2 to 3 degrees below normal.

Spring 1971

Spring rains over the pastoral areas were generally above normal with the western section of the North East District and most of the North West being the best-served areas. The only inland area which failed to receive reasonable rains was the extreme north-east of the State. Most of the rain fell during September and November.

The settled areas also experienced above-normal rains with the largest surpluses of up to 50 per cent occurring over all of the Lower South East District, the Adelaide Plains, County Light, western Kangaroo Island, southern Eyre Peninsula and the eastern part of the Upper North District. Along the New South Wales and Victorian Borders there were small sections with below-normal rains, the worst served being the Upper Murray Valley where some spring aggregates were one-third of normal. Nearly all of this rain was recorded during September and November.

Mean spring maximum temperatures were mostly in the low to mid 60s over the southern settled areas grading through the 70s in the remainder of the settled areas to the mid and upper 80s in the extreme north of the State. No significant hot spells occurred although a few inland centuries were recorded, mainly during October. Mean maxima were 1 to 3 degrees above normal in the western half, 2 to 4 degrees below normal in the eastern settled areas and within 2 degrees of normal elsewhere. Mean spring minima were generally about normal.

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 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 forty miles. They are composed primarily of iron-rich rocks and contain the only known large 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. The Oraparinna mine in the Flinders Ranges is the largest producer of high grade barite in Australia.

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, Cooke Plains and along the River Murray.

Conditions in South Australia are ideal for the production of salt from sea water by solar evaporation. Large solar salt works are located at Dry Creek (near Adelaide), Port Price (Gulf St Vincent) and Whyalla. Salt is also harvested from several saline lakes, in particular Lake Bumbunga and Lake MacDonnell.

The opal fields at Coober Pedy and Andamooka supply a very large proportion of the precious opal produced in Australia. The value of raw opal production in South Australia exceeded \$7 million in 1970. Most of this is exported to Japan, Hong Kong, the U.S.A. and Germany.

Pyrite from the large deposit near Nairne has been used in the manufacture of sulphuric acid for the fertiliser industry since 1955.

South Australia is the major supplier of talc for the Australian home market, 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 and at Truro.

Although deficient in bituminous coal resources, South Australia has one deposit of sub-bituminous coal at Leigh Creek. This field supplies two million tons of coal annually for electric power generation at Port Augusta. Lignite deposits at Moorlands and Inkerman-Balaklava are undeveloped.

Limestone and dolomite together form one of the State's most abundant natural resources. The principal deposits being exploited at present are: limestone at Rapid Bay, Penrice, Angaston and Klein Point; limesand at Coffin Bay, and dolomite at Ardrossan. Large reserves of both limestone and dolomite have been established at Brachina in the Flinders Ranges.

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 were discovered and exploited until it was not economic to continue with the methods and equipment then available. The most important of these minerals was copper ore, found initially at Kapunda and at Burra in the 1840s and later more extensive deposits were found at Wallaroo in 1859 and Moonta in 1861. These fields played an important part in the development of the colony in the nineteenth century. Uranium deposits were worked extensively at Radium Hill in the 1950s, while less important deposits of gold, silver-lead ores and manganese ore have been exploited over past years.

The intensive mineral exploration activity of the past few years has led to the discovery of economic deposits of natural gas, copper and zinc. Smaller amounts of molybdenite, nickel, tin and lead have also been found.

In 1971 production recommenced at the old mining localities of Burra and Kanmantoo. At Burra an ammonia-leaching plant is being used to treat low grade copper ore from the old Burra mine to produce copper oxide while at Kanmantoo the usual flotation method is being used to produce copper sulphide concentrates.

At present extensive mineral exploration is being carried out in South Australia by Australian and overseas companies who have contracted to spend about \$4 million a year on exploration tenements which they hold. Drilling on the plains to the east of Mount Painter has resulted in the discovery of encouraging deposits of sedimentary uranium, the first to be found in Australia.

As a result of farm-out agreements made in 1969 over \$15 million has been spent on extensive petroleum exploration. The discovery of oil at Tirrawarra,

Moorari and Flylake in the Cooper Basin marks a significant break-through and points to the probability of a commercial oil field being located in this area. Eleven natural gas fields have now been discovered in this part of the State, namely Gidgealpa, Moomba, Daralingie, Toolachee, Packsaddle, Merrimelia, Della, Strzelecki, Biglake, Moorari and Flylake.

The proved gas reserves in these fields are already greatly in excess of the amount required for Adelaide which is served by a 486 mile pipeline and in 1971 an agreement to supply natural gas to Sydney from these fields was finalised.

Locations of mineral deposits referred to are shown on the map on page 22.

UNDERGROUND WATER

South Australia is not endowed with a generous rainfall. Only the southern portion of the State, approximately that part south of Port Augusta, receives more than 10 inches of rain annually of which only quite small areas of the South East and the Adelaide Hills have an annual rainfall exceeding 25 inches. The northern part of the State, comprising approximately three-quarters of the total area, is largely arid with an average annual rainfall of less than 10 inches. As a consequence South Australia is notably deficient in rivers. There is only one large permanent river, the River Murray, flowing through it while the few streams commencing in the Flinders and Mount Lofty Ranges are short and seasonal in flow.

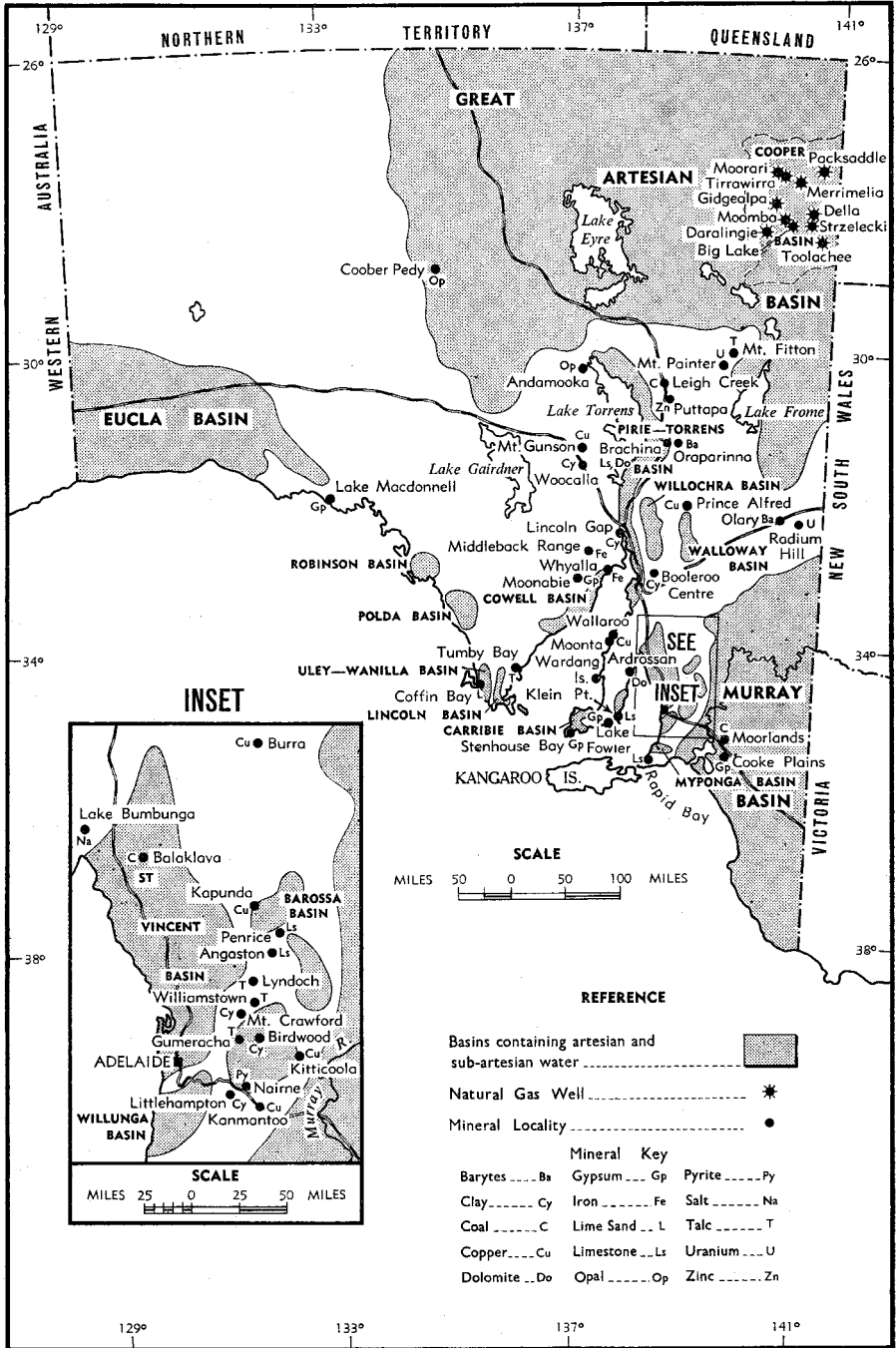
Water supply for the metropolitan area of Adelaide is derived from reservoirs in nearby ranges and from the River Murray. Reticulation of surface supplies now covers most of the Adelaide Plains, Yorke Peninsula and portions of Eyre Peninsula (see map page 313). In addition there are a number of small areas whose reticulated supplies are derived from groundwater sources by means of bores.

Groundwater suitable for various purposes is available in many areas. Pressure water, also referred to as artesian water, is generally confined to the several sedimentary basins located throughout the State. The largest of these, the Great Artesian Basin, 660,000 square miles in area, of which 120,000 square miles lie in the north-east part of South Australia, covers nearly one-third of the State. The intake area for the principal water-bearing bed lies along the western margins of the highlands in eastern New South Wales and Queensland and natural outlets for the water are mound springs which, in South Australia, lie to the west and south of Lake Eyre. Deep bores are necessary to tap these waters and very large flows have been obtained. However the water is generally too saline for any form of irrigation and its use is confined to stock watering.

The Murray Basin covers 28,000 square miles in South Australia and extends into Victoria and New South Wales. The southern and central portions of the basin contain waters suitable for all purposes while the water quality deteriorates steadily in a north and north-westerly direction from the southern intake area. Very large yields can often be developed from the bryozoal limestone aquifers at shallow depths and also in some places from sand dune and other local aquifers. Groundwater is used to supply the towns throughout the southern area and is also developed for irrigation and stock. At Padthaway near Naracoorte increasing use is being made of flood irrigation from a high-yielding shallower aquifer for vines and pastures.

NATURAL ENVIRONMENT

SOUTH AUSTRALIA
MINERAL RESOURCES AND
ARTESIAN WATER



The Eucla Basin in the south-west of the State lies partly in South Australia and partly in Western Australia. However because of the low fertility of the area the basin is of little importance although some of the water which is of poor quality is used for watering stock.

The Adelaide Plains Basin is part of the larger St Vincent Basin, lying between the Mount Lofty Ranges and the shores of the gulf. Good quality water is obtainable in certain portions of this basin; it is heavily used for market gardening on the northern Adelaide Plains. The danger of serious depletion of the aquifers by overpumping in this area has been recognised and use is now subject to government control. In the Adelaide metropolitan area groundwater is used from time to time to supplement reticulated reservoir water. Bores constructed for this purpose have yielded up to 15 million gallons a day.

The Pirie-Torrens Basin is a long narrow basin lying west of the Flinders Ranges between Port Broughton and Port Augusta and extending north to the northern end of Lake Torrens. The variable quality of the water from this basin, however, limits its use mainly to stock watering. The high salinity of the Cowell Basin on the west coast of Spencer Gulf renders it little used and of minor interest only. Several small basins, Walloway, Willunga, Myponga and others are utilised to various extents for stock and pastoral uses.

Groundwater outside the well defined sedimentary basins is often obtainable in useful quantity but its location is not so readily defined. Many bores in folded rocks of the Mount Lofty Ranges and elsewhere provide water supplies for towns, farms and for domestic purposes. Much of the extensive water reticulation of Eyre Peninsula is derived from shallow groundwater basins; Lincoln Basin, Uley-Wanilla Basin and Poldia Basin together yielding more than 3 million gallons per day.

It is estimated that the usage of underground water in South Australia exceeds 130 million gallons daily for all purposes. The exploration for, and development of, underground water resources is a continuing responsibility of the South Australian Department of Mines which provides the services of geologists and an extensive drilling organisation.

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, while some show a marked textural 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 content of soils in some areas 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 these soils along the River Murray have been notably successful, but where dry land arable farming is practised these soils are susceptible to wind erosion.

There are other important features that affect 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 and in a bulletin published by the Department 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, Commonwealth Scientific and Industrial Research Organisation (CSIRO). 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.

A special article on the 'Soils of South Australia' was included on pages 21-31 of the *South Australian Year Book* 1969.

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

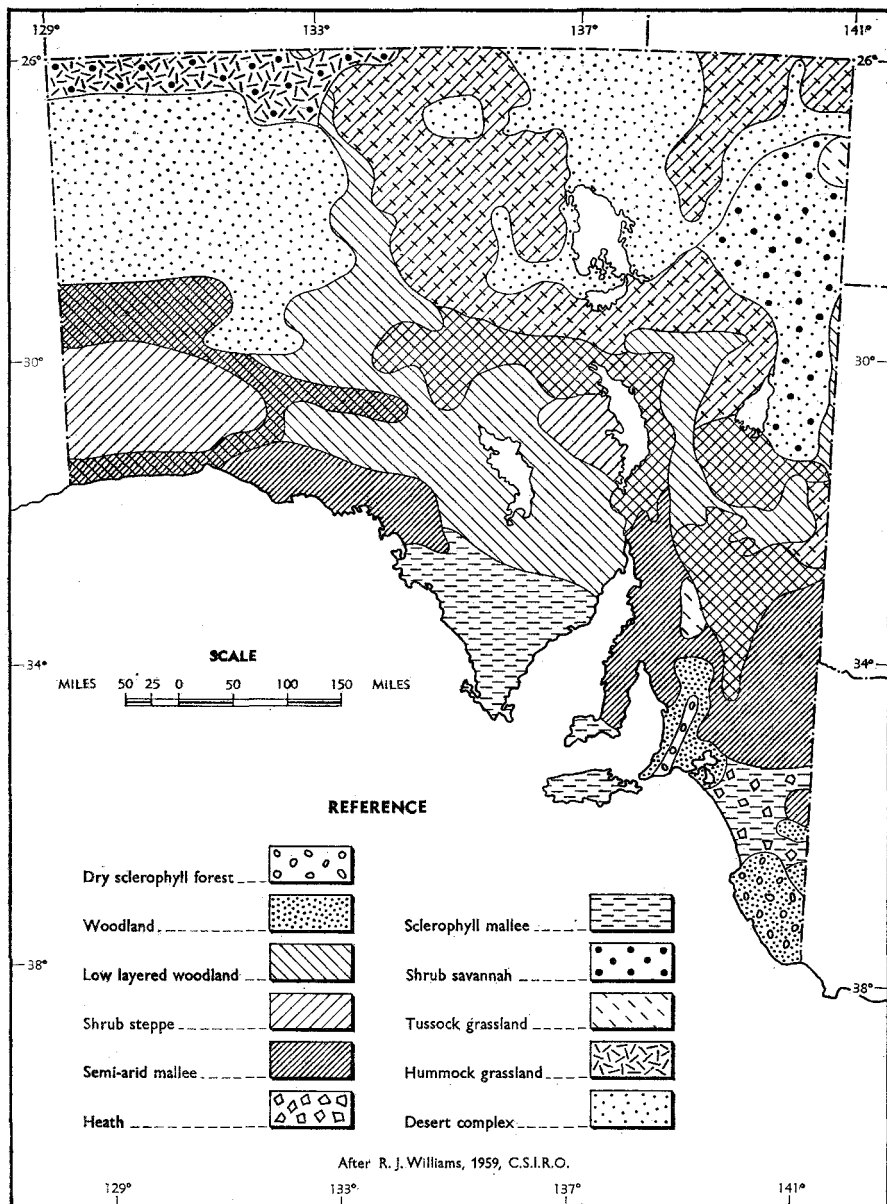
FLORA

A broad division of vegetation types is formed by Goyder's Line which represents approximately the 10-inch annual isohyet. To the north of the Line, in the Eremaean Province, lies about 80 per cent 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 ranges structurally from low layered woodland, through shrub savannah, to exceedingly sparse vegetation of very low stature (shrub

SOUTH AUSTRALIA
VEGETATION MAP



steppe). As in arid situations elsewhere throughout the world, therophytes are well represented and after rain these may transform the scene with prolific but transient herbage. The woody perennial vegetation is of genera adapted to the dry conditions. Predominant trees and shrubs are frequently species of *Acacia* (mulga, myall, ironwood) *Cassia*, *Grevillea* etc. but other genera (*Hakea*, *Myoporum*, *Casuarina*, and less frequently *Eucalyptus*) are often involved. Some species such as the desert oak achieve a stature comparable with large temperate zone trees. Chenopod shrubs (Blue Bush, Salt Bush) are often prominent in the shrub stratum, and *Triodia* (Porcupine Grass) in the herbaceous cover, but there is considerable diversity in the Eremaean flora. The development of cattle and sheep grazing industries and overstocking for long periods and especially in times of drought has led to the depletion of, and alteration to, 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 30-40 inches) 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 *Eucalyptus rubida* (the candlebark) are sometimes prominent. Such forest is replete with lesser trees *Acacia melanoxylon* (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 being invaded by aliens. Lower rainfall areas down to about 15 inches per annum support mainly savannah woodlands and layered woodlands with South Australian bluegum (*Eucalyptus leucoxylon*) and peppermint gum (*Eucalyptus odorata*) as predominant trees. Associated trees include river redgum (*Eucalyptus camaldulensis*), especially along river and creek frontages, sheoak (*casuarina* spp.), and manna gum (*Eucalyptus viminalis*). 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 (*callitris* spp.) 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 rise 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.

A more detailed description of the vegetation was included on pages 26-37 of *South Australian Year Book* 1967 and should be referred to for a description of the plant species included in the vegetation formations shown in the map on page 25 of this issue.

FAUNA

South Australia, centrally situated and sharing borders with every other mainland State, is in a sense the zoological cross-roads of the continent. A number of typically western, eastern, and northern species extend to some point within the State, which has few species that are uniquely South Australian.

Only 7.8 per cent of South Australia—a fragmented, southern fringe—is favoured with an annual rainfall of 15 or more inches; more than 80 per cent receives 10 inches or less. The moister areas are restricted mainly to three peninsulas, to Kangaroo Island and the extreme south-east, and these are divided by gulfs, straits, and stretches of drier country. Further north, the semi-arid to arid zone is deeply cut into and split by Spencer Gulf and the central highlands. Because of this geographical background the distribution of South Australian fauna, notably of birds and reptiles, is very complex.

Highly developed agriculture in the limited favourable areas and the widespread pastoral occupation beyond have depleted the fauna, particularly the mammals. A series of national parks and reserves is being established which will preserve samples of the various habitat types and, it is hoped, their indigenous fauna. The Commissioners of National Parks control over 8 million acres (see Part 6.4), while the Flora and Fauna Board administers the Flinders Chase Reserve (212 square miles) on Kangaroo Island which is free from the introduced fox.

The land mammals of South Australia at the time of European settlement numbered about ninety species—some 38 per cent of the total Australian mammal fauna. The two monotremes have survived; the spiny ant-eater is wide-spread but nowhere common while the platypus (once found in the River Onkaparinga as well as in the River Murray) is extremely rare except where it has been introduced in Flinders Chase. The marsupials have been affected most severely; more than a quarter of the fifty or so species are now extinct in South Australia although a number of these survive beyond the State. Originally the marsupial fauna was relatively rich with some 45 per cent of the total number of Australian species represented.

Marsupials that are still common are the brushtailed possum (*Trichosurus vulpecula*) and the western grey kangaroo (*Macropus fuliginosus*). In the dry interior the red kangaroo (*Megalcia rufa*) at times greatly increases in numbers, probably because of changes caused by livestock grazing and the provision of extra water. Today South Australia is almost the sole custodian of the hairy-nosed wombat (*Lasiorhinus latifrons*) which is still numerous in the far west of the State but elsewhere the species has been reduced to a few small isolated colonies.

Of the native placental mammals possibly one of the fifteen or so species of bats and three or four of the eighteen rodents have become extinct.

A special article on the mammals of South Australia was included on pages 42-9 of the *South Australian Year Book* 1970.

Well over 100 species of reptiles have been recorded. Of the few that are peculiar to the State the white dragon lizard (*Amphibolurus maculosus*) found

on the salt-encrusted margins of Lake Eyre and other inland playas is of particular interest. Undescribed species of lizards are known to occur in the Flinders Ranges.

The nineteen species of frogs include one that is restricted to the State. This number is only 16 per cent of the Australian frog fauna (123 species) and reflects, in large degree, the predominantly arid nature of the State.

Marine and freshwater fishes number about 390 species—not a very rich fauna for a State with a coastline of 2,500 miles. There is, however, an abundance of certain species of economic importance. A special article on the freshwater fish of South Australia was included on pages 27-34 of the *South Australian Year Book* 1971.

The insects of the coastal regions show affinities with those of similar regions to the east and west while many of the restricted number of species of the inland extend widely through arid Australia.

Among insect groups that are prominent elsewhere in Australia but are scarce in this State are butterflies and cicadas, while insects that depend on permanent streams or swamps, such as dragonflies and caddisflies, are rather poorly represented. Similarly, few species of freshwater crustaceans occur. In eastern and western Australia hosts of wasps, native bees, jewel beetles and other insects are attracted to the flowers of native shrubs in spring and summer. These insects are less numerous in South Australia largely because of the nature and limited extent of the bushland.

Among the restricted range of insects of the arid interior are a number of interesting forms. Of these certain desert-adapted grasshoppers (*Acridiidae*) are notable. Other groups with specialised species are lacewings (*Neuroptera*) and beetles and moths. Some are never abundant but the populations of others may fluctuate enormously. Moths can prolong the pupal stage to survive dry periods and may emerge in great numbers after heavy rain.

BIRDS OF SOUTH AUSTRALIA*

Ornithology, the study of birds, has contributed much to an understanding of the problems and principles of biology more especially in the fields of endocrinology, embryology, evolution, genetics, photoperiodism, animal behaviour, migration, and taxonomy, the science of classifying organisms. Traditionally, museums are the recognised 'clearing-houses' for all ornithological matters.

Number of Bird Species

There are 404 naturally occurring and thirteen introduced species of birds which can be listed for South Australia (Condon 1969; 1971 Ms). Recently published aggregates for the other States and Territories of the Commonwealth are as follows:

Queensland, 538 + 7 introductions (Lavery 1969); New South Wales, 485 + 16 introductions (McGill 1960); Western Australia, 466 + 8 introductions (Serventy and Whittell 1967); Victoria, 425 + 12 introductions (Wheeler 1967); Northern Territory, 352 + 0 introductions (Storr 1967-amended); Australian Capital Territory, 257 + 9 introductions (Frith 1969); Tasmania, 255 + 10 introductions (Ridpath and Moreau 1966).

Excluding adventive species, estimated totals for the whole of Australia, including Tasmania, have varied between 650 and 715 (Serventy and Warham 1971).

*Contributed by H. T. Condon, South Australian Museum.

According to calculations arrived at during the preparation (by the writer) of a new Australian checklist of birds, the exact number should be 683, of which 350 are non-passerines.

New Guinea, which is about one-tenth the size of Australia, has approximately 650 species while the New Zealand avifaunal list comprises 248 species and thirty-four introduced forms (Kinsky *et alia* 1970). A rough estimate suggests that about 8,600 recent species of birds are known throughout the world with the greatest variety in tropical regions.

It is expected that a few more names will be added to the Australian and South Australian lists from time to time, these being mainly long-distance migrants and vagrants from the northern hemisphere and other parts of the globe. New and exceptional records are acceptable only if based on museum specimens or similar evidence.

Since the beginning of 1969 the following species and subspecies have been added to the South Australian List: Light-mantled Sooty Albatross (*Phoebastria palpebrata*) (19A); Northern (or Grey-eyed) Giant Petrel (*Macronectes halli*) (20A); Antarctic Fulmar (Silver-Grey Petrel) (*Fulmarus glacialisoides*) (20B); Scrub Turkey (*Alectura lathamii*), Flinders Chase, Kangaroo Island (introduced) (123A); Broad-billed Sandpiper (*Limicola falcinella*) (177A); Naretha Parrot (*Psephotus haematogaster narethae*), south of Nullarbor Plain (235(C)); Rose Robin (*Petroica rosea*) (340A). The numbers refer to the proper sequence in *A Handlist of the Birds of South Australia*.

Fossil Birds

The fossil record suggests that birds evolved from reptiles, the 'missing link' being provided by the ancient toothed bird *Archaeopteryx lithographica*, whose remains were found in Jurassic limestone deposits in Bavaria, Germany in the years 1861, 1877 and more recently 1956. These primitive toothed creatures, which are regarded as avian mainly because of their feathers, existed more than 140 million years ago, and are the oldest known birds.

In South Australia, the oldest known fossil species, a penguin, *Palaeudyptes marplei*, is about 50 million years of age, having been found in Upper Eocene deposits at Port Noarlunga, south of Adelaide. Other unidentified fragments of penguins, perhaps 30 million years old, have been recovered from deposits of the Upper Oligocene Period. Flamingoes, unknown in Australia at the present time, were present in the interior, in more pluvial times, from the Middle Tertiary to the late Pleistocene, *i.e.*, about forty million to one million years ago. Four species are known to have occurred, including *Phoenicopterus ruber* which has survived in parts of America, Africa, Europe and Asia up to the present time.

Altogether, twenty-nine fossil species may be listed, including the extinct giant runners *Genyornis* and *Dromornis*, which died out in late Pleistocene or early Recent times and two species of emus, also now extinct. In addition many unidentified fragments of land and freshwater birds have been discovered. As in other parts of the world, fossil remains of birds are more scarce than those of other land vertebrates because their fragile skeletons are less likely to be preserved, and in South Australia the most productive deposits have been lacustrine. No ancient passerines have yet been discovered.

OCCURRENCE AND DISTRIBUTION

Climate and Vegetation

Faunistically the resident land birds are divisible into arid or eremaeon forms, which are widespread in the interior, and humidity-loving species which are concentrated in the wetter parts of the regions of winter rain, such as the Mount Lofty

Ranges, Kangaroo Island and the extreme south-east corner of the State. Tropical and rain forest types found in northern and north-eastern Australia do not occur; also many familiar species of the high rainfall coastal districts of south-eastern Australia are absent, e.g., the Lyrebird (*Menura novaehollandiae*), certain flycatchers, honeyeaters, bowerbirds and catbirds.

Climate and soil factors indirectly affect the distribution of birds because they control the basic vegetation formations, or major habitats, which in both a physical and biological sense are relatively constant or unchanging zones. Most species are 'habitat-specific', and, judging from their strong ecological preferences, the birds of the interior deserts and those of the wetter areas of winter rain must have co-existed in different climatic zones for a long time.

In Australia about ten major vegetation formations, excluding mangroves, may be listed in relation to the occurrence and distribution of the avifauna. As Keast (1961) has pointed out a different series of species, or even genera, may be found in each vegetation zone, and nowhere else. The major habitats important for birds in South Australia are sclerophyll forest, which is isolated from similar formations in other parts of the continent, savannah woodland, heath, Mallee, Mulga scrub, shrub steppe, sandy desert, lakes and rivers.

Without doubt, the ranges of many species would have expanded and contracted in former times in accordance with the climatic fluctuations which are known to have occurred over the last million years.

Baldwin Spencer (1896), in an analysis of the Australian terrestrial fauna, placed the whole of South Australia in the arid Eyrean subregion, which is surprising because in birds there is a preponderance of 'humid forms' in the Mount Lofty Ranges and on Kangaroo Island. Other writers, e.g. D. L. Serventy (1953), have drawn attention to similar occurrences in the humid south-west corner of Western Australia; this suggests that these places are outliers or relict provinces of a humidity-loving avifauna that may have extended across southern Australia long ago when the climatic stresses of the present day began.

Worsening conditions, the causes of which may be still in operation, would have been responsible not only for the contraction and disruption of the wet forests and their peculiar faunal suite, but also for the expansion and southward march of the eremaeans (Mallee etc.) types from the centre of the continent.

At Mount Remarkable in the Flinders Ranges are found lingering traces of the 'humid' avifauna which are matched by other minor occurrences on southern Eyre Peninsula and perhaps along the valley of the River Murray. Common birds which are characteristic of the 'wet' zone of the Mount Lofty Ranges include the so-called Adelaide Rosella, *Platycercus adelaidae* and its ecotypes (cf. Cain 1955), Blue Wren (*Malurus cyaneus*), Noisy Miner (*Myzantha melanocephala*), and many others. The absence of yellow robins (*Eopsaltria*) and a few other species commonly met with in southern Victorian forests serves as a reminder of the proximity of the scorching deserts of central Australia.

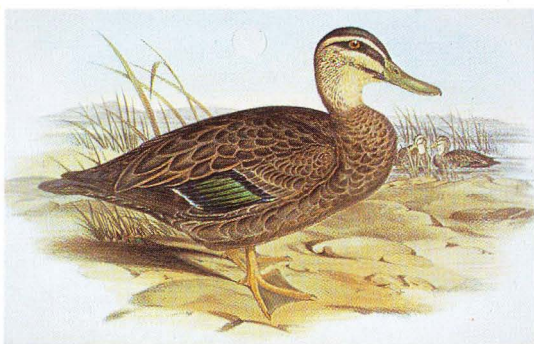
Mallee forms and species are recognisable and widespread over a large portion of southern Australia from the coastal districts in the west to the far inland of New South Wales and Victoria. In South Australia, Mallee birds inhabit most of Eyre Peninsula, Yorke Peninsula, Kangaroo Island, the northern Flinders Ranges, and an area of many hundreds of square miles which adjoins the southern highlands and is known as the Murray Mallee. All these areas are moderately rich in species, and the broken distributions of some, e.g. the Western Whipbird (*Psophodes nigrogularis*)—in coastal south-western Western Australia and in



Wedgetailed Eagle *Aquila audax*
97 cm (Accipitriformes)



Blackshouldered Kite *Elanus notatus*
36 cm (Accipitriformes)



Black Duck *Anas superciliosa* 56 cm
(Anseriformes)



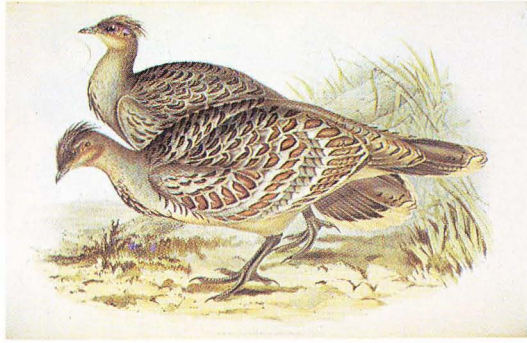
Australian Goshawk *Accipiter fasciatus* 41-56 cm (Accipitriformes)



Barn Owl *Tyto alba* 33 cm
(Strigiformes)



Magpie-lark *Grallina cyanoleuca*
27 cm (Passeriformes)



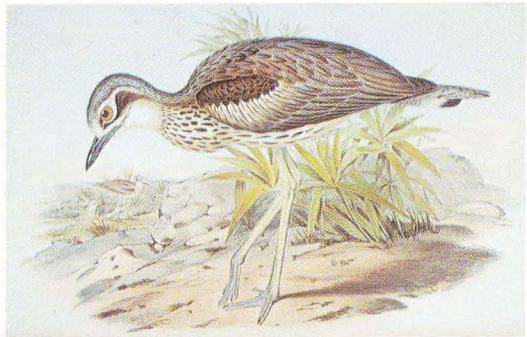
Malleefowl *Leipoa ocellata* 61 cm (Passeriformes)



Spurwinged Plover *Vanellus miles novaehollandiae*
36 cm (Passeriformes)



Whitebacked Magpie *Gymnorhina tibicen leuconota* 46 cm (Passeriformes)



Southern Stone-plover *Burhinus magnirostris* 52 cm (Passeriformes)



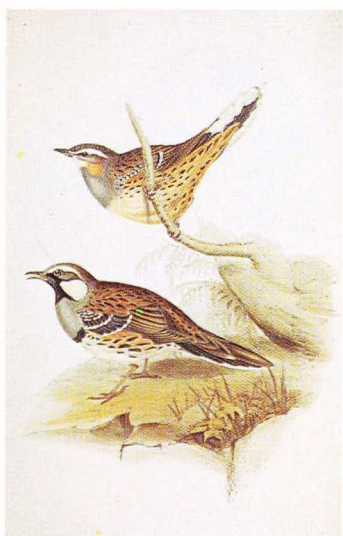
Yellow Rosella *Platycercus flaveolus*
30 cm (Psittaciformes)



Scarletbreasted Parrot *Neophema splendida* 18 cm (Psittaciformes)



Night Parrot *Geopsittacus occidentalis* 24 cm
(Psittaciformes)



Spotted Quail-thrush *Cinlosoma punctatum* 27 cm (Passeriformes)



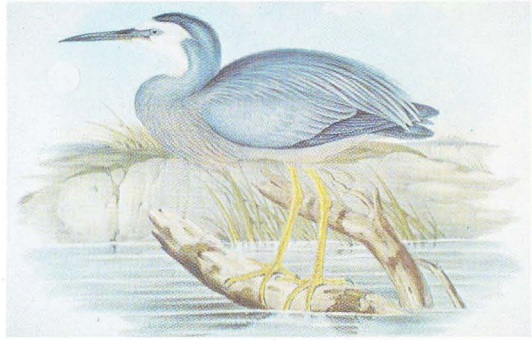
Western Whipbird *Psophodes nigrogularis* 25 cm (Passeriformes)



Pied Cormorant *Phalacrocorax varius* 76 cm
(Pelecaniformes)



Fantailed Cuckoo *Cuculus pyrrhophanus* 25 cm
(Cuculiformes)



Whitefaced Heron *Ardea novaehollandiae* 66 cm
(Ardeiformes)



Nankeen Night Heron *Nycticorax caledonicus* 58 cm
(Ardeiformes)



Whiteplumed Honeyeater *Meliphaga penicillata* 17 cm (Passeriformes)



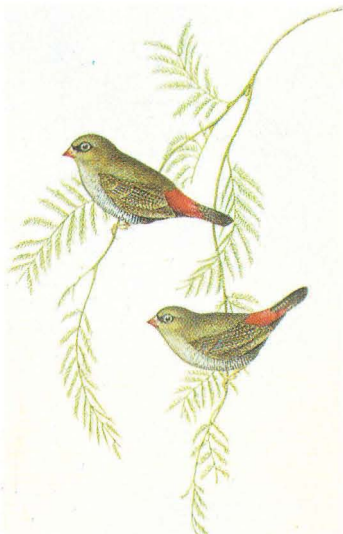
Eastern Spinebill *Acanthorhynchus tenuirostris* 17 cm (Passeriformes)



Swamphen *Porphyrio porphyrio* 46 cm (Passeriformes)



Red Wattlebird *Anthochaera carunculata* 37 cm (Passeriformes)



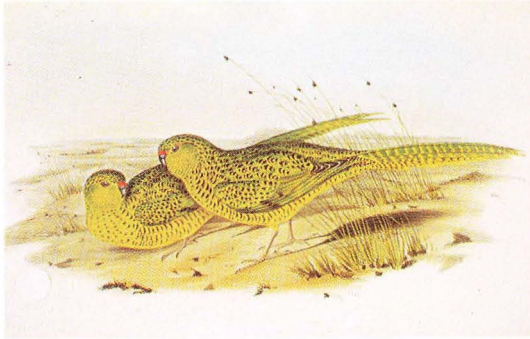
Beautiful Firetail *Emblema bella* 11 cm (Passeriformes)



Yellowtailed Black Cockatoo *Calyptorhynchus funereus* 66 cm (Psittaciformes)



Pink Cockatoo *Cacatua leadbeateri* 36 cm (Psittaciformes)



Swamp Parrot *Pezoporus wallicus* 30 cm (Psittaciformes)



Port Lincoln Parrot *Barnardius zonarius* 38 cm (Psittaciformes)



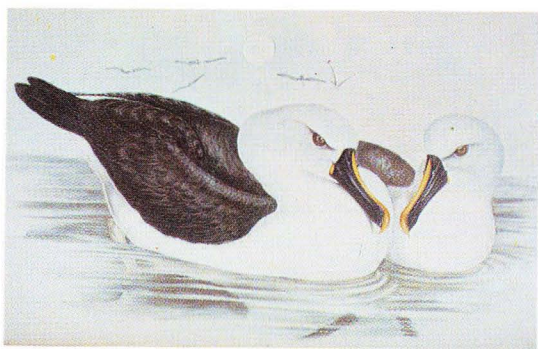
Rock Pebbler *Polytelis anthopeplus* 41 cm (Psittaciformes)



Rockhopper Penguin *Eudyptes chrysocome* total
length 64 cm (Order Sphenisciformes)



Crested Grebe *Podiceps cristatus* 51 cm (Podi-
pediformes)



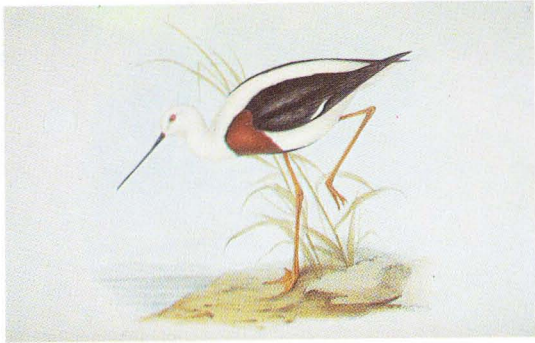
Yellow-nosed Albatross *Diomedea chlororhynchos*
58 cm (Procellariiformes)



Southern Emu Wren *Stipiturus malachurus* 18 cm (Passeriformes)



Yellowrumped Thornbill *Acanthiza chrysorrhoa* 10 cm (Passeriformes)



Banded Stilt *Cladorhynchus leucocephalus* 34 cm (Charadriiformes)



Grey Fantail *Rhipidura fuliginosa* 15 cm (Passeriformes)



Rose Robin *Petroica rosea* 11 cm (Passeriformes)

South Australia on Eyre and Yorke Peninsulas, Kangaroo Island, and the eastern Murray Mallee—suggest that the Mallee communities were in existence before the fractioning of the 'humid' avifauna.

A great many birds found in the Mallee districts also occur in adjacent regions of greater aridity. Others, such as the Gibber-Bird (*Ashbyia*) and Cinnamon Quail-thrush (*Cinclosoma cinnamomeum*) must be regarded as true desert forms, absent from Mallee.

Judging from what is left and from the recorded observations of the pioneers, there is little doubt that the original environment was extremely rich in birds. Nowadays one must travel far off the beaten track to find bird communities undisturbed by European settlement. Nevertheless, there is no evidence that human settlement has been the sole cause of extinction of any species in the past. More likely, as in the case of the Night Parrot (*Geopsittacus*) the white man has merely hastened the elimination of forms fighting a losing battle with a fickle climate.

Local Extinctions

The destruction or modification of the natural habitat by European man in an attempt to control the environment for his own immediate advantage obviously has affected different species of birds in varying degrees.

The new habitats fashioned by humans have been favourable to a few natives, and most of the introductions. However, local extinctions brought about by habitat loss invariably occur quickly among the ground-frequenting and other sedentary species peculiar to the more fertile areas.

Early local extinctions were the Ground Parrot (*Pezeporus wallicus*), which disappeared from the Adelaide Plains less than thirty years after settlement began, and the Emu of Kangaroo Island which died out some time between its discovery by Flinders in 1802 and the arrival of the first colonists in 1836.

The Kangaroo Island Emu, often regarded as a full species, *Dromaius diemenianus*, was probably a marooned colony of runt individuals of the mainland species. Osteological remains suggest that the birds may have suffered from mineral deficiencies in the diet—the tarsal bones are curved or bent—and they may have lived a precarious existence to succumb finally to bushfires.

Although at the end of one hundred years of settlement by Europeans, all usable parts of the State were occupied, large areas of the natural flora remained untouched. Local extinctions were confined to the agricultural areas and bigger towns and cities. Only one bird species was believed to be totally extinct, namely, the Night Parrot (*Geopsittacus occidentalis*), of which there have been no reliable sightings since the 1880s.

After the 1939-45 War the destruction of timber and the drainage of swamps and marshlands greatly reduced the number and variety of native birds everywhere in South Australia. In an endeavour to preserve natural habitats the Government is taking over many relatively unspoiled areas as national parks.

Most birds as well as their nests and eggs are protected by law, and it is illegal to kill or interfere with them in any way except during open seasons which are proclaimed for game species, such as ducks and Stubble Quails (*Coturnix pectoralis*).

The totally unprotected birds of South Australia are listed below.

Psittaciformes

- Little Corella (*Cacatua sanguinea*)
- Galah (*Cacatua roseicapilla*)
- Budgerigar (*Melopsittacus undulatus*)

Pelecaniformes

- Black Cormorant (*Phalacrocorax carbo*)
- Little Black Cormorant (*Phalacrocorax sulcirostris*)
- Blackfaced Cormorant (*Phalacrocorax fuscescens*)
- Pied Cormorant (*Phalacrocorax varius*)
- Little Pied Cormorant (*Phalacrocorax melanoleucos*)

Passeriformes

- Red Wattle-Bird (*Anthochaera carunculata*)
- Zebra Finch (*Poephila guttata*)
- Silvereye (*Zosterops lateralis*)
- Australian Raven (*Corvus coronoides*)
- Little Raven (*Corvus mellori*)
- Little Crow (*Corvus bennetti*)
- Australian Crow (*Corvus orru ceciliae*)

NOTE: All introduced species are unprotected.

Strays and Stragglers

It is some times difficult to decide whether certain birds, which are recorded irregularly, should be regarded as strays (or 'vagrants'). Some species, such as the Cattle Egret (*Ardeola ibis*) are currently engaged in extensive range expansion all over the world. The sudden appearance of Cattle Egrets in a number of widely separated localities in South Australia in 1963 and 1964 is in accord with known movements in other parts of Australia. The species was recently found breeding near Lake Alexandrina. Perhaps in the same category as those of the Cattle Egret are occurrences of the Ruff, (*Philomachus pugnax*) (first in 1962), Red-necked Phalarope (*Phalaropus lobatus*) (first in 1966), and Rose Robin (*Petroica rosea*) (first in 1967), although the two first-named breed in the Northern Hemisphere. The Rose Robin which has not been found nesting here is a common resident species in the coastal regions of south-eastern Australia.

The Manx Shearwater (*Puffinus puffinus*) which breeds in Europe normally migrates to the coasts of Brazil, Uruguay and Argentina in South America, but occasionally it wanders further afield. In November 1961 a dead bird which had been banded as a chick on the island of Skokholm, Wales on 9 September 1960 was found in South Australia at Venus Bay, a most remarkable example of a single (stray) occurrence. Other stragglers which have been recorded only once in South Australia are all migratory breeding species in coastal south-eastern Australia—Rufous Fantail (*Rhipidura rufifrons*) (December 1933), Satin Flycatcher (*Myiagra cyanooleuca*) (March 1964) and Leaden Flycatcher (*Myiagra rubecula*) (December 1964).

Composition of South Australian Avifauna

Resident land birds predominate, both in variety and number of species, followed by the aquatic forms which occur on or near either fresh or salt water, or on both. About one half of the aquatic forms are migratory species from northern Asia in the Palaearctic Region, whilst others come from northern and eastern Australia; two species, the White-fronted Tern (*Sterna striata*) and Double-banded Dotterel (*Charadrius bicinctus*) are annual visitors from New Zealand.

The oceanic birds include as breeding species the littoral Little Penguin (*Eudyptula minor*) which nests on most islands, including Kangaroo Island; the Mutton Bird (*Puffinus tenuirostris*), nesting on Great Althorpe, Wedge (formerly), Gambier, North, Neptune and Greenly Islands, the Investigator Group, and on six islands in the Nuyts Archipelago; and White-faced Storm-Petrel (*Pelagodroma marina*), breeding on most islands in the Sir Joseph Banks Group, Wedge, Price and South Hummocks Islands, and two islands in the Nuyts Archipelago. Other oceanic species are visitors from arctic, subantarctic and antarctic regions.

The following table lists the species which make up the South Australian avifauna.

Composition of South Australian Avifauna

Australian Species:

Residents;

Land (non-passerines)	89
Land (passerines)	150
Aquatic	57
Oceanic (including littoral and pelagic)	5

Visitors;

Seasonal, land (non-passerines)	9
Seasonal, land (passerines)	7
Seasonal, aquatic	7

324

New Zealand Species:

Visitors;

Aquatic	2
Oceanic	2

4

Palaeartic Species:

Visitors;

Land	2
Aquatic	31
Oceanic	2

35

Subantarctic and Antarctic Species:

Visitors;

Oceanic	36
Provisional List	5

Total 404

Introduced Species 13

Fossil Species (non-passerines) 29

Spencer Gulf, the Flinders Ranges, and the western margins of Lake Eyre mark the limits of a few species which are considered Western Australian forms; these include the Western Shrike-Thrush (*Colluricincla rufiventris*), a Treecreeper (*Climacteris rufa*), the Western Yellow Robin (*Eopsaltria griseogularis*), and the Ringneck Parrot (*Barnardius zonarius*).

Introduced Birds

From 1862 efforts were made to introduce and acclimatise a number of European species, including the House Sparrow (*Passer domesticus*). At first the imported birds were protected by law, often to the disadvantage of the endemic forms, but in less than twenty years the Sparrow, to name one, had become an agricultural pest and it was the subject of violent and official persecution for about forty years in a futile attempt to eradicate it.

With the effluxion of time and the disappearance of native species in many areas, most of the adventive bird species have come to be accepted as part of the damaged ecosystem. Indeed, the Starling (*Sturnus vulgaris*), which occurs in enormous flocks and used to be blamed for interference with the nesting hollows of certain endemics, must now be classed as beneficial because of the astronomical numbers of insects it destroys throughout the year. The Sparrow, although it has not changed its habits, is of some value as an insect-eater and scavenger around habitations. All introduced birds are now unprotected but they cannot be harmed in areas barred to shooters such as national parks.

Introduced Birds of South Australia

Species	Mode of Introduction	Approximate Date	Distribution
Ostrich, <i>Struthio camelus</i> (Struthioniformes)	Feral, domestic	1919	Formerly Coorong and Port Augusta area
Mallard, <i>Anas platyrhynchos</i> (Anseriformes)	Feral, domestic	Early	Botanic gardens, towns
Ringneck Pheasant, <i>Phasianus colchicus</i> (Galliformes)	Deliberate . . .	1961	Mount Lofty Ranges
Domestic Pigeon, <i>Columba livia</i> (Columbiformes)	Feral, domestic	Early	Widespread, common
Spotted Turtle-Dove, <i>Streptopelia chinensis tigrina</i> (Columbiformes)	Feral, domestic (accidental)	1931	Widespread, common
Skylark, <i>Alauda arvensis</i> (Passeriformes)	Deliberate	1862	Adelaide Plains, Kangaroo Island, South-East
Blackbird, <i>Turdus merula</i> (Passeriformes)	Deliberate	1863	Widespread, common
Goldfinch, <i>Carduelis carduelis</i> (Passeriformes)	Deliberate	1862	Widespread, common
Greenfinch, <i>Carduelis chloris</i> (Passeriformes)	Deliberate	1879	Adelaide, Mount Lofty Ranges, south-east of S.A.
House-Sparrow, <i>Passer domesticus</i> (Passeriformes)	Deliberate	1862-3	Widespread, common
Red Bishop, <i>Euplectes orix</i> (Passeriformes)	? feral, domestic	Before 1926	Near Murray Bridge, restricted range
Starling, <i>Sturnus vulgaris</i> (Passeriformes)	Deliberate	1862	Widespread, common
Common Mynah, <i>Acridotheres tristis tristis</i> (Passeriformes)	? deliberate . . .	Early 1950	Restricted, 4-5 miles north of Adelaide

Man's Interest in Birds

The significance of birds to the Aborigines was mainly as a source of food with practically any species, including its eggs and young, being eaten. Feathers were freely used as body decorations in ceremonies and such common species as the Emu, Wedge-tailed Eagle, and Crow featured in their folklore and myths.

Many of the native names for birds are pleasant sounding; some are descriptive or refer to habits and call-notes, and a few indicate the suitability of the species as food. However, with the exception of 'Punkarry' for the White-eyed Duck, no South Australian Aboriginal name appears to be in general use by Europeans. For a list of Aboriginal names see Condon (1955).

As in other parts of Australia, the local avifauna received a good deal of attention from the early navigators, explorers, scientists and naturalists, the first recorded observations being made about 170 years ago by Matthew Flinders during the voyage of the *Investigator* which sailed along the southern coastline and around Kangaroo Island, between 26 January and 19 April 1802.

Flinders was followed by the French who, under Baudin, in *Le Casuarina*, claimed to have captured three live Emus on Kangaroo Island in January 1803 and to have transported them back to France, but there is now some doubt about this.

Following colonisation in 1836 this interest continued among the settlers and subsequently a collection was started in the early 1860s in the South Australian Museum, then called the South Australian Institute Museum.

Today the museum ornithological collection numbers over 12,000 cabinet specimens of Australian birds, nearly 7,000 clutches of eggs, and about 2,000 osteological specimens. The research collection includes about 3,500 skins and 500 clutches of eggs of foreign birds.

Two organisations in South Australia whose common aim is the study of native birds are the South Australian Ornithological Association, which publishes the *South Australian Ornithologist*, and the Adelaide Ornithologists Club.

The protection of native species is an important activity of bird clubs and organisations and they are interested in legislation that effects birds.

Bird Banding

Bird-banding is a pursuit which has arisen from the greater need for accuracy in studying birds by amateur ornithologists and certain scientific organisations. Individual birds are marked by placing rings (or bands) on their legs for the purpose of determining such things as seasonal movements, age, plumage changes, nesting habits, and general behaviour. The rings may be of metal, coloured celluloid, anodised aluminium or plastics, and, where possible, bear a serial number and other details.

Organised bird-banding in Australia is dependent on the gratuitous efforts of amateur ornithologists, the majority being members of the local bird clubs or field naturalists societies. However, there is a strict system of control in that permits are issued annually and final approval of all those wishing to become banders rests with the State fauna authority and the Wildlife Division of the Commonwealth Scientific and Industrial Research Organisation (CSIRO) which sponsors a bird banding scheme.

Thousands of birds are banded in South Australia each year with a high percentage of the total number being accounted for by a very active local group working on behalf of the Wildlife Division of the CSIRO. Since the group began operating in 1960 they have ringed almost 200,000 individual birds.

Detailed reports of recoveries are published in the quarterly *The Australian Bird Bander*, a journal of The Bird Banders' Association of Australia.

NOMENCLATURE

Scientific Names

The scientific name of every species consists of two parts, the generic name and the specific name *e.g.*, Emu *Dromaius novaehollandiae*. The species is the basic unit. When it is divided into subspecies (*i.e.* geographical races) the latter are designated by a third name, *e.g.*, *Dromaius novaehollandiae novaehollandiae*, the name of the emu of the south-eastern mainland of Australia.

The present system of scientific nomenclature is known as the Binomial System or, sometimes, the Linnaean System after the Swedish naturalist Charles Linnaeus its inventor. But even before Linnaeus there was a recognition of the categories of genus and species which in part goes back to the nomenclature of primitive peoples. The generic names used by Linnaeus and his predecessors often went back to the names used by the Romans and Greeks.

With so many kinds of animals, including birds, and numberless taxonomists at work naming and describing them in different countries, confusion in nomenclature has arisen. Different names have been given to the same animal and the same name has been given to different animals. So it has come about that where the Animal Kingdom is concerned the Binomial System is controlled by the International Code of Zoological Nomenclature and no other code or system of rules has validity. The Code gives anyone the authority to apply Latin names, and these names automatically have permanent status, either as valid names or as synonyms.

Common or Vernacular Names

Elaborate systems of naming animals occur in most languages and all have primitive origins. For instance, the more conspicuous species have special names in all European languages.

In English, many of our so-called 'common names' are of Anglo-Saxon origin. Those applied to major groups are usually short and monosyllabic, *e.g.* finch, the different related species being distinguished by binomials—green finch, gold finch, bull finch. In the better known species, common names in English are still uninomial *e.g.* raven, robin, quail, crow and many others.

The transplanting of these familiar names of British birds by settlers in other parts of the world to describe similar but not the same birds immediately leads to difficulties. The old common names have lost their original and exact meanings of former times and are of no value in precise or scientific studies. Neither do common names necessarily indicate true relationships; for example, the robins, ravens, thrushes and magpies of Europe are quite unrelated to birds with these names in Australia.

Common names do not come under any control, either local or international and their security is dependent on usage. Most students of Australian birds adhere to the names of the Royal Australian Ornithologists Union (RAOU) Checklist, published in 1926. These names may be regarded as the non-Latin

equivalents of the scientific names, which they often resemble in being truly diagnostic designations calling attention to relationships or noteworthy features of appearance, behaviour and occurrence. They have come to be accepted everywhere as the standard by those who, for one reason or another, do not employ scientific names.

Bird on the State Badge

The State badge, as used by the Government, shows a black and white bird backed by the rising sun. Outside ornithological circles much confusion exists concerning the correct name and identity of this bird because in the official heraldic description it is called a 'Piping Shrike'. This name, which is an invention and an ornithological archaism, refers to a familiar native species, known for over seventy years as the White-backed Magpie, *Gymnorhina tibicen leuconota*, Family Streperidae. Some of the early naturalists compared this bird to a European shrike and the prefix 'piping' alludes to its loud call.

The White-backed Magpie of Australia is quite unrelated to the shrikes of Europe. Strictly speaking the now accepted name 'Magpie' is incorrect also, being derived from a European species (*Pica pica* with the same common name), a member of the Crow family, or Corvidae.

There are two kinds of Magpies in Australia, those in which the males have white backs and those in which the males have black backs. The White-backed Magpie of the State badge is the form confined to southern South Australia from Eyre Peninsula eastwards to the vicinity of Adelaide, coastal areas of the South East, all of Victoria except the Mallee areas, and the south-eastern corner of New South Wales, north to about Cooma.

Classification

Within the Animal Kingdom birds are placed in the Class Aves, which includes a formal sequence of lesser categories, such as Orders, Suborders, Families, Subfamilies, genera, species and subspecies. Ordinal names end in 'iformes', suborders have the usual Latin plural form ('-i', '-ae', or '-es') for an ending; family names are derived from the name of the type-genus and end in '-idae', subfamilies are recognised by the ending '-inae', superfamilies '-oidea'. All these subdivisions are aimed at indicating phylogenetic relationships.

The basic unit of classification is the species and upon its correct determination depends the recognition not only of genera, families and so on, but also subspecies which are discussed elsewhere in this article. Fortunately there are remarkably few cases where the character and extent of a bird species have not been settled.

A common distinction often made when speaking of birds is the reference to 'non-passerines' and 'passerines'. The passerines are of world wide distribution and comprise two-thirds of all living bird species; they belong to the Order Passeriformes, Perching Birds. They are presumably the most advanced of birds, in an evolutionary sense, and are usually smaller than most 'non-passerines', and include such common species of terrestrial song birds as larks, flycatchers, silvereyes, honeyeaters, finches, magpies and crows. Nineteen of the twenty-three non-passerine orders are represented in South Australia.

The sequence of these orders, as given in the following synopsis is a matter of convention although it is intended to indicate a sequence from what are presumably the oldest and most primitive to the most highly evolved families.

Outline of Major Classification of Birds

Order and Suborder	Family	Vernacular Name	Number of Species	Category
Casuariiformes	Dromaiidae	Emus	3 (2 F)	L/R
	Dromornithidae	Giant Runners (fossil)	3	L/F
Struthioniformes	Struthionidae	Ostriches	1	L/A
Sphenisciformes	Spheniscidae	Penguins	5	O/R/V
Podicipediformes	Podicipedidae	Grebes	3	W/R
Procellariiformes	Diomedeidae	Albatrosses	7	O/V
	Procellariidae	Petrels	17	O/R/V
	Oceanitidae	Storm Petrels	2	O/R/V
	Pelecanoideidae	Diving Petrels	1	O/V
Pelecaniiformes:				
Phaethontes	Phaethontidae	Tropic-Birds	1	O/V
Pelecani	Pelecanidae	Pelicans	3	W/R
	Sulidae	Gannets	1	O/V
	Phalacrocoracidae	Cormorants	8	W/R
	Anhingidae	Darters	2	W/R
Ardeiformes:				
Ardeae	Ardeidae	Hérons and allies	11	W/R/V
Plataleae	Plataleidae	Ibises and Spoonbills	7	W/R
Ciconiae	Ciconiidae	Storks and allies	3	W/R
Phoenicopteriformes	Phoenicopteridae	Flamingoes	4	W/F
Anseriformes:				
Anseres	Anatidae	Swans, Geese and Ducks	24	W/R
Accipitriformes:				
Accipitres	Accipitridae	Hawks, Kites and Eagles	16	L/R
	Pandionidae	Osprey	1	W/R
Falcones	Falconidae	Falcons and Caracaras	7	L/R
Galliformes:				
Galli	Megapodiidae	Mound-builders	2	L/R
	Phasianidae	Quails, Pheasants and Turkeys	4	L/R
Gruiformes:				
Turnices	Turnicidae	Bustard-Quails	3	L/R
	Pedionomidae	Plains-Wanderer	1	L/R
Grues	Gruidae	Cranes	1	W/R
Ralli	Rallidae	Rails, Crakes, Coots and allies	10	W/R
Otides	Otididae	Bustards	1	L/R
Charadriiformes:				
Charadrii	Rostratulidae	Painted Snipes	1	W/R
	Haematopodidae	Oystercatchers	2	W/R
	Charadriidae	Plovers, Dotterels and allies	15	W/R
	Scolopacidae	Sandpipers, Snipe and allies	21	W/V
	Phalaropidae	Phalaropes	1	W/V
	Recurvirostridae	Stilts, Avocets	3	W/R
	Burhinidae	Stone-Curlews	1	L/R
	Glareolidae	Pratincoles	2	L/R/V
Lari	Stercorariidae	Skuas	3	O/V
	Laridae	Gulls, Terns	16	O/W/R/V
Columbiformes:				
Columbae	Columbidae	Doves and Pigeons	9	L/R
Psittaciformes	Psittacidae	Cockatoos, Parrots	34	L/R
Cuculiformes:				
Cuculi	Cuculidae	Cuckoos	6	L/M
Strigiformes	Tytonidae	Barn Owls	2	L/R
	Strigidae	Typical Owls	3	L/R
Caprimulgiformes:				
Podargi	Podargidae	Frogmouths	1	L/R
Aegothelae	Aegothelidae	Owlet-Nightjars	1	L/R
Caprimulgi	Caprimulgidae	Nightjars	1	L/R

Outline of Major Classification of Birds (continued)

Order and Suborder	Family	Vernacular Name	Number of Species	Category
Apodiformes:				
Apodi.....	Apodidae.....	Swifts.....	2	L/M
Coraciiformes:				
Alcedines.....	Alcedinidae.....	Kingfishers.....	4	L/R
Meropes.....	Meropidae.....	Bee-eaters.....	1	L/R
Coracii.....	Coraciidae.....	Rollers.....	1	L/V
Passeriformes:		Perching Birds:		
(Tyranni).....	(Pittidae).....	(Pittas).....	(3)	NSA
(Menurae).....	(Menuridae).....	(Lyrebirds).....	(2)	NSA
	(Atrichornithidae)	(Scrub-birds).....	(2)	NSA
Oscines.....	Alaudidae.....	Larks.....	2	L/R
	Hirundinidae.....	Swallows and Martins..	4	L/R
	Motacillidae.....	Pipits.....	1	L/R
	Campephagidae.....	Cuckoo-Shrikes.....	3	L/R
	Pycnonotidae.....	Bulbuls.....	1	L/A
	Turdidae.....	Thrushes.....	7	L/R/A
	Timaliidae.....	Babblers and allies.....	3	L/R
	Sylviidae.....	Old World Warblers....	5	L/R
	Epthianuridae..	Australian Chats.....	4	L/R
	Acanthizidae.....	Thornbill Warblers and allies	19	L/R
	Maluridae.....	Blue Wrens and allies...	14	L/R
	Rhipiduridae.....	Fantails.....	3	L/R/V
	Monarchidae.....	Monarch Flycatchers..	3	L/R/V
	Muscicapidae.....	Old World Flycatchers..	8	L/R
	Pachycephalidae..	Whistlers, Song-Shrikes and allies	6	L/R
	Falcunculidae.....	Shrike-Tits, Bellbirds, Whipbirds and allies	4	L/R
	Neosittidae.....	Sittellas.....	1	L/R
	Climacteridae....	Australian Treecreepers	4	L/R
	Dicaeidae.....	Flowerpeckers, Pardalotes	6	L/R
	Zosteropidae.....	Silveryeyes (White-eyes)..	1	L/R
	Meliphagidae.....	Honeyeaters.....	34	L/R
	Fringillidae.....	Grosbeaks, Finches, Buntings	2	L/A
	Estrildidae.....	Waxbills, Grass-Finches and Mannikins	5	L/R
	Ploceidae.....	Weaver-Finches.....	2	L/A
	Sturnidae.....	Starlings, Mynahs.....	2	L/A
	Oriolidae.....	Orioles.....	1	L/R
	Grallinidae.....	Mud-nest Builders.....	3	L/R
	Artamidae.....	Wood-Swallows.....	6	L/R
	Cracticidae.....	Magpies, Butcher-Birds and allies	4	L/R
	Ptilonorhynchidae	Bower-Birds.....	2	L/R
	Corvidae.....	Ravens, Crows.....	4	L/R

KEY TO CATEGORIES

A Introduced F Fossil L Land birds M Migratory NSA Not in South Australia
 O Oceanic birds R Resident V Visitors W Water birds, fresh or salt

NOTE: Number of species refers to South Australia.

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EXPLORATION AND COLONISATION

In the story of the discovery and exploration of South Australia there are many paradoxes which can mainly be 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 until after 1801 that British explorers discovered the valuable central southern coastline; Sydney was settled in 1788, but again it was much later, 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 COLONISATION

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 Zeepaard* 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 Zeepaard* was Pieter Nuyts, 'Councillor Extraordinary of India', after whom this area was named 'A Landt Van P. Nuyts'.

As the South Australian coast presented no evidence of prospects for trade, the Dutch, being essentially a trading nation, were not inclined to closer investigation. 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 after so many miles of barren coast abandoned hope of finding anything other than desolate country, 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 colonisation 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 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 8 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 Le 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 27 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 colonisation, 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 colonisation, 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 Grimes, a government surveyor, to Kangaroo Island to report on it as a possible site for colonisation. 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 establishing 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), Goold (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 before colonisation 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 12 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 formation 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 17 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 arising out of navigational difficulties, in the area of the Murray mouth which tended to cast a hoodoo on its navigation later. 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 17 February 1834. Sturt actually marked the present position of the Outer Harbour 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 4 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.

COLONISATION

The colonisation 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 colonisation 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 colonisation of South Australia was finally approved.

The theoretician was Edward Gibbon Wakefield, whose 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 colonisation 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.

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 earlier plans.

The South Australian Colonization Act (4 & 5 William IV. Cap. 95) was assented to on 15 August 1834; the persistent efforts of Gouger, Torrens, and many others for a settlement in South Australia had finally borne 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' (\$1.20) 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 authorise the experiment it was not prepared to finance it; the colony was to be self-supporting. The Commissioners were accordingly authorised to borrow \$400,000 against future general revenue to finance the founding of the colony and the establishment of government, and \$100,000 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 colonisation 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 \$40,000 be lodged as a guarantee for the venture. Secondly land to the value of \$70,000 was to be sold before settlement.

A Board of Commissioners with Torrens as chairman was appointed early in 1835. The Board immediately offered land in the new colony at \$2 an 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 \$1.20 an 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 \$40,000 guarantee lodged with the Treasury, the Commissioners were free to begin the business of colonisation. 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 of the Surveyor-General, Colonel William Light, whose task included choosing a site for the first settlement. Details of Light's early movements are given on pages 44-5. 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 RN, arrived at Holdfast Bay on 28 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 eighteen 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 difficult tasks with an inadequate staff Light first had to contend with opposition to his choice of a site for Adelaide. His views prevailed and the city was surveyed to his plan and the land was 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. 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 realised that the divided authority as incorporated in the Colonisation Act was impracticable, and the next Governor, Colonel George Gawler, was authorised 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 ceased with 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 finally became 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 had a two-fold influence on 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. Secondly it gave great impetus to agriculture when the price of wheat rose sharply—the feeding of the miners became as attractive a proposition as was the actual mining. 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 COLONISATION

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-colonisation 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 13 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 eleven weeks with the cattle in good condition and only four 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 and Bonney. 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 fifty 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 realised, however, that very different conditions prevailed in the Lower South East, and by the mid-1840s 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 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 giant horseshoe-shaped salt lake forming an impassable barrier. This erroneous belief was to persist for eighteen 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 Fowlers 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 for King George Sound (Albany) in February 1841, having sent the remainder of the party back to Adelaide. Eyre arrived at King George Sound in July after an extremely tortuous crossing.

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 colonisation 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 Stoney 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 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* Fowlers 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 thus he was 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 was thwarted however, 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 24 July 1862 and establishing a route which was to be followed by the Overland Telegraph ten years later. A special article on the Overland Telegraph Line appears on pages 526-31.

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 seventeen 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 Creek, McKinlay pushed east and then north, to reach the Gulf of Carpentaria.

The construction of the Overland Telegraph between 1870 and 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 thirty 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 forty 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, 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-government authorities such as the 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.

Electoralates

For elections for the Commonwealth Upper House (Senate) each State is a single multi-member electorate. South Australia is divided into five multi-member electoralates for elections for the State Upper House (Legislative Council) and into twelve and forty-seven single-member electoralates 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 State 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.

The electoral commission appointed after the 1966 Census recommended that South Australia be given an additional seat in the House of Representatives. After the necessary legislation had been passed, new electoral boundaries were proclaimed on 21 November 1968. At the general elections held on 25 October 1969, the first under the new boundaries, twelve members from South Australia were returned to the House of Representatives.

The Electoral Districts (Redivision) Act, 1968-1969 provided for the appointment of a three-man Electoral Commission to divide the State into forty-seven House of Assembly districts, eight more than previously, and also to re-define Legislative Council districts without increasing the number.

After considering submissions from interested persons and organisations the Commission completed its report with recommendations in September 1969. The Constitution Act Amendment Act, 1969 incorporating the Commission's recommendations passed both Houses and the Royal Assent was given on 12 March 1970 and at the House of Assembly election conducted on 30 May 1970 forty-seven members were returned.

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 the major political 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.

Cabinet and Executive Government

Both in the Commonwealth and in South Australia, executive government is based on the system which was evolved in Britain in the eighteenth century and which is generally known as 'cabinet' or 'responsible' government. Its main principles are that the head of the State, Her Majesty the Queen (or her representative, the Governor-General or Governor, acting on her behalf) should perform governmental acts on the advice of her ministers; that she should choose her principal Ministers of State from members of Parliament belonging to the party or coalition of parties commanding a majority in the popular House; that the Ministry so chosen should be collectively responsible to that House for the government of the State; and that the Ministry should resign if it ceases to command a majority there.

The cabinet system operates chiefly by means of constitutional conventions, customs or understandings and through institutions that do not form part of the legal structure of government at all. The executive power of the Commonwealth is exercisable by the Governor-General and that of South Australia by the Governor, each being advised by an executive council which only meets for formal purposes. The whole policy of a Ministry is in practice determined by some or all of the Ministers of State, meeting without the Governor-General or Governor under the chairmanship of the Prime Minister or Premier. This group of Ministers is known as the Cabinet.

The Cabinet

The Cabinet does not form part of the legal mechanism of government. Its meetings are private and deliberative, the actual Ministers of the day alone are present, no records of the meetings are made public and the decisions taken have in themselves no legal effect. Before January 1956 all Commonwealth Ministers were members of the Cabinet, but at present the thirteen senior Ministers constitute the Cabinet and the other Ministers only attend Cabinet meetings when required, for example, when the business of their respective Departments is being discussed. In South Australia all ten Ministers are members of Cabinet.

As Ministers are the leaders of the party or parties commanding a majority in the popular House, the Cabinet substantially controls not only the general legislative programme of Parliament, but the whole course of Parliamentary proceedings. In effect, though not in form, the Cabinet, by reason of the fact that all Ministers are members of the Executive Council, is also the dominant element in the executive government of the State. In summoning, proroguing or dissolving Parliament, the Governor-General or the Governor is usually guided by the advice tendered him by the Cabinet through the Prime Minister or Premier, although legally the discretion is vested in the Governor-General or Governor himself.

Executive Council

The Executive Council is usually presided over by the Governor-General or Governor, the members holding office during his pleasure. All Ministers of State must be members of the Executive Council. Commonwealth Ministers remain members of the Executive Council on leaving office, but are not summoned to attend its meetings, for it is an essential feature of the cabinet system that attendance should be limited to the Ministers of the day.

The meetings of the Executive Council are formal and official in character and a record of proceedings is kept by the Secretary or Clerk. At Executive Council meetings the decisions of Cabinet are, where necessary, given legal form, appointments are made, resignations accepted, proclamations issued and regulations approved.

Appointment of Ministers

Legally, Ministers hold office during the pleasure of the Governor-General or Governor, but in practice the discretion of the Queen's representative in the choice of Ministers is limited by the conventions on which the Cabinet system rests. When a Ministry resigns the Crown's custom is to send for the leader of the party which commands, or is likely to be able to command a majority in the popular House, and to commission him, as Prime Minister or Premier, to 'form a Ministry'—that is, to nominate other persons to be appointed as Ministers of State and to serve as his colleagues in the Cabinet.

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 there is a Committee system whereby a limited number of Members enquire into and report on 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. Some items of Commonwealth legislation are completely, or almost 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 (the South Australian Magistrates and Local Courts) may be the subject of appeal to the State Supreme Court, and the decisions of this higher court, acting in either its original or appellate jurisdiction, may be the subject of appeal to the High Court of Australia. In certain circumstances an ultimate appeal in matters of State jurisdiction may 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

Federation

The Commonwealth of Australia was proclaimed as from 1 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 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.

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

Qualifications for franchise are possessed by any British Subject, not under twenty-one years of age and not disentitled on other grounds, who has lived in Australia for six months continuously. Residence in a subdivision for a period of one month prior to enrolment is necessary to enable a qualified person to enrol. Enrolment and voting are compulsory except that the compulsory enrolment provisions do not relate to Aboriginal natives of Australia.

A member of the Defence Forces on service outside Australia who is a British Subject not less than twenty-one years of age and has lived in Australia for six months continuously is entitled to vote at Commonwealth elections, whether enrolled or not. In 1966 the franchise was extended to entitle a person who is less than twenty-one years of age, who has lived in Australia for six months continuously and who is, or has been, on 'special service' outside Australia as a member of the Defence Forces to vote at elections as if his name appeared on the

roll. 'Special service' takes the same meaning as that term in the Repatriation (Special Overseas Service) Act and means, in relation to a person, service during a period when he is outside Australia and he or his unit is allotted for special duty in a special area.

Persons of unsound mind, attainted of treason, convicted and under sentence for any offence punishable by imprisonment for one year or longer or, persons who are holders of temporary entry permits under the *Migration Act 1958-1966* or are prohibited immigrants under that Act are excluded from the franchise.

Membership

Qualifications necessary for membership of either House of the Commonwealth Parliament are possessed by any British Subject, twenty-one years of age or over, who has resided in Australia for at least three years and who is, or is qualified to become, an elector of the Commonwealth. The principal reasons for disqualification of persons otherwise eligible as members of either House are; membership of the other House, allegiance to a foreign power, being attainted of treason, being convicted and under sentence for any offence punishable by imprisonment for one year or longer, being an undischarged bankrupt or insolvent, holding office of profit under the Crown (with certain exceptions), or having pecuniary interest in any agreement with the Public Service of the Commonwealth except as a member of an incorporated company of more than twenty-five persons.

EXECUTIVE GOVERNMENT

Governor-General

On 30 April 1969 His Excellency the Rt Hon. Sir Paul Meernaa Caedwalla Hasluck, GCMG, was sworn in as the eighteenth 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 fortieth Ministry (the first McMahon Ministry) are listed below. In 1971 assistant ministers were appointed for the first time.

McMahon Ministry from 14 September 1971

Prime Minister

The Rt Hon. W. McMahon, CH, MP (N.S.W.)

Deputy Prime Minister and Minister for Trade and Industry

The Rt Hon. J. D. Anthony, MP (N.S.W.)

Treasurer

The Rt Hon. B. M. Snedden, QC, MP (Vic.)

Minister for Primary Industry

The Hon. I. McC. Sinclair, MP (N.S.W.)

Minister for Health and Leader of the Government in the Senate

Senator the Hon. Sir Kenneth McC. Anderson, KB, MP (N.S.W.)

Minister for National Development and Leader of the Government in the House of Representatives

The Hon. Sir Reginald W. C. Swartz, KBE, ED, MP (Qld)

Minister for Foreign Affairs

The Hon. N. H. Bowen, QC, MP (N.S.W.)

Minister for Defence

The Hon. D. E. Fairbairn, DFC, MP (N.S.W.)

Postmaster-General and Vice President of the Executive Council

The Hon. Sir Alan S. Hulme, KBE, MP (Qld)

Minister for Shipping and Transport

The Hon. P. J. Nixon, MP (Vic.)

Minister for Labour and National Service

The Hon. P. R. Lynch, MP (Vic.)

Minister for Education and Science

The Hon. J. M. Fraser, MP (Vic.)

(The above Ministers constitute the Cabinet)

Minister for Air

Senator the Hon. T. C. Drake-Brockman, DFC (W.A.)

Minister for Immigration

The Hon. A. J. Forbes, MC, MP (S.A.)

Minister for Social Services

The Hon. W. C. Wentworth, MP (N.S.W.)

Minister for Works and, under the Minister for Trade and Industry, Minister-in-Charge of Tourist Activities

Senator the Hon. R. C. Wright (Tas.)

Minister for Civil Aviation

Senator the Hon. R. C. Cotton (N.S.W.)

Minister for Customs and Excise, Deputy Leader of the Government in the House of Representatives and Minister Assisting the Minister for National Development

The Hon. D. L. Chipp, MP (Vic.)

Minister for Repatriation and Minister Assisting the Minister for Trade and Industry

The Hon. R. McN. Holten, MP (Vic.)

Minister for External Territories

The Hon. A. S. Peacock, MP (Vic.)

Minister for the Interior

The Hon. R. J. D. Hunt, MP (N.S.W.)

Attorney-General

Senator the Hon. I. J. Greenwood, QC, MP (Vic.)

Minister for the Navy

The Hon. M. G. Mackay, MP (N.S.W.)

Minister for Housing

The Hon. K. M. K. Cairns, MP (Qld)

Minister for Environment, Aborigines and the Arts and Minister-in-Charge of Tourist Activities

The Hon. P. Howson MP (Vic.)

Minister for Supply and Minister Assisting the Treasurer

The Hon. R. V. Garland, MP (W.A.)

Minister for the Army

The Hon. R. C. Katter, MP (Qld)

ASSISTANT MINISTERS

Assistant Minister assisting the Minister of Labour and National Service
The Hon. A. A. Street, MP (Vic.)

Assistant Minister assisting the Prime Minister
The Hon. J. D. M. Dobie, MP (N.S.W.)

Assistant Minister assisting the Postmaster-General
The Hon. I. L. Robinson, MP (N.S.W.)

Assistant Minister assisting the Minister for Health and Leader of the Government in the Senate
Senator the Hon. J. E. Marriott (Tas.)

Assistant Minister assisting the Minister for Primary Industry
The Hon. R. S. King, MP (Vic.)

Assistant Minister assisting the Minister for Civil Aviation
The Hon. J. E. McLeay, MP (S.A.)

Salaries and Allowances

From 17 June 1970 the annual salary for each member has been \$9,500 with electorate allowances of \$2,750 for city House of Representatives members, \$3,350 for country House of Representatives members and \$2,750 for senators.

The following additional payments are also made:

Prime Minister—\$21,250 plus expense allowance of \$10,300;

Deputy Prime Minister—\$12,500 plus expense allowance of \$4,600;

Treasurer—\$12,250 plus expense allowance of \$4,600;

Senior Ministers—\$10,500 plus expense allowance of \$4,600;

Other Ministers—\$7,500 plus expense allowance of \$4,000;

Speaker (House of Representatives)—\$7,500 plus expense allowance of \$4,000;

President (Senate)—\$7,500 plus expense allowance of \$4,000;

Chairman of Committees (House of Representatives)—\$3,125;

Chairman of Committees (Senate)—\$3,125;

Leader of the Opposition (House of Representatives)—\$10,500 plus expense allowance of \$4,600;

Deputy Leader of the Opposition (House of Representatives)—\$5,000 plus expense allowance of \$1,500;

Leader of the Opposition (Senate)—\$5,000 plus expense allowance of \$1,500;

Deputy Leader of the Opposition (Senate)—\$1,625 plus expense allowance of \$750;

Leader of the Australian Democratic Labor Party (Senate)—\$1,000 plus expense allowance of \$500;

Government Whip (House of Representatives)—\$1,500;

Other Whips (House of Representatives)—\$1,250;

Whips (Senate)—\$1,250.

Superannuation

The *Parliamentary Retiring Allowances Act 1948-1968* provides for the payment of superannuation pensions to persons or widows of persons who have served as members of the Commonwealth Parliament. Members who retire involuntarily and have attained the age of forty years are eligible for pensions after eight years

service, while those members who retire voluntarily and have attained the age of forty years are eligible after twelve years service. Except in the case of the Prime Minister, for whom a non-contributory scheme is provided, members are required to contribute towards the Parliamentary Retiring Allowance Scheme; at present members generally contribute 11½ per cent of their monthly allowance, although the rate is lower for some officers of the Parliament.

The annual rate of pension payable to all eligible retired members ranges from \$2,850 for retired members at age forty to \$5,062 for those sixty-five and over. Members who have served as ministers, or in certain other offices, may receive an additional allowance which varies from \$1,575 for eight years service as an office-holder to \$3,750 for fourteen or more years service. A retired Prime Minister over the age of forty-five years who has held that office for at least two years does not receive a ministerial pension but a special pension (in addition to his normal parliamentary pension); the value of this allowance depends on length of service as Prime Minister with a minimum of \$4,000 for two years service and a maximum of \$6,000 for not less than six years service.

A member who retires and is not eligible for a pension receives a refund of his contributions plus a Commonwealth supplement the value of which depends on length of service and whether the retirement is involuntary or voluntary.

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.

From 1 July 1971 representation in the Senate is as follows:

State	To Retire 30 June 1974				To Retire 30 June 1977			
	LP	CP	ALP	Others	LP	CP	ALP	Others
New South Wales....	1	—	3	1 (a)	1	1	3	—
Victoria.....	2	1	1	1 (a)	1	1	2	1 (a)
Queensland.....	1	1	2	1 (a)	1	1	2	1 (a)
South Australia.....	3	—	2	—	2	—	3	—
Western Australia....	2	1	2	—	1	1	2	1 (b)
Tasmania.....	2	—	2	1 (b)	2	—	2	1 (b)

(a) Australian Democratic Labor Party.

(b) Independent.

LP Liberal Party of Australia (including Liberal and Country League of South Australia and Liberal Country Party of Victoria) CP Country Party ALP Australian Labor Party

The members representing South Australia in the Senate are:

To Retire 30 June 1974:

Bishop, Reginald (ALP)
Buttfield, Dame Nancy, DBE
(LCL)
Cavanagh, James Luke (ALP)
Laucke, Condor Louis (LCL)
Young, Harold William (LCL)

To Retire 30 June 1977:

Cameron, Donald Newton (ALP)
Davidson, Gordon Sinclair (LCL)
Drury, Arnold Joseph (ALP)
Jessop, Donald Scott (LCL)
McLaren, Geoffrey Thomas (ALP)

Elections for the Senate: Voting, South Australia

Date of Election	Electors Enrolled	Votes Recorded		Informal Votes	
		Number	Percentage of Electors Enrolled	Number	Percentage of Votes Recorded
10 December 1949..	434,224	420,437	96.82	48,838	11.62
28 April 1951.....	440,454	427,593	97.08	24,792	5.80
9 May 1953.....	453,496	437,583	96.49	21,297	4.87
10 December 1955..	462,747	444,827	96.13	39,802	8.95
22 December 1958..	490,930	473,832	96.52	36,677	7.74
9 December 1961 ..	521,396	501,312	96.15	28,284	5.64
5 December 1964 ..	551,341	528,464	95.85	39,421	7.46
25 November 1967 .	594,480	568,823	95.68	32,864	5.78
21 November 1970 .	639,807	609,268	95.23	42,306	6.94

Voting System

Before 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. This system was discussed in detail on pages 55-6 of the *South Australian Year Book* 1971.

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 one member is elected from both the Northern Territory and the Australian Capital Territory.

In the redistribution of seats on the basis of the Census of 30 June 1966 South Australia gained a seat. As a result twelve members were returned from South Australia at the Commonwealth election held on 25 October 1969.

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

House of Representatives, 1969 Elections
Voting and Party Representation in South Australian Electorates

Electorate	Electors on Roll	Electors Voting	Successful Candidates		
			Name	Party	First Preference Votes
Adelaide.....	55,765	53,339	Hurford, C. J.	ALP	29,641
Angas.....	47,870	46,167	Giles, G. O'H.	LCL	25,771
Barker.....	49,796	48,236	Forbes, Hon. A. J.	LCL	27,176
Bonython.....	53,389	50,812	Nicholls, M. H.	ALP	31,296
Boothby.....	55,550	52,943	McLeay, J. E.	LCL	27,308
Grey.....	48,097	45,770	Wallis, L. G.	ALP	22,096
Hawker.....	54,152	52,169	Jacobi, H. R.	ALP	28,305
Hindmarsh.....	55,195	52,885	Cameron, C. R.	ALP	34,346
Kingston.....	53,345	51,608	Gun, R. T.	ALP	26,975
Port Adelaide.....	54,929	52,576	Birrell, F. R.	ALP	35,147
Sturt.....	51,382	49,602	Foster, N. K.	ALP	24,007
Wakefield.....	45,156	43,612	Kelly, Hon. C. R.	LCL	24,685

At 1 July 1970 representation in this House was as follows:

Party	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Total
LP.....	15	18	7	4	1	1	—	—	46
CP.....	8	5	4	—	2	—	1	—	20
ALP.....	22	11	7	8	6	4	—	1	59

LP Liberal Party of Australia (including Liberal and Country League of South Australia and Liberal Country Party of Victoria) CP Country Party ALP Australian Labor Party

Elections for the House of Representatives: Voting, South Australia

Date of Election	Electors Enrolled	Votes Recorded		Informal Votes	
		Number	Percentage of Electors Enrolled	Number	Percentage of Votes Recorded
10 December 1949..	434,224	420,437	96.82	9,380	2.23
28 April 1951.....	440,454	(a)384,082	(a)97.09	7,910	2.06
29 May 1954.....	455,872	(a)357,854	(a)96.77	8,812	2.46
10 December 1955..	462,747	444,827	96.13	18,050	4.06
22 December 1958..	490,930	473,832	96.52	15,619	3.30
9 December 1961..	521,396	501,312	96.15	15,629	3.12
30 November 1963..	541,536	523,135	96.60	13,963	2.67
26 November 1966..	585,465	563,341	96.22	16,220	2.88
25 October 1969...	624,626	599,719	96.01	20,562	3.43

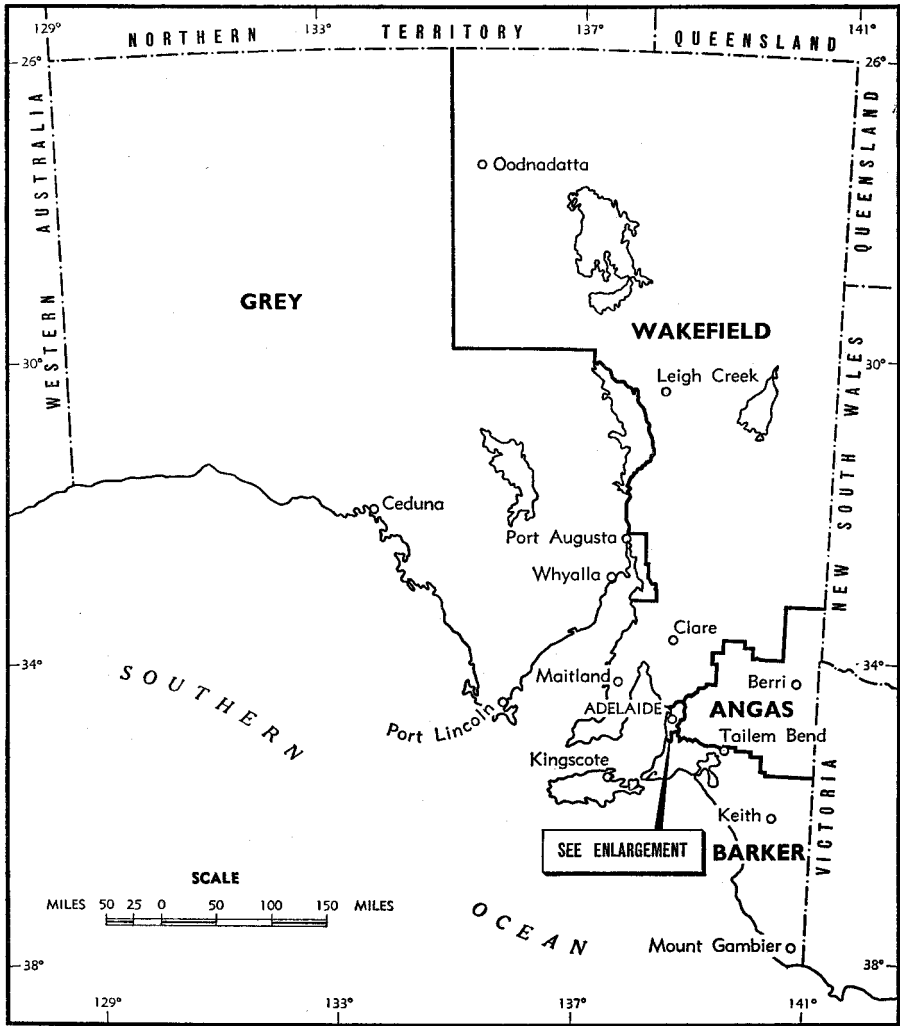
(a) Contested electorates only.

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.

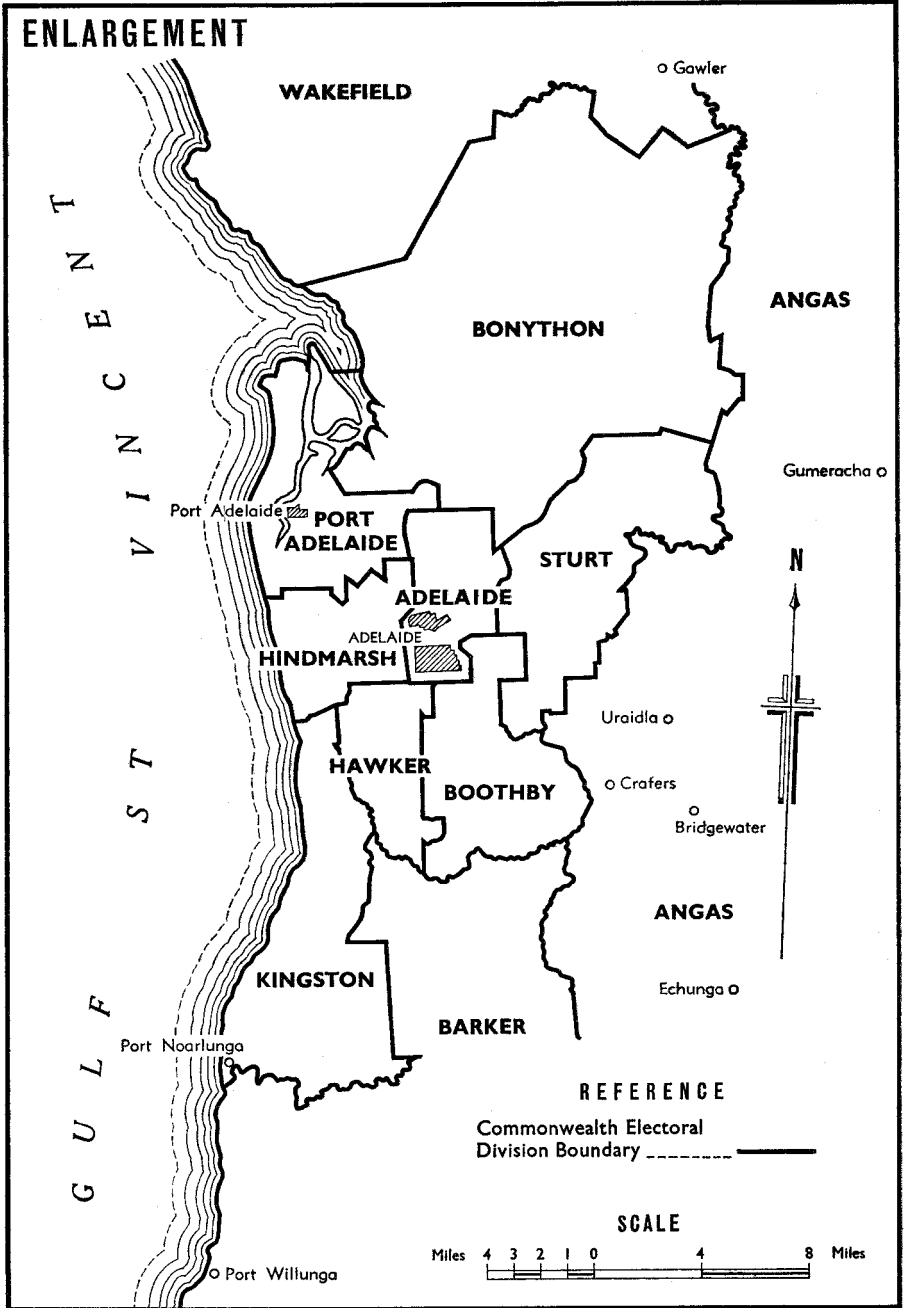
SOUTH AUSTRALIA
COMMONWEALTH ELECTORAL DIVISIONS

As proclaimed 21 November 1968



PORTION OF SOUTH AUSTRALIA
COMMONWEALTH ELECTORAL DIVISIONS

As proclaimed 21 November 1968



Of the twenty-six proposals so far submitted to the people of Australia only five have been approved (one in each of 1906, 1910, 1928, 1946 and 1967).

The most recent referendum (1967) proposed two alterations to the Constitution: the first, to sections 7 and 24-27, sought approval to alter the Constitution so that the number of members of the House of Representatives might be increased without necessarily increasing the number of Senators; the second, to sections 51 and 127, sought approval to alter the Constitution so as to omit certain words relating to the people of the Aboriginal race in any State and so that Aborigines would be counted in reckoning the population.

All States and a majority of electors in the Commonwealth voted in favour of the proposal regarding Aborigines while all States (except New South Wales) and a majority of Commonwealth voters rejected the Parliamentary proposal.

3.3 GOVERNMENT OF SOUTH AUSTRALIA

As has been described in Part 2 the Foundation Act for South Australia provided for the powers of government to be shared by a Governor and a Board of Colonisation Commissioners. Many problems were created by this division of authority and during the early years the Colony experienced considerable administrative and financial difficulties.

Following agitation by the colonists over a number of years, for popularly elected representation, the Constitution Act, 1855-1856, which inaugurated the system of responsible government in South Australia, was passed and came into force on 24 October 1856.

A summary of early constitutional history and the introduction of responsible government was included on pages 60-2 of the *South Australian Year Book* 1971.

VICE-REGAL REPRESENTATION

Following the death in office of Sir James Harrison on 16 October 1971, Sir Mark Laurence Elwin Oliphant, KBE was sworn in as the Queen's representative in South Australia on 1 December 1971.

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 table on the next page, which lists occupants of the office since the foundation of South Australia.

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 Foreign and Commonwealth Affairs, 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 one per cent of the total amount appropriated from the State's general revenue by the Appropriation Acts for public service without specific Parliamentary authority.

Governors of South Australia

Name	From	To
Captain John Hindmarsh, RN, KH	28 December 1836	16 July 1838
Lt-Col George Gawler, KH	17 October 1838	15 May 1841
George Grey	15 May 1841	25 October 1845
Lt-Col Frederick Holt Robe	25 October 1845	2 August 1848
Sir Henry E. F. Young	2 August 1848	20 December 1854
Sir Richard G. MacDonnell, CB	8 June 1855	4 March 1862
Sir Dominick Daly	4 March 1862	19 February 1863
Rt Hon. Sir James Fergusson, Bart	16 February 1869	18 April 1873
Sir Anthony Musgrave, KCMG	9 June 1873	29 January 1877
Lt-Gen. Sir Wm F. D. Jervois, GCMG, CB	2 October 1877	9 January 1883
Sir Wm C. F. Robinson, GCMG	19 February 1883	5 March 1889
Rt Hon. the Earl of Kintore, PC, GCMG	11 April 1889	10 April 1895
Sir Thomas F. Buxton, Bart, GCMG	29 October 1895	29 March 1899
Rt Hon. the Lord Tennyson, KCMG	10 April 1899	17 July 1902
Sir George R. Le Hunte, KCMG	1 July 1903	18 February 1909
Admiral Sir Day Hort Bosanquet, GCVO, KCB	18 February 1909	22 March 1914
Lt-Col Sir Henry L. Galway, KCMG, DSO	18 April 1914	30 April 1920
Lt-Col Sir Wm E. G. Archibald Weigall, KCMG	9 June 1920	30 May 1922
Lt-Gen. Sir George T. M. Bridges, KCB, KCMG, DSO	4 December 1922	4 December 1927
Brig.-Gen. the Hon. Sir A. G. A. Hore-Ruthven, VC, KCMG, CB, DSO	14 May 1928	26 April 1934
Maj.-Gen. Sir W. J. Dugan, KCMG, CB, DSO	28 July 1934	23 February 1939
Sir Charles M. Barclay-Harvey, KCMG	12 August 1939	26 April 1944
Lt-Gen. Sir C. W. M. Norrie, KCMG, CB, DSO, MC	19 December 1944	19 June 1952
Air Vice-Marshal Sir Robert A. George, KCMG, KCVO, KBE, CB, MC	23 February 1953	7 March 1960
Lt-Gen. Sir Edric M. Bastyan, KCMG, KCVO, KBE, CB	4 April 1961	1 June 1968
Maj.-Gen. Sir James W. Harrison, KCMG, CB, CBE	4 December 1968	16 October 1971
Sir Mark Oliphant, KBE	1 December 1971	

A Governor is normally appointed for a term of five years, but he can be re-appointed for one or more subsequent terms. At present he is granted a salary of \$15,000 per year, an expense allowance based on an amount of \$14,000 per year 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 a 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 seventeen persons so appointed have been:

Name	Occupancy of Office		Occasions in Office	Total Period	
	First	Most Recent		Years	Days
George Milner Stephen	16/7/1838	17/10/1838	1	—	93
Boyle Travers Finnis	20/12/1854	8/6/1855	1	—	170
Lt-Col Francis G. Hamley	19/2/1868	16/2/1869	1	—	364
Maj. James Harwood Rocke	6/4/1870	5/5/1870	1	—	29
Hon. Sir Richard D. Hanson	7/12/1872	9/6/1873	1	—	184
Rt Hon. Sir Samuel J. Way, Bart, QC	29/1/1877	17/11/1915	65	6	117
William W. Cairns, CMG	24/3/1877	17/5/1877	1	—	54
Hon. James P. Boucaut, QC	26/10/1885	16/9/1897	9	—	263
Hon. William H. Bunday	30/7/1888	9/8/1888	1	—	10
Hon. Sir G. J. R. Murray, KCMG, QC	25/9/1916	9/2/1942	103	6	47
Hon. Thomas Slaney Poole	20/3/1925	22/11/1925	2	—	240
Hon. Sir H. Angus Parsons, QC	11/6/1935	19/2/1942	6	—	54
Hon. Sir J. Mellis Napier, KCMG	21/4/1942	1/12/1971	169	9	93
Hon. Sir Herbert Mayo	15/10/1946	9/1/1965	25	—	187
Hon. Sir G. S. Reed	24/7/1951	4/11/1957	5	—	31
Hon. J. J. Bray, QC	25/6/1968	7/7/1971	4	—	51
Hon. D. S. Hogarth, QC	8/7/1971	8/7/1971	1	—	1

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 1855-1856 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 authorising 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; 1970—10. 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 five, in 1965 to six and in 1970 to seven.

The Constitution of 1856 provided for salary payments to Ministers only and salary payments to other members did not commence until 1887. The 1971-72 appropriation for salaries and allowances for ten Ministers is \$171,975 which includes 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. In addition to government departments statutory authorities also come under some degree of ministerial or parliamentary oversight.

Premiers

Since 1856 the following thirty-six persons have held the office of Premier:

Premiers of South Australia

Name	Dates of Office	Total Period in Office	
		Years	Days
Hon. Boyle T. Finnis	24/10/1856- 21/8/1857	—	301
Hon. John Baker	21/8/1857- 1/9/1857	—	11
Hon. Robert R. Torrens	1/9/1857- 30/9/1857	—	29
Hon. Richard D. Hanson	30/9/1857- 9/5/1860	2	222
Hon. Thomas Reynolds	9/5/1860- 8/10/1861	1	152
Hon. G. M. Waterhouse	8/10/1861- 4/7/1863	1	269
Hon. Francis S. Dutton	4/7/1863- 15/7/1863; 22/3/1865- 20/9/1865	—	193
Hon. Sir Henry Ayers, KCMG	15/7/1863- 4/8/1864; 20/9/1865-23/10/1865; 3/5/1867- 24/9/1868; 13/10/1868- 3/11/1868;		
Hon. Arthur Blyth	22/1/1872- 22/7/1873 4/8/1864- 22/3/1865;	4	35
Hon. John Hart, CMG	10/11/1871- 22/1/1872; 22/7/1873- 3/6/1875	2	254
Hon. James P. Boucaut, QC	23/10/1865- 28/3/1866; 24/9/1868-13/10/1868; 30/5/1870-10/11/1871	1	339
Hon. H. B. Strangways	28/3/1866- 3/5/1867; 3/6/1875- 6/6/1876; 26/10/1877- 27/9/1878	3	11
Hon. John Colton	3/11/1868- 30/5/1870 6/6/1876-26/10/1877;	1	208
Hon. William Morgan	16/6/1884- 16/6/1885	2	142
Hon. John C. Bray	27/9/1878- 24/6/1881	2	270
Hon. Sir J. W. Downer, KCMG, QC	24/6/1881- 16/6/1884 16/6/1885- 11/6/1887; 15/10/1892- 16/6/1893	2	239
Hon. Thomas Playford	11/6/1887- 27/6/1889; 19/8/1890- 21/6/1892	3	323
Hon. J. A. Cockburn	27/6/1889- 19/8/1890	1	53
Hon. F. W. Holder	21/6/1892-15/10/1892; 8/12/1899- 15/5/1901	1	274
Rt Hon. C. C. Kingston, QC	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. Richard Butler	1/3/1905- 26/7/1905	—	147
Hon. Thomas Price	26/7/1905- 5/6/1909	3	314
Hon. A. H. Peake	5/6/1909- 3/6/1910; 17/2/1912- 3/4/1915;		
Hon. John Verran	14/7/1917- 8/4/1920	6	312
Hon. Crawford Vaughan	3/6/1910- 17/2/1912	1	259
Hon. Sir H. N. Barwell, KCMG	3/4/1915- 14/7/1917	2	102
Hon. John Gunn	8/4/1920- 16/4/1924	4	8
Hon. Lionel L. Hill	16/4/1924- 28/8/1926	2	134
Hon. R. L. Butler	28/8/1926- 8/4/1927; 17/4/1930- 13/2/1933 8/4/1927- 17/4/1930;	3	160
Hon. R. S. Richards	18/4/1933- 5/11/1938	8	210
Hon. Sir Thomas Playford, GCMG	13/2/1933- 18/4/1933	—	64
Hon. F. H. Walsh	5/11/1938- 10/3/1965	26	125
Hon. D. A. Dunstan, QC	10/3/1965- 1/6/1967 1/6/1967- 17/4/1968; 2/6/1970-	2	83
Hon. R. S. Hall	17/4/1968- 2/6/1970	2	45

Ministry

The Ministry is the sixty-third to hold office. The members as from 20 November 1970 are:

Premier, Treasurer, Minister of Development and Mines

Hon. Donald Allan Dunstan, QC, MP

Deputy Premier, Minister of Works and Minister of Marine

Hon. James Desmond Corcoran, MP

Chief Secretary and Minister of Health

Hon. Albert James Shard, MLC

Minister of Education

Hon. Hugh Richard Hudson, MP

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

Hon. Leonard James King, QC, MP

Minister of Roads and Transport and Minister of Local Government

Hon. Geoffrey Thomas Virgo, MP

Minister of Agriculture and Minister of Forests

Hon. Thomas Mannix Casey, MLC

Minister of Environment and Conservation and Minister Assisting the Premier

Hon. Glen Raymond Broomhill, MP

Minister of Lands, Minister of Repatriation and Minister of Irrigation

Hon. Alfred Francis Kneebone, MLC

Minister of Labour and Industry

Hon. David Hugh McKee, MP

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).

Voting System

Members for both Houses are elected by secret ballot; the preferential system of voting is used. In filling the vacancy for each House of Assembly District and the first vacancy in each Legislative Council District the candidate who has received the largest number of first preference votes is elected if this number constitutes an absolute majority (*i.e.* greater than one-half of the total formal votes). If no candidate has received an absolute majority of first preference votes a second count is made in which the second preferences of the candidate who has received the fewest first preference votes are distributed. This distribution of second preferences of the successive candidate with the fewest votes is repeated until one candidate has received an absolute majority of votes.

The second vacancy in each Legislative Council District is filled by re-arranging all the ballot papers according to the first preferences and allotting each ballot paper of the first elected candidate according to the second preferences. If a candidate then has an absolute majority he is elected, otherwise subsequent counts are made eliminating the candidates with the fewest votes until one remaining candidate has received an absolute majority.

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, persons under the age of eighteen, 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 applicable only to one house or the other are mentioned on pages 72 and 75.

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 powers as were held by members of the House of Commons on 24 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 72 and 75. South Australia was the first, at the general election of 25 April 1896, 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. For the first eighty-five years of responsible government voting for both Houses of Parliament was voluntary but the Electoral Act Amendment Act of 1942 made voting for the House of Assembly compulsory for persons whose names appear on the House of Assembly Electoral Roll.

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, 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 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 is generally three years from the day on which it first meets for the dispatch of business but it may be prorogued or dissolved by the Governor before the expiration of this period. By legislation introduced in 1933 the life of the twenty-eighth Parliament was extended to five years and in 1937 the Constitution Act was amended for each subsequent Parliament to have a life of five years. However the twenty-ninth Parliament repealed this provision and re-introduced 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
1970.....	20	5	47	47

(a) Separate representation for Northern Territory.

(b) Cession of Northern Territory to Commonwealth control.

The present allocation of twenty-eight metropolitan and nineteen country electorates for the House of Assembly was introduced on 12 March 1970 with the proclamation of the Constitution Act Amendment Act, 1969. Before this date there were thirteen metropolitan and twenty-six country House of Assembly electoral districts. The first election incorporating the new boundaries was held on 30 May 1970.

Salaries and Allowances

The annual salary from 1 September 1971 is \$9,250 per member with allowances of between \$1,500 and \$3,200 depending on the area of the member's electorate and the distance from the City of Adelaide. The following additional payments are also made:

Premier and Treasurer—\$9,250, plus expense allowance of \$1,800.

Deputy Premier—\$5,850, plus expense allowance of \$1,450.

Chief Secretary—\$5,600, plus expense allowance of \$1,400.

Other Ministers—\$5,000, plus expense allowance of \$1,200.

President of Legislative Council and Speaker of House of Assembly—each \$3,000, plus expense allowance of \$450.

Chairman of Committees, House of Assembly—\$1,500, plus expense allowance of \$200.

Leader of the Opposition—\$3,750, plus expense allowance of \$900.

Deputy Leader of the Opposition—\$1,100.

Government Whip—\$1,000.

Opposition Whip—\$1,000.

Leader of the Opposition in the Legislative Council—\$1,500, plus expense allowance of \$400.

In addition allowances are paid to the members of the various Parliamentary Committees.

Superannuation

All members are required to contribute to a superannuation fund established under the Parliamentary Superannuation Act, 1948-1971 which provides for the payment of superannuation pensions to persons or widows or widowers of persons who have served as members of the State Parliament. No member can qualify for a pension until he is over fifty years of age and has served a minimum of eight years either in one term or as an aggregate of terms. The standard contribution to this fund is \$832.50 a year. According to the annual contribution and the length of service the pension payable varies between \$2,775 and \$6,271.50 a year.

At 30 June 1971 there were sixty-seven contributors to the fund; twenty-one ex-members and twenty widows were in receipt of pensions.

LEGISLATIVE COUNCIL

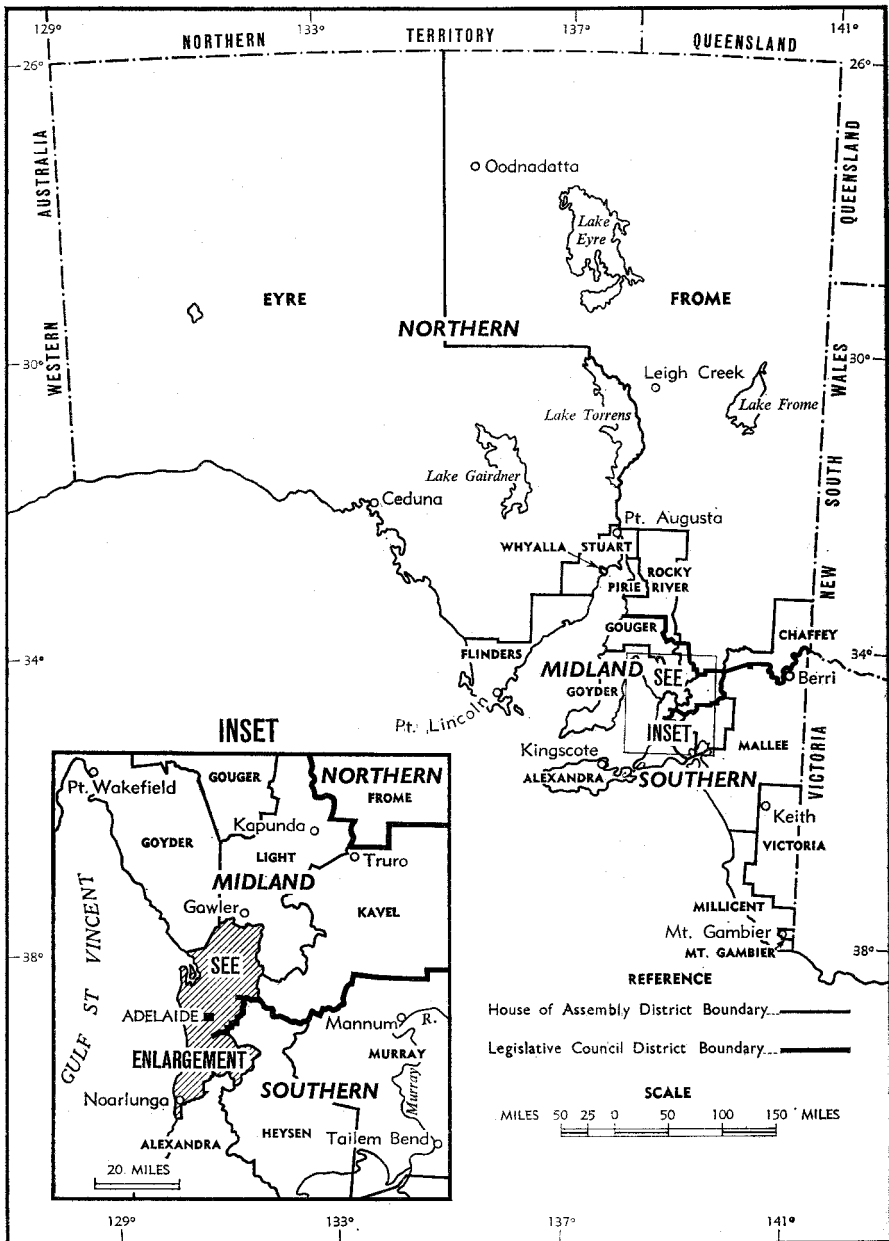
Members and Electorates

Each member of the Legislative Council, in addition to fulfilling the general requirements mentioned on page 70, must have attained the age of thirty years, be a British subject, 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 normally elects two members every three years, and each member occupies his seat for a minimum of 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.

Franchise

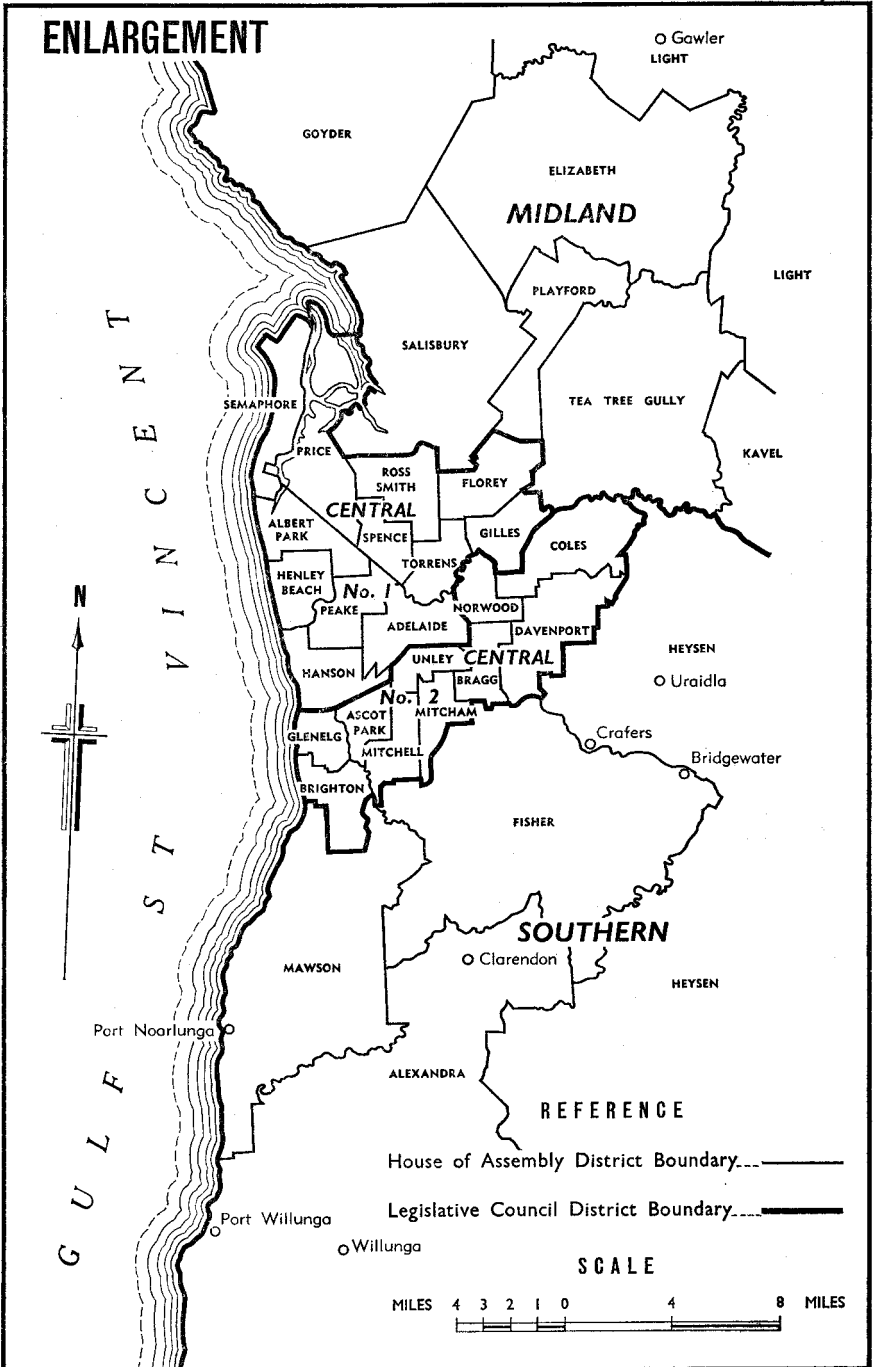
Voting for the Legislative Council is voluntary for those persons whose names are on the Legislative Council Electoral Roll. Enrolment is voluntary and an eligible voter in addition to being an adult British subject who has resided in the State for at least six months must possess at least one of the following qualifications. He may be:

SOUTH AUSTRALIA
STATE ELECTORAL DISTRICTS
As proclaimed 12 March 1970



PORTION OF SOUTH AUSTRALIA
STATE ELECTORAL DISTRICTS

As proclaimed 12 March 1970



- (i) the owner of a freehold estate of the value of \$100;
- (ii) the leaseholder in possession of a leasehold estate;
- (iii) the inhabitant occupier of a dwelling house;
- (iv) the husband or wife of a qualified elector; or
- (v) entitled to vote because of war or active service.

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

A British subject at least eighteen years of age who:

- (i) has lived continuously in Australia for at least six months, and in South Australia for at least three months, and in a Subdivision for at least one month immediately preceding the date of his or her claim for enrolment; or
- (ii) is or has been (as qualified by the Constitution Act) a member of the Commonwealth Naval, Military or Air Force, or a member of the Mercantile Marine, during any war in which the Commonwealth is or has been engaged;

is entitled to vote at an election for a Member of the House of Assembly if, at the time of the election, he or she is enrolled on the Electoral Roll for a Subdivision of the Assembly District in which the election is held.

Enrolment for the House of Assembly is not compulsory but in practice, as a consequence of the operation of the Commonwealth and House of Assembly Joint Electoral Rolls, most persons enrolling for the Commonwealth Electoral Roll are also enrolled for the House of Assembly.

Membership

Subject to the exclusions mentioned on page 70 election to the House of Assembly is open to those eligible to vote in an election for the House. Members of this House are elected for a maximum of three years, for single-member districts. The seat of a member becomes vacant in cases similar to those stated for Legislative Councillors and may be filled at a by-election.

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

The following table gives details of the numbers of electors on the Electoral Rolls and voting in contested electorates for all general elections from 1933 to 1970. It appears that compulsory voting for the House of Assembly, introduced by the 1942 amendment to the Electoral Act, also caused a considerable increase in voting for the Legislative Council. At the most recent election only House of Assembly districts were contested as Legislative Council Members are elected for a minimum term of six years and at the date of the election no member was due to retire before March 1971.

South Australian Parliament, Voting at Elections, 1933 to 1970

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
8 April 1933	133,152	39,415	25,309	64.21	338,576	307,285	182,693	59.45
19 March 1938	129,135	129,135	91,165	70.60	364,884	352,423	223,136	63.31
29 March 1941	133,358	115,952	70,660	60.94	378,265	339,263	171,978	50.69
29 April 1944 (a)	142,314	98,482	81,791	83.05	401,747	289,032	255,883	88.53
8 March 1947	155,847	155,847	124,826	80.10	418,308	306,059	285,765	93.37
4 March 1950	161,917	68,347	52,954	77.48	437,832	311,658	290,306	93.15
7 March 1953	168,758	97,968	79,373	81.02	449,630	354,273	336,592	95.01
3 March 1956	174,241	22,963	16,002	69.69	468,303	299,048	280,811	93.90
7 March 1959	187,248	86,278	70,007	81.14	497,456	426,340	400,531	93.95
3 March 1962	201,517	118,218	98,786	83.56	531,228	444,197	417,462	93.98
6 March 1965	213,377	186,899	149,910	80.21	562,824	542,436	513,064	94.59
2 March 1968	275,701	275,701	262,328	95.15	609,626	609,626	575,948	94.48
30 May 1970	261,565	—	—	—	635,533	635,533	603,952	95.03

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

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

South Australian Parliament, Party Representation at Elections, 1933 to 1970

Date	Legislative Council				House of Assembly			
	ALP	LCL	Independent	Other	ALP	LCL	Independent	Other
8 April 1933	2	16	1	1(a)	6	29	4	4(a) 3(b) 2(c)
19 March 1938	2	15	1	2(c)	9	15	13	
29 March 1941	4	14	1	1(c)	11	21	5	
29 April 1944	5	15	—	—	16	20	3	—
8 March 1947	4	16	—	—	13	23	3	—
4 March 1950	4	16	—	—	12	23	4	—
7 March 1953	4	16	—	—	14	21	4	—
3 March 1956	4	16	—	—	15	21	3	—
7 March 1959	4	16	—	—	17	20	2	—
3 March 1962	4	16	—	—	19	18	2	—
6 March 1965	4	16	—	—	21	17	1	—
2 March 1968	4	16	—	—	19	19	1	—
30 May 1970	4	16	—	—	27	20	—	—

(a) Parliamentary Labor. (b) Lang Labor. (c) Independent Labor.
ALP Australian Labor Party LCL Liberal and Country League

At present there are forty-seven electorates represented in the House of Assembly, twenty-eight metropolitan and nineteen country. The table below shows the electoral returns for the general election held on 30 May 1970.

House of Assembly: Party Representation, 1970

Electorate	Electors on Roll	Electors Voting	Successful Candidate		
			Name	Party	First Preference Votes
Metropolitan:					
Adelaide	16,776	15,713	Lawn, S. J. (a)	ALP	9,590
Albert Park	16,052	15,308	Harrison, C. A.	ALP	10,112
Ascot Park	15,849	15,213	Virgo, Hon. G. T.	ALP	9,455
Bragg	15,393	14,411	Tonkin, D. O.	LCL	9,476
Brighton	16,534	15,893	Hudson, Hon. H. R.	ALP	8,471
Coles	16,975	16,463	King, Hon. L. J., QC	ALP	8,802
Davenport	16,210	15,403	Steele, Mrs J.	LCL	10,298
Elizabeth	15,033	13,780	Clark, J. S.	ALP	8,584
Fisher	15,894	14,846	Evans, S. G.	LCL	8,598
Florey	16,781	16,062	Wells, C. J.	ALP	10,683
Gilles	15,738	15,048	Slater, J. W.	ALP	8,186
Glenelg	16,415	15,700	Mathwin, J.	LCL	8,329
Hanson	16,865	15,979	Becker, H. T.	LCL	7,925
Henley Beach	16,461	15,699	Broomhill, Hon. G. R.	ALP	8,918
Mawson	16,563	15,716	Hopgood, D. J.	ALP	8,653
Mitcham	15,886	14,986	Millhouse, R. R.	LCL	9,584
Mitchell	15,762	15,056	Payne, R. G.	ALP	8,785
Norwood	16,316	15,355	Dunstan, Hon. D. A.	ALP	8,353
			QC		
Peake	15,606	14,922	Simmons, D. W., DFC	ALP	8,644
Playford	15,680	14,925	McRae, T. M.	ALP	8,358
Price	16,349	15,540	Ryan, J. R.	ALP	10,330
Ross Smith	15,223	14,538	Jennings, J. J.	ALP	9,668
Salisbury	14,091	13,359	Groth, R. W.	ALP	8,742
Semaphore	16,591	15,701	Hurst, Hon. R. E.	ALP	11,428
Spence	15,863	15,109	Crimes, E. H.	ALP	11,116
Tea Tree Gully	16,693	15,941	Byrne, Mrs M. V.	ALP	9,291
Torrens	15,965	14,812	Coumbe, J. W. H.	LCL	7,823
Unley	15,699	14,736	Langley, G. R. A.	ALP	7,916
Country:					
Alexandra	10,141	9,839	Brookman, Hon. D. N.	LCL	5,830
Chaffey	10,238	9,861	Curren, A. R.	ALP	4,296
Eyre	8,909	8,236	Gunn, G. M.	LCL	4,510
Flinders	10,121	9,714	Carnie, J. A.	LCL	5,726
Frome	8,296	7,770	Allen, E. C.	LCL	3,881
Gouger	9,703	9,327	Hall, R. S.	LCL	4,758
Goyder	9,569	9,261	Ferguson, J. R.	LCL	5,615
Heysen	10,452	9,980	McAnaney, W. P.	LCL	6,589
Kavel	9,606	9,245	Goldsworthy, E. R.	LCL	5,513
Light	9,833	9,248	Eastick, B. C.	LCL	4,963
Mallee	10,003	9,384	Nankivell, W. F.	LCL	5,382
Millicent	9,637	9,428	Corcoran, Hon. J. D.	ALP	5,016
Mount Gambier	10,332	9,737	Burden, A. R.	ALP	5,253
Murray	10,303	9,953	Wardle, I. A.	LCL	4,916
Pirie	9,971	9,599	McKee, Hon. D. H.	ALP	7,008
Rocky River	9,753	9,373	Venning, H. M.	LCL	5,205
Stuart	10,348	9,597	Kencally, G. F.	ALP	7,080
Victoria	9,775	9,345	Rodda, W. A.	LCL	5,383
Whyalla	9,280	8,661	Brown, M. J.	ALP	4,798

(a) Following the death of Mr S. J. Lawn, a by-election was held on 3 July 1971. The successful candidate was Mr J. D. Wright (ALP). ALP Australian Labor Party LCL Liberal and Country League

Speaker: The Hon. R. E. Hurst, MP
Chairman of Committees: J. R. Ryan, MP
Leader of the Opposition: R. S. Hall, MP
Deputy Leader of the Opposition: R. R. Millhouse, MP
Government Whip: G. R. A. Langley, MP
Opposition Whip: S. G. Evans, MP
Clerk of the House of Assembly: G. D. Combe, MC

The members of the Legislative Council and the districts they represent are:

To Retire in 1973

Banfield, Hon. D. H. L.	(ALP)	Central No. 1
Casey, Hon. T. M.	(ALP)	Central No. 1
Cooper, Hon. Mrs J. M.	(LCL)	Central No. 2
Potter, Hon. F. J.	(LCL)	Central No. 2
DeGaris, Hon. R. C.	(LCL)	Southern
Kemp, Hon. H. K.	(LCL)	Southern
Hart, Hon. L. R.	(LCL)	Midland
Russack, Hon. E. K.	(LCL)	Midland
Geddes, Hon. R. A.	(LCL)	Northern
Whyte, Hon. A. M.	(LCL)	Northern

To Retire in 1976

Kneebone, Hon. A. F.	(ALP)	Central No. 1
Shard, Hon. A. J.	(ALP)	Central No. 1
Hill, Hon. C. M.	(LCL)	Central No. 2
Rymill, Hon. Sir Arthur	(LCL)	Central No. 2
Cameron, Hon. M. B.	(LCL)	Southern
Springett, Hon. V. G.	(LCL)	Southern
Dawkins, Hon. M. B.	(LCL)	Midland
Story, Hon. C. R.	(LCL)	Midland
Gilfillan, Hon. G. J.	(LCL)	Northern
McEwin, Hon. Sir A. Lyell . . .	(LCL)	Northern

President and Chairman of Committees: Hon. Sir Lyell McEwin, MLC

Leader of the Opposition: Hon. R. C. DeGaris, MLC

Clerk of the Legislative Council: I. J. Ball

Court of Disputed Returns

In South Australia, provision is made in the Electoral Act, 1929-1969, for the constitution of a Court of Disputed Returns which has jurisdiction to hear and determine all questions of disputed returns affecting either House of the State Parliament which are referred to it by the House concerned. No return on an election writ may be disputed, except by a petition to this Court. A subsidiary function of the Court is to hear petitions for exoneration from liability for failure to file certain electoral returns or vouchers under Part XIV of the Electoral Act.

The Court is constituted by the senior puisne Judge of the Supreme Court, or where he is not available by the puisne Judge next in order of seniority who is available.

The Court sits as an open court, usually at Parliament House Adelaide and has power, *inter alia*:

- (a) to compel the attendance of witnesses and the production of documents;
- (b) to examine witnesses upon oath;
- (c) subject to any Supreme Court rules, to regulate the form and mode of its own proceedings;
- (d) to declare that any person who was returned as elected was not duly elected;
- (e) to declare any candidate duly elected who was not returned as elected;
- (f) to declare any election void;
- (g) to dismiss or uphold any petition in whole or in part;
- (h) to award any costs; and
- (i) to punish any contempt of its authority.

Most cases have related to House of Assembly elections. Since 1857, the Court of Disputed Returns has considered 21 petitions referred to it by the House of Assembly concerning the election of 26 members of that House. The Court's decisions in these cases are summarised hereunder:

Election voided and member unseated	15
Member unseated but other candidate declared to be duly elected	2
Petitions unsuccessful	2
Petitions dismissed	6
Petition withdrawn	1

REFERENDA

Since the inception of responsible government in South Australia in 1856 seven referenda have been held—the first in 1896 and subsequent ones in 1898, 1899, 1911, 1915, 1965 and 1970—and ten proposals have been submitted.

Three proposals related to education (1896) of which only one was approved; three were constitutional (1898 and 1899)—all approved; one related to Parliamentary salaries (1911)—not approved; one related to bar-room closing hours (1915)—favoured 6 p.m. closing; one related to the establishment of a lottery (1965)—approved; and one related to extended shopping hours in the metropolitan area—not approved.

The last referendum, held on 19 September 1970, asked House of Assembly electors in the Adelaide Metropolitan Planning Area and the Municipality of Gawler 'Are you in favour of shops in the Metropolitan Planning Area and the Municipality of Gawler being permitted to remain open for trading until 9 p.m. on Fridays?' Of the 463,629 electors qualified to vote 177,296 voted 'Yes' and 190,826 voted 'No'.

ADMINISTRATION

The South Australian Public Service consists of forty-six departments, many of which are very small. In the following list, the departments have been grouped according to Ministerial control.

PREMIER, TREASURER, MINISTER OF DEVELOPMENT AND MINES

Hon. Donald Allan Dunstan, QC, MP

Department of the Premier and of Development	Agent-General in England Department
Treasury Department	Valuation Department
Superannuation Department	Mines Department
State Taxes Department	Department of the Public Service Board

DEPUTY PREMIER, MINISTER OF WORKS AND MINISTER OF
MARINE

Hon. James Desmond Corcoran, MP

Minister of Works Department	Public Buildings Department
Engineering and Water Supply Department	State Supply Department
	Department of Marine and Harbors

CHIEF SECRETARY AND MINISTER OF HEALTH

Hon. Albert James Shard, MLC

Chief Secretary's Department	Department of the Public Actuary
Government Reporting Department	Prisons Department
Auditor-General's Department	Hospitals Department
Government Printing Department	Department of Public Health
Police Department	

MINISTER OF EDUCATION

Hon. Hugh Richard Hudson, MP

Minister of Education Department	Libraries Department
Education Department	Art Gallery Department

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

Hon. Leonard James King, QC, MP

Attorney-General's Department	Supreme Court Department
Crown Law Department	Local and District Criminal Courts Department
Public Trustee Department	Registrar-General's Department
Department of Social Welfare and Aboriginal Affairs	Electoral Department

MINISTER OF ROADS AND TRANSPORT AND MINISTER OF LOCAL
GOVERNMENT

Hon. Geoffrey Thomas Virgo, MP

Department of the Minister of Roads and Transport and Minister of Local Government	Highways Department
	Motor Vehicles Department

MINISTER OF AGRICULTURE AND MINISTER OF FORESTS

Hon. Thomas Mannix Casey, MLC

Minister of Agriculture Department	Department of Fisheries and Fauna
Agriculture Department	Conservation
Agricultural College Department	Woods and Forests Department
Chemistry Department	Produce Department

**MINISTER OF ENVIRONMENT AND CONSERVATION AND
MINISTER ASSISTING THE PREMIER**

Hon. Glen Raymond Broomhill, MP

**MINISTER OF LANDS, MINISTER OF REPATRIATION AND
MINISTER OF IRRIGATION**

Hon. Alfred Francis Kneebone, MLC

Department of Lands	Botanic Garden Department
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MINISTER OF LABOUR AND INDUSTRY

Hon. David Hugh McKee, MP

Department of Labour and Industry

LEGISLATION

During 1971, 115 Public Acts were passed by the State Parliament: forty-one new Acts and seventy-four amendments of existing Acts. Details of some of the more important legislation passed during this period are given below.

Age of Majority (Reduction) Act, 1971 (No. 15). An Act to reduce the age of majority, conferring upon persons who have attained the age of eighteen years the juristic competence and capacity of full age together with the attendant rights, privileges, responsibilities and obligations.

Building Act, 1971 (No. 16) repealed the Building Act, 1923-1965 and enacted legislation to regulate the construction, alteration and demolition of buildings and to establish the standards to which buildings must conform.

Constitution Act Amendment Act, 1971 (No. 17) amended the Constitution Act, 1934-1969 to lower the voting age of electors for the South Australian Parliament from twenty-one to eighteen years and to remove the restriction which prevented ministers of religion from being eligible for election to either House.

Corporal Punishment Abolition Act, 1971 (No. 58). An Act to abolish the imposition of corporal punishment by Courts in South Australia.

Daylight Saving Act, 1971 (No. 54). An Act to promote the longer use of daylight by the adoption of South Australian summer time, one hour ahead of South Australian Standard Time, from 2 a.m. on 31 October 1971 to 2 a.m. on 27 February 1972.

Film Classification Act, 1971 (No. 82). An Act to provide for the classification of films intended for public exhibition making it an offence for a theatre proprietor to admit persons between the age of two years and eighteen years to films which have been classified as restricted.

Health Act Amendment Act, 1971 (No. 104) amended the Health Act, 1935-1971 to extend certain provisions of the Act relating to clean air and air pollution to all areas of the State and to provide for an Air Pollution Appeal Board.

Industries Development Act Amendment Act, 1971 (No. 21) amended the Industries Development Act, 1941-1965 to provide for the establishment of the Industries Assistance Corporation to assist industrial development in the State.

Juvenile Courts Act, 1971 (No. 69) repealed the Juvenile Courts Act, 1965-1969 and enacted legislation to consolidate and amend the law relating to the commission of offences by young persons, and to neglected and uncontrolled children.

Marginal Dairy Farms (Agreement) Act, 1971 (No. 33). An Act to approve an agreement between the South Australian Government and the Commonwealth Government to provide for financial assistance to the State for the purposes of a marginal dairy farms reconstruction scheme.

Motor Vehicles Act Amendment Act, 1971 (No. 39) amended the Motor Vehicles Act, 1959-1970 to introduce a points demerit scheme of motor vehicle licence suspension.

Payroll Tax Act, 1971 (No. 52). An Act to impose a tax upon employers in respect of certain wages and to provide for assessment and collection of the tax.

River Murray Waters (Dartmouth Reservoir) Act, 1971 (No. 7). An Act to ratify and approve an agreement relating to financial assistance for the construction of the Dartmouth reservoir.

Road Traffic Act Amendment Act, 1971 (No. 73) amended the Road Traffic Act, 1961-1969 to make the wearing of seat belts compulsory in certain motor vehicles.

Workmen's Compensation Act, 1971 (No. 36) repealed the Workmen's Compensation Act, 1932-1969 and enacted legislation to provide for the compensation of workmen and their dependants in respect of injuries suffered by workmen arising out of, or in the course of, their employment.

Complete details of Acts passed are contained in the volumes of *Acts of the Parliament of South Australia*.

OVERSEAS REPRESENTATION

South Australia is represented in London by the Agent-General for South Australia, at South Australia House, 50 Strand, London. 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 State Government informed of political and economic developments overseas, to promote industrial development and investment in South Australia, to encourage immigration to the State and to foster trade with the United Kingdom and other countries. The present Agent-General and Trade Commissioner is Mr R. C. Taylor.

INTERSTATE REPRESENTATION

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.

CONSULAR REPRESENTATIVES

There are twenty-two countries represented in South Australia by consuls, vice-consuls, consular-agents, consul-generals or deputy high commissioners.

- Austria*: John A. Nelson, Consular-General^(a)
Belgium: Robert E. Porter, Consul
Britain: Henry O'Brien, Deputy High Commissioner^(b)
 Charles P. Price, Second Secretary (Commercial) ^(b)
Denmark: Trevor R. Taylor, Consul
Dominican Republic: Peter H. D. Lathlean, Consul
Finland: Robert N. Irwin, Consul
France: Frank C. Buttfield, Consul
Germany: Bruce R. Macklin, Consul
Greece: Vasilis P. Apostol, Consul
Guatemala: Robert M. Napier, QC, Consul
Italy: Dr. Dorello Ferrari, Vice-Consul^(b)
Japan: J. Langdon Parsons, Consul
Lebanon: Archie M. Hambour, Consul
Liberia: William B. Coombs, Consul
Netherlands: M. M. Keukenmeester, Consul
Norway: John N. Howe, Consul
Peru: Max J. Hill, Consul
Philippines: J. Rolfe Sabine, Consul
Portugal: Raymond F. Walters, Vice-Consul
Sweden: Mrs June Tanner, Consul
Switzerland: Paul A. Richter, Vice-Consul
United States of America: Thomas Manuel, Consular-Agent

(a) Dean of the Consular Corps.

(b) *Consul de Carriere*.

STATE EMBLEMS

A description of the South Australian Coat-of-Arms, the State Badge, the State Flag and the Floral Emblem together with coloured illustrations was included on pages 94-5 of the *South Australian Year Book* 1970.

On 27 September 1970 the hairy-nosed wombat (*Lasiorhinus latifrons*) was adopted as South Australia's official Faunal Emblem.

3.4 SEMI-GOVERNMENT AUTHORITIES

A semi-government authority is defined, for statistical purposes, 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-government because their activities are carried out on behalf of industries rather than on behalf of any Government.

Most semi-government 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-government authorities include tertiary education, hospital services, 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, off-course totalisators and lotteries, and investigation of problems relating to the development of mineral resources.

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

3.5 LOCAL GOVERNMENT

LOCAL GOVERNMENT AUTHORITIES

Local Government Areas: Number, Size, and Status

At 1 January 1972 there were 137 local government areas in South Australia, and with the exception of one area, each is controlled by a council consisting of members elected by local ratepayers and exercising powers under the Local Government Act, 1934-1971. The Garden Suburb Commission, Colonel Light Gardens, is administered by a Commissioner appointed by the Governor.

The total area incorporated in local government areas at 1 January 1971 was 57,856 square miles; this is only slightly above 15 per cent of the total area of the State but contains almost 99 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. Generally, 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 these purposes), and be able to support itself financially. Some municipalities are constituted as cities, the qualification being 15,000 inhabitants for metropolitan municipalities (the twenty-one local government areas which form the metropolitan area as defined under the Local Government Act and which, before June 1966, corresponded to the statistical metropolitan area) and 10,000 persons in other 'country' areas.

Of the 137 local government areas at 1 January 1972, 40 were municipalities (including 24 cities) and 97 were district council areas.

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

As a result of legislation passed in 1969 district councils may apply to the Governor for mayoral status; in previous years only municipal councils had mayors. Since the legislation six district councils, Berri, Clare, Gumeracha, Kanyaka-Quorn, Kapunda and Millicent have been granted mayoral status.

Functions of Local Government

The Local Government Act, 1934-1971 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 8.3, Physical Development; health services and Local Boards of Health in Part 6.5, Social Environment, and libraries in Part 6.4, Social Environment. Among the many other functions of local governing authorities are the provisions of street lighting, the licensing and inspection of slaughterhouses, 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.

Organisation and Representation

Whereas a municipality must be divided into at least two areas known as wards a district council need not have wards, however, only four district councils have undivided areas. No council may comprise less than five members, and each ward in a municipality must be represented by two councillors. No district council area may be divided into more than ten 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 subject owning or occupying ratable property within the area for which he seeks election. Special magistrates, undischarged bankrupts, persons holding contract or employment under the council, persons under sentence for crimes, persons overdue with council rates and any associated fines and persons of unsound mind are ineligible for election.

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 the 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.

Mayors of municipalities and of certain district councils are elected annually on the same basis as aldermen. The chairman of a district council is chosen annually by councillors from among their number.

Allowances

Council members, other than mayor or chairman, are not paid salaries or allowances, but may be reimbursed any expenses incurred in the performance of council business, and in the case of district councils, may be reimbursed the cost of travelling to and from council meetings.

The mayor or chairman receives an annual allowance which is determined at a council meeting in July of each year. This allowance, payable in advance, is to compensate for any expenses he is likely to incur in the execution of his official duty in the current financial year.

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 \$300 of annual (improved) value or \$2,000 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) as the chief administrative officer, and an auditor.

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. Other officers employed in local government are required to hold appropriate qualifications; these include engineers, overseers, building surveyors and inspectors, health inspectors and authorised weed officers.

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 valuer 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 Valuation Department. When this is done a council avoids the necessity of employing a valuer but a fee for each valuation is payable to the Valuation Department. There is no right of appeal to the council against valuations so based; in respect of the Government unimproved valuation the right of appeal lies against the Department when the valuation is made.

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 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.

A revised system of local government accounting was introduced from 1 July 1968 involving, among other things, a change of basis from cash to accrual accounting. More detailed attention is given to local government finance in Part 12.5.

Local Government Report

A major 'Report by the Local Government Act Revision Committee on Powers, Responsibilities and Organisation of Local Government in South Australia' was released early in 1970. The Report, prepared following the appointment of the Committee in 1965, is the first in Australia to investigate the functions and responsibilities of local government. The Committee received 8,470 pages of transcript and written submissions criticising 1,005 of the 1,029 sections of the existing Act. The Committee has recommended that a new Local Government Act be prepared and that local authorities should be given wider powers to more effectively provide services and other assistance to ratepayers.

TOWN AND REGIONAL PLANNING

In 1920 the South Australian Parliament passed the Town Planning and Development Act which followed the Control of Subdivision of Land Act of 1917. These Acts were the first of their kind in Australia. The Act of 1920 made provision for the preparation of town planning schemes and by-laws, for the appointment of a Government Town Planner and a Town Planning Department. The Department prepared plans for various areas, including Colonel Light Gardens and the townships of Iron Knob and Barmera. The Acts of 1917 and 1920 were repealed by the Town Planning Act, 1929 which dealt only with the control of land subdivision.

The Town Planning Act, 1929 was amended in 1955 to provide for a Town Planning Committee which was required to prepare a plan to guide the future development of the metropolitan area of Adelaide. The Committee considered the probable future population of the metropolitan area, the provision of public transport, adequacy of highways, provision of open spaces such as parks and

sports grounds, the zoning of industrial districts, and the subdivision of land in relation to the economic provision of sewerage, water supply, electricity and gas services.

The Metropolitan Development Plan and its accompanying Report on the Metropolitan Area of Adelaide, were laid before both Houses of Parliament in October 1962, and an amendment to the Town Planning Act followed in 1963. The amendment required the Committee to call for and consider objections to the Plan as submitted to Parliament and the Committee was authorised to make regulations to implement the Plan.

The Planning and Development Act, 1966-1967 repealed the Town Planning Act, 1929-1963. It established an eleven-member State Planning Authority (with a Director of Planning as Chairman) and an independent Planning Appeal Board of four members. Provisions were made for the Planning Authority to implement and review the 1962 Development Plan, to prepare similar plans for other parts of the State and in conjunction with local government authorities to determine broad policies to guide the growth of towns and cities throughout the State. Eleven planning areas have been declared and development plans have been authorised for four of these areas, namely, Metropolitan (1 July 1967), South East (29 January 1970), Kangaroo Island (29 January 1970) and Whyalla (24 September 1970). The Planning Appeal Board hears appeals against decisions of the Director of Planning, the State Planning Authority or local government authorities.

Control of development in accordance with a development plan is by regulation and the Authority or the appropriate local government body can recommend to the Minister that regulations be made. Such regulations may, for example, deal with the zoning of industrial, commercial or residential areas. The regulations must be exhibited publicly and opportunity given for objections to be lodged, before being submitted to the Minister. Any person aggrieved by a decision given under a regulation may appeal to the Planning Appeal Board with a subsequent right of appeal to the Land and Valuation Court.

The Authority is empowered to buy land either by agreement or compulsorily to assist in promoting development in accordance with a development plan and a Planning and Development Fund exists in the Treasury to assist the Authority in carrying out this function.

The control of land subdivision throughout the State, with the exception of the City of Adelaide, is vested in the Director of Planning and the local government authority in the area in which the land is situated. If permission to subdivide is refused, there is a right of appeal to the Planning Appeal Board.

The Minister Assisting the Premier is responsible for the administration of the Planning and Development Act. The Director of Planning heads the State Planning Office, which forms part of the Premier's Department.

The Planning and Development Act Amendment Act, 1971 reconstituted the State Planning Authority to include a wider representation of experts in the fields of local government, conservation and aesthetics.

THE HEYSEN TRAIL

A walking and horse-riding trail is to be established in South Australia from Cape Jervis, approximately 50 miles south of Adelaide, to Mount Hopeless in the Northern Flinders Ranges, approximately 450 miles north of Adelaide, a total distance of 500 miles.

The trail is to be secured by the South Australian State Planning Authority and will be named the Heysen Trail in memory of Sir Hans Heysen (1877-1968), the eminent landscape artist, whose best work includes paintings of the stark gum trees and vivid rocks of the Flinders Ranges.

The Route

Starting at Cape Jervis, the proposed route proceeds east along the backbone of Fleurieu Peninsula, across Inman Valley and along the hills to near Meadows. It then goes through Crafers to Cleland National Park and Mount Lofty Summit. Continuing north the trail skirts easterly around Kangaroo Creek and Millbrook Reservoirs, passes through Warren and Hale National Parks before following the Barroosa Range towards Nuriootpa.

Going north-west the route passes west of Kapunda and turns north along the Camels Hump Range, turns west to join the Mount Gregory Range and then follows north to Bundaleer. South-west of Jamestown the trail swings across to meet the Flinders Ranges at The Bluff. It then follows the crest of the main range, passing through Mambray Creek and Alligator Gorge National Parks to the summit of Mount Brown. The trail then turns west across the Pichi Richi Road and north along the Dutchmans Stern Range.

The route passes through Warren and Buckaringa Gorges to Hawker and then north to Arkaba and into Wilpena Pound. It follows the Bunyeroo Valley north past the Brachina Gap into the Aroona Valley and proceeds northwards across Parachilna Gorge, passing Mount Patawarta and Mount Hack, on to Angepena and Mount Serle Stations. The trail then goes eastwards over the Gammon Ranges to Arkaroola, and past Mount Painter to Mount Hopeless at the northern extremity of the Flinders Ranges.

Objectives

Walking and horse-riding through unspoiled country free of motor vehicles has become increasingly difficult with the spread of urban development. More leisure time and an increasing population have created the need for more outdoor recreational facilities, and a State-wide system of walking and riding trails would help to satisfy this demand. The proposed route along the Mount Lofty and Flinders Ranges could form the major axis for a network of trails.

The trails should provide a variety of views of distinctive beauty and its rural character must be safeguarded. Facilities for car parking and overnight shelter may be provided at intervals. As horse-riding and walking are not completely compatible it may be necessary to follow different routes in some places. Because of problems of watering and rugged terrain it is likely that horse-riding will be restricted to parts of the trail only. Generally motor vehicles will be excluded from the trail.

Security of tenure of the land forming the trail is essential if the route is to be permanently safeguarded. However, initially the trail may have to be located along seldom-used roads until a permanent right is secured along the ideal route. With the proposed route passing through as many national parks as possible, the trail will act as a link between the parks. Where it is necessary for the route to cross country which is largely under crops, it may be possible to use existing surveyed but unutilised roads. The co-operation of local councils will be necessary to close the roads making the land available, and to avoid the legal use of the road by motor vehicles.

Securing the Trail

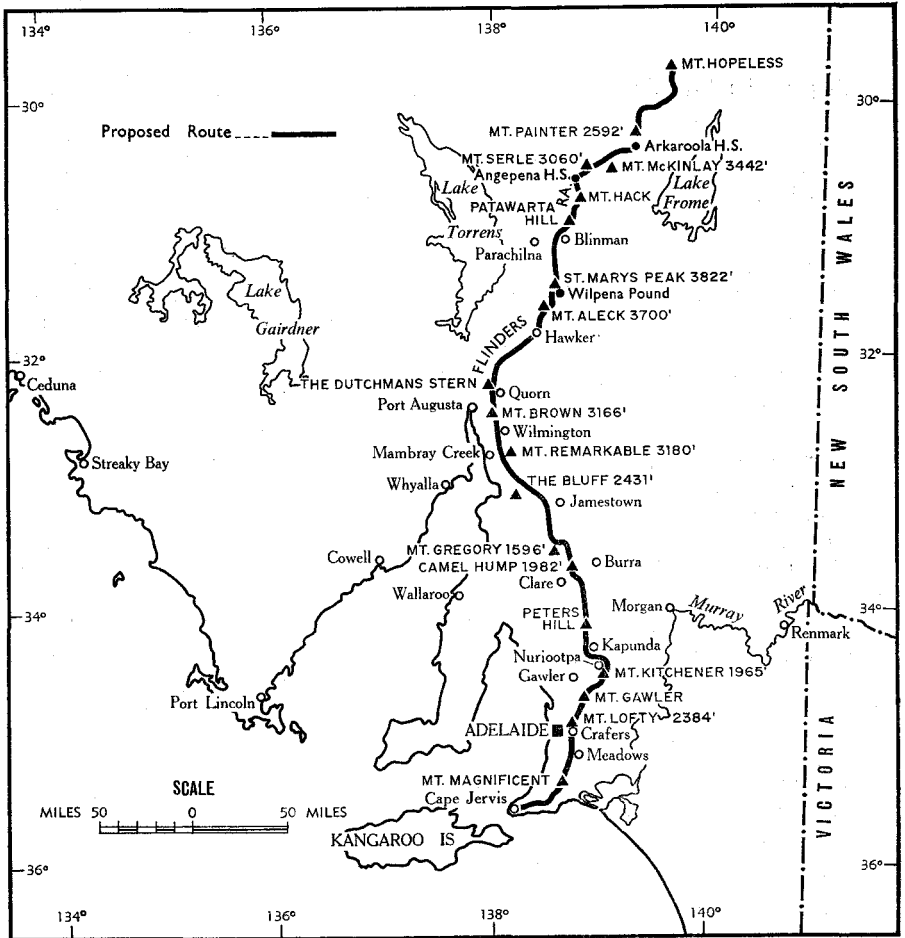
Wherever possible the fee simple of the land over which the trail is to run will be obtained so that the permanence of the route is guaranteed. The State Planning Authority has power under the Planning and Development Act to buy

land. Where the route passes through land subject to pastoral lease, agreements and rights-of-way will have to be obtained. Co-operation from government departments which control substantial areas of land along the route will also be necessary.

It is likely that some control over the use of the land adjoining may be necessary if the character of the trail is to be maintained. Similarly, regulations restricting the erection of buildings or advertisements and preventing the felling of trees may be justified. The route will be located on ridges or rising ground, where extensive views can be obtained, wherever possible. Tree cutting and trail marking will be minimised to preserve the beauty and rural character, and walkers and riders may have to rely extensively on maps.

By providing relevant information, local councils can be of considerable assistance in the final selection of the route. Advice will also be sought from interested organizations such as bush-walking, riding and pony clubs.

PORTION OF SOUTH AUSTRALIA
THE HEYSEN TRAIL



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 Colonisation 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 pasturage. To assist it was proposed in 1846 that boundaries of areas smaller than counties be created and the system of hundreds used 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 forty-nine counties covering 23 per cent 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 four 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 eight in Counties Alfred and Kintore to thirty-four in County Jervois. New hundreds are created from time to time, the present total being 534. 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, 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, 1886-1969. 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.

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 to be converted to the Torrens System and this transition is still in progress in certain areas.

Details of property transferred are estimated from records available in the Stamp and Succession Duties Office. The following table shows the number and value of transfers of property for each of the five years to 1970-71.

Property Transferred

Year	Number	Value (\$'000)
1966-67	39,280	283,800
1967-68	37,308	282,000
1968-69	37,547	302,900
1969-70	42,574	342,600
1970-71	42,460	362,400

SYSTEMS OF TENURE

LAND ADMINISTRATION

Approximately 90 per cent 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 before 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 'Area sold, dedicated, etc.' does not represent the accumulated total of all alienated lands as certain alienated lands repurchased by the Crown are currently held under leases.

At 30 June 1971 land in South Australia was occupied as follows:

	Area Acres	Proportion Per cent
Area sold, dedicated, etc.;		
Sold	15,106,794	6.21
Free grants	916,685	0.38
Dedicated (a)	302,959	0.12
Under agreement to purchase	293,449	0.12
Total	16,619,887	6.83
Area under lease and licence (b);		
Perpetual	21,051,627	8.65
Pastoral	126,895,327	52.17
Other	1,703,598	0.70
Total	149,650,552	61.52
Area in occupation	166,270,439	68.35
Remainder of State;		
Lakes and lagoons	7,904,800	3.25
Open for allotment or selection	8,056	0.01
Other vacant land (c)	69,061,505	28.39
Total area of State	243,244,800	100.00

(a) Includes State forest reserves.

(b) Includes areas held under Mining Acts.

(c) Includes surveyed roads, railways and other reserves, 22,938,564 acres of which 18,842,645 acres are set apart as Aboriginal reserves.

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 because of decreased areas under pastoral lease. Since 1931 there has been a fairly steady increase to the present figure of 166,270,439 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 this method is not used to any great extent at present.

The purchase money is payable over varying terms not exceeding sixty-four 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, subject to the Minister's approval, purchase may be completed after six years provided the purchaser has complied with all the necessary conditions. When allotting land preference is given to the applicant who agrees to reside on the land. Land allotted under Agreements to Purchase amounted to 420 acres in 1970-71.

Sales at Auction

Certain Crown lands may be sold at auction for cash. These include town lands, suburban lands exempt from the operations of the Land Board, and Crown lands which have been offered for lease and not taken up within two years. Town lands so sold are subject to limitations on resale and conveyance through mortgage during the first six years, and it is usually conditional that improvements, for an agreed function and of a certain minimum value, be erected within a stipulated period.

Free Grants and Reservations

A free grant of Crown lands may be made for any public purpose. Of the 916,685 acres, thus alienated at 30 June 1971, 768,000 acres had been granted for the Weapons Research Establishment. Lands may also be dedicated and reserved for a variety of purposes such as forest areas, Aboriginal reserves, wild life reserves, parklands, schools and defence establishments.

METHODS OF LEASING AND LICENSING LAND

Leases for Limited Terms

Pastoral lands outside the counties and large areas in the northern counties are held under pastoral leases granted for terms of forty-two years (except in the case of previously unoccupied lands when the term is twenty-one years). Under the conditions of these leases the lessee must expend in improvements a sum as recommended by the Pastoral Board and must comply with certain conditions on stocking. Rent is based on the unimproved value of the land and in the case of a forty-two year lease is reviewed every seven years. Such lands may be reallocated to the same lessees on expiry of the existing terms.

Persons may be granted a permit to search for water and if successful may take up a lease of 100 square miles of land. Such leases are granted for forty-two years at a nominal rental for the first ten years and a low rental thereafter. Conditions of stocking are also modified.

In certain circumstances, for example, 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 twenty-one 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 Forest Department may be leased for cultivation or grazing purposes for a period not exceeding forty-two years. At 30 June 1971, 4,617 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.

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 previously, rents and water rates are payable on a sliding scale for the first three years. Certain improvements are required 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 1970-71, 58 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 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.

A current miner's right (which forms the basis of all operations under the Mining Act) must be held by every independent prospector, and authorises the holder to prospect for any metal, mineral, precious stones, salt, gypsum or coal on mineral lands. A miner's right does not of itself confer the right to enter on private lands. The prospector may acquire a claim carrying with it the right of possession of minerals found with the exception of salt and gypsum, which cannot be worked until a lease has been obtained. Claims are issued with a tenure of one year only and are designed to enable the holder to prove the deposit before applying for a long term lease. Claims may be renewed at the expiration of each year of tenure.

The holder of a claim (other than an alluvial gold claim or a precious stones claim) may be required to take a lease of his claim, if at any time payable results are achieved. In the case of salt and gypsum, application for a lease must be made within twenty-one days of acquiring a claim. A lease (other than a Special Mining Lease) may be for any term up to twenty-one years. The maximum size of claims and leases and of working conditions imposed, vary with the nature of the mineral.

An annual rental and a royalty on gross profits are payable by the lessee to the Crown. Special Mining Leases may be granted for a term of up to two years, under terms and for an area fixed by the Governor; these are for exploration only.

Petroleum and natural gas, whether on mineral lands or not, are the property of the Crown. On-shore exploration for, and production of, petroleum and natural gas is controlled by the Petroleum Act, 1940-1971 by virtue of the appropriate form of licence. A petroleum exploration licence is granted for a term of five years for an area not exceeding 10,000 square miles.

A petroleum production licence is granted for a term of twenty-one years, with a maximum area of 100 square miles, and provides for a royalty of 10 per cent of the value at the well-head of all petroleum recovered from the land comprising the licence.

Off-shore exploration for petroleum is governed by the Petroleum (Submerged Lands) Act, 1967-1969. An exploration permit for petroleum is for a term of six years with a maximum area of 400 blocks. A production licence for petroleum is for twenty-one years with a variable maximum area.

Lands with Mineral Rights Alienated

The mineral rights of lands sold by the Crown before 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 authorisation 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 30 June

Particulars	1967	1968	1969	1970	1971
	Acres				
Claims.....	17,169	16,597	16,416	39,857	52,884
Leases.....	15,489,944	14,502,782	25,859,231	39,542,018	(a)42,331,857
Petroleum licences and permits.....	240,791,040	207,260,160	212,188,160	206,862,080	193,288,320

(a) Lands held under Special Mining Leases accounted for 42,246,880 acres of land occupied under lease at 30 June 1971.

Mineral royalties received by the Department of Mines during 1970-71 amounted to \$1,797,678.

Recent Legislation

The Mining Act, 1971 which repeals the existing Mining Act, 1930-1962 was assented to in December 1971. The new Act will not come into force until proclaimed, some time in 1972, and, until this time, the current Act will be in force. Some of the features of the new Act are discussed below.

Mining Claims, Leases and Licences

At the time when the Mining Act, 1971 comes into operation all leases current at that date will remain in existence for twelve months irrespective of their previous termination date; the rights of current 'Authority to Enter' holders will also be protected for twelve months from that date; and a person lawfully mining on

'private land' immediately before the commencement of the new Act will be able to continue mining for six months from that date and longer if he officially declares the mine to be a 'private mine'.

After the proclaimed date any pegging of new claims or granting of leases and licences will be governed by the new Act and its regulations.

Minerals Resumed

The mineral rights on private land have been resumed by the Crown so that in future all minerals will be the property of the Crown and there will not be any 'Lands with the Mineral Rights Alienated by the Crown' with different conditions applying to them. However, if minerals (other than extractive minerals) which have been resumed under this Act are mined at any time in the future, the royalty can be claimed by the person who held the mineral rights immediately before the commencement of this Act.

A royalty of 2.5 per cent (5 per cent for extractive minerals) of the value of the minerals immediately upon recovery from the earth will be payable to the Minister of Development and Mines on all minerals (except precious stones) recovered and sold or used for commercial purposes. No royalty will be payable on precious stones.

Extractive Minerals

Extractive minerals are defined as sand, gravel, stone, shell, shale or clay but not fine-clay, bentonite or kaolin.

No person will be permitted to peg claims for extractive minerals on freehold land other than the person who, immediately before the operation of the new Act, held the mineral rights or had rights to mine the minerals by holding a claim or lease over the deposit. Normal pegging rights will apply to extractive minerals on other than freehold land or exempt land, and will also apply to other minerals on freehold land.

Under the new Act, all the royalties collected from the mining of extractive minerals will be paid into an 'Extractive Areas Rehabilitation Fund' to be used in rehabilitating land disturbed by the mining of or searching for extractive minerals.

General Conditions

A current miners right or, in the case of precious stones, a precious stones prospecting permit must be held by every prospector to authorise the pegging of the appropriate class of claim.

At least three weeks notice of entry for prospecting or mining purposes will have to be given to the landowner if the land is freehold or held on perpetual lease. Three weeks notice will also have to be given to the landowner before 'declared equipment' (initially bulldozers) can be used on his land. In either case the landowner may lodge an objection with the Warden's Court.

A claim (other than a precious stones claim) will have a maximum term of twelve months, will not be transferable and will have to be converted to a lease before minerals can be removed for sale or used for commercial purposes.

A mining lease may be granted after twenty-eight days notice in the *South Australian Government Gazette* for a term of up to twenty-one years with certain rights of renewal. A mining lease will be transferable with the Minister's consent and an annual rent will be payable on a mining lease. Nineteen-twentieths of the rent collected on a lease on freehold land will be paid to the landowner.

Exploration licences will replace Special Mining Leases as used under the old Act. They will have a maximum life of two years and a maximum area of 2,500

square kilometres and will be subject to the terms agreed. Twenty-eight days notice will be given in the *South Australian Government Gazette* before an exploration licence is granted.

Mining leases and exploration licences will be granted only under conditions which will give proper consideration to the protection of the natural environment.

4.2 LAND SETTLEMENT SCHEMES

CLOSER SETTLEMENT

There is provision in the Crown Lands Act for acquisition of land for subdivision to encourage closer settlement. Such land is divided into blocks not exceeding \$14,000 in unimproved value, and offered under conditional agreements to purchase with payment over thirty-five and sixty-four 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 \$5,730,400, 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 30 June 1971 a total of 155,834 acres of closer settlement lands were held under agreement to purchase or lease.

MARGINAL AREAS ASSISTANCE

Marginal Lands Improvement Account

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

Investigations showed that if the settlers were to succeed, cereal growing would need to be replaced by grazing. The Commonwealth Government established a trust fund to assist this development. 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.

The fund was provided by the Commonwealth Government under the *Wheat Industries Assistance Act* 1938. An amount of \$1,426,000 was allocated to South Australia. By arrangement with the Commonwealth the rentals and income from sales of improvements on marginal lands which had been subject to adjustments under the above fund are retained as an additional fund to be used for assistance to settlers in marginal areas. Receipts for 1970-71 amounted to \$27,382.

During 1967-68 an amount of \$150,000 was transferred from this fund to the Farmers Assistance Fund. No advances were made from this fund during 1970-71. The balance of the fund at 30 June 1971 was \$289,744.

Rural Industry Assistance (Special Provisions) Act, 1971

This Act, which became operative on 27 May 1971, makes provision to give effect to an Agreement between the Commonwealth and the State for a scheme of assistance to help restore to a profitable basis those farms and farmers with a

capability to service commitments and reach a stage of commercial viability within a reasonable time. The scheme provides for carry-on finance, debt reconstruction and farm build-up.

Carry-on finance and debt reconstruction are designed to assist the farmer who, although having sound prospects on a long term basis, has used all of his cash and credit resources and cannot meet his financial commitments. Advances for carry-on finance and/or debt reconstruction bear interest at the rate of 4 per cent a year.

Farm build-up is to assist the process whereby farms which are too small to be profitable can be enlarged to an economic unit. Interest on advances is chargeable at 6.25 per cent a year.

Funds were provided initially by the transfer of the balance of the Primary Producers Debt Adjustment Fund (\$804,636) to the Rural Industry Assistance Fund. Other contributions to the fund will be made by the State and Commonwealth in accordance with the Agreement.

Over 200 applications have been received and are being considered. At 30 June 1971, no payment had been made from the fund.

Marginal Dairy Farms (Agreement) Act, 1971

This Act makes provision to give effect to an agreement between the State and the Commonwealth based on the proposition that a low income problem exists within the dairy industry, particularly in the case of producers relying on the sale of milk or cream for manufacturing purposes.

The scheme provides for farmers whose farms have insufficient potential to become viable economic units while based on the sale of milk or cream for manufacturing purposes to voluntarily sell their land to the State at market value. The State may then dispose of the land on the basis of the most profitable and economic land use, particularly with a view to building other rural properties to economic levels.

At 30 June 1971 seven applications had been received and were being investigated. Funds for the scheme will be provided by the Commonwealth when required.

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.

ASSISTANCE FOR RETURNED SERVICE PERSONNEL

1914-18 War

Following the 1914-18 War the State Minister for Repatriation was authorised 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, 3,801 ex-servicemen were settled under this Act with 3,008 settling in 'dry lands' and 793 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. Basic structural improvements were provided and 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 ten 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 following table shows for selected years the number of farms allotted and total expenditure under the War Service Land Settlement Scheme.

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

Particulars	1956	1959	1962	1965	1968	1971
Farms allotted:						
Number	718	984	1,015	1,022	1,032	1,032
Area ('000 acres)	343	623	671	688	704	704
Expenditure:						
				\$'000		
State	<i>n.a.</i>	3,310	4,742	6,612	7,064	7,670
Commonwealth;						
Acquisition of land	4,768	6,358	6,914	6,836	6,837	6,837
Development and improve- ment of land	19,872	25,414	28,214	29,748	30,336	31,016
Provision of credit facilities	4,982	8,690	18,852	27,008	33,218	37,241
Other	1,668	3,634	6,472	9,454	10,540	12,052
Total expenditure by Commonwealth	31,290	44,096	60,452	73,046	80,931	87,146
Total expenditure	<i>n.a.</i>	47,406	65,194	79,658	87,995	94,816

n.a. not available

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.

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 \$2,009,096 had been made to 1,288 ex-servicemen, and allowances totalling \$649,218 had been granted to 2,264 ex-servicemen.

An additional Marginal Lands Improvement Fund was established in 1943 from which expenditure of \$416,476 had been made to 30 June 1971 by the Department of Lands.

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, involving 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 development of this area was made possible by the discovery that the retarded nature of the country was caused by certain soil deficiencies, and that these deficiencies 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 was administered to various stages of development and sold to the public; sales in this category amounted 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, 1930-1970, 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 30 June for the five most recent years are shown in the following table.

Advances to Settlers, South Australia
Balances Outstanding at 30 June

Particulars	1967	1968	1969	1970	1971
			\$'000		
Department of Lands:					
Closer settlement.....	344	295	261	236	217
Soldier settlers (1914-18 War)..	520	477	413	388	350
Returned service personnel (1939-45 War).....	12,341	12,309	11,850	11,422	11,321
Crown lands development	701	689	659	674	660
State Bank of South Australia:					
Advances to settlers	1,197	1,231	1,251	1,333	1,367
Loans to producers.....	8,087	8,398	9,308	9,802	8,146
Vermin and fencing advances..	67	59	60	89	112
Total	23,257	23,458	23,802	23,944	22,173

Private Institutional Advances

Many financial institutions advance funds for rural development.

At July 1971 the major trading banks had advances outstanding to residents of South Australia employed in agriculture, dairying and grazing, of \$76.1 million. At June 1971 branches of major pastoral finance companies located in South Australia had \$73.7 million outstanding on similar advances.

4.3 STATISTICAL DIVISIONS AND SUBDIVISIONS

For the purpose of presenting the statistical series of South Australia, the State is divided into a number of areas which are entitled statistical divisions.

PREVIOUS STATISTICAL DIVISIONS

Statistical series for South Australia have been published at various times under two different sets of statistical divisions—'Primary' Statistical Divisions, the boundaries of which have followed the boundaries of proclaimed counties, and 'Census' Statistical Divisions, where boundaries for the most part have followed the boundaries of local government areas.

Before 1889 agricultural statistics were published for counties from at least 1851, and local government areas from 1854. Publication of statistics by 'Primary' Statistical Divisions commenced in 1889 on the basis of five statistical divisions made up of thirty-eight counties. In 1920-21 an additional division

was created, to limit the number of counties in each division as the number had by this time increased to forty-eight, and the number of 'Primary' divisions remained at six from that date.

Early population census results were published on the basis of local government areas and counties, but for the 1891 and 1901 Censuses the five 'Primary' Statistical Divisions were used. The Census of 1911, which was the first conducted by the Commonwealth Government, reverted to the use of counties for published results whereas subsequent censuses, up to and including 1947, were published using local government areas. Details of the 1954 and subsequent population censuses have been published by 'Census' Statistical Divisions.

For the 1966 Census an additional division was delineated, the Adelaide Statistical Division, to embrace the area expected to contain the urban development of Adelaide during a period of at least twenty years.

CURRENT DIVISIONS AND SUBDIVISIONS

Although, ideally, statistical division boundaries should remain unchanged over time so as to enable comparisons to be made of constant areas, growth in certain statistical divisions, together with the adoption of the Adelaide Statistical Division for the 1966 Population Census, made it desirable to review the boundaries and to select a new group of statistical divisions.

The new statistical divisions were designed to represent closely allied and meaningful areas of production and community of interest and where areas smaller than divisions were considered to be important, subdivisions were introduced.

Where practicable, entire local government areas are embraced in divisions and subdivisions. This facilitates the aggregation of statistics in a hierarchical structure rising from local government area to whole State through subdivision and division totals.

Apart from major changes in relevant local government area boundaries, for which special provision will necessarily have to be made, it is considered that the statistical division and subdivision boundaries now adopted, should be suitable for a period of fifteen to twenty years.

These statistical divisions and subdivisions have been adopted for the publication of official statistics from 1 January 1971. A map showing the statistical divisions and subdivisions is included inside the back cover of this volume. A more detailed article together with descriptions of the divisions and subdivisions was included on pages 96-104 of the *South Australian Year Book* 1971.

PART 5

POPULATION

5.1 THE CENSUS

PRE-FEDERATION ACTIVITY

Early 'musters'

Population returns in one form or another have existed from a very early period in the history of Australia. The earliest enumerations were known as 'musters', and although the actual results of very few of them have been preserved, it is probable that during the early days of colonisation they were of frequent occurrence. The first official 'muster' was taken in 1788 soon after the new settlement at Sydney Cove was formed, and in 1803 the first 'muster' of convicts in Van Diemen's Land (now Tasmania) was conducted.

Development of the census

The first regular census in Australia was taken in New South Wales in November 1828, and included the population of Moreton Bay (now Queensland) but not Van Diemen's Land (Tasmania). Details of the names, ages and civil conditions of the inhabitants were sought. The next census was taken in 1833, and was followed by another in 1836, when arrangements were made for the enumeration of the population of the newly-established settlement at Port Phillip (Victoria). The first censuses taken in Tasmania, Victoria and Queensland as separate colonies were in 1841, 1854 and 1861 respectively. The first recognised census in South Australia was taken in 1844 and in Western Australia in 1848. The 1881 census was the first simultaneous census taken in Australia and formed part of the first simultaneous census of the British Empire.

CENSUSES OF THE COMMONWEALTH

Under the Commonwealth of Australia Constitution Act of 1900, 'Census and Statistics' became Commonwealth functions and with the passing of the empowering legislation, the *Census and Statistics Act 1905*, all censuses of the Commonwealth of Australia have been taken under the authority of this Act, (now

Census and Statistics Act 1905-1966) and the regulations made thereunder. The first Australian census collected under the Act was that of 1911; subsequent censuses were taken in the years 1921, 1933, 1947, 1954, 1961, 1966, and 1971, while the next census is planned for 1976. The Act provides that the census should be taken by means of a householder's schedule delivered to every dwelling and that this schedule should contain particulars of the dwelling and its inmates.

Periodicity and date of the census

The *Census and Statistics Act 1905* provided that the Census should be taken 'in the year one thousand nine hundred and eleven and in every tenth year thereafter'. But in 1930 this was amended by the addition of the words 'or at such other time as is prescribed'. Because of the economic depression prevailing in 1931 the third Australian census was not taken until 1933, and because of war conditions the fourth Australian census was not taken until 1947. Consideration was then given to the practicability of holding future censuses in the series of years originally envisaged. However, it was considered that the interval of years from 1947 to 1951 was too short; therefore it was decided to take the fifth census in 1954 at the mid-point of the period from 1947 to 1961. The sixth census was held in 1961. Because of the administrative demand for more frequent counts of the population the seventh census was held in 1966 and the eighth in 1971.

The Census and Statistics Act provides that 'the Census day shall be a day appointed for that purpose by proclamation', but the actual date is not specified. The census is conducted on a strictly *de facto* basis, i.e. it records the population actually in Australia at the place where located on census day (as distinct from a *de jure* basis, which records the population according to place of usual residence). In the selection of census day every endeavour is made to choose a date when there is a minimum displacement of population. In 1911 and 1921, census day was near the beginning of April, but in 1933 and subsequently, census day has been at or near the end of June because this time has fulfilled the condition mentioned and is otherwise suitable, being the end of a fiscal year and of a quarterly period used extensively for statistical purposes.

Scope of the census

The census covers the population of the Commonwealth and the dwellings in which it lives.

Persons excluded from results of Censuses up to 1966 were:

- (i) diplomatic representatives of other Governments and their families and staffs having diplomatic immunity in accordance with international practice;
- (ii) full-blood Aborigines, pursuant to Section 127 of the Constitution which specifically excluded them from the count of the population.

However, following the results of a Commonwealth referendum held in 1967, Section 127 of the Constitution was repealed and full-blood Aborigines were included in the 1971 Census and will be included in all future censuses. In 1971 Census publications, where it is intended to show also 1966 figures, the 1966 figures will be amended to include Aborigines and thus provide comparability.

Broadly the principle is to record at the census babies born at or before midnight of census day and to exclude persons dying before midnight of census day.

Travellers on ships in or between Australian ports at midnight of census day are also included.

For census purposes the Act defines a dwelling as 'a building, erection, or tenement, whether permanent or temporary, which is wholly or partly used for the purpose of human habitation and includes any ship or other vessel in any port of the Commonwealth or in any inland waters thereof, or any ship or vessel on a passage between any two Commonwealth ports.' Section 10 (2) provides that 'where a building is let, sub-let or held in different apartments and occupied by different persons or families, each part so let, sub-let, or held and used for the purpose of human habitation shall be deemed a dwelling'.

Measurable characteristics such as 'class' of dwelling, materials of outer walls, number of inmates in relation to number of rooms, facilities and rentals are recorded.

The census data on occupied dwellings are obtainable from the completed householder's schedules. However, census collectors are responsible for recording, from personal observations or inquiry, particulars also of dwellings which are unoccupied on census day, including those temporarily unoccupied or those used for 'holiday purposes'. Dwellings excluded from census results are those occupied by accredited persons having diplomatic immunity and (before 1967) dwellings occupied solely by full-blood Aborigines.

Commonwealth Parliamentary representation and the census

The *Representation Act* 1905-1964 obliges the Chief Electoral Officer to ascertain the number of people in the Commonwealth and in each of the States from time to time for the purpose of determining the number of Members of the House of Representatives to be chosen from each State, all 'Statistical Officers of the Commonwealth' being authorised and required to furnish all the information the Chief Electoral Officer needs for this purpose.

After each census the Chief Electoral Officer requests the Commonwealth Statistician to supply the information required for the purposes of the Representation Act. From such information the Chief Electoral Officer prepares the requisite certificate and this is published in the *Commonwealth Gazette*.

A more detailed description outlining the history, purposes, legal basis, organisation and publication of the results of the population census in Australia was included on pages 77-86 of the *South Australian Year Book* 1968.

5.2 POPULATION GROWTH AND DISTRIBUTION

The population of South Australia had reached 17,366 persons at the first Census on 26 February 1844. In 1861, twenty-five 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 population enumerated at the Census, 30 June 1966 was 1,094,984 persons and preliminary figures compiled by field personnel during the taking of the 1971 Census showed it to be 1,172,774 at 30 June 1971.

Population: South Australia, Censuses 1844 to 1971

Census Date	Population (a)			Increase since Previous Census		
	Males	Females	Persons	Males	Females	Persons
1844 26 February ..	9,686	7,680	17,366	..	..	..
1846 26 February ..	12,670	9,720	22,390	2,984	2,040	5,024
1851 1 January	35,302	28,398	63,700	22,632	18,678	41,310
1855 31 March	43,720	42,101	85,821	8,418	13,703	22,121
1861 8 April	65,048	61,782	126,830	21,328	19,681	41,009
1866 26 March	85,334	78,118	163,452	20,286	16,336	36,622
1871 2 April	95,236	90,189	185,425	9,902	12,071	21,973
1876 26 March	109,841	102,687	212,528	14,605	12,498	27,103
1881 3 April	145,113	130,231	275,344	35,272	27,544	62,816
1891 5 April	161,920	153,292	315,212	16,807	23,061	39,868
1901 31 March	180,485	177,861	358,346	18,565	24,569	43,134
1911 3 April	207,358	201,200	408,558	26,873	23,339	50,212
1921 4 April	248,267	246,893	495,160	40,909	45,693	86,602
1933 30 June	290,962	289,987	580,949	42,695	43,094	85,789
1947 30 June	320,031	326,042	646,073	29,069	36,055	65,124
1954 30 June	403,903	393,191	797,094	83,872	67,149	151,021
1961 30 June	490,225	479,115	969,340	86,322	85,924	172,246
1966 30 June	550,196	544,788	1,094,984	58,305	64,230	122,535
1971 30 June (b)	585,827	586,947	1,172,774	35,631	42,159	77,790

(a) Excludes full-blood Aborigines before 1966 Census.

(b) Preliminary. Field count figures subject to amendment.

Following the repeal in August 1967 of Section 127 of the Commonwealth Constitution, official figures of population include full-blood Aborigines from 1966.

Reporting at the 1966 Census was insufficiently precise to enable a reliable dissection of full-blood and half-blood Aborigines to be made and consequently the difference between inclusive figures and exclusive figures of full-blood Aborigines should not be taken as a reliable measure of the Aboriginal population.

Increases in the Population, South Australia^(a)

Period	Recorded Natural Increase			Other Increase			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	926	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	(b)1,787	(b)1,929	(b)3,716	(-) 860	(-) 397	(-)1,257	927	1,532	2,459
1941-1950	(b)3,977	(b)4,026	(b)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
1961-1970	5,973	6,395	12,368	3,900	4,668	8,568	9,873	11,063	20,936

(a) Excludes full-blood Aborigines before 1966.

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

In the table above, increases in the population have been classified as *recorded natural increase* (the excess of recorded births over recorded deaths) and *other increase* (which consists mainly of the excess of arrivals over departures, either

from overseas or interstate). Annual average increases which are given for each ten-year period since 1861 show some important aspects of the development of the State, namely:

- (i) the net migration, especially of males, away from South Australia following the mineral discoveries in other States in the 1880s and early 1890s;
- (ii) the slow growth during the economic depression of the 1930s when natural increase fell to a particularly low level; and
- (iii) the high rate of migration in the post 1939-45 War period up to 1960.

The State's rate of growth was slower than the Australian rate in every decade from 1881-90 to 1931-40. In the next two decades the steep rise in the rate of net migration enabled an above-average growth rate to be achieved, and this was maintained until 1966. Since then the State's growth rate has been below the Australian rate.

Rate of Increase of Population, South Australia and Australia^(a)

Period	South Australia			Australia		
	Recorded Natural Increase	Other Increase	Total Increase	Recorded Natural Increase	Other Increase	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	22.44
1961-1970(c) ..	11.57	8.02	19.59	11.78	7.38	19.16

(a) Rate per 1,000 of mean population.

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

(c) Excludes full-blood Aborigines before 1966.

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 before 1921 then settled at about 2 per cent a year. From 1928 to 1940 the rate was less than one per cent but since 1947 it has been below 2 per cent in only five years (including the last four) and it exceeded 3 per cent a year during the 1950s.

Estimates of the population of the State for the last nine 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^(a)
At 31 December

Year	Males	Females	Persons	Total Increase for Year	Rate of Growth
1962.....	501,900	493,900	995,800	18,709	1.91
1963.....	513,300	506,500	1,019,800	23,960	2.41
1964.....	527,600	521,600	1,049,200	29,361	2.88
1965.....	542,600	537,300	1,079,900	30,796	2.94
1966.....	553,900	549,700	1,103,600	20,687	1.91
1967.....	559,200	556,500	1,115,600	11,999	1.09
1968.....	566,600	565,100	1,131,700	16,021	1.44
1969.....	574,500	574,200	1,148,700	17,053	1.51
1970.....	584,200	585,200	1,169,400	20,671	1.80
1971.....	591,500	593,100	1,184,600	15,182	1.30

(a) Excludes full-blood Aborigines before 30 June 1966.

Intercensal estimates of population are derived by adding to the population ascertained at the Census the recorded natural increase and the allocation to the State of portion of the net gain to Australia by overseas migration; gains and corresponding losses that result from movement between South Australia and other States are also taken into account, in so far as they are recorded as transfers of residence under child endowment procedures or Commonwealth electoral procedures, supplemented by results of any special count or sample survey. These estimates have been revised according to preliminary results of the Census 30 June 1971. Further revisions may be made when the final results of the 1971 Census become available.

The estimates show that an annual increase in population of over 20,000 persons was maintained during the period 1963 to 1966, but it fell significantly below this level in 1967. The rate of growth increased from 1.9 per cent per annum in 1962 to nearly 3 per cent per annum in 1965, fell sharply to 1.1 per cent per annum in 1967 but there has been since a gradual increase in the growth rate.

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

Estimated Mean Population, South Australia^(a)

Year	Year Ended 30 June			Year Ended 31 December		
	Males	Females	Persons	Males	Females	Persons
1962....	493,400	483,600	977,000	497,100	488,400	985,500
1963....	502,100	494,000	996,100	507,800	500,200	1,008,000
1964....	513,900	506,900	1,020,900	520,700	514,100	1,034,800
1965....	527,800	521,500	1,049,300	535,000	529,000	1,064,000
1966....	542,300	536,600	1,078,900	549,800	544,500	1,094,300
1967....	553,800	549,200	1,103,000	556,800	553,000	1,109,800
1968....	559,300	556,100	1,115,400	562,500	559,900	1,122,400
1969....	566,400	564,500	1,130,900	570,400	569,100	1,139,500
1970....	574,700	573,800	1,148,500	579,000	578,900	1,157,900
1971....	583,300	584,000	1,167,300	587,200	588,400	1,175,600

(a) Mean population figures for periods before 30 June 1966 are based on estimates exclusive of full-blood Aborigines.

EARLY HISTORY OF SETTLEMENT

A detailed description of early settlement in South Australia together with information on the 1851 Census was included on pages 116-7 of the *South Australian Year Book* 1970.

DISTRIBUTION OF POPULATION

For the purpose of presenting population and dwelling statistics new methods have been adopted for delimiting urban centres. These methods were first used for the Census, June 1966, and will apply uniformly throughout Australia.

At each census of Population and Housing a boundary will be drawn around each population cluster of 1,000 or more persons (or around known holiday resorts of less population if they contain 250 or more dwellings of which at least 100 are occupied). These clusters will be named urban centres and the population and dwellings enumerated therein will be classified as urban for statistical purposes.

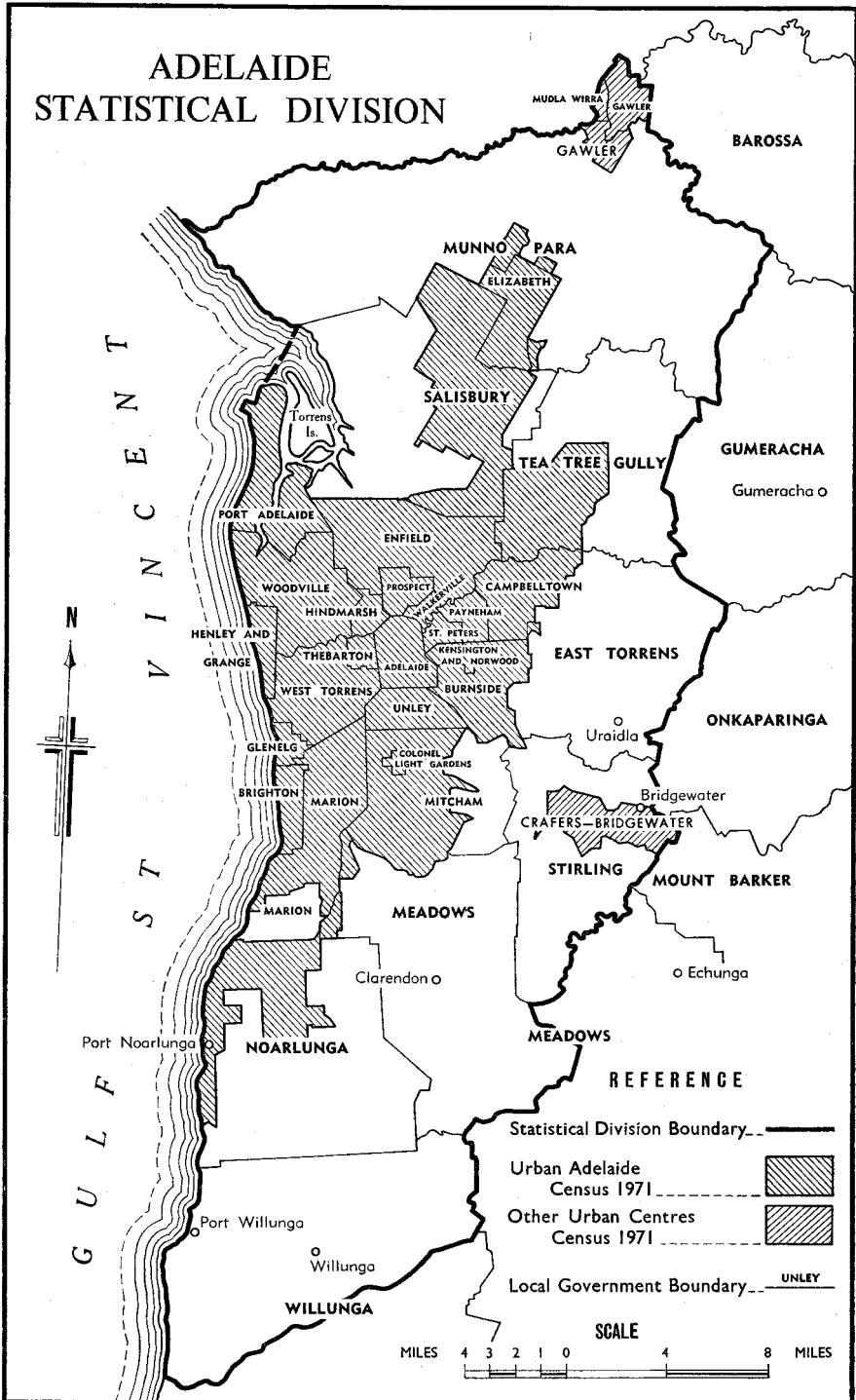
In delimiting urban centres with 25,000 or more population the basic criterion to be used is *population density*.

The geographic units to be classified according to the density criterion are collector's districts, the smallest units available. These areas vary in size and shape, but as far as possible they have been designed to ensure that significant urban development in large rural collector's districts is split off as a separate collector's district. Particular rules apply to contiguous areas with special functions, such as airports, sporting areas and industrial areas, which do not meet the density criterion. A gap in urban development which is less than two miles (by the shortest rail or road distance) between the edge of one area of urban development and another will be ignored and the urban areas treated as contiguous; two urban areas separated by a gap of two or more miles will be treated as separate urban areas even if the gap comprises mainly reserved land or a natural barrier.

The boundary of such an urban centre will be therefore, the peripheral boundary of an aggregate of contiguous urban collector's districts, the densities of which are at least 500 persons per square mile. The boundary is a moving one which reflects the process of urbanisation. The use of objective criteria enables valid comparisons to be made between one urban centre and another, and between the population for an urban centre at one census with the population at succeeding censuses.

When delimiting urban centres of less than 25,000 population the urban centres are to be delimited subjectively (by the inspection of aerial photographs, by field inspection and/or by consideration of any other information that is available). All continuous urban growth is to be included (which in small urban centres would not necessarily occur if the density criterion were applied), together with close but non-contiguous development which could be clearly regarded as part of the centre.

Around Adelaide (and all other urban centres with a population of at least 100,000) two boundaries have been defined. The outer one, which is fixed, circumscribes the area in close economic and social contact with the main city, and which contains the anticipated urban development of the city for a period of at least twenty to thirty years. This boundary defines the Adelaide Statistical Division (see map on page 111). The inner boundary indicates the area which, at the time of the census, meets the criteria for urban areas described above.



As urbanisation proceeds, this boundary will move outwards to encompass peripheral development. This boundary defines Urban Adelaide which at the 1966 Census contained nearly all the metropolitan area as defined at the 1961 Census, and, in addition, included the City of Elizabeth and large portions of the Cities of Salisbury and Tea Tree Gully, and small parts of Munno Para and East Torrens District Councils. Preliminary results of the 1971 Census indicate that Urban Adelaide has been extended to encompass the whole of the urban area of Reynella-Port Noarlunga and fringe development particularly in northern suburbs (see map on page 111).

At the 1971 Census 809,466 persons (69.02 per cent of the State population) lived in Urban Adelaide, and a further 182,834 (15.59 per cent) were in other urban areas; this is a continuance of the trend of increased urbanisation in South Australia.

In 1921 the rural population was 195,054 and at that time represented 39.4 per cent of the total population (42.1 per cent of males and 36.7 per cent of females). There were 214,762 persons classified as living in rural areas at the 1933 Census but the total had fallen slightly to 200,065 in 1961, and the proportion of the total population was down to 20.6 per cent (21.7 per cent of males and 19.6 per cent of females). Further falls occurred during 1961-66 and 1966-71. The total rural population was 190,167 persons at 30 June 1966, and the proportion of the total population had fallen further to 17.4 per cent. Preliminary figures for the 1971 Census again show a decline in the rural population to 15.2 per cent (16.1 per cent of males and 14.4 per cent of females).

Urban and Rural Population, South Australia^(a)
Censuses 1921 to 1971

Census	Urban				Rural		Total (including Migratory)	
	Adelaide (b)		Other (c)		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
1966.....	(b)728,279	66.51	174,964	15.98	190,167	17.37	1,094,984	100.00
1971 p.....	809,466	69.02	182,834	15.59	178,733	15.24	1,172,774	100.00

(a) Excludes full-blood Aborigines before the 1966 Census.

(b) Before 30 June 1966 Urban Adelaide comprised twenty-one municipalities. From 30 June 1966 new criteria, based mainly on population density were adopted for all capital cities; the boundary for Adelaide was extended at the 1966 Census to embrace new areas including Elizabeth, Salisbury and Tea Tree Gully and at the 1971 Census to include urban Reynella-Port Noarlunga.

(c) 'Other urban' up to the 1947 Census comprised all municipalities outside Urban Adelaide. For the 1954 and 1961 Censuses non-municipal towns of 1,000 or more persons were also included, but in 1961 municipalities of less than 1,000 persons were excluded. The 1966 and 1971 figures comprised clusters of 1,000 or more population; included also were four centres namely Goolwa, Port Elliot, Port Broughton and Port MacDonnell which, although having a population of less than 1,000, were regarded as urban on a dwelling density basis.

p preliminary

For statistical purposes the State is divided into nine statistical divisions, most of which are further divided into subdivisions, as described on pages 102-3 and shown on the map inside the back cover of this volume. The population of each division and subdivision at the 1966 Census, preliminary figures based on field counts for the 1971 Census and estimates for the intervening years are shown in the following table.

Population of Statistical Divisions and Subdivisions, South Australia

Statistical Division and Subdivision	Population at 30 June					
	1966	1967	1968	1969	1970	1971 (a)
Adelaide:						
City	18,619	17,950	17,450	17,350	16,800	16,331
Inner Western	25,992	25,600	25,150	25,050	24,800	24,323
Inner Eastern	100,939	100,200	99,600	99,150	99,350	99,136
North Eastern Suburban	91,544	97,000	100,950	105,150	111,600	117,763
Eastern Suburban	81,779	83,600	85,200	86,800	88,400	89,535
South Eastern Hills	62,017	62,850	63,650	64,900	66,250	67,869
South Western Coastal	107,274	109,200	111,500	115,400	119,700	124,371
Western Suburban	72,820	74,100	74,950	76,700	78,500	79,547
North Western Suburban	135,927	134,200	133,100	133,150	133,150	132,359
Para.	74,684	79,750	83,450	86,000	88,250	91,377
Total Adelaide	771,595	784,450	795,000	809,650	826,800	842,611
Central:						
Central Plains	21,569	21,300	21,150	20,850	20,750	20,479
Yorke	11,728	11,550	11,300	11,150	11,050	10,719
Total Central	33,297	32,850	32,450	32,000	31,800	31,198
Kangaroo Island	3,375	3,300	3,300	3,200	3,200	3,152
Mount Lofty Ranges:						
Northern Ranges	21,852	21,750	21,600	21,650	21,700	21,492
Southern Ranges	30,561	30,500	30,400	30,350	30,300	30,134
Total Mount Lofty Ranges	52,413	52,250	52,000	52,000	52,000	51,626
Murray:						
Upper Murray	31,802	31,700	31,700	31,600	31,600	31,322
Lower Murray	17,984	18,250	18,500	18,750	18,800	18,814
Mallee	7,597	7,400	7,300	7,150	6,900	6,750
Total Murray	57,383	57,350	57,500	57,500	57,300	56,886
South East:						
Upper South East	20,724	20,650	20,650	20,700	20,750	20,554
Lower South East	36,880	36,850	36,900	37,050	37,200	37,206
Total South East	57,604	57,500	57,550	57,750	57,950	57,760
Eyre:						
Upper Eyre	8,180	8,250	8,400	8,750	8,950	8,979
Lower Eyre	20,820	20,750	20,800	20,850	20,900	20,779
Total Eyre	29,000	29,000	29,200	29,600	29,850	29,758
Northern:						
Spencer	61,628	64,200	66,700	69,150	71,150	72,454
Frome	12,925	12,550	12,300	12,100	11,950	11,723
Total Northern	74,553	76,750	79,000	81,250	83,100	84,177
Far North	14,190	14,600	13,800	14,250	13,550	13,865
Migratory (b)	1,574	1,550	1,600	1,600	1,650	1,741
Total State	1,094,984	1,109,600	1,121,400	1,138,800	1,157,200	1,172,774

(a) Preliminary. Field count figures subject to amendment.

(b) Persons on ships in port and travelling on long-distance public transport.

Note: For intercensal years (1967-1970) figures have been revised in accordance with preliminary results of the 1971 Census and may be subject to further amendment.

Population in and near Adelaide

Urban Adelaide as defined for the 1971 Census comprises twenty complete local government areas and part of each of seven others. Of these, nineteen have been proclaimed as cities, the latest being Henley and Grange which was officially declared to be a city from 11 June 1970.

Qualification for city status within the metropolitan local government areas (as defined in the Local Government Act) 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 bring loss of city status.

Over the last two decades 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, namely 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 Munno Para, Salisbury, Elizabeth, Enfield (generally north of the city); Campbelltown and Tea Tree Gully (north-east); Marion, Brighton and Noarlunga (south-west).

Although figures for Urban Adelaide, defined according to the density criteria, are not available for the 1947 and 1954 Censuses, there appears to have been a continual increase in the proportion of the total population residing in Urban Adelaide.

At the 1961 Census, the population of Urban Adelaide defined according to the new density criteria is estimated to have been 580,449 persons or 59.9 per cent of the total State population and this figure had increased to 728,279 (66 per cent) at the Census, 30 June 1966.

After the 1966 Census the gap in development between Urban Adelaide and urban Reynella-Port Noarlunga so narrowed as to enable these two areas to be regarded as contiguous at the 1971 Census. This amalgamation, together with the inclusion of further peripheral development, has resulted in an increase, as indicated by preliminary figures, to 809,466 persons (69 per cent of the State population).

Population, Adelaide Statistical Division^(a)

Local Government Area	Census 30 June 1961	Census 30 June 1966	Census 30 June 1971 <i>p</i>
Adelaide (C)	23,051	18,619	16,331
Brighton (C)	20,337	22,638	22,393
Burnside (C)	36,266	38,776	39,379
Campbelltown (C)	20,945	32,083	37,953
Colonel Light Gardens (M)	3,671	3,404	3,384
East Torrens (DC)	3,664	3,822	4,201
Elizabeth (C)	(b)	32,956	33,363
Enfield (C)	72,427	80,336	77,555
Gawler (M)	5,639	5,703	5,490
Glenside (C)	14,492	14,763	15,383
Henley and Grange (C)	11,680	14,146	16,349
Hindmarsh (M)	12,914	11,367	10,265
Kensington and Norwood (C)	13,476	11,943	11,071
Marion (C)	58,464	66,984	67,591
Meadows (DC) (part)	2,242	2,824	5,111
Mitcham (C)	43,122	49,485	54,347
Mudla Wirra (DC) (part)	111	155	186
Munno Para (DC)	3,154	14,279	20,169
Noarlunga (DC)	5,492	14,214	28,460
Payneham (C)	14,930	16,847	17,347
Port Adelaide (C)	38,923	39,846	39,038
Prospect (C)	22,184	21,415	20,711
Salisbury (C)	35,715	35,766	56,290
Stirling (DC)	7,075	7,552	8,348
St Peters (M)	11,727	11,339	10,888
Tea Tree Gully (C)	5,887	21,315	36,687
Thebarton (M)	12,884	12,303	11,847
Unley (C)	40,280	39,735	39,906
Walkerville (M)	4,464	4,593	7,215
West Torrens (C)	40,681	46,233	50,026
Willunga (DC) (part)	2,210	2,190	2,606
Woodville (C)	71,039	73,930	72,703
Not incorporated	—	—	(c) 18
Total	659,146	771,561	842,611

(a) Excludes full-blood Aborigines before 30 June 1966.

(b) Elizabeth (C) was constituted out of Salisbury (C) in July 1964.

(c) Torrens and Garden Islands included in Adelaide Statistical Division subsequent to 1966 Census.

p preliminary

(C) Municipality with city status (M) Municipality (DC) District Council

Population Beyond the Adelaide Statistical Division

Whereas in each of the eastern States, New South Wales, Victoria and Queensland, there are at least four centres outside the capital city with a population of more than 20,000 persons, there is only one in South Australia. This centre, Whyalla, had a population of 32,085 persons at the Census, 30 June 1971, making it the largest centre outside Urban Adelaide.

Early expansion of Whyalla was a direct consequence of it being the closest port to the rich iron ore deposits at Iron Knob, Iron Baron and Iron Monarch. Whyalla's population increased with the establishment of a ship-building yard—Australia's largest—in 1940. As ship-building activities have expanded the population has steadily increased. Growth was accelerated by the construction of a modern steel-making plant which began production in February 1965. The population of Whyalla at the Census, 1961 was 13,711 persons; in the following five years it had grown to 22,131 and the preliminary count at the 1971 Census was 32,085.

At the 1971 Census there were only three other urban centres outside of the Adelaide Statistical Division with population in excess of 10,000 persons. These were Mount Gambier (17,867 persons), the centre of the rich and fertile south-eastern portion of the State, Port Pirie (15,506 persons), the most convenient port for shipping the rich silver-lead-zinc production of Broken Hill (N.S.W.) and Port Augusta (12,095 persons), situated at the head of Spencer Gulf. Growth or decline of these and other urban centres outside the Adelaide Statistical Division between 1961 and 1966 can be seen from the following table.

Population of Urban Centres, South Australia Censuses 1966 and 1971^(a)

Urban Centre	Census		Urban Centre	Census	
	June 1966	June 1971 (b)		June 1966	June 1971 (b)
Angaston	1,887	1,816	Mount Barker	1,934	2,340
Balaklava	1,199	1,111	Mount Gambier ..	17,261	17,867
Barmera	1,490	1,683	Murray Bridge ...	5,958	7,400
Berri	2,232	2,712	Naracoorte	4,380	4,399
Bordertown	1,759	1,977	Nuriootpa	2,041	2,467
Burra	1,342	1,278	Penola	1,383	1,293
Ceduna	1,457	2,056	Peterborough	3,117	3,019
Clare	1,582	2,105	Port Augusta	10,457	12,095
Cooper Pedy	(c)	1,391	Port Broughton ..	418	489
Crystal Brook	1,235	1,185	Port Elliot	565	561
Goolwa	561	680	Port Lincoln	8,912	9,158
Jamestown	1,282	1,339	Port MacDonnell ..	531	584
Kadina	3,022	2,853	Port Pirie	15,567	15,506
Kapunda	1,119	1,301	Quorn	(c)	1,010
Keith	1,097	1,211	Renmark	3,054	3,277
Kingscote	1,071	1,007	Strathalbyn	1,449	1,547
Kingston (S.E.)	1,065	1,173	Tailem Bend	1,952	1,975
Lobethal	1,098	1,381	Tanunda	1,986	1,936
Loxton	2,420	2,658	Victor Harbor	3,140	3,533
Maitland	1,017	1,020	Waikerie	(c) 998	1,252
Mannum	2,034	2,036	Walleroo	2,094	2,092
Millicent	4,539	5,075	Whyalla	22,131	32,085
Moonta	1,702	1,578	Woomera-Maralinga	4,749	4,066

(a) Outside Adelaide Statistical Division. For definition of 'urban' see page 110.

(b) Figures are based on field count data and are subject to revision. Boundaries of a number of urban centres have been redrawn to encompass all areas of urban development; consequently comparability with 1966 figures is affected and generally greater increases are indicated than have occurred.

(c) Non-urban in 1966. Where an urban centre at the 1971 Census was non-urban at the 1966 Census, figures for both Censuses (where available) have been shown for comparison.

Outside the Adelaide Statistical Division there are five municipalities which have been proclaimed as cities (Whyalla, Mount Gambier, Port Pirie, Port Augusta and Port Lincoln). Although there are no other towns of city size there are a number of smaller municipalities with a population of about 3,000 or more. Growth of these towns since the 1947 Census is shown in the next table.

Population of Municipalities, South Australia^(a)

Municipality	Statistical Division	Census 30 June				
		1947	1954	1961	1966	1971 (b)
Mount Gambier	South East	6,771	10,331	15,388	17,261	17,319
Murray Bridge	Murray	3,690	4,362	5,404	5,958	6,668
Naracoorte	South East	2,202	3,329	4,410	4,380	4,399
Peterborough	Northern	2,890	3,437	3,430	3,117	3,019
Port Augusta	Northern	4,351	6,704	9,711	10,132	12,095
Port Lincoln	Eyre	3,972	5,871	7,508	8,912	9,158
Port Pirie	Northern	12,019	14,223	14,003	13,965	13,269
Renmark	Murray	4,832	5,484	6,070	6,275	6,331
Whyalla	Northern	7,845	8,598	13,711	21,281	31,568

(a) Excludes full-blood Aborigines before 30 June 1966.

(b) Preliminary. Field count figures subject to amendment.

5.3 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, Deaths and Marriages Registration Act, 1966 which came into operation on 1 January 1968 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 twenty-two registration districts each of which has a registry office in the charge of a District Registrar.

The Principal Registrar maintains a register of all live 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. Up to the end of 1967 separate registers were kept of still births, which were not included in the registration or statistics of either live births or of deaths. Compulsory registration of still births was introduced in South Australia in 1937.

The current legislation does not require the Principal Registrar to maintain a register of still births, but it provides for a 'Medical Certificate of Cause of Perinatal Death' to be filled in and forwarded to the Principal Registrar by the attending medical practitioner in respect of a 'child not born alive'. The 'perinatal' certificates are also required from attending medical practitioners for children dying within twenty-eight days of birth.

The birth of each live-born child is required to be registered by a parent within sixty days of the date of birth. Registration of a live birth after the expiration of sixty days following 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 fourteen 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 'Notice of signing of 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 to the end of 1965 have been excluded from statistics where there was definite indication that they were of full-blood. Statistics of births and deaths for 1966 and subsequent years cover all registrations.

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 longer period allowed 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 ten years is also shown.

Live Births and Still Births, South Australia^(a)

Year	Total Live Births Occurred (b)	Births Registered						
		Live-born					Still-born	
		Total	Rate (c)	Males	Females	Masculinity (d)	Total	Rate (e)
1962.....	21,340	21,361	21.67	11,003	10,358	106.23	278	12.85
1963.....	21,205	21,367	21.20	11,006	10,361	106.23	262	12.11
1964.....	20,830	20,866	20.16	10,849	10,017	108.31	252	11.93
1965.....	20,793	20,891	19.63	10,778	10,113	106.58	256	12.11
1966.....	20,314	20,362	18.61	10,556	9,806	107.65	237	11.51
1967.....	20,442	20,386	18.37	10,402	9,984	104.19	211	10.24
1968.....	21,212	21,207	18.89	10,949	10,258	106.74	217(f)	10.13
1969.....	21,978	21,977	19.29	11,262	10,715	105.10	208	9.38
1970.....	22,561	22,617	19.53	11,555	11,062	104.46	200	8.77
1971.....	22,719	22,996	19.56	11,797	11,199	105.34	199	8.58

- (a) Where identified in registrations births of full-blood Aborigines have been excluded before 1966.
 (b) Figures are subject to the addition of a few very late registrations. (c) Per 1,000 of mean population. (d) Number of male births per 100 female births. (e) Per 1,000 of all births (live and still). (f) Figures from 1968 derived from perinatal death certificates.

The birth rate per thousand of the mean population was above 45 in the late 1850s then declined generally to 23.8 in 1903 before improving gradually to reach nearly 29 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 14.1 in 1935, the lowest on record. From that time there was a steady upward trend climaxing with a rate of 25.2 in 1947. A reversal in trend followed with the lowest post-war rate of 18.4 being recorded in 1967. The rate in 1970 was 19.5 which was well below the Australian rate of 20.6 and lower than the rate in any other State.

Ex-nuptial Births and Legitimations

The ex-nuptial birth rate was about 3 per 100 from the early 1920s until the late 1950s, but has more than doubled since 1959 when the rate was 3.66. Except for falls in 1967 and 1969 the rates for 1962 to 1971 were successively the highest recorded.

The legitimation of an ex-nuptial child upon the subsequent marriage of the parents which 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, was possible only if there were no legal impediment to the marriage of the parents at the time of the birth of the child. The Commonwealth *Marriage Act* 1961-1966, which came into operation on 1 September 1963, provides for the legitimation of a child upon the subsequent marriage of the parents whether or not there was a legal impediment to the marriage 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 1 September 1963, at that date.

Ex-nuptial Live Births and Legitimations, South Australia

Year	Ex-nuptial Live Births		Legitimations
	Number	Rate per 100 Births	
1967.....	1,375	6.74	295
1968.....	1,558	7.35	240
1969.....	1,508	6.86	260
1970.....	1,715	7.58	323
1971.....	1,782	7.75	337

Confinements and Live Births

In the table below confinements in each of the years 1967 to 1970 have been shown in relation to age group of the mother and nuptiality.

Confinements: Age Group of Mother and Nuptiality, South Australia

Age Group	Number of Confinements (a)				Percentage of Total In Each Category			
	1967	1968	1969	1970	1967	1968	1969	1970
NUPTIAL CONFINEMENTS								
10-14	1	—	—	—	—	—	—	—
15-19	1,570	1,581	1,588	1,681	8.3	8.1	7.8	8.1
20-24	6,845	7,221	7,779	7,815	36.4	37.1	38.4	37.8
25-29	5,841	6,125	6,298	6,695	31.0	31.5	31.1	32.4
30-34	2,695	2,851	2,933	2,944	14.3	14.6	14.5	14.2
35-39	1,402	1,223	1,262	1,179	7.5	6.3	6.2	5.7
40-44	418	423	380	344	2.2	2.2	1.9	1.7
45 and over	49	41	29	21	0.3	0.2	0.1	0.1
Not Stated	—	—	3	—	—	—	—	—
Total	18,821	19,465	20,272	20,679	100.0	100.0	100.0	100.0
EX-NUPTIAL CONFINEMENTS								
10-14	10	6	8	10	0.7	0.3	0.5	0.6
15-19	540	617	604	647	39.5	39.8	40.4	38.1
20-24	422	485	491	594	30.9	31.3	32.9	35.0
25-29	188	207	188	237	13.8	13.4	12.6	14.0
30-34	110	114	116	106	8.1	7.4	7.8	6.2
35-39	73	83	59	76	5.4	5.4	3.9	4.5
40-44	21	36	25	26	1.5	2.3	1.7	1.5
45 and over	2	1	1	1	0.1	0.1	0.1	0.1
Not Stated	—	—	1	—	—	—	0.1	—
Total	1,366	1,549	1,493	1,697	100.0	100.0	100.0	100.0

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

The next table shows the number of confinements and live births for 1969 and 1970 classified separately for single births and multiple births in which at least one issue was live-born.

Confinements and Live Births: Class of Birth, South Australia

Particulars	1969				1970			
	Confinements (a)	Live Births			Confinements (a)	Live Births		
		Male	Female	Total		Male	Female	Total
Nuptial:								
Single Births	20,075	10,318	9,757	20,075	20,455	10,428	10,027	20,455
Twins	196	196	195	391	222	236	205	441
Triplets	1	—	3	3	2	5	1	6
Total Nuptial..	20,272	10,514	9,955	20,469	20,679	10,669	10,233	20,902
Ex-Nuptial:								
Single Births	1,478	733	745	1,478	1,680	869	811	1,680
Twins	15	15	15	30	15	13	16	29
Triplets	—	—	—	—	2	4	2	6
Total Ex-Nuptial	1,493	748	760	1,508	1,697	886	829	1,715
Total	21,765	11,262	10,715	21,977	22,376	11,555	11,062	22,617

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

In each year from 1950 to 1963 multiple confinements occurred at a rate of a little over ten per 1,000 confinements but have fallen below this level in five of the seven years since 1963. There is a marked tendency for multiple births to be of the same sex; in 1970 there were 152 cases of twins of the same sex compared with only 85 cases of one male and one female issue.

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 1970 in the following table.

Confinements: Relative Ages of Parents, South Australia, 1970(a)

Age Group of Father (Nuptial Births)	Age Group of Mother							Total
	Under 20	20-24	25-29	30-34	35-39	40-44	45-49	
Under 20	287	60	1	—	—	—	—	348
20-24	1,166	3,308	308	17	2	—	—	4,801
25-29	201	3,609	3,328	230	15	1	—	7,384
30-34	19	694	2,381	1,349	99	6	—	4,548
35-39	5	109	513	1,002	507	50	—	2,186
40-44	2	21	128	265	421	158	4	999
45-49	—	11	25	69	116	90	9	320
50 and over . . .	1	3	11	12	19	39	8	93
Married Mothers . .	1,681	7,815	6,695	2,944	1,179	344	21	20,679
Unmarried Mothers	657	594	237	106	76	26	1	1,697
Total Mothers.	2,338	8,409	6,932	3,050	1,255	370	22	22,376

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

The table which follows shows the number of confinements classified by duration of marriage and previous issue. Previous issue is the number of live-born children of the existing marriage born before the current confinement.

**Nuptial Confinements: Duration of Marriage and Previous Issue of Mother
South Australia, 1970**

Duration of Marriage	Number of Confinements	Previous Issue						
		0	1	2	3	4	5	6 and over
Under 1 year	2,862	2,859	3	—	—	—	—	—
1 year	2,416	1,972	440	4	—	—	—	—
2 years.....	2,694	1,384	1,249	61	—	—	—	—
3 years.....	2,552	844	1,438	259	10	1	—	—
4 years.....	2,110	461	1,149	450	44	6	—	—
5 years.....	1,717	231	809	572	91	14	—	—
6 years.....	1,288	111	424	551	163	34	5	—
7 years.....	992	79	254	435	173	42	8	1
8 years.....	786	42	161	314	194	57	12	6
9 years.....	607	42	95	209	167	70	20	4
10 years.....	555	42	64	165	170	77	32	5
11 years.....	426	19	43	133	119	70	22	20
12 years.....	344	21	35	94	86	59	27	22
13 years.....	286	6	29	67	82	59	21	22
14 years.....	240	3	19	46	66	60	19	27
15 years and over ..	770	15	36	105	158	148	113	(a)195
Not stated.....	34	4	3	1	11	10	1	4
Total	20,679	8,135	6,251	3,466	1,534	707	280	(a)306

(a) Includes one confinement where previous issue is not stated.

Since 1964 the number of nuptial first live births has risen steadily from 6,552 to 8,135 in 1970; an increase from 33.7 per cent of all nuptial confinements in 1964 to 39.3 per cent. However, the number of mothers having their fourth or subsequent child has fallen in the same period from 4,154 to 2,827; a decrease from 21.4 per cent to 13.7 per cent of all nuptial confinements. This decrease is related to the sharper decline in the age-specific birth-rate for women over thirty years of age and is partly because of the decrease in the proportion of the female population in the 30-39 age group.

The following table illustrates a trend towards a longer period after marriage before the birth of the first child. In particular, there is a decrease in the percentage of nuptial first live births to women who had been married less than two years, from 62.69 per cent in 1967 to 59.38 per cent in 1970. A corresponding increase is evident in the two to four years duration of marriage groups; from 29.33 per cent to 33.06 per cent.

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: Duration of Marriage of Parents, South Australia

Duration of Marriage	Nuptial First Live Births				Percentage of Total			
	1967	1968	1969	1970	1967	1968	1969	1970
Under 5 months	588	635	660	698	8.24	8.58	8.36	8.58
5 months	478	527	517	563	6.70	7.12	6.55	6.92
6 months	515	519	593	537	7.22	7.01	7.51	6.60
7 months	208	182	195	199	2.92	2.46	2.47	2.45
8 months	144	141	146	143	2.02	1.91	1.85	1.76
9 months	261	291	255	269	3.66	3.93	3.23	3.30
10 months	248	255	240	228	3.48	3.45	3.04	2.80
11 months	215	207	197	222	3.01	2.80	2.50	2.73
Total under 1 year	2,657	2,757	2,803	2,859	37.25	37.26	35.51	35.14
1 year	1,815	1,823	1,976	1,972	25.44	24.64	25.04	24.24
2 years	1,138	1,274	1,258	1,384	15.95	17.22	15.94	17.01
3 years	613	647	834	844	8.59	8.75	10.57	10.38
4 years	342	329	455	461	4.79	4.45	5.76	5.67
5 years	179	178	205	231	2.51	2.41	2.60	2.84
6 years	106	125	104	111	1.49	1.69	1.32	1.36
7 years	71	85	70	79	0.99	1.15	0.89	0.97
8 years and over	204	174	182	190	2.86	2.35	2.31	2.34
Not stated	9	6	5	4	0.13	0.08	0.06	0.05
Total	7,134	7,398	7,892	8,135	100.00	100.00	100.00	100.00

DEATHS

The following table shows the number of deaths and death rates per 1,000 of the mean population since 1935.

Deaths and Death Rates, South Australia^(a)

Period	Number of Deaths			Death Rate ^(b)		
	Males	Females	Persons	Males	Females	Persons
Annual Average:						
1935-39 ^(c)	2,929	2,501	5,430	9.89	8.47	9.19
1940-44 ^(c)	3,348	2,887	6,235	11.07	9.43	10.25
1945-49 ^(c)	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	9.19	7.36	8.29
1965-69	5,172	4,119	9,291	9.32	7.47	8.40
Year:						
1967	5,031	4,040	9,071	9.04	7.31	8.17
1968	5,555	4,361	9,916	9.88	7.79	8.83
1969	5,207	4,130	9,337	9.13	7.26	8.19
1970	5,576	4,562	10,138	9.63	7.88	8.76
1971	5,310	4,376	9,686	9.04	7.44	8.24

^(a) Deaths of full-blood Aborigines where identified in registrations were excluded before 1966.

^(b) Per 1,000 of mean population. ^(c) Excludes deaths of defence personnel and of internees and prisoners of war from overseas for the period September 1939 to June 1947.

Male and female deaths in selected age groups for each of the five years 1966 to 1970 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								
1966....	280	56	120	82	225	455	947	3,066	5,231
1967....	217	58	136	73	206	482	923	2,936	5,031
1968....	239	52	130	79	214	499	1,031	3,311	5,555
1969....	249	59	112	101	196	471	980	3,039	5,207
1970....	268	52	162	92	204	545	1,061	3,192	5,576
	FEMALES								
1966....	161	35	44	50	126	276	451	2,971	4,114
1967....	177	25	45	39	103	250	440	2,961	4,040
1968....	181	24	51	40	125	227	496	3,217	4,361
1969....	173	42	47	40	118	225	468	3,017	4,130
1970....	166	39	48	49	119	251	526	3,364	4,562

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 tables, which show 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 centre.

Age-Specific Death Rates: Males, South Australia^(a)

Age Group	Death Rate (b)							
	1880-82	1900-02	1920-22	1932-34	1946-48	1953-55	1960-62	1965-67
0-4	51.85	32.12	19.98	9.90	8.09	6.41	5.82	4.65
5-9	3.33	2.81	2.33	1.18	1.00	0.52	0.50	0.45
10-14	2.59	1.85	1.55	1.08	0.68	0.65	0.46	0.55
15-19	4.48	2.88	2.41	1.69	1.42	1.50	1.08	1.19
20-24	4.85	4.19	3.47	2.35	1.44	1.88	1.37	1.33
25-29	6.32	5.16	3.67	2.51	1.59	1.70	1.59	1.34
30-34	7.51	5.30	3.97	2.51	1.88	1.57	1.62	1.13
35-39	9.00	6.77	5.12	3.23	2.41	2.29	2.08	2.23
40-44	12.25	8.50	6.10	4.73	3.63	3.56	3.43	3.27
45-49	16.10	10.26	8.37	6.82	6.12	5.48	5.44	5.71
50-54	17.29	14.19	11.58	9.82	10.74	10.16	9.24	9.57
55-59	25.28	20.74	18.99	15.11	16.28	15.71	15.75	15.94
60-64	31.77	30.23	26.02	24.98	26.08	24.33	24.39	26.65
65-69	46.67	47.24	41.62	36.14	40.08	39.31	37.84	40.50
70-74	63.52	64.27	62.49	57.07	60.79	62.59	59.47	63.67
75-79	92.49	89.66	105.50	92.60	97.69	94.55	88.56	90.57
80-84	138.02	140.35	158.90	147.86	145.56	141.64	135.85	138.24
85 and over	247.47	246.96	269.50	257.03	248.89	235.84	227.39	228.66
All ages.....	15.76	12.03	10.75	9.29	10.87	9.80	9.00	9.15

(a) Deaths of full-blood Aborigines where identified in registrations were excluded before 1965.

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

Age-Specific Death Rates: Females, South Australia^(a)

Age Group	Death Rate (b)							
	1880-82	1900-02	1920-22	1932-34	1946-48	1953-55	1960-62	1965-67
0-4	45.36	27.20	16.29	8.29	7.12	5.01	3.93	3.50
5-9	3.28	2.02	2.30	1.04	0.54	0.45	0.35	0.33
10-14	2.49	1.64	1.32	0.88	0.38	0.42	0.30	0.30
15-19	4.16	3.47	2.71	1.25	0.75	0.52	0.37	0.45
20-24	5.59	4.16	2.91	2.36	1.04	0.63	0.58	0.46
25-29	8.01	5.00	3.95	2.73	1.65	0.85	0.70	0.53
30-34	7.67	5.66	4.18	2.66	1.91	0.99	0.96	0.87
35-39	10.29	6.90	5.27	3.85	2.03	1.79	1.33	1.14
40-44	9.76	7.85	4.99	4.10	3.48	2.56	1.80	2.12
45-49	11.65	8.20	6.42	5.80	4.59	3.65	3.03	3.29
50-54	13.09	10.83	9.18	8.06	7.09	5.88	5.22	5.00
55-59	14.86	14.08	10.65	11.24	10.33	9.04	7.82	7.58
60-64	24.30	20.45	18.07	17.68	14.97	14.06	12.74	12.82
65-69	36.27	35.51	33.15	27.16	25.22	23.01	21.05	20.40
70-74	53.10	53.80	46.20	42.19	42.17	40.35	35.52	35.35
75-79	93.21	87.96	83.56	75.53	72.07	72.20	58.28	60.77
80-84	94.83	126.07	131.63	121.15	121.57	109.92	108.61	100.48
85 and over	161.90	222.58	232.84	233.59	214.35	215.80	199.38	183.83
All ages.....	13.97	10.25	9.00	8.23	9.19	8.31	7.38	7.41

(a) Deaths of full-blood Aborigines where identified in registrations were excluded before 1965.

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

Over the period there was a marked reduction in death rates with greater reduction in female than in male rates in almost every age group.

CAUSES OF DEATH

The classification of causes of deaths in Australia since 1907 has been based on International Lists of Causes of Deaths (ICD). 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 ICD introduced major changes 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.

The Eighth Revision brought into use in Australia in 1968 provided a few changes to the structure of the tabular list, e.g. the transferring of cerebrovascular diseases from the section covering diseases of the nervous system and sense organs to that covering diseases of the circulatory system. Comparability has not been affected greatly by the changes with the exception of the categories within the section now entitled 'Certain Causes of Perinatal Morbidity and Mortality'—the Seventh Revision title was 'Certain Diseases of Early Infancy'. Seventh Revision classification in this section was related to the condition in the infant whereas the Eighth Revision provides primarily for classification wherever possible to maternal diseases or conditions or to the circumstances of the birth rather than to the

resultant condition in the infant. ICD Eighth Revision code numbers have been shown where appropriate in the tables which follow.

In the following table deaths registered in 1970 are shown classified according to the abbreviated list of the Eighth Revision together with the percentages from each cause and the rate per 10,000 of mean population.

Causes of Deaths, South Australia, 1970

Abbreviated Classification (a)	International Classification Code Number	Number of Deaths	Proportion of Total (Per cent)	Rate per 10,000 of Mean Population
3 Bacillary dysentery and amoebiasis ..	004, 006	2	0.02	0.02
4 Enteritis and other diarrhoeal	008, 009	24	0.24	0.21
5 Tuberculosis of respiratory system ..	010-012	13	0.13	0.11
6 Other tuberculosis incl. late effects ..	013-019	3	0.03	0.03
10 Streptococcal throat and scarlet fever	034	1	0.01	0.01
14 Measles	055	1	0.01	0.01
17 Syphilis and its sequelae	090-097	3	0.03	0.03
18 Other infective and parasitic diseases	{ Remainder			
	{ 000-136	21	0.21	0.18
19 Malignant neoplasms	{ 140-209	1,652	16.30	14.17
20 Benign and unspecified neoplasms ..	{ 210-239	19	0.19	0.16
21 Diabetes mellitus	{ 250	179	1.76	1.54
22 Avitaminoses and other nutritional deficiency	260-269	17	0.17	0.15
23 Anaemias	280-285	18	0.18	0.15
24 Meningitis	320	7	0.07	0.06
25 Active rheumatic fever	390-392	1	0.01	0.01
26 Chronic rheumatic heart disease	393-398	75	0.74	0.64
27 Hypertensive disease	400-404	134	1.32	1.15
28 Ischaemic heart disease	410-414	3,204	31.60	27.49
29 Other forms of heart disease	420-429	432	4.26	3.71
30 Cerebrovascular disease	430-438	1,401	13.82	12.02
31 Influenza	470-474	51	0.50	0.44
32 Pneumonia	480-486	272	2.68	2.33
33 Bronchitis, emphysema and asthma ..	490-493	317	3.13	2.72
34 Peptic ulcer	531-533	68	0.67	0.58
35 Appendicitis	540-543	9	0.09	0.08
36 Intestinal obstruction and hernia ..	550-553, 560	34	0.33	0.29
37 Cirrhosis of liver	571	92	0.91	0.79
38 Nephritis and nephrosis	580-584	62	0.61	0.53
39 Hyperplasia of prostate	600	25	0.25	0.21
40, 41 Complications of pregnancy, child-birth and puerperium	630-678	7	0.07	0.06
42 Congenital anomalies	740-759	106	1.05	0.91
43 Birth injury, difficult labour and other anoxic and hypoxic conditions ..	{ 764-768,			
	{ 772, 776	86	0.85	0.74
44 Other causes of perinatal mortality ..	{ 760-763,			
	{ 769-771,	119	1.17	1.02
	{ 773-775,			
	{ 777-779			
45 Symptoms and ill-defined conditions ..	780-796	94	0.93	0.81
46 All other diseases	Residual	795	7.84	6.82
47 Motor vehicle accidents	E810-E823	364	3.59	3.12
48 All other accidents	{ E800-E807			
	{ E825-E949	262	2.58	2.25
49 Suicide and self-inflicted injuries	E950-E959	138	1.36	1.18
50 All other external causes	E960-E999	30	0.29	0.26
Total all causes		10,138	100.00	86.99

(a) No deaths were recorded in 1970 in the following categories—1 Cholera (000), 2 Typhoid fever (001), 7 Plague (020), 8 Diphtheria (032), 9 Whooping Cough (033), 11 Meningococcal infection (036), 12 Acute Poliomyelitis (040-043), 13 Smallpox (050), 15 Typhus and other rickettsiosis (080-083), 16 Malaria (084).

The following table shows for 1970 the main causes of deaths in selected age groups.

Main Causes of Deaths: Age Groups, South Australia, 1970

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.	%	%	%
0-4 Years					
764-768, 772, 776	Birth injury, difficult labour, etc.	86	19.8	100.0	
760-763, 769-771, 773-775, 777-779	Other perinatal causes, including maternal conditions, prematurity, etc.	119	27.4	100.0	
740-759	Congenital anomalies	85	19.6	80.2	
E800-E999	Accidents, poisonings, violence	42	9.7	5.3	
780-796	Symptoms and ill-defined conditions	32	7.4	34.0	
	Other causes	70	16.1	—	
5-14 Years					
E800-E999	Accidents, poisonings, violence	46	50.5	5.8	
140-209	Malignant neoplasms	14	15.4	0.8	
740-759	Congenital anomalies	8	8.8	7.5	
480-493	Pneumonia, bronchitis, emphysema, asthma	4	4.4	0.7	
	Other causes	19	20.9	—	
15-24 Years					
E800-E999	Accidents, poisonings, violence	158	75.2	19.9	
140-209	Malignant neoplasms	14	6.7	0.8	
393-398, 410-429	Heart disease	9	4.3	0.2	
	Other causes	29	13.8	—	
25-34 Years					
E800-E999	Accidents, poisonings, violence	67	47.5	8.4	
140-209	Malignant neoplasms	24	17.0	1.5	
393-398, 410-429	Heart disease	10	7.1	0.3	
430-438	Cerebrovascular disease	7	5.0	0.5	
	Other causes	33	23.4	—	
35-44 Years					
E800-E999	Accidents, poisonings, violence	97	30.0	12.2	
140-209	Malignant neoplasms	79	24.4	4.8	
393-398, 410-429	Heart disease	47	14.6	1.3	
430-438	Cerebrovascular disease	21	6.5	1.5	
480-493	Pneumonia, bronchitis, emphysema, asthma	16	5.0	2.7	
	Other causes	63	19.5	—	
45-54 Years					
393-398, 410-429	Heart disease	282	35.4	7.6	
140-209	Malignant neoplasms	196	24.6	11.9	
E800-E999	Accidents, poisonings, violence	98	12.3	12.3	
430-438	Cerebrovascular disease	57	7.2	4.1	
571	Cirrhosis of liver	30	3.8	32.6	
480-493	Pneumonia, bronchitis, emphysema, asthma	29	3.6	4.9	
	Other causes	104	13.1	—	
55-64 Years					
393-398, 410-429	Heart disease	639	40.3	17.2	
140-209	Malignant neoplasms	394	24.8	23.9	
430-438	Cerebrovascular disease	161	10.1	11.5	
480-493	Pneumonia, bronchitis, emphysema, asthma	89	5.6	15.1	
E800-E999	Accidents, poisonings, violence	76	4.8	9.6	
250	Diabetes mellitus	32	2.0	17.9	
	Other causes	196	12.4	—	

Main Causes of Deaths: Age Groups, South Australia, 1970 (continued)

International Classification Number	Age Group and Cause of Death	Deaths		Proportion of Total Deaths in Age Group	Proportion of Total Deaths from the Specified Cause
		No.	%	%	%
65-74 Years					
393-398, 410-429	Heart disease	1,016	43.4	27.4	
140-209	Malignant neoplasms	454	19.4	27.5	
430-438	Cerebrovascular disease	326	13.9	23.3	
480-493	Pneumonia, bronchitis, emphysema, asthma	149	6.3	25.3	
E800-E999	Accidents, poisonings, violence	65	2.8	8.2	
250	Diabetes mellitus	52	2.2	29.1	
	Other causes	281	12.0	—	
75 Years and Over					
393-398, 410-429	Heart disease	1,706	40.5	46.0	
430-438	Cerebrovascular disease	826	19.6	59.0	
140-209	Malignant neoplasms	469	11.1	28.4	
480-493	Pneumonia, bronchitis, emphysema, asthma	283	6.7	48.0	
440-448	Diseases of arteries, arterioles and capillaries	205	4.9	74.0	
E800-E999	Accidents, poisonings, violence	145	3.4	18.3	
250	Diabetes mellitus	75	1.8	41.9	
	Other causes	504	12.0	—	

The following sections illustrate the long term trends in deaths and death rates from some of the main causes.

One of the factors affecting these trends has been the reduction of mortality in early childhood. 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.

Infectious Diseases

Deaths from certain infectious diseases over the period 1915 to 1969 are shown in the following table.

Deaths from Certain Infectious Diseases, South Australia^(a)

Period	Respiratory Tuberculosis (010-012)	Typhoid Fever (001)	Scarlet Fever (034.1)	Diphtheria (032)	Whooping Cough (033)	Acute Poliomyelitis (040-043)	Measles (055)
Annual Average							
1915-19	339	311	4	94	21	(b)	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
1965-69	20	—	—	—	—	—	2

(a) Deaths of full-blood Aborigines where identified in registrations were excluded before 1966.

(b) Not separately recorded.

In 1956 a poliomyelitis immunisation programme was begun and since then the incidence of and deaths from this disease have declined (see Part 6.5).

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. Of those diseases shown in the preceding table, in 1970 there were thirteen deaths from respiratory tuberculosis and one from measles.

The decline in the incidence of deaths from infectious diseases can be attributed to several factors, the more important being advances in medical science, improved hygiene and the general acceptance of immunisation of infants and young children against such diseases as diphtheria and whooping cough.

Malignant Neoplasms

For 1950 and subsequent years, deaths from malignant neoplasms (generally known as 'cancer') have included those deaths classified to neoplasms of lymphatic and haematopoietic tissues (ICD 200-209). This latter group, which accounted for 160 of the 1,652 deaths attributed to malignant neoplasms in 1970, includes such diseases as lymphosarcoma, Hodgkin's disease, leukaemia and aleukaemia.

The next table indicates a steady increase in deaths from malignant neoplasms 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 because of the increasing proportion of the population in the higher age groups.

Deaths from Malignant Neoplasms (140-209), South Australia^(a)

Period	Number of Deaths			Death Rate ^(b)		
	Males	Females	Persons	Males	Females	Persons
Annual Average:						
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	13.16	12.58	12.88
1965-69	820	698	1,518	14.77	12.67	13.73
Year:						
1966.....	796	649	1,445	14.48	11.92	13.20
1967.....	804	700	1,504	14.44	12.66	13.55
1968.....	858	726	1,584	15.25	12.97	14.11
1969.....	919	755	1,674	16.11	13.27	14.69
1970.....	876	776	1,652	15.13	13.41	14.27

^(a) Deaths of full-blood Aborigines where identified in registrations were excluded before 1966.

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

Malignant Neoplasms: Age-Specific Death Rates, South Australia^(a)

Age Group	Death Rate (b)					
	1920-22	1932-34	1946-48	1953-55	1960-62	1965-67
MALES						
0-4	0.97	—	0.49	1.18	1.02	1.14
5-14	0.39	0.12	0.51	1.05	0.82	0.97
15-24	0.33	0.31	0.07	1.64	0.86	0.90
25-34	0.89	1.05	1.18	1.21	1.33	1.62
35-44	3.48	3.36	2.57	4.63	4.29	3.72
45-54	13.08	8.65	12.35	10.42	11.57	15.09
55-64	37.75	35.41	32.77	33.43	36.52	43.46
65-74	87.18	89.18	82.62	69.54	83.67	87.28
75 and over	109.91	147.57	148.98	149.45	142.29	151.06
All ages.....	9.48	11.40	13.60	12.54	12.86	14.09
FEMALES						
0-4	0.38	0.30	0.41	1.24	0.79	0.57
5-14	0.39	0.13	0.23	0.34	0.79	0.55
15-24	0.49	0.25	0.40	0.72	0.46	0.82
25-34	1.09	1.49	1.74	1.99	2.16	1.70
35-44	6.04	6.32	4.42	5.95	6.66	5.68
45-54	17.53	16.86	15.39	12.67	16.69	16.14
55-64	32.56	34.61	30.12	32.91	28.19	30.33
65-74	63.69	55.98	57.21	52.26	52.24	49.90
75 and over	104.61	115.15	108.52	98.41	99.76	94.61
All ages.....	9.03	11.37	13.12	12.64	12.68	12.30

(a) Deaths of full-blood Aborigines where identified in registrations were excluded before 1965.

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

The following tables show trends over the last twenty years in deaths from malignant neoplasms according to site of the disease for selected years.

Malignant Neoplasms: Deaths Classified by Site, South Australia^(a)

Site of Disease	1950	1955	1960	1965	1970
Malignant neoplasm of:	NUMBER				
Buccal cavity and pharynx (140-9).....	23	26	21	20	35
Digestive organs and peritoneum (150-9)	383	391	425	479	546
Respiratory system (160-3)..	58	105	130	201	291
Skin (172, 173)	12	16	28	34	44
Breast (174)	93	103	120	107	146
Uterus (180-2)	56	60	66	61	52
Other female genital organs (183, 184)	35	31	39	47	63
Male genital organs (185-7)..	58	79	74	84	110
Urinary organs (188, 189) ..	35	62	67	88	79
Brain and nervous system (191, 192)	14	26	32	50	43
Other and unspecified sites (170, 171, 190, 193-9).....	55	70	48	84	83
Neoplasms of lymphatic and haemalopoietic tissue (200-9)	60	81	97	128	160
Total (140-209)	882	1,050	1,147	1,383	1,652

(a) Deaths of full-blood Aborigines where identified in registrations were excluded before 1966.

Malignant Neoplasms: Death Rates Classified by Site, South Australia^(a)

Site of Disease	1950	1955	1960	1965	1970
Malignant neoplasm of:	RATE (b)				
Buccal cavity and pharynx (140-9).....	3.24	3.17	2.22	1.88	3.02
Digestive organs and periton- eum (150-9).....	53.99	47.67	44.98	45.02	47.16
Respiratory system (160-3)...	8.18	12.80	13.76	18.89	25.13
Skin (172, 173).....	1.69	1.95	2.96	3.20	3.80
Breast (174).....	13.11	12.56	12.70	10.06	12.61
Uterus (180-2).....	7.89	7.32	6.99	5.73	4.49
Other female genital organs (183, 184).....	4.93	3.78	4.13	4.42	5.44
Male genital organs (185-7)...	8.18	9.63	7.83	7.90	9.50
Urinary organs (188, 189)...	4.93	7.56	7.09	8.27	6.82
Brain and nervous system (191, 192).....	1.97	3.17	3.39	4.70	3.71
Other and unspecified sites (170, 171, 190, 193-9).....	7.75	8.54	5.08	7.90	7.17
Neoplasms of lymphatic and haematopoietic tissue (200- 9).....	8.46	9.88	10.27	12.03	13.82
Total (140-209).....	124.32	128.02	121.39	129.98	142.68

(a) Deaths of full-blood Aborigines where identified in registrations were excluded before 1966.

(b) Per 100,000 of mean population.

Cerebrovascular Disease

The increase in both numbers and rates of deaths from cerebrovascular disease (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 1970 nearly 20 per cent of deaths of persons aged seventy-five years and over. During the period 1920-24 deaths classified to this cause were only 6.7 per cent of all deaths, but during 1965-69 they were 14 per cent of all deaths.

Deaths from Cerebrovascular Disease (430-438), South Australia^(a)

Period	Number of Deaths			Death Rate (b)		
	Males	Females	Persons	Males	Females	Persons
Annual Average:						
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	9.83	13.16	11.48
1965-69.....	567	731	1,298	10.22	13.27	11.73
Year:						
1966.....	564	739	1,303	10.26	13.57	11.91
1967.....	560	686	1,246	10.06	12.41	11.23
1968.....	605	792	1,397	10.76	14.15	12.45
1969.....	557	743	1,300	9.77	13.06	11.41
1970.....	579	822	1,401	10.00	14.20	12.10

(a) Deaths of full-blood Aborigines where identified in registrations were excluded before 1966.

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

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 1935.

Deaths from Diseases of the Heart (393-398, 410-429), South Australia^(a)

Period	Number of Deaths			Death Rate ^(b)		
	Males	Females	Persons	Males	Females	Persons
Annual Average:						
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	35.61	25.42	30.56
1965-69	2,036	1,432	3,468	36.69	25.98	31.36
Year:						
1966	2,066	1,463	3,529	37.58	26.87	32.25
1967	1,996	1,436	3,432	35.85	25.97	30.92
1968	2,202	1,490	3,692	39.15	26.61	32.89
1969	1,989	1,386	3,375	34.87	24.35	29.62
1970	2,136	1,575	3,711	36.89	27.21	32.05

(a) Deaths of full-blood Aborigines where identified in registrations were excluded before 1966.

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

The percentage of total deaths classified to heart disease has increased from 11.0 per cent in the period 1920-24 to 37.3 per cent during 1965-69. Over the same period the rate per 10,000 of population has increased from 10.7 to 31.4. However, apart from the effect of the ageing population, there are other difficult-to-measure factors which have influenced this large increase, namely 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.

External Causes

In the table which follows deaths from selected categories of external cause (accidents, poisonings, and violence) are shown for recent years.

Deaths: External Cause, South Australia

Year	Motor Vehicle Traffic Accidents	Accidental Drownings	Accidental Poisonings	Accidental Falls	Suicide and Self Inflicted Injury	Other External	Total
MALES							
1966	227	47	7	37	88	68	474
1967	200	32	4	39	95	88	458
1968	205	35	9	43	90	83	465
1969	181	30	7	53	92	81	444
1970	262	27	5	57	97	92	540
FEMALES							
1966	95	6	4	58	48	39	250
1967	66	7	1	83	50	33	240
1968	66	5	4	72	39	38	224
1969	70	8	2	68	48	32	228
1970	92	5	5	68	41	43	254

INFANT MORTALITY

The infant mortality rate, *i.e.* the number of deaths of children under one year to every 1,000 live births, has shown a marked decline from 148.77 in 1875-79 to 17.05 in 1965-69, and the rate of 15.79 in 1969 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
1967....	187	159	346	17.98	15.93	16.97
1968....	198	147	345	18.08	14.33	16.27
1969....	205	142	347	18.20	13.25	15.79
1970....	226	141	367	19.56	12.75	16.23
1971....	204	162	366	17.29	14.47	15.92

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

Decrease in mortality has been much greater for infants a week or more old than for those under one week. However, to a large extent the factors influencing mortality in these two groups are different. Deaths of infants under one week can be related mainly to pre-natal causes which also have a bearing on still births. Combinations of still birth rates and rates of infant mortality to 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^(a)

Period	Still Births Plus Deaths Under 1 Week		Still Births Plus Deaths Under 1 Month		Still Births Plus Deaths Under 1 Year	
	Number	Rate (b)	Number	Rate (b)	Number	Rate (b)
Annual Average:						
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
1965-69 (c)	443	20.90	474	22.37	584	27.56
Year:						
1967.....	423	20.54	452	21.94	557	27.04
1968.....	443	20.68	473	22.08	562	26.23
1969 (c) ..	423	18.98	456	20.46	555	24.90
1970.....	453	19.85	476	20.86	567	24.85
1971.....	442	19.06	468	20.18	565	24.36

(a) Deaths of full-blood Aborigines where identified in registrations were excluded before 1966.

(b) Per 1,000 of all births (live and still). (c) Figures of still births from 1968 derived from perinatal death certificates.

The table which follows shows infant mortality rates in age groups since 1910.

Infant Mortality Rates: Age Groups, South Australia^(a)

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	
Annual Average:						
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 ..	11.79	2.06	2.45	2.42	2.65	21.37
1960-64 ..	11.25	1.93	1.93	1.99	2.07	19.17
1965-69 ..	10.35	1.50	1.70	1.74	1.77	17.05
Year:						
1967.....	10.40	1.42	1.57	2.01	1.57	16.97
1968.....	10.66	1.41	1.18	1.32	1.70	16.27
1969.....	9.78	1.50	1.73	1.46	1.32	15.79
1970.....	11.19	1.02	1.55	1.50	0.97	16.23
1971.....	10.57	1.13	1.48	1.70	1.04	15.92

(a) Deaths of full-blood Aborigines where identified in registrations were excluded before 1966.

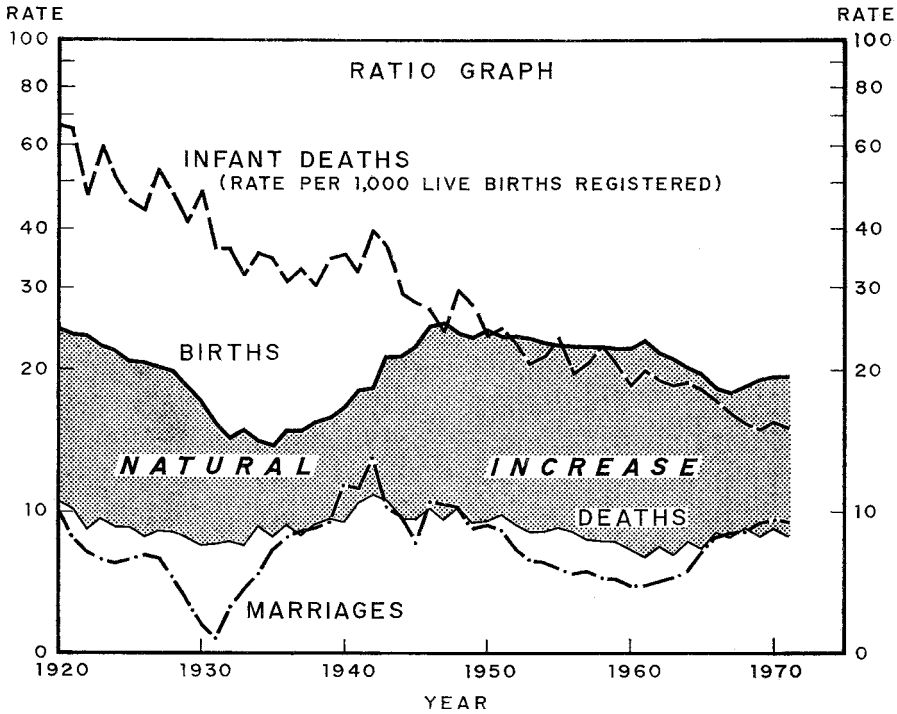
The causes of infant deaths in 1970 classified according to age group are shown in the following table.

Infant Mortality: Causes in Age Groups, South Australia, 1970

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 (000-136)	3	1	2	5	4	15
Diseases of nervous system and sense organs (320-389)	2	4	—	2	—	8
Diseases of respiratory system (460-519)	1	—	1	4	3	9
Congenital anomalies (740-759)	46	11	16	3	2	78
Perinatal causes:						
Maternal diseases and conditions (760-763)	21	1	—	—	—	22
Difficult labour (764-768)	16	—	—	—	—	16
Conditions of placenta and cord (770-771)	19	—	—	—	—	19
Haemolytic disease (774-775)	15	2	—	—	—	17
Anoxic and hypoxic conditions n.e.c. (776)	64	1	—	—	—	65
Immaturity, unqualified (777)	15	2	—	—	—	17
Other perinatal causes (769, 772, 773, 778)	47	2	—	—	—	49
All other diseases	3	1	14	12	9	39
Accidents, poisonings, violence (E800-E999)	2	—	1	6	4	13
Total all causes	254	25	34	32	22	367

VITAL STATISTICS RATES

SOUTH AUSTRALIA 1920 TO 1971
(PER 1,000 MEAN POPULATION)



EXPECTATION OF LIFE

The expectation of life at age x is defined as the average number of years lived after age x by each of a group of persons aged exactly x years. Because detailed information of the age structure and mortality experience of the population is required, the calculation of the expectation of life for each age is generally based on a period which spans a population census (the only time at which a sufficiently accurate age distribution is available).

The table which follows shows the expectation of life at specified ages in Australia based on mortality experience during each of the two decades to 1910 and for the three years spanning each of the Censuses of 1921, 1933, 1947, 1954 and 1961.

Generally, the figures shown in the table indicate that the number of years which people of all ages in Australia can expect to live has increased steadily since the turn of the century.

Expectation of Life, Australia

Age	1891-1900	1901-10	1920-22	1932-34	1946-48	1953-55	1960-62
	MALES						
0.....	51.1	55.2	59.2	63.5	66.1	67.1	67.9
5.....	55.6	57.9	60.4	62.6	63.8	64.3	64.8
10.....	51.4	53.5	56.0	58.0	59.0	59.5	59.9
15.....	47.0	49.0	51.4	53.4	54.3	54.7	55.1
20.....	42.8	44.7	47.0	48.8	49.6	50.1	50.4
25.....	38.9	40.6	42.7	44.4	45.0	45.5	45.8
30.....	35.1	36.5	38.4	39.9	40.4	40.9	41.1
35.....	31.3	32.5	34.2	35.5	35.8	36.3	36.5
40.....	27.7	28.6	30.1	31.1	31.2	31.7	31.8
45.....	24.0	24.8	26.0	26.9	26.8	27.2	27.4
50.....	20.5	21.2	22.2	22.8	22.7	22.9	23.1
55.....	17.1	17.7	18.5	19.0	18.8	19.0	19.2
60.....	14.0	14.3	15.1	15.6	15.4	15.5	15.6
65.....	11.3	11.3	12.0	12.4	12.3	12.3	12.5
70.....	8.9	8.7	9.3	9.6	9.6	9.6	9.8
75.....	6.7	6.6	6.9	7.2	7.2	7.3	7.5
80.....	5.0	5.0	5.0	5.2	5.4	5.5	5.6
	FEMALES						
0.....	54.8	58.8	63.3	67.1	70.6	72.8	74.2
5.....	58.6	60.8	63.6	65.6	67.9	69.6	70.8
10.....	54.5	56.4	59.2	61.0	63.1	64.8	65.9
15.....	50.0	51.9	54.6	56.3	58.3	59.9	61.0
20.....	45.7	47.5	50.0	51.7	53.5	55.1	56.2
25.....	41.7	43.4	45.7	47.2	48.7	50.2	51.3
30.....	37.9	39.3	41.5	42.8	44.1	45.4	46.5
35.....	34.1	35.4	37.3	38.4	39.5	40.7	41.7
40.....	30.5	31.5	33.1	34.0	34.9	36.0	37.0
45.....	26.7	27.6	29.0	29.7	30.5	31.4	32.3
50.....	22.9	23.7	24.9	25.6	26.1	27.0	27.9
55.....	19.3	19.9	21.0	21.6	22.0	22.8	23.6
60.....	15.9	16.2	17.2	17.7	18.1	18.8	19.5
65.....	12.7	12.9	13.6	14.2	14.4	15.0	15.7
70.....	9.9	10.0	10.4	11.0	11.1	11.6	12.2
75.....	7.4	7.6	7.7	8.2	8.3	8.7	9.2
80.....	5.5	5.7	5.6	6.0	6.0	6.3	6.7

5.4 MIGRATION

Powers and Legislation of the Commonwealth

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 1958-1966* which came into force on 1 June 1959.

The *Aliens Act 1947-1966* provides that a register of aliens shall be maintained for every State or mainland Territory of the Commonwealth and that, unless exempted, aliens sixteen years of age and over are required to register with the Department of Immigration. Under the provisions of the *Nationality and Citizenship Act 1948-1967* aliens may, upon application, be granted naturalisation; generally, this is after five years residence but may be earlier under certain circumstances.

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

Overseas Arrivals and Departures

Since 1924 the movements of overseas travellers have been classified according to declared intention regarding residence into two main categories, short term and long term (including permanent). For short term movements, overseas visitors and Australian residents are 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 twelve 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.

Overseas Arrivals and Departures, State of Embarkation/Disembarkation South Australia Intended Term of Residence

Year	Long Term and Permanent		Short Term				Total		
	Males	Females	Australian Residents		Visitors		Males	Females	Persons
			Males	Females	Males	Females			
ARRIVALS (a)									
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
1965....	3,720	3,945	594	692	560	358	4,874	4,995	9,869
1966....	3,739	3,857	729	820	583	367	5,051	5,044	10,095
1967....	2,315	2,352	634	810	537	315	3,486	3,477	6,963
1968....	2,400	2,455	729	511	772	308	3,901	3,274	7,175
1969....	2,206	2,159	1,204	559	775	361	4,185	3,079	7,264
1970....	2,392	2,364	700	687	654	289	3,746	3,340	7,086
1971....	1,713	1,694	1,263	654	760	321	3,736	2,669	6,405
DEPARTURES (a)									
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
1965....	2,010	2,155	1,876	1,411	708	546	4,594	4,112	8,706
1966....	2,358	2,275	1,345	1,504	850	687	4,553	4,466	9,019
1967....	2,002	1,972	1,793	1,139	796	520	4,591	3,631	8,222
1968....	1,951	1,964	1,612	1,009	919	457	4,482	3,430	7,912
1969....	2,077	2,004	1,718	1,249	1,143	601	4,938	3,854	8,792
1970....	1,567	1,640	1,080	1,069	658	429	3,305	3,138	6,443
1971....	1,169	1,291	1,534	763	752	344	3,455	2,398	5,853

(a) 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 in 1964 (10,120) and departures in 1966 (4,633) were the highest ever recorded in South Australia.

Revised questions for travellers introduced in 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 shows that in 1971 there were 29,449 former settlers leaving Australia who stated that they were departing permanently. Of these 16,002 intended to settle in the United Kingdom or Ireland, 3,599 in New Zealand, 1,957 in other Commonwealth countries, 5,622 in European foreign countries and 1,176 in the United States of America. Other residents departing permanently totalled 11,673, of whom 2,397 intended to settle in the United Kingdom or Ireland, 2,811 in New Zealand, 1,798 in Papua and New Guinea and 1,550 in other Commonwealth countries.

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 31 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. The Assisted Passage Agreement continued in operation under renewal from time to time.

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 organisations.

An agreement to settle displaced persons in Australia was made with the International Refugee Organisation in July 1947; the functions of this organisation were assumed in 1951 by the Intergovernmental Committee for European Migration (ICEM). In addition, ICEM is concerned with the movements of national migrants from Europe.

Migration schemes have been entered into with the governments of other countries including the Netherlands, Italy, Federal Republic of Germany, Austria, Greece and Turkey.

Assisted settler arrivals in Australia during the period January 1947 to June 1971 totalled 1,782,785 of whom 991,431 were British migrants under the Free and Assisted Passage Agreements. Included in the Australian total shown above were 199,488 who stated at the time of arrival that their proposed destination was South Australia.

Citizenship and Naturalisation

The *Nationality and Citizenship Act* 1948 came into force on Australia Day, 26 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.

In the table which follows numbers of former aliens naturalised are shown according to previous nationality.

Nationality of Persons Naturalised, South Australia

Nationality	1965	1966	1967	1968	1969	1970	1971
Austrian	107	95	44	58	69	51	46
Belgian	3	8	13	30	23	22	21
Czechoslovak	28	27	10	22	15	18	19
Dutch	836	696	619	494	335	311	180
Finnish	52	56	20	40	28	23	11
German	614	554	452	372	294	253	161
Greek	472	556	445	710	498	550	608
Hungarian	164	158	81	81	59	55	52
Italian	986	1,287	1,049	893	647	684	534
Latvian	50	51	19	25	13	13	9
Polish	304	355	198	151	154	88	164
Russian	53	72	43	43	10	11	4
Spanish	3	6	7	28	21	21	29
Ukranian	44	67	26	23	20	19	13
Yugoslav	340	390	219	307	232	253	207
Stateless	61	27	79	50	49	75	21
Other	172	131	123	119	148	148	131
Total	4,289	4,536	3,447	3,446	2,615	2,595	2,210

There were 2,322 naturalisation certificates granted in 1970 and 1,985 in 1971. Each certificate covers the person being naturalised and his/her children under the *Nationality and Citizenship Act 1948-1967*.

At the end of December 1970 there were estimated to be 40,000 registered aliens and 7,500 alien children under sixteen years of age residing in South Australia.

5.5 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 1966 Census, these characteristics include the sex distribution, age distribution and the marital status of the population. Information was also obtained on the country of birth, period of residence, nationality, religion, educational attainment, occupational status, industry and occupation of the population. Figures in this section refer to the population exclusive of full-blood Aborigines.

Details from the 1971 Census are not yet available.

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	1966	101.0

Preliminary figures for the 1971 Census (inclusive of Aborigines) indicate a masculinity of 99.8.

At each Census except 1947 and 1971 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 partly because of the loss of male lives in the 1939-45 War, 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 five censuses 1933 to 1966. Masculinity of the 20-24 and 25-29 age groups fell considerably between 1933 and 1947, but then rose to such an extent that by 1954 it was higher in these age groups than in any other age groups. The larger number of males in the younger age groups reflects the fact that the masculinity of births is consistently over 100 while the higher male death rate is reflected in the very low masculinity ratios of the older age groups.

Masculinity of Population According to Age, South Australia
Censuses 1933 to 1966

Age Last Birthday (Years)	1933	1947	1954	1961	1966
0-4	104.78	104.30	104.46	103.21	105.70
5-9	102.80	106.18	104.85	104.98	104.00
10-14	102.96	104.60	105.38	105.75	105.26
15-19	103.47	100.43	105.27	105.55	104.66
20-24	102.09	95.29	113.81	109.21	102.97
25-29	106.25	96.70	111.99	110.23	104.00
30-34	102.72	99.26	106.65	110.78	105.49
35-39	93.22	101.27	105.80	105.31	108.17
40-44	97.30	107.23	107.05	104.86	104.39
45-49	100.23	99.93	110.99	107.65	104.40
50-54	99.04	89.83	104.54	106.49	104.40
55-59	98.02	96.52	91.53	105.42	101.81
60-64	96.43	93.65	87.94	88.90	97.59
65-69	89.36	88.05	87.80	77.48	80.31
70-74	90.34	83.07	81.72	78.01	68.31
75-79	94.58	77.76	73.53	71.88	68.97
80-84	82.90	70.90	66.71	62.44	60.22
85-89	70.12	65.19	62.38	59.06	52.04
90 and over	63.95	56.17	53.08	40.60	41.19
All ages	100.34	98.16	102.72	102.32	101.00

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, mortality rates, probabilities of survival and annuity rates.

Age Distribution of Population, South Australia
Censuses 1961 and 1966

Age Last Birthday (Years)	30 June 1961			30 June 1966			Increase
	Males	Females	Persons	Males	Females	Persons	Persons
0-4	52,311	50,682	102,993	55,233	52,255	107,488	4,495
5-9	50,927	48,509	99,436	57,933	55,704	113,637	14,201
10-14	50,884	48,119	99,003	55,045	52,295	107,340	8,337
15-19	38,276	36,265	74,541	52,779	50,428	103,207	28,666
20-24	31,538	28,879	60,417	39,564	38,424	77,988	17,571
25-29	29,600	26,852	56,452	33,684	32,388	66,072	9,620
30-34	35,328	31,891	67,219	31,879	30,219	62,098	(-) 5,121
35-39	37,175	35,300	72,475	37,644	34,800	72,444	(-) 31
40-44	32,746	31,229	63,975	38,248	36,640	74,888	10,913
45-49	31,959	29,687	61,646	33,167	31,769	64,936	3,290
50-54	26,240	24,641	50,881	30,973	29,669	60,642	9,761
55-59	20,934	19,857	40,791	24,961	24,517	49,478	8,687
60-64	16,305	18,340	34,645	19,221	19,696	38,917	4,272
65-69	13,497	17,419	30,916	14,023	17,461	31,484	568
70-74	11,003	14,104	25,107	10,633	15,565	26,198	1,091
75-79	6,854	9,535	16,389	7,761	11,253	19,014	2,625
80-84	3,185	5,101	8,286	3,988	6,622	10,610	2,324
85-89	1,167	1,976	3,143	1,413	2,715	4,128	985
90 and over	296	729	1,025	381	925	1,306	281
Total	490,225	479,115	969,340	548,530	543,345	1,091,875	122,535

Age distribution of the population at the 1961 and 1966 Censuses is given in the above table. During the five-year period the population (excluding full-blood Aborigines), increased by 122,535 persons (12.6 per cent) of whom 59,996 were under twenty-one years of age. Population in the age groups 15-19 years increased by 38.5 per cent while that in the age groups 30-34 fell by 7.6 per cent.

The movement in these two age groups is partly because of the post 1939-45 War birth rate increase and the low birth rates of the depression years of the early 1930s respectively.

The mean or average age of the population of South Australia (excluding full-blood Aborigines) at the Census of 1954 was 32.2 years (males 31.5 and females 32.9); in 1961 it was 31.3 years (males 30.6 and females 32.1), and by 1966 it had fallen further to 30.8 years (males 30.4 and females 31.2).

The next table shows that the proportion of the population under fifteen years of age fell markedly between 1901 and 1947; rose significantly between 1947 and 1961 but fell slightly between 1961 and 1966. Fifteen years and under sixty-five years showed an upward trend to 1947, but has since maintained a fairly stable level of approximately 61 per cent. The proportion of the population sixty-five years and over continued to rise over the period 1901 to 1954, but since 1954 has fallen slightly.

**Proportional Age Distribution of Population, South Australia
Censuses 1901 to 1966**

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	67.0	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
1966....	30.7	62.4	7.0	29.5	60.5	10.0	30.1	61.4	8.5

Marital Status

The marital status of the population was ascertained at the 1961 and 1966 Censuses, when a statement of never married, married, married but permanently separated (legally or otherwise), widowed, or divorced was required in respect of every person enumerated.

In 1966 the number of persons who were stated to have been never married represented 47.7 per cent of the total population, approximately the same proportion as in 1961. Married persons in 1966 represented 45.6 per cent of the total compared with 45.8 per cent in 1961.

**Marital Status of Population, South Australia
Censuses 1961 and 1966**

Marital Status	30 June 1961				30 June 1966			
	Males		Females		Males		Females	
	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent
Never married:								
Under 15 years of age	154,122	31.44	147,310	30.74	168,211	30.67	160,254	29.50
15 years of age and over ...	93,927	19.16	66,055	13.79	110,592	20.16	81,731	15.04
Total never married	248,049	50.60	213,365	44.53	278,803	50.83	241,985	44.54
Married	223,321	45.56	220,579	46.04	249,048	45.40	248,731	45.78
Married but permanently separated .	5,049	1.03	5,540	1.16	5,478	1.00	6,201	1.14
Widowed	10,303	2.10	35,974	7.51	10,964	2.00	41,577	7.65
Divorced	3,503	0.71	3,657	0.76	4,237	0.77	4,851	0.89
Total	490,225	100.00	479,115	100.00	548,530	100.00	543,345	100.00

At the 1961 Census 77.7 per cent of widowed persons were female and this proportion had increased to 79.1 per cent in 1966. 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.

Country of Birth

The Australian-born content of the population in South Australia was 85.7 per cent in 1911, 88.3 per cent in 1921, 90.3 per cent in 1933, and 93.3 per cent in 1947. Overseas migration had lowered the proportion of Australian-born persons to 86.1 per cent by 1954, whilst in 1966 the proportion was down to 77.5 per cent. The proportion of the population born in the United Kingdom, including the Republic of Ireland, fell from 11.0 per cent in 1911 to 5.1 per cent in 1947 and rose to 11.2 per cent in 1966.

Country of Birth of Population, South Australia
Censuses 1961 and 1966

Country of Birth	30 June 1961			30 June 1966			Increase
	Males	Females	Persons	Males	Females	Persons	Persons
Australia	386,685	396,543	783,228	416,965	428,962	845,927	62,699
New Zealand	936	890	1,826	1,080	1,108	2,188	362
Europe:							
United Kingdom and Republic of Ireland	41,684	37,102	78,786	62,756	59,274	122,030	43,244
Germany	8,345	7,662	16,007	8,189	8,024	16,213	206
Greece	5,341	4,187	9,528	7,834	6,826	14,660	5,132
Italy	15,446	10,784	26,230	17,130	13,718	30,848	4,618
Netherlands	6,781	5,758	12,539	6,703	5,740	12,443	(—) 96
Poland	4,471	2,468	6,939	4,519	2,734	7,253	314
Yugoslavia	3,260	1,736	4,996	4,024	2,328	6,352	1,356
Other	12,456	8,411	20,867	13,107	9,499	22,606	1,739
Total Europe	97,784	78,108	175,892	124,262	108,143	232,405	56,513
Other countries	4,820	3,574	8,394	6,223	5,132	11,355	2,961
Total born outside Australia	103,540	82,572	186,112	131,565	114,383	245,948	59,836
Total	490,225	479,115	969,340	548,530	543,345	1,091,875	122,535

Of persons born in Europe, the greatest numerical and proportionate increase between 1961 and 1966 was in persons born in the United Kingdom, including the Republic of Ireland, (43,244 persons, 54.9 per cent). An almost similar proportionate increase (53.9 per cent) was recorded for persons born in Greece. The percentage increase over the period 1961 to 1966 of persons born in Germany, Italy and the Netherlands was much less than for the period 1954 to 1961.

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 1966 Census respondents representing approximately 10 per cent of the South Australian population chose not to answer.

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 per cent of answers compared with 29.1 per cent in 1966.

Religion of Population, South Australia
Censuses 1961 and 1966

Religion	30 June 1961			30 June 1966			Increase Per Cent
	Males	Females	Persons	Males	Females	Persons	
Christian:							
Baptist	9,830	11,010	20,840	10,342	11,893	22,235	6.7
Brethren	250	293	543	270	272	542	(—) 0.2
Catholic, Roman (a)	32,821	26,799	59,620	40,016	34,952	74,968	25.7
Catholic (a)	61,707	61,708	123,415	72,153	73,455	145,608	18.0
Churches of Christ	11,328	12,569	23,897	11,884	13,460	25,344	6.1
Church of England	126,918	128,135	255,053	141,408	144,746	286,154	12.2
Congregational	8,442	9,425	17,867	8,561	9,727	18,288	2.4
Lutheran	27,252	26,695	53,947	29,487	29,794	59,281	9.9
Methodist	106,679	110,090	216,769	110,976	116,507	227,483	4.9
Orthodox	10,294	8,350	18,644	14,852	12,901	27,753	48.9
Presbyterian	19,212	18,891	38,103	21,286	21,401	42,687	12.0
Salvation Army	3,161	3,280	6,441	3,542	3,762	7,304	13.4
Seventh Day Adventist	1,173	1,384	2,557	1,339	1,660	2,999	17.3
Protestant (undefined)	5,892	5,595	11,487	6,556	6,420	12,976	13.0
Other (including Christian undefined)	4,667	5,050	9,717	6,863	7,456	14,319	47.4
Total Christian	429,626	429,274	858,900	479,535	488,406	967,941	12.7
Non-Christian:							
Hebrew	486	499	985	622	627	1,249	26.8
Other	695	307	1,002	678	413	1,091	8.9
Total Non-Christian	1,181	806	1,987	1,300	1,040	2,340	17.8
Indefinite	1,433	1,181	2,614	1,908	1,593	3,501	33.9
No religion	2,138	1,096	3,234	5,379	2,993	8,372	158.9
No reply	55,847	46,758	102,605	60,408	49,313	109,721	6.9
Total	490,225	479,115	969,340	548,530	543,345	1,091,875	12.6

(a) So described in individual census schedules.

Changes in the pattern of religious affiliation 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 per cent of the answers in 1933 compared with 22.5 per cent in 1966, thus reflecting the pattern of post-war migration.

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 1940s. The following table gives details of period of residence of such persons residing in South Australia at the 1961 and 1966 Censuses.

In 1947 there were 43,552 persons residing in South Australia who were not born in Australia and only about 5 per cent of these had lived in Australia for less than five years. By 1954 the number of such persons had risen to 110,605, of whom 51 per cent had resided in Australia for less than 5 years. By 1966 the number had further increased to 245,948, but the proportion of these who had lived in Australia for less than five years had fallen to 33 per cent.

**Period of Residence in Australia of Persons Residing in South Australia
Censuses 1961 and 1966**

Period of Residence in Australia	30 June 1961			30 June 1966			Increase
	Males	Females	Persons	Males	Females	Persons	Persons
Under 1 year	8,859	6,381	15,240	12,235	11,062	23,297	8,057
1 year and under 2	6,678	5,662	12,340	10,332	9,742	20,074	7,734
2 years and under 3	6,522	6,388	12,910	8,834	8,262	17,096	4,186
3 years and under 4	4,321	5,178	9,499	5,961	5,757	11,718	2,219
4 years and under 5	4,969	5,212	10,181	4,349	4,441	8,790	(-) 1,391
5 years and over	69,955	52,639	122,594	87,919	73,586	161,505	38,911
Not stated	2,236	1,112	3,348	1,935	1,533	3,468	120
Born outside Australia	103,540	82,572	186,112	131,565	114,383	245,948	59,836
Born in Australia	386,685	396,543	783,228	416,965	428,962	845,927	62,699
Total	490,225	479,115	969,340	548,530	543,345	1,091,875	122,535

Nationality

The nationality (or country of allegiance) of the population of South Australia at June 1961 and 1966 is given in the following table. For purposes of this table, Irish nationality is included with British. Decreases in the number of persons of most nationalities in 1966 are partly because of British naturalisation of former aliens.

**Nationality (i.e. Allegiance) of Population, South Australia
Censuses 1961 and 1966**

Nationality	30 June 1961			30 June 1966			Increase
	Males	Females	Persons	Males	Females	Persons	Persons
British (a):							
Born in Australia	386,685	396,543	783,228	416,965	428,962	845,927	62,699
Born outside Australia	71,059	57,413	128,472	103,460	90,495	193,955	65,483
Total British	457,744	453,956	911,700	520,425	519,457	1,039,882	128,182
Foreign:							
Austrian	921	642	1,563	554	401	955	(-) 608
Dutch	5,216	4,678	9,894	3,548	3,129	6,677	(-) 3,217
German	4,537	3,753	8,290	3,085	2,597	5,682	(-) 2,608
Greek	3,767	3,297	7,064	4,994	4,869	9,863	2,799
Hungarian	699	476	1,175	304	216	520	(-) 655
Italian	9,928	7,935	17,863	9,224	8,538	17,762	(-) 101
Polish	1,465	926	2,391	934	677	1,611	(-) 780
Yugoslav	1,456	857	2,313	1,566	926	2,492	179
Other (including Stateless)	4,492	2,595	7,087	3,896	2,535	6,431	(-) 656
Total foreign	32,481	25,159	57,640	28,105	23,888	51,993	(-) 5,647
Total	490,225	479,115	969,340	548,530	543,345	1,091,875	122,535

(a) Includes Irish.

Persons of British nationality represented 99.7 per cent of the State population in 1947, but this proportion had fallen to 95.2 per cent by 1966.

Educational Attainment

At the 1966 Census information was sought for the first time on the highest level of education attained by all persons. The following table summarises the details obtained for South Australia.

Educational Attainment of Population, South Australia

Census 1966

Highest Level of Education Attained	Males	Females	Persons	Percentage Distribution		
				Males	Females	Persons
Tertiary:						
University degree	7,632	2,060	9,692	1.39	0.38	0.89
Other tertiary qualifications	10,907	7,392	18,299	1.99	1.36	1.68
Secondary:						
Passed at Leaving or Leaving Honours level	41,373	32,148	73,521	7.54	5.92	6.73
Passed at Intermediate level	69,281	73,387	142,668	12.63	13.51	13.07
Attended secondary school (a)	130,811	131,190	262,001	23.85	24.14	24.00
Primary:						
Attended primary school (b)	221,516	232,459	453,975	40.38	42.78	41.58
No schooling (c)	60,221	57,605	117,826	10.98	10.60	10.79
Not stated	6,789	7,104	13,893	1.24	1.31	1.27
Total	548,530	543,345	1,091,875	100.00	100.00	100.00

(a) Passed no examination at intermediate level or above.

(b) Or passed final primary examinations.

(c) Mostly children not yet attending school.

Other Characteristics

Some census 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 New South Wales, Victoria and Queensland—a practitioner is entitled to pursue any one or more of the four callings.

The legal profession is controlled by the Legal Practitioners Act, 1936-1969. 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. Practitioners duly admitted to practice, and who are principals, have the right of audience in all courts of South Australia; those other than principals have this right in all courts except the Supreme Court. 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 1971 there were 518 legal practitioners actually practising in the State; of these 464 were practising in the City of Adelaide including forty-five who were not in private practice.

LEGAL DEPARTMENT

In South Australia the Attorney-General is a Minister of State Parliament. There is a Solicitor-General 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 and inferior Courts, the Crown Law Department (which includes the Crown Prosecutor) and the Parliamentary Counsel as well as statute law revision and consolidation. 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 also administers Acts of Parliament relating to justices, coroners, lands titles, registration of companies and business names, liquor 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, 1935-1971, 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, which are published in the *Government Gazette*, may regulate the admission to practice of practitioners of the Supreme Court and control their conduct.

There are at present eight judges of the Supreme Court, comprising the Chief Justice, Dr J. J. Bray, QC, and seven puisne judges. A judge holds office until the age of seventy 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, except 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.

Following the establishment of District Criminal Courts, jurisdiction in the hearing of many indictable offences was transferred to these Courts late in 1970.

Crimes and misdemeanours prosecuted by indictment in the Supreme Court must be tried before a jury of twelve 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* 1914-1966 and *Crimes (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 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 1971, the Supreme Court heard 164 appeals from inferior courts. Of these 74 were dismissed, 77 were allowed, 10 were remitted for rehearing and 3 were struck out.

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 1962 to 1971. In the post-war period to the end of 1971 a total of twenty-six persons have been sentenced to death in South Australia, twenty 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
1962.....	743	24	697	21	—
1963.....	737	35	716	29	—
1964.....	650	21	608	21	1
1965.....	707	28	687	26	—
1966.....	751	19	720	18	—
1967.....	706	38	674	33	—
1968.....	698	38	659	33	—
1969.....	721	24	689	23	—
1970 (a)	603	23	570	18	—
1971.....	188	14	178	14	—

(a) Comparability affected from 1970 by transfer of some jurisdiction late in 1970 to District Criminal Courts—see text above.

Details of convictions classified by type of offence are set out in the following table.

Supreme and Circuit Courts: Persons Convicted, South Australia^(a)

Type of Offence	1967	1968	1969	1970 (b)	1971
Offences against the person:					
Murder and attempted murder	3	3	3	6	9
Other acts causing death, injury or endangering life	28	33	20	34	16
Offences against females	170	167	147	116	11
Unnatural offences	16	26	18	21	4
Other offences against the person	8	8	19	10	3
Total	225	237	207	187	43
Offences against property:					
Robbery	14	11	20	24	36
Breaking and entering and burglary	358	307	340	272	23
Embezzlement and stealing by servants	7	12	9	6	5
Fraud and false pretences	19	20	22	11	—
Other offences against property	24	38	43	39	7
Total	422	388	434	352	71
Other offences:					
Forgery and offences against the currency	21	18	16	13	13
Breach of recognisance	13	24	32	10	43
Other	26	25	23	26	22
Total	60	67	71	49	78
Total (all offences)	707	692	712	588	192

(a) In the case of multiple charges, where more than one conviction is recorded, the most serious offence is counted.

(b) Comparability affected from 1970 by transfer of some jurisdiction late in 1970 to District Criminal Courts—see text page 147.

Matrimonial Causes Jurisdiction

As in other States, the Supreme Court exercises jurisdiction in matrimonial causes pursuant to the Commonwealth *Matrimonial Causes Act* 1959-1971. 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 common being desertion for two years, adultery, separation for five years, and habitual cruelty. Details of divorces granted and the grounds for divorce are shown in Part 6.8.

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.

Some statistics of the estates of deceased persons appear in Part 13.3.

LOCAL AND DISTRICT CRIMINAL COURTS

Local and District Criminal Courts are now constituted under the Local and District Criminal Courts Act, 1926-1971. An amendment to the Act in 1969 increased the jurisdiction of local courts, established District Criminal Courts and provided for the appointment of a Senior Judge and other judges.

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 more than \$60.

Local Courts are divided into three groups—Full Jurisdiction, Limited Jurisdiction and Special Jurisdiction. The courts vested with all three jurisdictions are the Local Courts of Adelaide, Berri, Mount Gambier, Port Lincoln, Port Pirie and Whyalla. These courts may hear and determine actions for amounts up to \$8,000 with special provisions to deal with actions for damages arising from the use of a vehicle for up to \$10,000. The equitable jurisdiction provisions have also been extended to all Local Courts of Full Jurisdiction. Local Courts of

Limited Jurisdiction may hear and determine claims of up to \$2,500. Courts of Special Jurisdiction may hear and determine any unsatisfied judgment summons whatever the amount of the judgment.

A Local Court of Full Jurisdiction may be constituted of a Judge of the Supreme Court or a Local Court judge, and exercise all jurisdictions under the Act.

A special magistrate may exercise limited jurisdiction and special jurisdiction, while two justices of the peace sitting together or one special justice sitting alone may exercise special jurisdiction only.

Any Local Court may reserve any question of law arising in any action for the decision of the Full Court, and any party who is dissatisfied with any final judgment, determination or order of a local court, if the claim exceeds \$200, may appeal to the Full Court. Appeals involving claims under \$200 may be made if leave of the Full Court is obtained.

Pursuant to Section 28 of the Act, the Senior Judge or any other judge may make rules of court for carrying into effect the Act or any other Act conferring jurisdiction upon Local Courts.

Local Courts: Summary of Transactions, South Australia

Year	Total Claims		Verdicts and Judgments						Service and Execution of Process Act		
	Sum-moneses Issued (a)	Amount Sued For	Verdicts by Trial		Judgment by Default		Total		Sum-moneses for Service out of Jurisdiction	Certificates	
			Number	Amount	Number	Amount	Number	Amount		To Other States	From Other States
		\$'000		\$'000		\$'000		\$'000			
1966.....	99,601	8,827	1,372	343	50,189	4,157	51,561	4,500	2,580	1,231	288
1967.....	96,145	8,867	1,637	405	49,346	4,363	50,983	4,768	2,797	1,609	269
1968.....	92,724	8,464	1,413	421	48,994	4,355	50,407	4,776	2,512	1,693	251
1969.....	93,679	8,684	1,989	466	47,535	4,362	49,524	4,828	1,805	1,385	318
1970.....	96,261	10,048	1,681	520	44,516	4,368	46,197	4,888	1,697	1,313	421

(a) Including those withdrawn or settled out of Court.

District Criminal Courts

These courts came into operation on 31 August 1970 and have jurisdiction to hear and determine many of the indictable offences that previously could only be tried by the Supreme Court.

The State is divided into three proclaimed districts; Central Criminal Court District, Northern Criminal Court District, and the South Eastern Criminal Court District.

The jurisdiction of a District Criminal Court is exercisable by a Recorder sitting in open court, with or without a jury, or in chambers, as the case may require. The Crown is represented in District Criminal Courts by the Attorney-General or by counsel appearing on his behalf. The other party may conduct his own case or may engage counsel on his behalf.

A person who is not a practitioner of the Supreme Court entitled to practise cannot appear in a District Criminal Court on behalf of any party.

Appeals against verdicts and sentences of District Criminal Courts are to the Full Court.

Pursuant to Section 321 of the Act the Senior Judge and two other judges may make rules of court for carrying into effect the district criminal court provisions of the Act.

District Criminal Courts: Trials and Convictions, South Australia, 1970

Type of Offence	Tried		Convicted	
	1970	1971	1970	1971
Offences against the person:				
Acts (except murder) causing death, injury or endangering life	6	20	6	15
Offences against females	19	155	18	148
Unnatural offences	4	19	4	18
Other offences against the person.....	1	8	1	7
Total	30	202	29	188
Offences against property:				
Breaking and entering and burglary.....	57	439	56	434
Embezzlement and stealing by servants....	2	16	2	15
Fraud and false pretences.....	4	18	3	16
Other offences against property.....	8	37	8	33
Total	71	510	69	498
Other offences	9	55	8	53
Total (all offences)	110	767	106	739

COURTS OF SUMMARY JURISDICTION

Courts of Summary Jurisdiction are established in all major towns and hear many criminal cases. In offences of dishonesty their jurisdiction is in most instances confined to cases where the property value is not more than \$400, and the limit of their jurisdiction as to penalty is imprisonment for two years. Their procedure is regulated by the Justices Act, 1921-1972. They are presided over either by a special magistrate, a special justice 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 the Local Courts Act, and each appointment must be approved by the Chief Justice. Generally appointees are required to be practitioners of the Supreme Court who have been practising for some years.

Offences under the Road Traffic and Motor Vehicles Acts accounted for 62 per cent of total convictions in 1970-71—this compares with 51 per cent in 1960-61 and 43 per cent in 1950-51.

Of the 9,777 females convicted in 1970-71, 5,305 were convicted of offences under the Road Traffic and Motor Vehicles Acts, 515 under laws relating to local government (largely city parking offences), and 808 were convicted of various forms of larceny.

**Courts of Summary Jurisdiction (Magistrates Courts), Persons Convicted,
South Australia^(a)**

Offence	1966-67	1967-68	1968-69	1969-70	1970-71
Against the person	347	413	586	732	694
Against property:					
Burglary and housebreaking ..	659	767	719	801	949
Larceny (various)	2,653	2,837	3,404	3,330	3,844
Other	1,304	1,569	1,777	2,235	2,349
Against morality	346	349	350	517	415
Against good order:					
Drunkenness	6,109	6,889	7,528	9,650	9,365
Unlawfully on premises	427	598	617	645	583
Vagrancy	470	573	514	691	768
Other	1,819	2,149	2,575	3,030	3,278
Other, relating to:					
Road Traffic and Motor Vehicles					
Acts	55,567	70,472	70,781	73,242	68,138
Licensing	848	1,138	1,361	1,349	1,332
Social welfare	1,458	1,589	1,630	974	1,333
Police Act	1,091	1,509	1,455	1,612	1,866
Local government	5,235	4,691	2,995	3,864	4,963
Australian Broadcasting Act ..	3,818	2,884	2,903	2,575	2,648
Income tax assessment	603	1,004	1,083	1,908	1,653
Other	4,356	5,596	5,688	7,344	6,365
Total persons convicted:					
Males	80,978	96,747	97,111	104,709	100,766
Females	6,132	8,280	8,855	9,790	9,777
Total	87,110	105,027	105,966	114,499	110,543

(a) Includes juveniles. Where multiple charges have been laid against one individual at the same time each type of offence has been counted separately.

JUVENILE COURTS

Juvenile courts for the trial of juvenile offenders, *i.e.*, persons under eighteen 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 Minister of Social Welfare or committal to a training school. Juvenile courts also exercise jurisdiction over destitute, neglected or uncontrolled children and may commit such children to a childrens home.

The principles upon which a juvenile court must act in making orders in respect of these latter are set out in Section 44 of the Juvenile Courts Act, 1965-1969, which reads in part as follows:

'Before making an order under this section committing a child to an institution, the Court shall have regard to the welfare of the child and the desirability or otherwise of removing him from unsuitable surroundings and making proper provision for his care, training and control.'

A new Juvenile Courts Act, which repeals the existing legislation, was assented to in November 1971 but at the time of publication had not been proclaimed.

Juvenile Offenders, South Australia^(a)

Offences	1966-67	1967-68	1968-69	1969-70	1970-71
Against the person	53	73	102	137	125
Against property:					
Burglary and housebreaking ..	620	737	702	696	939
Larceny (various)	1,673	1,297	1,483	1,630	1,932
Other	345	422	424	563	611
Against morality	144	130	132	129	142
Against good order:					
Unlawfully on premises	118	180	168	225	163
Other	380	560	558	740	858
Other:					
Road Traffic and Motor Vehicles Acts	2,939	3,574	4,710	4,337	4,396
Police Act	188	314	262	295	348
Other	224	428	563	665	1,014
Total juveniles convicted:					
Males	6,373	7,203	8,538	8,705	9,690
Females	311	512	566	712	838
Total	6,684	7,715	9,104	9,417	10,528

(a) Under 18 years. Includes both police and private cases. Excludes children found to be neglected destitute or uncontrolled.

THE LICENSING COURT

The licensing of hotels and the issue of liquor licences for storekeepers, restaurants and clubs is governed by the Licensing Act, 1967-1972 under which is constituted a Licensing Court. The Act introduced changes in the constitution and powers of the Licensing Court, abolished local option polls and extended hotel trading hours to 10 p.m.

The Licensing Court consists of a Chairman who has the rank and title of Judge of the Court, a Deputy Chairman, and a panel of six Licensing Magistrates.

The more important work of the Court, for example the granting of new licences and the forfeiture and removal of licences, is done by the Full Bench which consists of the Chairman or Deputy Chairman and two Licensing Magistrates. Other matters may be dealt with by a member of the Court sitting alone.

Since the local option polls are no longer part of the licensing system the question of whether a licence should be granted is wholly in the hands of the Court. The Act contains some requirements which must be observed before the Court can grant a licence and full opportunity is given for any person to object on a number of grounds to the granting of a licence.

The types of licences that may be granted are:

- | | |
|--|-----------------------------|
| (a) Full publican's licence. | (j) Packet licence. |
| (b) Limited publican's licence. | (k) Railway licence. |
| (c) Wholesale storekeeper's licence. | (l) Restaurant licence. |
| (d) Retail storekeeper's licence. | (m) Cabaret licence. |
| (e) Wine licence. | (n) Theatre licence. |
| (f) Brewer's Australian ale licence. | (o) Special licence. |
| (g) Distiller's storekeeper's licence. | (p) Twenty litre licence. |
| (h) Vigneron's licence. | (q) Hotel broker's licence. |
| (i) Club licence. | |

A packet licence covers the sale of liquor to passengers on board steamers or vessels; a special licence may be granted where an application for the renewal of a licence is adjourned, while the limited publican's licence is available to 'premises specifically constructed and primarily used for the service of the itinerant public.'

Fees for licences are paid in accordance with the amount of liquor purchased (or in some cases sold) during the preceding twelve months and at present in the case of the retail licences is calculated at 6 per cent of the amount of purchases.

Hotel bar trading hours are, with a few exceptions, from 9 a.m. to 10 p.m. In the case of a full publican's, limited publican's and restaurant licences, liquor may be consumed in the dining area each weekday from 12 noon to 1.30 a.m. on the following morning and on Sundays between 12 noon and 10.45 p.m. by diners. Similar provisions apply to wine licences where *bona fide* meals are served. New provisions relating to a special class of hotels referred to as *Tourist Hotels* were enacted in 1972.

Permits may be granted under certain circumstances to extend the trading hours of licensed premises and to allow the sale, supply or consumption of liquor in unlicensed premises. Permits may be granted to clubs for periods of up to one year for sale and supply to members for consumption on club premises—at present more than 2,000 of these permits are current.

The following table shows the number of licences and permits issued during the years ended 31 March 1968 to 1972.

Liquor Licences and Permits, South Australia

Licence or Permit	Year ended 31 March				
	1968	1969	1970	1971	1972
Licence:					
Publicans;					
Full	598	597	601	598	599
Limited	11	24	28	36	40
Storekeepers (a).....	77	106	169	168	171
Vignerons	2	32	46	47	46
Club	43	53	55	70	88
Restaurant	22	56	65	90	102
Other	28	75	93	53	65
Permits:					
Special licensed premises	1,223	3,788	6,386	6,209	7,049
Special unlicensed premises	4,874	13,920	19,554	15,286	15,282
Booth	1,018	7,449	9,125	7,330	6,998
Club	555	1,912	1,952	2,001	992
Other	342	358	420	345	344

(a) Covers wholesale, retail and distillers.

BANKRUPTCY

Since 1928 bankruptcy has been under Commonwealth jurisdiction. Under the Commonwealth *Bankruptcy Act*, 1966-1970 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: Number, 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	Number
		\$	\$		\$	\$	
1967.....	639	3,058,445	1,547,603	21	243,189	164,563	660
1968.....	745	3,644,158	1,907,511	14	390,395	327,320	759
1969.....	637	3,219,480	1,521,180	22	890,210	933,119	659
1970.....	594	2,995,037	1,698,836	17	781,840	615,217	611
1971.....	659	4,942,054	2,772,576	22	897,561	763,099	681

A debt of at least \$500 is necessary before a creditor may commence bankruptcy proceedings. Preferential creditors include employees for amounts owing in respect of wages and salaries, workers compensation, long service leave, annual leave, recreation leave or sick leave, and the Commissioner of Taxation for unpaid tax on one year's income.

A bankrupt who has not previously been discharged is automatically discharged after five years unless an objection is filed with the Registrar in Bankruptcy.

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 257.

JURY SYSTEM

The procedure in relation to juries is governed by the Juries Act, 1927-1971.

With certain exceptions all men over the age of twenty-five and under sixty-five who are enrolled as electors for the House of Assembly are qualified and liable to serve as jurors. Men exempted from liability to serve are listed in the third schedule of the Act and include judges, members of Parliament, certain public officers, members of the defence forces, clergymen, legal practitioners, magistrates, police officers, doctors, dentists, pharmacists and school teachers.

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.

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, 1967-1971, under which the Industrial Commission, Conciliation Committees and Commissioners have been established.

For details on the composition of these bodies and their functions see Part 7.2.

LEGAL ASSISTANCE SCHEME

The Legal Assistance Scheme, administered by the Law Society of South Australia Incorporated, has been operating since 1933. This voluntary Scheme which has legislative recognition in the Legal Practitioners Act, 1936-1969, is supported by the legal profession and is designed to ensure that no person who is deserving of legal assistance shall be deprived of it by lack of finance.

The South Australian Government makes an annual grant to the Law Society to assist in the administration of the Scheme and, since 1960, the Government has made special annual grants to partially recompense legal practitioners acting in assigned cases. On 1 July 1970 the Legal Practitioners Trust Account was instituted and from that date further financial assistance to the Law Society and legal practitioners acting in assigned cases has been received from portion of the interest on this Trust Account.

PUBLIC TRUSTEE

The office of Public Trustee was established in 1881 and is now regulated by the Administration and Probate Act, 1919-1972. It provides a service to the public in the administration of estates and the protection of infants and absentee beneficiaries in estates administered by private administrators. A person may appoint the Public Trustee to be the executor and trustee of a will or as trustee of any disposition of property creating a trust.

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, 1940-1968; and receives, invests and distributes for the benefit of widows and minor dependants, amounts awarded under the Workmen's Compensation Act, 1971.

Under the Mental Health Act, 1935-1969, the Public Trustee has control of the estates of some of the 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

A police force was first established in South Australia in 1838 and has been administered by a Commissioner of Police since 1840.

The number of police officers rose steadily from 127 in 1851 to a peak of 802 in 1929, fell to 674 in 1943 and has since risen steadily to 1,971 in 1971. The number of persons per police officer has fallen from 910 in 1943 to 595 in 1971.

The maintenance of law and order and the reduction of opportunities for criminal activity are the main functions of the Uniformed Branch. The Traffic Division of this Branch, while concerned with the general regulation and control of traffic, also aims at improving road safety by the testing of vehicles for road-worthiness, lecturing on road courtesy and safety, practical driving courses and driving tests for licence applicants.

Police Personnel, South Australia^(a)

At 30 June

Personnel	1967	1968	1969	1970	1971
Commissioned officers	46	48	52	57	58
Non-commissioned officers	332	350	378	399	445
Constables	1,243	1,341	1,377	1,387	1,431
Women police	39	38	38	38	37
Total active police force	1,660	1,777	1,845	1,881	1,971
Persons per active member	670	633	620	619	595

(a) Active police force strength; excludes trainees, Women Police auxiliaries, civil staff, etc.

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 recognised. These officers render assistance to lost and destitute children and endeavour to alleviate domestic suffering and hardship. They are also active in the control of juvenile delinquency. At 30 June 1971 there were thirty-seven 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 page 160.

Today, with an increasing number of laws and changing policing techniques, much emphasis is placed on the work of the Training Division. Police cadets (enrolled at sixteen or seventeen 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 30 June 1971 there were 367 police cadets.

In 1970 three new Sections instituted within the Department were:

- (1) Automatic Data Processing with responsibility for systems design and feasibility studies for computerisation of records,
- (2) Legal and In Service Training with its main objective to provide a legal research, advisory and training service to all sections of the Department, and
- (3) Management Services concerned with review of policies, practices and methods and to plan for the future to maintain and improve the efficiency of police operations.

The following table gives details of the revenue and expenditure of the South Australian Police Force.

South Australian Police Force, Revenue and Expenditure^(a)

Year	Expenditure			Revenue	Net Cost	
	Wages and Salaries	Other	Total		Total	Per Head
	Dollars					
1965-66	5,519,200	1,919,496	7,438,696	119,547	7,319,149	7.77
1966-67	6,459,754	2,077,347	8,537,101	119,960	8,417,141	7.62
1967-68	7,053,980	2,198,998	9,252,978	116,083	9,136,895	8.17
1968-69	7,476,426	2,238,103	9,714,529	146,561	9,567,968	8.43
1969-70	8,700,055	2,068,500	10,768,555	147,093	10,621,462	9.20
1970-71	10,218,913	2,161,493	12,380,406	199,630	12,180,776	10.44

(a) As reflected in Consolidated Revenue Account only—capital expenditure is met from Loan Fund.

GAOLS AND PRISONS

Gaols and prisons in South Australia are administered by the Prisons Department, eight being in use during 1970-71. Adelaide Gaol is a holding centre for remand prisoners and sentenced prisoners serving under three months. Yatala Labour Prison (8 miles from Adelaide) provides for minimum, medium and maximum security prisoners with sentences from three months to life. Gladstone Prison (mid-north), Port Augusta Gaol (north), Mount Gambier Gaol (south-east), and Port Lincoln Prison (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 120 selected minimum security trainees and 60 medium security short-term prisoners. The Women's Rehabilitation Centre at Northfield accommodates women prisoners from all parts of the State. It is a holding centre for both sentenced and remand prisoners. In addition there are eight police prisons for short-term prisoners situated throughout the State.

In common with other States and countries the emphasis in South Australia is on rehabilitation, and 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. Training in a variety of trades and industries is available throughout the institutions enabling prisoners to be prepared 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, and group counselling is practised in all institutions. Chaplains, the Prisoners Aid Association and other voluntary organisations 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 April, 1970 the Parole Board was created to consider applications from prisoners for release on parole. The terms 'parole' and 'probation' are synonymous. Prisoners may be released on probation by the courts or released on parole from prison, both categories come under the supervision of 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
1966-67	1,118	4,520	136	684	21
1967-68	1,276	6,648	448	821	39
1968-69	1,314	7,271	552	968	43
1969-70	1,356	6,910	693	899	45
1970-71	1,414	7,555	682	874	41

(a) Before 1967-68, the 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 instituted 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 country towns. At 30 June 1971 there were thirty-seven fire brigade stations of which sixteen were metropolitan and twenty-one were country. During the year 1970-71 these brigades received 4,625 calls of which 523 were false and malicious calls. Some of these brigades are manned by permanent personnel and others by auxiliary firemen, there being at 30 June 1971, 388 officers and firemen and 109 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 Fire Brigades Act, 1936-1958 provides that the expenses and maintenance of brigades be defrayed in the proportion of two-ninths by the Treasury; five-ninths by insurance companies; and two-ninths by the municipalities and district councils concerned. If the Treasury proportion exceeds its statutory contribution of approximately \$31,000, the excess is borne five-sevenths by insurance companies and two-sevenths by municipalities and district councils.

The total revenue for the year 1970-71 was \$2,177,061 including contributions of \$1,901,772 made up as follows; insurance companies \$1,144,374; municipalities and district councils \$457,750; and Treasury \$299,648 which included a special grant of \$266,972.

South Australian Emergency Fire Services

The South Australian Emergency Fire Services was formed as a branch of Civil Defence during the 1939-45 War. When Civil Defence was disbanded, redundant trailer pumps were issued to local governing bodies by the State Government and the Emergency Fire Service (EFS) was developed into a volunteer country fire service, to protect those areas outside of the districts covered under the Fire Brigades Act, 1936-1958. The responsibility and authority for fire prevention and control in these outer areas are vested in local government by the Bush Fires Act, 1960-1968 and Local Government Act, 1934-1971.

EFS 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 EFS organisations and councils is subsidised by the Bush Fires Equipment Subsidies Fund (equal contributions by the State Government and by fire insurers), and government subsidies are provided for maintenance.

The two main causes of fires attended by the Emergency Fire Service during 1970-71 were children with matches, and burn off out of control.

South Australian Emergency Fire Services

Particulars	1967	1968	1969	1970	1971
Strength of service at 30 June:					
Affiliated organisations	392	395	412	417	431
Volunteer members.....	8,500	8,500	8,750	8,800	9,000
Fires attended in twelve months ended 30 June:					
Number of fires;					
Urban type.....	260	300	318	265	261
Bush	899	605	592	1,044	1,066
Acres destroyed in bush fires...	36,829	42,145	50,351	318,745	110,909
Financial losses;			dollars		
Urban type.....	286,948	296,714	757,110	340,023	628,946
Bush	126,655	37,676	75,641	245,328	210,848

LIFE SAVING

The Royal Life Saving Society—Australia

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 were issued to 26,493 candidates who passed the various examinations in the 1970-71 season.

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 eighteen affiliated clubs situated at Semaphore, Grange, Henley, West Beach, Glenelg, Somerton, Brighton, Seacliff, Christies Beach, Port Noarlunga, Southport, Moana, Chiton Rocks, Port Elliot, Whyalla, Taperoo Beach, Hallett Cove and Goolwa.

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 30 June 1971 there were 1,454 members in Association clubs. From 1952 to the end of the 1970-71 season 1,303 rescues were performed with no loss of life on South Australian beaches while 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 organised by the Education Department were first established on an extensive scale in January 1956. Thirty-six country and fourteen 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 1970-71, 120 country and 63 metropolitan swimming centres were used, and the total student enrolment was over 41,000. Instruction is provided over a period of ten days by qualified swimming teachers.

Swimming classes have also been conducted in school time since October 1954, and in the first term of 1971 about 68,000 children were enrolled in such classes.

The success of the campaign can be illustrated by the fact that of all the children in Education Department schools who left Primary School at the end of 1970, 79 per cent can swim at least twenty yards.

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 minimising industrial accidents and in the late 1950s 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 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. Further details relating to industrial accidents are included in Part 7.4.

NATIONAL SAFETY COUNCIL OF AUSTRALIA S.A. DIVISION

The National Safety Council of Australia S.A. Division was formed in 1963 as the Industrial Accident Prevention Society of S.A. Inc., a voluntary non-profit educational body. It is an autonomous branch of the largest organisation in Australia devoting its entire resources to the reduction of accidents in most areas of the community. In South Australia the Council's efforts are largely devoted to occupational and child and home safety problems, traffic safety being the function of the Road Safety Council of South Australia. A consultant is permanently resident at Mount Gambier to serve the interests of that locality. The S.A. Division is also responsible for servicing the requirements of members in the Northern Territory and regular visits are made to that area for safety training and promotional purposes.

The aims of the Council are carried out by the provision of safety consultant services, lectures, training courses and the distribution of safety publications and materials. Finance is derived from membership fees, services and an annual grant from the State Government. The Council's activities are controlled by a body representative of all spheres of community interest.

ROAD SAFETY COUNCIL OF SOUTH AUSTRALIA

The Road Safety Council of South Australia was formed in December, 1965. The Council appointed by State Cabinet consists of an independent chairman and ten members representing the National Council of Women, the Road Traffic Board, the Police Department, the Royal Automobile Association of South Australia, the Fire and Accident Underwriters Association of South Australia, the Local Government Association (Metropolitan and Country), the Education Department, the South Australian Railways and the Trades and Labor Council of South Australia.

The objectives of the Council are to prevent road accidents involving death, injury or property damage through united action by all sections of the community, and to advise and assist government, semi-government and local authorities as well as private organisations in the adoption of precautionary measures in an attempt to prevent such accidents. In its efforts to achieve its objectives the Council concentrates on the education of road users in correct practices.

The Council is a Branch of the Department of the Minister of Roads and Transport and the Minister of Local Government. A Road Safety Instruction Centre is currently under construction at Oaklands Park. It will provide a permanent administration headquarters including an auditorium, lecture room as well as instructional areas for children of all age groups and a road system or driving range. The estimated cost is \$567,000. Finance for this and subsequent Council operations is derived from 50 cents of each driver's licence fee under the Motor Vehicles Act, 1959-1971.

6.2 EDUCATION

In South Australia attendance at school is compulsory for children from six to fifteen years of age. Children who are five years of age by the last day of February may be admitted to State schools on the first school day in February; children who are five years of age on or before 2 July may be admitted on the first Monday after the last Saturday in June of that year.

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 technical colleges. Roseworthy Agricultural College is conducted by the Agricultural College Department responsible to the Minister of Agriculture. The University of Adelaide, the Flinders University of South Australia 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 of Adelaide and the Education Department.

A historical summary of education in South Australia was included on pages 153-4 of the *South Australian Year Book* 1969.

PRE-SCHOOL EDUCATION

The kindergarten movement in South Australia was founded in 1905 and up to the end of the 1939-45 War 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 some 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 organisation trains kindergarten teachers (see page 192) and supervises 135 subsidised and eleven unsubsidised kindergartens situated throughout the State.

While the supervision covers various aspects of organisation it is largely concerned with the educational programme. As well as encouraging the creative, physical and mental development of the four to five years old child the kindergarten prepares him for the experiences of formal schooling. Sessions are

generally of two and a half to three hours duration each day, with enrolments limited to thirty children a session; in most cases two sessions are held daily at each kindergarten.

Kindergartens, South Australia^(a)

Year	Kinder-gartens (b)	Teachers	Children Enrolled End of Year	Receipts			Expenditure		
				Govt Aid	Other	Total	Salaries	Other	Total
	No.	No.	No.	\$	\$	\$	\$	\$	\$
1967.....	124	342	6,645	520,700	344,815	865,515	617,641	238,748	856,389
1968.....	126	348	6,848	547,000	366,868	913,868	644,522	279,940	924,462
1969.....	130	363	7,159	616,869	420,238	1,037,107	706,885	330,476	1,037,361
1970.....	133	376	7,356	750,400	460,043	1,210,443	827,208	385,496	1,212,704
1971.....	136	405	8,192	1,003,700	526,704	1,530,404	1,115,985	431,297	1,547,282

(a) Schools administered by the Kindergarten Union of South Australia (Inc.).

(b) At end of period.

The Kindergarten Union, although a voluntary organisation, receives approximately 60 per cent of its revenue from a State Government grant. Part of this grant is in turn used to subsidise 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.

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-General of Education, assisted by a Deputy Director-General of Education, an Assistant Director-General and Directors of Primary Education, Secondary Education, Teacher Education and Services, and Administration and Finance. A Director of Further Education has been appointed: he will ultimately head a separate Department of Further Education and there will not be a Technical Division within the Education Department. The Education Department staffs Northern Territory Schools but this responsibility is being assumed progressively by the Commonwealth Government.

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 1971 there were 669 bus services carrying an average of 24,590 pupils daily to 319 schools.

Although private primary 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 relating to compulsory attendance. The similarity between courses in the State and private secondary schools is because of the influence of the Public Examinations Board of South Australia syllabus and the close liaison of the administration and teachers of both types of school.

The Catholic school system is organised on a diocesan basis, South Australia being 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.

The State Government now pays a grant of \$10 a year for each primary and \$20 for each secondary student liable to pay fees at an approved private school. In 1971, additional payments varying from \$10 to \$20 a student were made to 118 schools catering for primary students where special need had been established. In the 1971-72 financial year, additional funds were provided for assistance on a needs basis for both primary and secondary students.

Schools

Details of schools operating in South Australia in 1971 are given in the next table. The average size of State schools has increased rapidly since 1940 partly as a result of the consolidation of country schools. The 631 State schools in 1971 compared with 1,043 in 1940 and 1,108 in the peak year of 1935. In 1940 there was an average of 73 pupils to each State school, with this figure increasing to 125 by 1950, 255 by 1960 and 367 by 1971. There has been a similar movement in the average size of private schools.

**Schools by Size, South Australia
At 2 August 1971**

Pupils on Roll	State Schools					Private Schools
	Primary	Primary-Secondary	Secondary	Special (a)	Total	
Under 21	40	—	—	6	45	7
21 to 35	56	—	—	6	62	9
36 to 100	108	6	—	15	130	31
101 to 200	38	10	6	4	58	57
201 to 300	26	15	10	—	51	23
301 to 400	23	11	8	1	43	15
401 to 600	53	6	23	—	82	14
601 to 800	57	3	15	—	75	8
801 to 1,000	28	1	12	—	41	5
1,001 to 1,200	15	—	8	—	23	—
1,201 to 2,000	6	—	15	—	21	—
Total	450	52	97	32	631	169

(a) Occupation centres, schools at institutions, subsidised schools 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 9,631 full-time and 802 part-time teachers at State schools in 1971 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 per cent of the full-time teaching staff in State schools in 1946, in 1971 they represented 57 per cent.

Teachers, South Australia

At or about 1 August	State Schools				Private Schools			
	Full-time		Part-time (a)		Full-time		Part-time (a)	
	Males	Females	Males	Females	Males	Females	Males	Females
1967.....	3,653	5,016	38	197	429	886	23	113
1968.....	3,854	5,167	21	174	435	884	16	122
1969.....	3,891	5,189	25	203	458	911	23	132
1970.....	3,942	5,376	37	245	477	941	25	161
1971.....	4,126	5,505	76	340	496	984	26	176
Type of School 1971								
Primary.....	1,533	3,445	3	85	49	470	3	46
Prim-Secondary..	425	390	1	26	265	395	16	100
Secondary.....	2,092	1,549	71	229	180	87	7	23
Special (b).....	76	121	1	—	2	32	1	7

(a) Equivalent full-time units of part-time teaching. Total part-time teachers at 2 August 1971, State Schools 131 males and 671 females; Private Schools, 87 males and 457 females.

(b) Includes occupation centres, schools at institutions, subsidised schools and schools for Aborigines.

Pupils

School enrolments, which had been declining since 1932, started to rise rapidly at the end of the 1939-45 War, and since 1945 have more than trebled. Enrolments in recent years, classified by State and private schools and by age of the pupil are given below.

Primary and Secondary Pupils, South Australia
At or about 1 August

Age	At State Schools				At Private Schools			
	1968	1969	1970	1971	1968	1969	1970	1971
5.....	16,775	16,771	16,637	16,440	2,243	2,336	2,562	2,620
6.....	19,998	20,407	19,994	19,480	2,684	2,805	2,660	2,781
7.....	20,827	20,175	20,354	19,929	2,929	2,829	2,825	2,822
8.....	20,503	21,011	20,669	20,693	2,863	2,944	2,940	2,848
9.....	20,380	20,864	21,116	20,829	2,959	2,898	2,959	2,996
10.....	19,568	20,446	20,858	21,306	3,069	2,968	3,066	3,225
11.....	19,366	19,709	20,469	20,756	3,068	3,084	3,080	3,156
12.....	18,819	19,211	19,498	20,272	3,231	3,371	3,365	3,437
13.....	18,402	18,947	19,490	19,758	3,292	3,214	3,391	3,381
14.....	18,221	18,429	19,269	19,454	3,037	3,120	3,112	3,263
15.....	15,270	15,238	15,275	16,147	2,997	2,830	3,039	3,088
16.....	9,353	9,809	9,947	10,578	2,329	2,448	2,347	2,417
17.....	3,575	3,898	4,079	4,365	1,307	1,172	1,343	1,191
18.....			870	1,078			299	363
19.....			159	225	405	441	65	56
20.....			60	65			28	21
21 and over.....			44	65			25	22
Total.....	222,019	226,091	228,788	231,440	36,413	36,460	37,106	37,687

A division of enrolments in 1971 between primary and secondary levels is set out in the next table. In 1945 approximately 17 per cent of total enrolments were at the secondary level; by 1971 this figure had risen to more than 33 per cent.

This table also illustrates the somewhat greater involvement of private schools at the secondary level where they account for nearly 17 per cent of enrolments as opposed to 12.6 per cent at the primary level.

**Primary and Secondary Pupils, South Australia
At 2 August 1971**

Age	At State Schools			At Private Schools			Total Pupils
	Primary	Secondary	Total	Primary	Secondary	Total	
5.....	16,440	—	16,440	2,620	—	2,620	19,060
6.....	19,480	—	19,480	2,781	—	2,781	22,261
7.....	19,929	—	19,929	2,822	—	2,822	22,751
8.....	20,693	—	20,693	2,848	—	2,848	23,541
9.....	20,829	—	20,829	2,996	—	2,996	23,825
10.....	21,306	—	21,306	3,225	—	3,225	24,531
11.....	20,739	17	20,756	3,099	57	3,156	23,912
12.....	13,666	6,606	20,272	1,952	1,485	3,437	23,709
13.....	2,562	17,196	19,758	239	3,142	3,381	23,139
14.....	371	19,083	19,454	49	3,214	3,263	22,717
15.....	139	16,008	16,147	12	3,076	3,088	19,235
16.....	85	10,493	10,578	10	2,407	2,417	12,995
17.....	92	4,273	4,365	3	1,188	1,191	5,556
18.....	80	998	1,078	2	361	363	1,441
19.....	34	191	225	5	51	56	281
20.....	9	56	65	4	17	21	86
21 and over	4	61	65	2	20	22	87
Total	156,458	74,982	231,440	22,669	15,018	37,687	269,127

PRIMARY EDUCATION

Children normally begin their schooling at the age of five years when they enrol for primary education at either a State or private school (see page 163). Primary education involves a seven year course.

STATE SCHOOLS

Metropolitan children attend primary schools while country children normally attend a primary, rural, area or special rural school, although those in remote areas may receive lessons by correspondence. The table which follows shows the numbers of schools and pupils in the primary division in recent years.

State Primary Education, South Australia

At or about 1 August	Schools		Pupils Enrolled				Total
	Primary	Area (a)	Primary Schools	Area Schools (a)	Correspondence School (b)	Other (c)	
1967.....	494	50	140,636	11,142	620	1,576	153,974
1968.....	483	54	141,599	11,466	693	1,573	155,331
1969.....	476	51	144,352	10,200	656	1,605	156,813
1970.....	475	51	144,647	9,976	650	1,649	156,922
1971.....	450	51	144,075	9,716	682	1,985	156,458

(a) Includes also special rural schools. The figures for pupils enrolled include primary pupils only.
 (b) Includes Northern Territory pupils, 261 at 2 August 1971.
 (c) Includes Aboriginal schools, schools for handicapped children and schools at institutions.

Infant and Primary

In the first two years of school the emphasis is on the child's active involvement in learning. The curriculum is designed to extend children's experience of their environment, through social studies, science and mathematics. It provides for the development of language skills, especially fluency in speech and reading, and creative activities in movement, music, art, drama and writing.

The primary school curricula provide a general framework for the study of English, mathematics, social studies, science, music, art and craft and physical education. Increasingly provision is being made for the study of elective subjects, such as foreign languages, ballet and instrumental music. Time is made available for the churches to provide religious instruction.

School libraries form an integral part of the primary education system, as do facilities for showing films, and for listening to the school broadcasts and viewing television programmes provided by the Australian Broadcasting Commission. Ancillary services are provided by consultants who have expertise in the various subject areas.

An increasing number of experimental units of the 'open plan' design were occupied in 1971. Units of this type provide open teaching areas for from seventy to 210 children and from two to six teachers. Adjacent areas provide for art, craft and science subjects. There is a withdrawal area with auditory separation from the open teaching and space and an enclosed court opens off the covered work areas. A special feature of the experimental units is the light mobile furniture, including room dividers, storage units, trapezoidal and oblong shaped tables. Carrels facilitate teaching and methods suited to the changing objectives of the primary school.

Twenty flexible 2-teacher open units, six 3-teacher units and five 4-teacher units were occupied at suburban and country schools in 1971. Additional flexible units are being occupied progressively during 1972.

Area and Special Rural

These schools, situated in country centres, cater for both primary and secondary pupils. The primary course is similar to that of the primary schools.

Correspondence

The Correspondence School was started in 1920 to cater for children unable to attend ordinary schools. Most of these 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 Port Augusta and Alice Springs which provide two-way radio communication between teacher and pupils to supplement the correspondence lessons.

At 2 August 1971 there were 350 boys and 332 girls receiving primary education through the Correspondence School. Of these, 142 boys and 119 girls were living in the Northern Territory.

PRIVATE SCHOOLS

At 2 August 1971, 22,669 children were receiving primary education at private schools. The majority of these children were attending Catholic schools (see table on page 174).

Catholic

Many children receiving primary education in the Catholic school system attend parish schools while the remainder attend colleges run by religious orders—both types of school charge fees.

Parish schools are the property of the parishes which are also responsible for equipping and maintaining them but the schools are usually staffed by religious orders. Elected school boards assist in the financial administration of these schools and determine the fees that will be charged as well as concessions for parents in necessitous circumstances.

Other

Primary schools are conducted by the Church of England, the Lutheran Church, and the Seventh Day Adventist 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 or problem children, many of whom are helped in the opportunity and remedial classes conducted at some of the large primary schools. There are also twelve special schools for children with serious mental deficiency, and a senior special school for mentally retarded adolescents.

For children with severely defective hearing there are seven speech and hearing centres, and there is provision for hard-of-hearing children at some 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, Estcourt House convalescent home, Adelaide Children's Hospital, Woodville Spastic Centre and the Strathmont Training Centre.

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 pupils 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 the larger towns, and by high, area or special rural schools in many of the smaller centres. Only one of these schools is located in any one centre. There is, however, a technical high school at Port Pirie, and certain pupils may use the facilities of the Correspondence School for secondary studies.

State Secondary Schools, South Australia

At or about 1 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		
1967.....	59	39,541	29	18,508	50	4,754	152	105
1968.....	59	41,839	30	19,467	54	5,014	143	84
1969.....	62	44,676	31	19,576	51	4,790	115	121
1970.....	63	47,216	33	19,545	51	4,915	124	66
1971.....	67	52,270	30	17,567	51	4,904	141	100

(a) Includes also special rural schools.

(b) Full correspondence pupils only. Includes Northern Territory pupils, 34 at 2 August 1971.

(c) Pupils receiving secondary education at primary schools, in Aboriginal schools, and in institutions.

Changes and Development

The high schools, technical high schools, and the secondary sections of the area schools have been administered since December 1968 by the Secondary Division. Many aspects of courses offered in each of the three kinds of schools were common to all, but each by tradition, planning, and function was better prepared to cope with certain aspects of secondary education than others. Each has still retained its identity by offering the kinds of courses for which it was originally intended, but each has become more flexible by offering other courses that allow for differences in the aspirations and abilities of students in the same school.

The close connections and inter-relationships between courses offered in the three different kinds of secondary schools is designated by the term 'Track' which denotes the intention of the course and does not necessarily indicate the level of ability of the students.

Track 0 is intended to prepare students for tertiary studies either at a University or for diploma courses at the S.A. Institute of Technology and at present such courses are examined externally by the Public Examinations Board at fourth and fifth year level.

Track 1 indicates that courses generally are internally examined; there is less degree of abstraction in the syllabuses, and the intention is to prepare students for entry to certificate courses at the S.A. Institute of Technology or entrance to some teachers college courses that do not require degree study. These courses have a high vocational intention and prepare students for commercial employment and exacting apprenticeship studies.

Track 2 courses usually are internally examined, and in general, aim to help students take an intelligent interest in the world around them, and prepare them for vocations that require routine activities or for apprenticeship study less exacting than expected of Track 1 students.

High Schools

High schools are provided in the metropolitan area and in the larger country towns—all except three are co-educational. High schools provide both academic and non-academic courses, with provision for commercial subjects, and instruction in a limited number of craft subjects.

Courses are provided that meet the needs and abilities of all kinds of students. Most students take the general course, designated Track 0, that leads to the

Matriculation and is examined externally at fourth year (Leaving) and fifth year (Matriculation) by the Public Examinations Board (PEB).

The breadth of courses sought during the first three years of secondary schooling (the Junior Secondary Curriculum) is believed to be best achieved by offering students as wide a selection of subjects as is compatible with their abilities and interests. For convenience and guidance the subjects are divided into two basic groups. The first, a core group of five subjects, consists of English, social studies, mathematics, science, and a craft, to which is added a selection of two, three or four subjects from a second group called electives. Subjects in this group include such disciplines as foreign languages, further mathematics, science and craft, art, agriculture (in country area schools and high schools), history and/or geography, and music. The number of electives taken will depend upon the facilities available, the ability of the student and his vocational interests.

Opportunities are also given for general experience in some of the elective group of subjects. Instruction referred to as general experience is below the norm in time for that regarded as a full subject, but is sufficient to stimulate and awaken latent interest. General experience subjects may include foreign languages at a conversational level, art, further craft, physical education, music, agriculture and commerce.

The junior secondary levels are regarded as exploratory and aim to provide the student with as wide a range of interests and educational experiences as possible before he commits himself to a particular course of study at the senior level (fourth and fifth year). A selection from the following subjects, English, foreign languages, history, geography, social studies, mathematics, science, art, craft (woodwork in high schools with needlework and metal work offered in a few schools), music, physical education, is possible in the junior curriculum in most high schools.

In the metropolitan area most high schools have matriculation classes and offer a comprehensive range of courses, while in the country most high schools with enrolments of 250 or more have a matriculation class.

The commercial courses (Track 1) may be either examined externally by the Public Examinations Board or internally moderated by the Education Department. A commercial course does not begin until the second year at high school and the core subjects consist of English, commerce, typewriting and shorthand with a choice from such additional general subjects as geography, history, mathematics, or arithmetic and a foreign language; but the extent of this elective group depends upon the facilities within the school. Commercial subjects are not available in high schools after the fourth year (Leaving) level.

There is a growing tendency to provide fifth year internally examined syllabuses in high schools in some subjects, but at present this practice is more widely developed in technical high schools. Urrbrae Agricultural High School offers an interesting variation to high school practice; this secondary school, located in an Adelaide suburb, specialises in the teaching of agriculture. Agriculture is taught in many country high schools and some area schools, but Urrbrae offers a special secondary education for boys who plan to follow a career in agriculture. The school's syllabus includes agricultural science, farm mechanics, and field work as well as the normal academic subjects. Boys who attend Urrbrae may matriculate for university degree courses and for Roseworthy Agricultural College courses. Courses alternative to those of the Public Examinations Board are provided; a special fourth and fifth year course leads to an Urrbrae Certificate.

Most high schools provide Track 2 courses for students who find the more academic studies of Track 0 and Track 1 too demanding. The Track 2 students

concentrate upon syllabuses that have a practical bias and aim to develop skills of communication, computation and understanding necessary to cope with the practical situations of everyday life.

Technical High Schools

Technical high schools combine both an academic and practical education, with a special emphasis upon the various forms of handwork. These schools, as with other secondary schools, offer syllabuses designed for students in Tracks 0, 1 or 2, as well as two further tracks designated 3 and 4 (Track 3 is for slow learners; the syllabuses emphasise remedial work and the essential skills of communication and computation: Track 4 students have handicaps which preclude them from most occupations other than those of a simple routine nature). The majority of students study Track 1 and 2 syllabuses which are internally examined, moderated by the Education Department, and acknowledged by the Secondary School Certificate at fourth and fifth year level, but opportunities are available to those students who elect to study Track 0 syllabuses that lead to matriculation.

Most technical high schools are designed either for boys or girls separately but the one country technical high school is co-educational as are Adelaide Technical High School and the newly established metropolitan technical high schools.

Subjects offered at boys technical high schools include: English, social studies, mathematics, science, arts, crafts, art/craft, and a wide assortment of technical subjects related to the art/craft group (*e.g.* plastics, applied electricity).

Girls technical high schools offer the same kind of core subjects, English, social studies, science and craft, but the elective group emphasises commercial subjects, skills and experience as well as art, craft, and art/craft. The commercial courses are basically vocational and give training in shorthand, typewriting, and commercial practice from second year to fourth year, whilst special secretarial courses are available in a number of schools at the fourth year level.

A number of high and technical high schools are developing fifth year courses which are internally examined; this is a logical extension for students who have completed four years of internally examined courses, and desire a further year as preparation for tertiary courses for which matriculation is not a prerequisite.

Area Schools

Area Schools are provided in certain country districts not served by high schools; they cater for both primary and secondary students and are co-educational. In line with secondary policy in high schools and technical high schools these schools offer a Track 0 course as well as a Track 1 or 2 course that is examined internally. The range of subjects offered is more restricted than that available to high schools and technical high schools, but all students have the opportunity to study core secondary syllabuses to fourth year in their own district; English, social studies, mathematics, science and craft form a core to which may be added further mathematics, science or craft, history and/or geography, but no foreign language.

Special Rural Schools

These schools were first established in remote country areas from the beginning of 1966 with the intention of supplying a limited secondary education in areas where it had been shown that there was an obvious need for secondary education

but where the establishment of an area school was not warranted. Courses in these schools are restricted to the core subjects, English, social studies, mathematics, science—sometimes craft where facilities are available, and geography and/or history. Programmes are based on Track 0 syllabuses and the instruction does not proceed beyond third year level.

Correspondence School

Children who are unable to attend a secondary school may receive secondary education through the Correspondence School. Lessons are forwarded to cover nine academic subjects (all to Leaving Certificate 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 2 August 1971 there were sixty-one boys and eighty girls receiving secondary education through full correspondence courses; of these, seventeen boys and seventeen girls were living in the Northern Territory.

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 usually charge fees; however, a limited number of internal scholarships are available and pupils may qualify for certain State scholarships. In addition to normal day attendance many private schools offer boarding facilities for country pupils. Private schools provide academic courses preparing pupils for the PEB examinations, and this determines their academic curricula for fourth and fifth years. Church schools give religious as well as secular education.

Catholic Schools

The Catholic school system provides secondary education at boarding and day colleges in metropolitan and country areas. There are no technical secondary schools, but both general and commercial courses are available to pupils for Leaving and Matriculation examinations. 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 with most schools having facilities for boarders.

At boys schools, emphasis is on general academic and commercial courses: Scotch College at Mitcham, however, provides in addition agricultural training. Girls schools generally provide alternative courses for those pupils not academically inclined. In addition, all these schools offer a wide range of extra-curricular activities. There are also two non-denominational 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 specialise in this field. A number of these colleges also prepare pupils in certain PEB subjects.

Summary

The following tables give details of all private schools and cover both primary and secondary education.

Private Schools, South Australia^(a)

Year	Number of Schools	Number of Teachers (b)	Pupils on Roll at or about 1 August				
			Primary		Secondary		Total
			Males	Females	Males	Females	
1967.....	173	1,451	11,422	12,111	6,749	6,720	37,002
1968.....	171	1,457	10,971	11,843	6,883	6,716	36,413
1969.....	171	1,524	10,835	11,422	7,170	7,033	36,460
1970.....	170	1,604	11,016	11,448	7,408	7,234	37,106
1971.....	169	1,682	11,029	11,640	7,586	7,432	37,687

(a) Excluding business colleges.

(b) Full-time teachers plus the full-time equivalent of part-time teachers.

In the next table private school pupils 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 1971 Catholic schools accounted for 80 per cent of primary pupils and 53 per cent of secondary pupils attending private schools.

Pupils at Private Schools, South Australia**At or about 1 August**

Denomination of School	1967	1968	1969	1970	1971
Primary:					
Catholic	19,253	18,634	18,051	18,108	18,191
Church of England	1,655	1,567	1,492	1,490	1,517
Lutheran	961	985	988	1,076	1,078
Methodist	535	529	524	531	549
Presbyterian and Baptist/ Congregational	625	615	600	624	625
Seventh Day Adventist	129	114	111	132	137
Udenominational	375	370	491	503	572
Total primary	23,533	22,814	22,257	22,464	22,669
Secondary:					
Catholic	6,712	6,791	7,208	7,558	7,957
Church of England	2,462	2,522	2,516	2,447	2,435
Lutheran	583	560	640	727	778
Methodist	1,569	1,627	1,680	1,756	1,761
Presbyterian and Baptist/ Congregational	1,275	1,262	1,334	1,308	1,273
Seventh Day Adventist	48	51	46	36	30
Udenominational	820	786	779	810	784
Total secondary	13,469	13,599	14,203	14,642	15,018



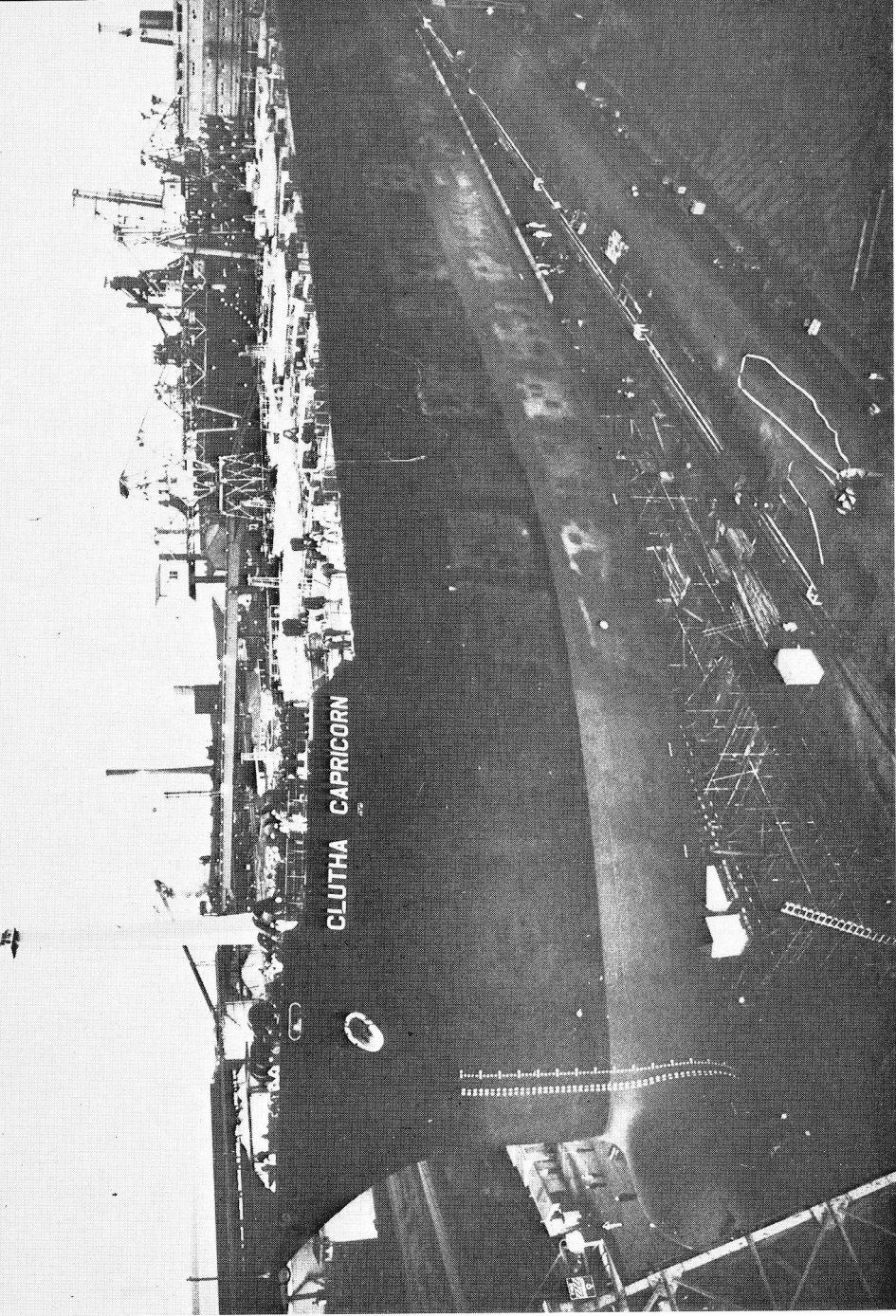
News Ltd

A feature of the Seventh Adelaide Festival of Arts, held in March 1972, was the group painting sessions of primary and secondary school children in the East Parklands.

Four boys from the Northfield Primary School absorbed in their group painting.

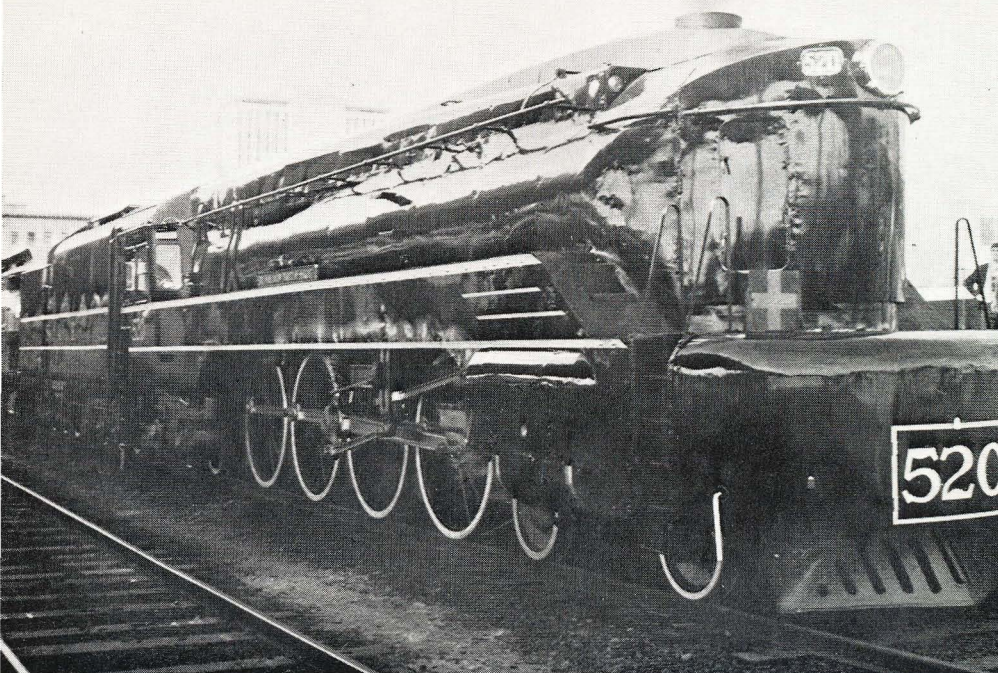
News Ltd





The Broken Hill Proprietary Co. Ltd

The largest ship to be built in Australia, the 83,000 deadweight tons ore carrier, *Clutha Capricorn*, was christened at BHP's Whyalla Shipyard on 28 April 1972 by Mrs Sonia McMahon, the wife of the Prime Minister of Australia.



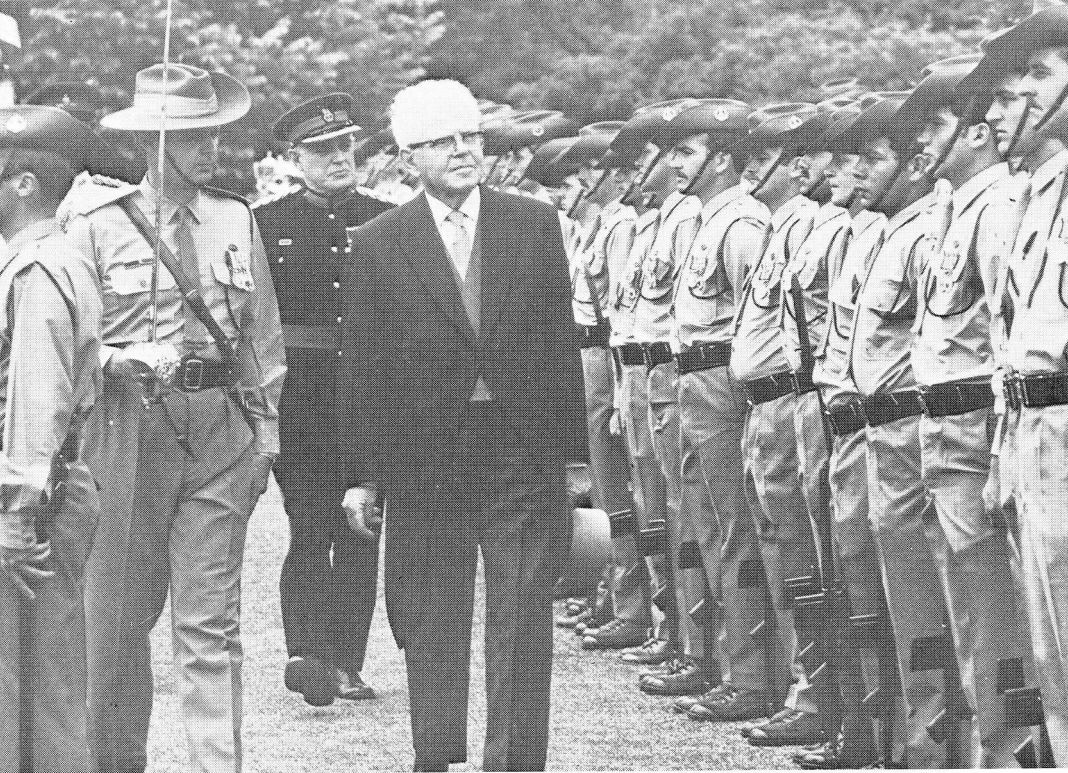
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One of four steam locomotives, maintained by the S.A. Railways for the Australian Railways Historical Society (S.A. Division), which are used by that Society for steam tours. This is one of the twelve '520' class steam locomotives designed and built by S.A. Railways which were introduced into service in November 1943 and withdrawn in December 1966.

A view of the Stirling-Verdun section of the South East Freeway which was opened on 31 May 1972.

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Sir Mark Oliphant inspecting the guard of honour after being sworn in as Governor of South Australia on 1 December 1971.

The new Governor of South Australia, Sir Mark Oliphant, was congratulated after the swearing-in ceremony by Sir Mellis Napier who has been Lieutenant-Governor since 1942. During this time Sir Mellis has filled the office of Governor for a total time of 9 years 108 days.

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EXAMINATIONS AND SCHOLARSHIPS

Examinations

In addition to internal examinations conducted by the schools there are a number of external examinations.

After four years secondary study the pupil normally sits for the Leaving examination of the Public Examinations Board of South Australia, or for an examination conducted by the Education Department.

The Public Examinations Board conducts a further examination at the completion of the fifth year. Before 1966 this examination had been known as the Leaving Honours examination and while considered a desirable fore-runner to university study had not been compulsory for entrance to the University of Adelaide (matriculation being based on the Leaving examination). Commencing with 1966 this examination became the Matriculation examination.

Before 1966 the PEB had given a certificate for a pass in the required number of subjects at either the Intermediate or Leaving examinations and for a pass in one or more subjects in the Leaving Honours examination. From 1966 the Board has issued to each Intermediate, Leaving and Matriculation examinee a certificate showing the grade achieved in each of the subjects in which examined. The last PEB Intermediate examination was held in 1968. The total number of candidates for examination by the Board in one or more subjects in 1971 were Leaving, 13,835 and Matriculation, 7,766.

Scholarships

The Commonwealth Government, the State Government and various private benefactors provide a variety of scholarships each year for South Australian pupils.

Secondary Scholarships

On the completion of primary schooling, secondary pupils, whether at State or private schools, are entitled to a book allowance of \$18 a year for the first three years, and \$26 and \$28 for the fourth and fifth years respectively. In 1970-71, \$1,641,200 was paid in secondary book allowances. Pupils 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 \$180 a year for each of the first four years of secondary schooling increasing to \$230 while studying an approved fifth year course.

In 1965 the Commonwealth Government introduced scholarships to cover the last two years of secondary education. These scholarships, of which 980 were available in South Australia in 1972, are awarded on the results of a special Australian Council for Education Research (ACER) examination conducted in July of the third year of secondary education. The scholarships which are tenable at any approved State or private school are free of a means test and offer a \$200 living allowance, a \$50 book allowance and up to \$150 re-imbursment for fees paid in each year.

Technical Scholarships are offered to pupils in the Leaving year on the basis of results in the ACER examination and are tenable in approved courses at the South Australian Institute of Technology, the South Australian Education Department technical colleges and adult education centres, two secretarial colleges and,

in Melbourne, the Australian Ballet School and the Social Welfare Department Youth Leadership course. The first year of some courses at the Roseworthy Agricultural College and the South Australian School of Art are also approved for Technical Scholarships, the remaining years of these courses are approved under the Commonwealth Advanced Education Scholarship Scheme. From the beginning of 1968 these scholarships have been offered to pupils in the Matriculation year, to students already enrolled in approved courses, to students with suitable results in other approved examinations and to apprentices who are qualified to enrol in an approved course. For full-time study benefits are the same as the secondary scholarship; for part-time study students receive \$100 living allowance and a re-imbusement for fees paid up to \$100 per year.

On the last school day of 1971 there were 1,895 pupils studying with the assistance of secondary scholarships and a further 405 with technical scholarships.

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 twelve 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 1 January 1972 weekly allowances were \$2.18 at ages twelve and thirteen, \$3.30 at ages fourteen and fifteen and \$7.28 at ages sixteen and over, if living at home; and \$7.28 at ages twelve to fifteen and \$11.25 at ages sixteen and over if living away from home. Each pupil aged sixteen and over whose father died before he turned sixteen receives \$10.30 if living at home or \$14.28 if living away from home. The pupil receives guidance and advice on his course of studies from the Soldiers' Children Education Board.

Tertiary Scholarships

The Commonwealth Government, through the Commonwealth Scholarships Board, each year offers four types of scholarships at the tertiary level, namely, University Scholarships, Advanced Education Scholarships, Commonwealth Teaching Service Scholarships and Canberra Teacher Education Scholarships. University Scholarships are tenable only in approved university courses and are either Open Entrance Scholarships, Later Year Scholarships or Mature Age Scholarships.

Advanced Education Scholarships are tenable only in approved non-university tertiary courses at the South Australian Institute of Technology, Roseworthy Agricultural College, Education Department teacher training colleges, the Kindergarten Teachers College, and the South Australian School of Art; these are either Open Entrance or Later Year Scholarships. Commonwealth Teaching Service Scholarships are available for certain courses which lead to professional teaching qualifications for people wishing to enter the Commonwealth Teaching Service. Canberra Teacher Education Scholarships are tenable only for teacher education courses at the Canberra College of Advanced Education.

The Commonwealth Teaching Service Scholarships have been introduced for 1972, while only a few Canberra Teacher Education Scholarships are awarded in South Australia.

Commonwealth Tertiary Scholarships, South Australia^(a)

Year	New Awards Accepted			Students in Training at 30 June	Expenditure (Year ending 30 June)		
	University	Advanced Education	Total		Fees	Living Allowance	Total
					\$	\$	\$
1967.....	484	32	516	2,343	652,478	413,883	1,066,361
1968.....	829	100	929	2,595	1,058,092	561,017	1,619,109
1969.....	912	151	1,063	3,000	1,013,772	656,580	1,670,352
1970.....	1,088	286	1,374	3,358	1,242,393	819,361	2,061,754
1971.....	1,198	207	1,405	3,671	1,530,268	1,061,708	2,591,976

(a) Includes pupils who live in Northern Territory and sit for the PEB examinations.

Students awarded a Commonwealth scholarship are entitled to the payment of certain fees and allowances without a means test. In addition, full-time students may be granted a living allowance in accordance with a prescribed means test. At 1 January 1972 the maximum annual allowance was \$700 for a student living at home and \$1,100 for a student living away from home.

Students under the Soldiers' Children Education Scheme may receive a basic annual allowance of \$700, plus all fees, travelling expenses and costs of necessary text books and equipment while undergoing tertiary education. Additional expenses are paid if the student is living away from home or supporting a family.

Soldiers' Children Education Scheme, South Australia^(a)

Year	Number of Beneficiaries in Training (b)				Expenditure on Benefits		
	Primary and Secondary	Tertiary	Industrial	Total	Allowances	Fees, Books, Equipment and Fares	Total
					\$	\$	\$
1966-67 ..	629	126	131	886	182,131	50,805	232,936
1967-68 ..	637	148	154	939	191,282	57,030	248,312
1968-69 ..	585	158	132	875	221,269	66,828	288,098
1969-70 ..	540	157	130	827	218,000	71,978	289,978
1970-71 ..	531	158	110	799	226,000	75,262	301,262

(a) Includes Northern Territory. (b) Beneficiaries twelve years and over. Number at end of year.

Subject to income limits, students undergoing industrial training receive a basic allowance of \$2.65 per week plus the cost of Trade School requisites.

The University of Adelaide and the Flinders University award a number of prizes, grants and scholarships each year, details of which are given in the Calendars of the respective Universities. Many students also receive assistance at the tertiary level through studentships offered by government departments and private firms (for teaching studentships see page 193).

The South Australian Government's Fees Concession Scheme provides financial assistance in the form of a loan only or of a combination of loan and grant to eligible students (at the Universities or undertaking tertiary courses at the South

Australian Institute of Technology) whose fees are not met by scholarships, cadetships, or similar awards or by employers. Eligibility for and the amount of assistance are determined in accordance with a prescribed means test. The nature of the course determines the form of assistance.

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 eight undergraduates and fifty-two others, 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.

The governing body of the University of Adelaide is the Council, comprising the Chancellor and the Vice-Chancellor (*ex officio*), twenty-two members elected by a Convocation of Electors, four members elected by the undergraduates and five members appointed by Parliament. 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.

Details of income and expenditure for the period 1967 to 1970 are shown in the following table.

The University of Adelaide, Finance^(a)

Particulars	1967	1968	1969	1970
	\$'000			
Income for capital purposes:				
Commonwealth Government	683	667	216	1,346
State Government	683	667	201	1,346
Other	5	—	—	—
Income for other purposes:				
Commonwealth Government	4,391	4,668	4,524	5,322
State Government	4,761	5,035	5,156	5,924
Student fees	1,207	1,379	1,428	1,689
Other	1,260	1,328	1,364	1,730
Total income	12,990	13,743	12,889	17,357
Expenditure:				
Teaching and research	8,842	9,493	9,509	11,506
Administration	789	813	918	1,098
Libraries	574	593	720	782
Buildings, premises, grounds	1,866	1,518	1,479	3,714
Other	587	1,484	728	480
Total expenditure	12,659	13,901	13,353	17,580

(a) Includes Waite Agricultural Research Institute.

In 1971 the University had 11 faculties: arts (10 departments); economics (2); science (16); 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 physical education, physiotherapy, and public administration. Higher degrees were provided in all faculties except technology.

Intending students are normally required to have passed the Matriculation examination at a prescribed overall standard. 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. Fees for full-time students were increased in 1972 to approximately \$475 a year for a student taking an arts-type course, \$530 a year for a science-type course, and \$560 a year for dentistry and medicine. These fees entitle students to tuition and access to the Library and to the various facilities of the University Union and the Sports Association. Students, however, may obtain financial assistance in a number of ways; see pages 175-8. Provision is also made in certain faculties for part-time students who pay reduced fees on a subject-taken basis.

The original full-time academic staff of four in 1876 had grown by June 1971 to 66 professors, 68 readers, 182 senior lecturers, 163 lecturers, and 90 tutors and demonstrators. Teaching by part-time staff amounted in 1971 to 63,100 hours. Part-time staff were mainly engaged in large first-year science classes involving laboratory work, in the faculties of engineering, law, medicine and dentistry, and in the physiotherapy course.

Details of student enrolments are given in the next two tables.

The University of Adelaide, Enrolments^(a)

Course	1967	1968	1969	1970	1971
Higher degree candidates (b)	727	747	835	852	966
Undergraduate, diploma, certificate and miscellaneous students:					
Agricultural science	139	180	202	195	202
Applied science	172	199	203	150	100
Architecture	186	180	187	186	180
Arts	2,640	2,564	2,629	2,565	2,672
Dentistry	211	202	209	182	206
Economics	459	465	475	498	545
Engineering	542	532	555	561	610
Law	359	366	352	382	450
Medicine	634	617	606	571	593
Music	73	80	88	97	103
Pharmacy (degree)	142	137	130	89	47
Science	1,436	1,376	1,351	1,382	1,495
Technology	656	592	505	347	225
Pharmacy (diploma)	56	16	—	—	—
Physical education	134	132	101	61	23
Physiotherapy	94	82	90	57	32
Social studies	68	23	10	2	—
Miscellaneous (SAIT) (c)	100	101	63	91	81
Elder Conservatorium (d)	339	292	283	296	207
Total	9,167	8,883	8,874	8,564	8,737

(a) Each student is counted once only; in the category appropriate to his principal course.

(b) Includes Master's qualifying candidates.

(c) Students enrolled in subjects as part of a diploma course at the South Australian Institute of Technology.

(d) Students not also enrolled for degree or diploma subjects.

The University of Adelaide, Enrolments, 1971^(a)

Course	New Students (b)	All Students				
		Full-time	Part-time	External	Staff	Total
Higher degree candidates	314	511	226	78	120	935
Master's qualifying candidates	17	5	20	6	—	31
Undergraduate, diploma, certificate, and miscellaneous students:						
Agricultural science	52	170	32	—	—	202
Applied science	—	54	46	—	—	100
Architecture	49	159	21	—	—	180
Arts	496	1,296	1,272	104	—	2,672
Dentistry	27	203	3	—	—	206
Economics	145	268	276	1	—	545
Engineering	195	557	53	—	—	610
Law	130	364	83	3	—	450
Medicine	37	586	7	—	—	593
Music	28	76	27	—	—	103
Pharmacy	—	41	6	—	—	47
Science	419	1,222	271	2	—	1,495
Technology	—	65	160	—	—	225
Physical education	—	2	18	3	—	23
Physiotherapy	—	32	—	—	—	32
Social studies	—	—	—	—	—	—
Misc. (SAIT) (c)	—	—	81	—	—	81
Elder Conservatorium (d)	55	—	207	—	—	207
Total	1,964	5,611	2,809	197	120	8,737

(a) Each student is counted once only; in the category appropriate to his principal course.

(b) Figures for undergraduate courses exclude students who have transferred from another undergraduate course either in this or another university, or who are commencing a second course.

(c) Students enrolled in subjects as part of a diploma course at the South Australian Institute of Technology.

(d) Students not also enrolled for degree or diploma subjects.

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 considerably more than that of undergraduate enrolments.

From its inception until the end of 1971 the University had conferred 20,065 degrees and 7,024 diplomas by examination. The growth of the University in recent years is indicated by the number of degrees and diplomas awarded in 1971 which totalled 1,757, compared with 740 in 1961.

The 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 \$48 (\$24 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 nearly forty sporting clubs, to the Clubs and Societies Council for the support of some fifty student societies and to the Students Association. It is also responsible for the Union buildings, including the three refectories and Union Hall. During 1970 and 1971 the Union buildings underwent an extensive

rebuilding and expansion programme which resulted in a total area of about 67,000 sq ft of floor space; the playing fields available to the Sports Association cover about 60 acres.

Residential Colleges

The residential colleges are independent bodies affiliated with the University. The three colleges for undergraduate men were founded by churches, but impose no denominational restrictions on admission; the women's college and the college for postgraduate students have no denominational affiliation. All 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	Church of England . . .	1925	146 students, 11 tutors;
St. Ann's	Non-denominational . . .	1947	121 students, 8 tutors;
Aquinas	Catholic	1948	95 students, 12 tutors;
Lincoln	Methodist	1952	160 students, 15 tutors;
Kathleen Lumley . . .	Non-denominational (postgraduate)	1968	70 students.

The Library

The central library of the University is named the Barr Smith Library in honour of its original benefactor, Robert Barr Smith, and his son, Tom Elder Barr Smith. During his life Robert Barr Smith provided funds for the purchase of books and members of his family gave the University a substantial donation in 1920 in his memory. Tom Elder Barr Smith provided the first part of the present building in 1930 at a cost of nearly \$70,000.

In addition to the central library there are branch libraries for law, music and the Waite Agricultural Research Institute. Borrowing facilities are available to staff, students and graduates.

Holdings at the end of 1971 were as follows: central library 489,000 volumes; law library 31,800; music library 6,000 (and 11,100 pieces of music in sheets); and the Waite Agricultural Research Institute 26,500; making total holdings of 564,600 volumes. In addition, the libraries hold over 47,000 volumes in microform.

During 1971 the Library made 213,500 loans to students, staff and graduates; 14,800 to other libraries in South Australia; and 5,800 to libraries in other States. It received 1,800 loans from other libraries. Accessions totalled 28,800 and withdrawals numbered 900. Serial titles received exceeded 17,200. Expenditure on staff, books, journals, binding and other library purposes amounted to \$780,000 or 6.1 per cent of total university revenue expenditure.

The 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 of land and property at Glen Osmond together with an endowment from Mr. Peter Waite. 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. A gift of about 700 acres of land at Mintaro, near Clare, has enabled the development of the Mortlock Experiment Station which provides additional field facilities for the Institute for its research and postgraduate training programmes in the animal, pasture, and crop sciences.

As part of the University of Adelaide the Institute is financed in large measure from the Commonwealth and State Government grants made on the recommendation of the Australian Universities Commission. The 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, Wheat Industry Research Committee of South Australia, Barley Improvement Trust Fund and the Australian Meat Research Committee. Between 20 and 25 per cent of the total Waite Institute budget comes from these sources.

The Institute contains six departments, each headed by a professor, namely Agricultural Biochemistry and Soil Science, Agronomy, Animal Physiology, Entomology, Plant Pathology and Plant Physiology. For its first forty years the Institute centred its research and teaching activities on the plant and soil sciences but recognition of the growing importance of the livestock industries in Australia led to the introduction of animal studies culminating in the establishment in 1964 of the Department of Animal Physiology.

The six departments are responsible for teaching the last two years of the four-year undergraduate course leading to the degree of Bachelor of Agricultural Science, the first two years being provided by appropriate science departments of the University. The Waite Institute is noted for the development and maintenance of a strong postgraduate school in which students from all over Australia and many countries overseas, especially the developing countries, are enrolled.

The Elder Conservatorium of Music

The University established a Chair of Music in 1884 and, with the assistance of an endowment by Sir Thomas Elder, a Conservatorium of Music in 1898. In addition to full degree courses in practical studies, musicology, and composition, the University School of Music provides instruction in the various branches of musical performance for part-time students.

Concert experience for students is provided through regular informal concerts internal to the Conservatorium and by public concerts given from time to time. The University Music Society arranges each year a series of night concerts by members of the staff, who provide also a series of Sunday afternoon public concerts and recitals during the winter months.

In 1971 there were 103 students proceeding to the degree of Bachelor of Music and 207 students taking single-subject practical studies.

Department of Adult Education

This department offers, largely in conjunction with the Workers Educational Association of South Australia Inc., a range of courses for members of the general public (see pages 191-2).

Other Special Features

Unusual features of the University's work include its extensive research into the linguistics, myths, legends and musicology of the Aborigines; teaching and research in Computing Science ranging from first year undergraduate level to the Doctorate of Philosophy; the Mawson Institute for Antarctic Research (which also takes post graduate students); upper atmosphere research by balloon and rocket; mineral exploration; and arid zone studies.

THE FLINDERS UNIVERSITY OF SOUTH AUSTRALIA

During 1958 when the University of Adelaide began to plan two major new buildings on its existing 30-acre site it became apparent that further expansion would have to take place elsewhere.

Early in 1961 the South Australian Government indicated that it would make available to the University of Adelaide an area at Bedford Park, of some 370 acres, situated about seven miles from the centre of Adelaide in the foothills of the Mount Lofty Ranges. Consequently the University of Adelaide made a submission for financial support to the Australian Universities Commission in 1962, which gave approval for the planning of Bedford Park. The institution became known as 'The University of Adelaide at Bedford Park'. Towards the end of 1965 the South Australian Government decided to make The University of Adelaide at Bedford Park a fully autonomous university under the name 'The Flinders University of South Australia', after the great explorer and hydrographer, Matthew Flinders. A more detailed history of the Flinders University was included on pages 163-8 of the *South Australian Year Book 1967*.

The Flinders University of South Australia Act came into force on 1 July 1966. The Act places the whole management of the University in the hands of a Council with powers to make statutes and regulations subject to the approval of Convocation which comprises the graduates of the University and members who are graduates of other universities. The Council comprises twenty-seven members: The Chancellor; the Vice-Chancellor; the Director-General of Education; five members of Parliament elected by Parliament; a nominee from each of the Chambers of Manufactures and Commerce jointly, the Trades and Labor Council, and the Government; two professors and two non-professorial academic staff members elected by the academic staff; the President of the Students Representative Council; eight members elected by Convocation; and up to three members co-opted by the Council.

Details of income and expenditure for the period 1967 to 1970 are shown in the following table.

The Flinders University of South Australia, Finance

Particulars	1967	1968	1969	1970
	\$'000			
Income for capital purposes:				
Commonwealth Government	928	769	479	842
State Government	923	769	479	842
Other	1	—	—	—
Income for other purposes:				
Commonwealth Government	873	1,010	1,120	1,524
State Government	1,285	1,484	1,643	2,156
Student fees	108	181	227	338
Other	63	75	159	178
Total Income	4,181	4,288	4,108	5,879
Expenditure:				
Teaching and research	1,761	1,924	2,201	2,869
Administration	272	315	377	459
Libraries	285	308	339	446
Buildings, premises, grounds	1,556	1,633	1,431	1,845
Other	35	35	41	60
Total Expenditure ...	3,910	4,215	4,390	5,679

The first academic year of the University began in 1966, with enrolments of 382 first-year undergraduates and 35 graduate students. Details of enrolments for the years 1968 to 1971 are shown in the following tables.

The Flinders University of South Australia, Enrolments

Course	1968	1969	1970	1971
Bachelors degrees:				
Arts	546	697	796	878
Science (a)	406	457	591	640
Economics	92	105	165	181
Education	45	63	96	140
Postgraduate diplomas:				
Social administration	17	31	32	43
Education	—	36	58	81
Higher degree (including master's qualifying)	95	138	155	155
Miscellaneous	11	10	16	27
Total	1,212	1,537	1,909	2,145

(a) Includes the following numbers of students who intended to transfer to the University of Adelaide at the end of their first year: 1968, 75; 1969, 74; 1970, 127; 1971, 129.

The Flinders University of South Australia: Enrolments, 1971

Course	New Students	All Students		
		Full-time	Part-time	Total
Arts	360	740	138	878
Science	326	610	30	640
Economics	64	140	41	181
Education	—	102	38	140
Higher degrees	37	77	55	132
Master qualifying	16	2	21	23
Postgraduate diplomas	111	114	10	124
Miscellaneous	14	—	27	27
Total	928	1,785	360	2,145

Academic Organisation

The academic organisation of the University is based on 'Schools' instead of faculties or departments. The school is the basic academic and administrative unit and one of the professors of each school is appointed to act as the chairman of the school.

At present there are five schools: the Schools of Humanities; Social Sciences; Mathematical Sciences; Physical Sciences; and Biological Sciences. A new School of Medicine is currently being developed. The School of Biological Sciences is an integrated one; there are no divisions into the traditional disciplines of botany, zoology, micro-biology, etc., the emphasis being on the manner in which the teaching and research are organised, *e.g.* cellular biology, molecular biology. The remaining schools have a total of nineteen disciplines established within them.

The establishment of full-time staff of the University at 1 January 1972 is shown in the following table.

**The Flinders University of South Australia,
Full-time Staff Establishment, 1972**

Schools:	
Academic (teaching and research)	206
Technical	84
Clerical	50
Library:	
Professional	21
Other	31
Registry:	
Senior administrative	27
Clerical	49
Caretaking, grounds and maintenance	53
Student services:	
Professional	4
Other	4
Total	529

The Library

The acquisition of books for the library commenced in 1963 when the first library staff were appointed. By the time teaching began in 1966 a collection of some 60,000 volumes had been assembled. At the end of 1971 the collection totalled 195,300 volumes and approximately 26,000 volumes are being added each year; 5,300 periodicals are currently received. Emphasis is placed on the acquisition of material to support the current teaching and research programmes of the University, with special attention being paid to such fields as American Studies, and Italian and Spanish Literature.

Loans to staff and students during 1971 totalled more than 79,000 and 4,000 items were borrowed from other libraries for use by staff and research students; 1,050 items were lent to other libraries during the year.

Admission to the University

Students must have qualified for matriculation by passing the Matriculation Examination of the Public Examinations Board in a prescribed manner, and must be selected by the University. Flinders University, the University of Adelaide and the South Australian Institute of Technology have established an Admissions Office for Higher Education to which all students wishing to enter any of these institutions must apply for admission. Selection for admission is based, as far as practicable, on academic merit.

Annual fees in 1972 for full-time students are \$396 for Arts, Economics and Education, \$444 for Science and \$202 for higher degrees. All full-time students also pay a union fee of \$66 a year for membership of the Union and for participation in its activities.

Degrees Offered

The University offers the following degrees; Bachelor of Arts, Bachelor of Economics, Bachelor of Education, Bachelor of Science, Master of Arts, Master of Economics, Master of Education, Master of Psychology, Master of Social

Administration, Master of Science, Doctor of Philosophy, Doctor of Letters and Doctor of Science. In addition there are postgraduate diplomas in social administration, education and psychology.

The structure of the degree courses in arts and science differ materially from those in most other Australian universities. The degree courses are built upon the principle of offering the students a choice of a limited number of 'programmes', rather than allowing students to aggregate credits for individual subjects. The programmes are designed so that a student will pursue the major part of his studies within one school. The performance of a student is assessed on his whole year's work and results are not awarded in individual subjects. In general the whole of the work prescribed for one year of a degree or diploma must be satisfactorily completed before a student proceeds to any part of the subsequent year's work.

The Bedford Park Teachers College

The Bedford Park Teachers College has been developed on a site of 20 acres adjoining the University site. Most of the students attached to the Teachers College are finishing courses at the University. In order to foster a close relationship between the work of the College and the University, a joint appointment has been made of Principal of the Bedford Park Teachers College and Professor of Education in the School of Social Sciences.

The Horace Lamb Centre for Oceanographical Research

In 1965, the University established an oceanographical research centre, which is now known as The Horace Lamb Centre for Oceanographical Research, after the distinguished mathematician who was Professor of Mathematics in the University of Adelaide from 1875 to 1885 and eminent for his work in hydrodynamics. The Centre provides undergraduate and graduate training in oceanography and its present interests are in physical, chemical and geological oceanography, and meteorology. Its investigations are related particularly to some of the problems of the Great Australian Bight. The Centre has two field stations, one on the Coorong and the other at Cape du Couedic, Kangaroo Island.

University Hall

University Hall, the University's first hall of residence was completed early in 1971. It provides accommodation for nearly 200 students, mostly in single furnished study bedrooms.

THE SOUTH AUSTRALIAN INSTITUTE OF TECHNOLOGY

The South Australian Institute of Technology, which adopted its present name in 1960, was established in 1889 as the South Australian School of Mines and Industries.

Since its inception there had been co-operation between the University of Adelaide and the School, 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. Current government policy aims at the independent development of Colleges of Advanced Education and the last degree students under the joint arrangement with the University of Adelaide were enrolled in 1969.

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 all trade classes have been transferred to the control of the Education Department, as was the Adelaide Technical High School in September 1963.

The Department is progressively taking over technician courses from the Institute and this has enabled the Institute to expand its work in the professional and more advanced semi-professional fields. In addition to its campuses at North Terrace, City, and The Levels (approximately seven miles north of the city), the Institute operates a centre at Whyalla teaching at both professional and semi-professional level.

The Institute is administered by a Council which 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 control for many years made the Institute unique among Australian technical institutes, but in recent years, some of the interstate colleges have been granted autonomous government.

Details of income and expenditure for the period 1967 to 1970 are shown in the following table.

South Australian Institute of Technology, Revenue and Expenditure

Particulars	1967	1968	1969	1970
	\$'000			
Income for capital purposes:				
Commonwealth Government	683	1,017	1,209	1,599
State Government	791	995	1,386	1,565
Other	—	33	26	27
Income for other purposes:				
Commonwealth Government (a)	476	527	993	1,072
State Government (a)	1,025	1,130	1,063	1,678
Fees from students	551	639	683	787
Other	65	28	33	37
Total income	3,591	4,369	5,393	6,765
Expenditure:				
Capital (Land, Buildings, Plant, Furniture and Equipment)	1,338	2,256	2,485	3,334
Revenue	2,099	2,390	2,838	3,735
Total expenditure	3,437	4,646	5,323	7,069

(a) Includes amounts transferred to Capital Account for equipment and furnishings purchased—1967 (108), 1968 (53), 1969 (43), 1970 (33).

A wide range of courses and subjects to varying levels is offered; some courses lead to the award of a degree of the University of Adelaide (this arrangement is to be discontinued) or a diploma or certificate by the Institute. Of twenty-six Diploma in Technology courses offered in Adelaide in 1971, thirteen were parallel with and identical to courses leading to degrees in Technology or Applied Science of the University of Adelaide.

Diploma and certificate courses applicable to local needs are conducted at Whyalla by the Institute and other courses are conducted at Woomera.

South Australian Institute of Technology, Students and Staff

Particulars	1966	1967	1968	1969	1970	1971
Students:						
Individual enrolments	11,393	10,637	7,947	8,031	6,755	6,103
Subject enrolments..	19,370	20,360	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Full-time teaching staff	157	166	194	219	228	251

n.a. not available

In 1971, the Institute conducted about 600 classes. Of the 6,103 individuals enrolled in 1971, 3,173 were taking professional courses, and 2,804 certificate level courses. The remaining 126 students were not enrolled in full courses.

The majority of students attending the Institute do so on a part-time basis. There were 1,289 full-time students in 1971.

TECHNICAL CORRESPONDENCE SCHOOL

The Technical Correspondence School provides correspondence courses in a wide range of post-secondary courses for students who are unable to attend technical colleges or Adult Education Centres.

Tuition is provided in accountancy and other commercial courses, technical and trade courses, secondary school subjects up to the matriculation level, general vocational and leisure interest courses. In the field of trade training, an important aspect of the School's work is the provision of apprentice training in twelve trades for country apprentices who are unable to attend an appropriate technical college. The School also provides tuition for prisoners at Yatala and other gaols.

In 1971, 5,369 persons, including 826 apprentices, enrolled with the Technical Correspondence School.

ROSEWORTHY AGRICULTURAL COLLEGE

Roseworthy Agricultural College was opened to students in 1883 and is the oldest of Australia's agricultural colleges. It is situated 32 miles north of Adelaide in better class mallee country, the average annual rainfall being 17.2 inches. The total area of the College farm is 2,964 acres, including buildings, grounds, vineyards and orchard; 1,200 acres are cropped annually and about 500 acres fallowed.

Studs are conducted for cattle (Jersey and Poll Shorthorn), sheep (Merino and Poll Dorset), and pigs (Berkshire and Large White). The College is involved in research and experimental work applicable to the area and in the production of pure seed of wheat and oat varieties suitable for South Australia. A major wheat and oat breeding programme is also conducted.

The College issues diplomas known as the Roseworthy Diploma of Agriculture (RDA), Roseworthy Diploma of Oenology (RDO) and Roseworthy Diploma of Agricultural Technology (RDAT).

Students entering the RDA course must be at least sixteen years of age on 1 January of the year of entry and have passed the Leaving examination in five subjects. Applicants for the RDO course must have completed the first two

years of the RDA course or else have passed at Matriculation level in specified subjects, and spent one year gaining practical experience in a winery. RDA applicants must have passed the RDA at or above a prescribed level.

At 30 June 1971 there were 157 students in residence at the College.

SOUTH AUSTRALIAN SCHOOL OF ART

The South Australian School of Art has the longest continuous history of any technical art school in Australia, having been established as a School of Design in 1861 under the control of the South Australian Society of Arts and transferred in 1909 to the Education Department as the South Australian School of Arts and Crafts. The present name was adopted in 1958.

The School conducts full-time courses leading to the Diplomas in Fine Art (Painting, Sculpture and Printmaking) and in Design (Ceramics, Product and Graphic), while classes in related subjects are also provided for part-time students. These Diploma courses are of four years with a study of specialised subjects following a common first-year course. A new course Diploma in Design (Furniture) commenced in 1972.

During 1971, 182 full-time diploma students and 470 part-time students enrolled at the School.

TRADE EDUCATION

Legislation governing apprenticeships in South Australia is contained in the Apprenticeship Act, 1950-1971 which is administered by an Apprenticeship Commission consisting of a full-time chairman and five part-time members representing employer organisations, trade unions and the Minister of Education.

An employer must receive the approval of the Commission before he can employ an apprentice. The Commission determines the term of indenture in any particular trade and no term can exceed four years. In the following table the number of new apprenticeships commenced for the period 1967 to 1971 are given for the major industry groups.

Number of New Apprenticeships Commenced: Trade Groups, South Australia

Trade	1967	1968	1969	1970	1971 ^p
Metal	983	1,083	1,193	1,094	1,042
Electrical.....	350	390	385	398	335
Building	202	221	278	278	320
Furniture	105	91	109	107	107
Printing.....	68	82	65	82	67
Vehicle industry.....	93	73	111	96	115
Ship and boat-building	7	18	13	8	10
Bootmaking	16	16	19	18	15
Clothing	2	3	1	3	3
Coopering	1	1	—	1	—
Food	146	139	143	126	151
Hairdressing.....	292	300	321	295	256
Leather and canvas goods	2	1	5	5	3
Miscellaneous	12	11	12	8	9
Total all trades	2,279	2,429	2,655	2,519	2,433

^p preliminary

The following table shows the number of new apprenticeships commenced, indentures completed, indentures cancelled, and apprentices employed at 31 December for the years 1967 to 1971.

Apprenticeships, South Australia

Particulars	1967	1968	1969	1970	1971 _p
New apprenticeships commenced.	2,279	2,429	2,655	2,519	2,433
Number of indentures completed.	1,670	2,210	2,276	2,215	2,175
Number of indentures cancelled.	338	287	284	282	288
Number of apprentices employed	10,662	10,463	10,439	10,453	10,528

p preliminary

The technical education of apprentices is the responsibility of the Minister of Education but the Commission has authority to make recommendations to the Minister on matters affecting their technical education.

Apprentices are required to attend technical colleges for four hours a week in their employer's time and two hours a week in their own time except in certain trades where full day training has been proclaimed; in such cases attendance is eight hours a week for the first two years of the apprenticeship and four hours a week in the third year, all training being undertaken during working hours.

The Education Department makes provision for the technical education of apprentices in technical colleges (of which there are five in the metropolitan area embracing ten separate institutions and four in the country at Port Pirie, Whyalla, Port Augusta and Mount Gambier), and by correspondence lessons through the Technical Correspondence School. Theoretical and practical instruction is given in a total of forty-four trades.

Although apprentices are required to attend technical college to complete basic training (normally three years), facilities are provided for those showing ability, to attend voluntarily for a fourth year. During these years, apprentices normally commence studies of an advanced nature most of which are components of various Post-Trade Certificate courses which the apprentices are encouraged to complete as adults. These advanced subjects, and others designed to meet special demands for training in new processes and techniques, are also available to adult tradesmen and others employed in industry.

Trade Education, South Australia Number of Apprentices Enrolled in December

Schools	1967	1968	1969	1970	1971
Metropolitan technical colleges . .	6,398	6,093	5,893	6,575	6,456
Country technical schools	753	802	871	1,012	1,038
Technical Correspondence School (a)	768	786	705	794	722
Total	7,919	7,681	7,469	8,381	8,216

(a) Includes Northern Territory apprentices.

Since 1960 the Commonwealth Development Bank has awarded Post-Apprenticeship Scholarships annually to financially assist young tradesmen and outstanding apprentices to further their education and technical qualifications. The scholarship scheme is administered on behalf of the Bank by the Australian Apprenticeship Advisory Committee. Seventeen of these scholarships were awarded to South Australians for 1972.

ADULT EDUCATION

Education Department: Adult Education

The Education Department provides adult education for part-time students in country areas through its twelve adult education centres (two of which are in the Northern Territory), and the Mount Gambier, Port Augusta, Port Pirie and Whyalla Technical Colleges—with branch classes conducted in 153 towns.

In the metropolitan area classes are held at eighteen secondary schools, all the technical colleges, the School of Art, the Adelaide Woodwork School and the full-time centre at Norwood where both day and evening classes are conducted. Adult education is also available through the Technical Correspondence School.

Over 400 subjects are currently available to adult classes and include academic subjects up to Matriculation standard and beyond, technical subjects for apprentices and adult tradesmen, commercial, business studies and other vocational subjects, art and craft subjects, and a wide range of cultural activities.

**Education Department, Adult Education
Number of Subject Enrolments**

Centres	1968	1969	1970	1971
Country	16,761	18,081	25,764	31,219
Metropolitan:				
South Australian School of Art ...	833	889	743	673
Technical colleges	4,010	9,216	10,159	15,853
Secondary schools	20,217	20,511	21,705	26,977
Adult Education Centres	—	3,988	4,658	2,855
Technical Correspondence School .	5,886	5,737	5,491	5,685
Adelaide Woodwork School	337	252	162	191
Total	48,044	58,674	68,682	83,453

Workers Educational Association of South Australia

The Workers Educational Association of South Australia Incorporated (WEA) was established in 1914. Patterned on the English WEA, it is a voluntary adult education organisation which works in close co-operation with the University of Adelaide's Department of Adult Education.

Activities it organises directly, or in which it provides major assistance to other bodies, include a comprehensive day and evening class programme, postal courses for trade unionists, and an international adult and childrens film festival. It possesses a residential college at Goolwa and an adult education centre in the city.

In 1971 there were 194 classes with a total enrolment of 7,568 students organised independently by the WEA, and a further 55 classes with an enrolment of 1,466 were organised by the WEA in association with the University of Adelaide.

University of Adelaide: Department of Adult Education

The University initiated adult education classes in 1917, and in 1957 established a Department of Adult Education.

The Department provides lectures and discussion courses, short schools and seminars in a wide range of subjects for members of the general public; in recent years it has conducted television discussions on issues of public concern, latterly in association with the Australian Broadcasting Commission; and it organises seminars on issues of current moment from which, in some cases, publications have arisen. It also arranges special courses for professional people and former graduates.

Total enrolments for all departmental activities during 1971 were 4,710; and throughout the year the Department carried out preliminary work on the establishment of an educational radio station which had been made possible by a gift from an anonymous donor of \$100,000. A Producer/Manager was appointed, a studio and other facilities built and the radio station, under the call sign VL5UV, began transmission on 28 June 1972.

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 1971, 3,923 persons enrolled or re-enrolled for English classes and a further 1,589 took correspondence lessons.

TEACHER TRAINING

Kindergarten

The Kindergarten Teachers 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 living 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.

At the end of 1971, the principal, eight full-time and four part-time lecturers were engaged in the training of 101 students.

Education Department

The Education Department conducts training schools for teachers at Adelaide Teachers College, Wattle Park Teachers College, Western Teachers College, Bedford Park Teachers College and Salisbury Teachers College.

Courses are related to the various levels of education or to specialised fields. Infant and primary teachers are trained at Salisbury, Wattle Park, Western and Bedford Park Teachers Colleges. Specialist secondary teachers are trained at Western and Adelaide Teachers Colleges. General secondary trainees are attached to the Salisbury Teachers College, where they undertake only internal tertiary studies, or to the Adelaide and Bedford Park Teachers Colleges which are situated adjacent to the University of Adelaide and the Flinders University of South Australia respectively.

The normal training period for infant and primary teachers is three 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 a university. In addition, the facilities of the South Australian Institute of Technology, Roseworthy Agricultural College, Waite Agricultural Research 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 Government Teachers Colleges, South Australia^(a)

Classification	1967	1968	1969	1970	1971
Infant	414	406	420	479	610
Primary	1,214	1,116	1,186	1,357	1,635
Secondary:					
General (b)	1,269	1,266	1,405	1,499	1,764
Specialist (c)	692	725	702	738	883
Total	3,589	3,513	3,713	4,073	4,892

(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, the University of Adelaide, and The Flinders

University of South Australia. Other teaching members of Catholic orders receive their training interstate.

Except for those mentioned above private schools do not normally train their own teachers but employ persons considered to be suitably qualified.

NON-SCHOOL STUDY COURSES

Using the framework of the population survey sample of households throughout Australia, a survey was conducted in August 1968 to obtain a measure of the number of persons enrolled for courses of study or training outside school (e.g. at universities, technical colleges, teachers colleges or privately). Because the data was obtained from persons rather than from institutions providing courses the measures derived cover a more comprehensive range of courses and therefore tend to give a broader general indication of post school education.

As a result of the survey, it is estimated that 516,400 persons in Australia, aged fifteen and over in August 1968, were enrolled for courses of study or training other than full-time secondary school courses. This total included 50,500 persons in South Australia.

More detailed descriptions of the rules and definitions adopted for the survey and results derived are available in the *Survey of Non-School Study Courses* bulletin (reference number 13.11) published by the Commonwealth Statistician.

TRAVEL TO SCHOOL

A sample survey was conducted in May 1970 to obtain information about the principal means of transport by which full-time students of all ages travelled to school, university or other educational institution, the time at which they usually left home and the time usually spent on the journey.

The means of transport refers to the principal method of travel used. Where two or more were used the principal method was taken as that one which covered the greatest distance. The category 'other' used in the table below includes such methods as travel by taxi or as a pillion passenger on a motor cycle. The duration of journey was measured as the time taken to travel from the front door of the student's residence to the entrance of his school, university or other educational institution.

The survey showed marked differences throughout Australia in the method of travel used by students of different age groups. Of the students aged from 5 to 9 years almost 56 per cent walked to school, a further 20 per cent were driven in private cars and fewer than 5 per cent rode bicycles to school. In the age group 13 and 14 years only a little over 26 per cent walked to school and less than 9 per cent were driven there in private cars, while nearly 19 per cent rode bicycles and about 46 per cent used public transport (train, bus, tram or ferry). The 18 and 19-year-olds included about 12 per cent who walked, over 43 per cent using public transport and nearly 39 per cent travelling in cars, mainly as drivers.

In South Australia only 23 per cent of students travelled to school etc. mainly by public transport compared with 30 per cent for Australia as a whole. An additional 18 per cent in this State rode bicycles to school etc., as against only

10 per cent for the whole of Australia. The table below shows more details of the differences in method of travel to school for each State.

Full-time Students who Travelled to School Etc.: Method of Travel, May 1970

Method of Travel to School, etc.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	Aust. (a)
	Per cent						
Public transport.....	36.4	23.2	29.4	23.0	29.5	40.5	29.8
Train	4.7	3.2	2.8	(b)	(b)	(b)	3.1
Bus	31.6	16.7	26.5	21.9	29.0	40.2	25.7
Tram or ferry	(b)	3.2	(b)	(b)	(b)	(b)	1.0
Car	13.6	15.9	17.8	16.8	19.2	14.5	15.7
As driver	0.9	1.3	1.1	(b)	(b)	(b)	1.1
As passenger	12.7	14.7	16.7	15.5	17.8	13.6	14.6
Bicycle	5.2	11.7	15.7	18.0	15.9	(b)	10.5
Walked	44.4	48.7	36.8	41.6	35.2	41.0	43.5
Other.....	0.5	(b)	(b)	(b)	(b)	(b)	0.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(a) Includes Australian Capital Territory and Northern Territory.

(b) Insufficient data obtained in sample.

The time needed to travel to school etc., was found to be reasonably uniform for most States as illustrated in the following table.

Full-time Students who Travelled to School Etc.: Duration of Journey, May 1970

Duration of Journey to School, etc. (minutes) (a)	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	Aust. (b)
	Per cent						
1-14	53.1	55.0	54.3	52.4	56.0	49.4	54.2
15-29	26.5	28.1	27.8	30.4	24.4	29.2	27.3
30-44	11.0	10.6	10.8	11.2	8.8	12.8	10.7
45-59	4.1	3.2	3.7	4.2	4.5	4.3	3.8
60-74	3.1	2.0	2.5	(c)	4.4	(c)	2.6
75 and over	2.2	1.0	(c)	(c)	(c)	(c)	1.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(a) One way journey only.

(b) Includes Australian Capital Territory and Northern Territory.

(c) Insufficient data obtained in sample.

More details resulting from the survey are included in the *Journey to Work and Journey to School* bulletin (reference 17.4) published by the Commonwealth Statistician.

STATE EXPENDITURE ON EDUCATION

Details of expenditure by the State Government on education in recent years are given in the next table. The considerable increase in annual expenditure shown in the table has been a continuous process since the end of the 1939-45 War; in 1946-47 total Government expenditure on education was less than \$4.3 million.

State Expenditure on Education, South Australia^(a)

Particulars	1966-67	1967-68	1968-69	1969-70	1970-71
Expenditure from Consolidated Revenue:	\$'000				
Primary	22,279	23,678	25,846	} 66,311	80,124
Secondary	11,843	13,004	14,706		
Technical (b)	11,006	12,446	14,569		
Kindergarten Union grants ..	499	542	579	682	813
University grants	8,628	9,965	10,481	11,528	14,085
Waite Agricultural Research Institute	1,064	1,162	1,250	1,321	1,580
Roseworthy Agricultural College	322	347	410	419	481
Pensions	1,038	1,141	1,302	1,395	1,651
Payroll tax	922	1,012	1,123	1,341	1,577
Miscellaneous	243	319	496	922	1,180
Buildings;					
Schools (b)	2,434	2,481	2,692	2,502	3,364
Agricultural College	15	37	30	16	19
Sinking fund payment	1,489	1,700	1,722	2,163	2,203
Interest on loan expenditure ..	5,047	5,572	6,044	7,032	7,793
Total expenditure from Consolidated Revenue ..	66,828	73,407	81,250	95,632	114,870
Receipts:					
Education Department	968	1,174	1,370	1,677	2,033
Agricultural College	99	107	124	156	177
Miscellaneous	65	65	81	88	85
Commonwealth grants (c)	4,418	5,221	5,654	7,478	8,618
Total receipts	5,550	6,567	7,229	9,399	10,913
Net expenditure from Consolidated Revenue ..	61,279	66,839	74,021	86,233	103,957
Loan Expenditure:					
Buildings;					
Schools, etc.	10,764	8,711	13,295	15,506	17,892
Agricultural College	13	36	7	39	125
Universities and Advanced Education	3,800	4,668	4,576	5,063	9,328
School buses	283	269	319	325	379
Student hostel advances (including buildings)	31	100	301	7	34
Total	14,891	13,784	18,498	20,941	27,757
Less repayments and redemptions (d)	3,514	4,343	5,747	7,590	23,763
Net debit to loan accounts ..	11,376	9,441	12,752	13,351	3,994

(a) Excludes libraries, art gallery and museum.

(b) Includes technical high schools and Institute of Technology.

(c) To and including 1965-66, for University purposes only. Thereafter includes grants for Colleges of Advanced Education (\$1,394,000 in 1970-71).

(d) Includes Capital Works grants from the Commonwealth amounting to \$14,924,000.

6.3 SCIENTIFIC AND RESEARCH ORGANISATIONS

AUSTRALIAN MINERAL DEVELOPMENT LABORATORIES

The Australian Mineral Development Laboratories (AMDEL) is a contract research and technical consulting organisation serving the mineral industry. A wide range of services are offered including chemical analysis, mineralogy and petrology, computer techniques, mineral engineering, chemical metallurgy, process control, materials science, plant evaluation, process design and commissioning.

The laboratories currently employ 280 personnel with graduate/diploma staff in excess of 80 supported by sophisticated instrumentation in the analytical and geological fields and extensive laboratory and pilot scale equipment for metallurgical processing.

Contract research earnings currently exceed \$2.6 million annually.

AUSTRALIAN WINE RESEARCH INSTITUTE

The Australian Wine Research Institute situated at Urrbrae promotes research and other scientific work for the Australian wine industry; it was established in 1955, having grown from a small research unit formed in 1934 within the University of Adelaide.

The Institute is administered by a nine member council consisting of representatives from the Australian wine industry, the Commonwealth Government, the Commonwealth Scientific and Industrial Research Organization and the University of Adelaide, and scientific advisers.

Comprising laboratories and an experimental winery, the Institute conducts research into wines, brandies, and winemaking, and specialises in the microbiology and chemistry of wines and brandies. A technical advisory section assists commercial winemakers with technical problems. Tested yeast cultures for wine fermentation are made available to the wine industry.

The John Fornachon Memorial Library maintained by the Institute is a specialised library of technical literature on wine.

COMMONWEALTH SCIENTIFIC AND INDUSTRIAL RESEARCH ORGANIZATION

The Commonwealth Scientific and Industrial Research Organization (CSIRO) is Australia's largest civil scientific body. Established as the Council for Scientific and Industrial Research in 1926, it was reorganised in 1949 under the Science and Industry Research Act. Its functions include the initiation and carrying out of scientific research in connection with, or for the promotion of, primary or secondary industries; the making of grants in aid of pure scientific research; the collection and dissemination of information relating to scientific and technical matters; and the publication of scientific and technical reports, periodicals and papers.

The governing body is an executive of five full-time and four part-time members supported by a national advisory council and a local committee in each State. The council and committee members (scientists, agriculturists or industrialists) are frequently consulted, either individually or corporately, by the executive and they also take the initiative in bringing problems to the attention of the executive.

Four of the thirty-three CSIRO research divisions have their headquarters in South Australia: these are the Divisions of Nutritional Biochemistry; Soils; Horticultural Research; and Mathematical Statistics.

Division of Nutritional Biochemistry

This Division'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.

Division of Soils

The research programme of the Division of Soils is concerned with the use of soils in agriculture and forestry, and the role of soils and soil materials in hydrology, plant growth and as habitats for flora and fauna. Increasing emphasis is placed on the importance of soil research in problems of the environment, although, from its inception the Division has necessarily been environmentally oriented. While early field programmes in the Division involved soil survey and mapping, this aspect is now largely the responsibility of the various State Departments and pedologists are now engaged on more basic studies of the principles of soil occurrence, geomorphology, geochronology and sedimentology.

The work is organised into several programmes, each of which comprises a number of projects. Because soil is a complex mixture of organic and inorganic materials, with a micro-flora and micro-fauna that vary with the material from which it is comprised, the climate in which it occurs, and the plants and animals that occupy its surface, very few problems in soils are capable of a unidisciplinary solution. Consequently, although the Division operates through seven Sections, Chemistry, Microbiology, Micromorphology, Mineralogy, Pedology, Physics and Zoology, several of the programmes involve work in more than one Section.

The headquarters laboratory is in Adelaide, with smaller groups in regional laboratories in Brisbane, Canberra, Hobart, Perth and Townsville. About half the staff are in the Adelaide laboratories, which hold the major groups for all sections except Micromorphology, which is at the Canberra laboratory. Not all the regional laboratories have each Section represented but scientists from Pedology and Chemistry Sections are located at all of them. Soil physicists and hydrologists are located at Brisbane, Canberra and Perth; the Mineralogy Section has a large group in Adelaide and a smaller unit in Brisbane.

Division of Horticultural Research

The work of this Division is concerned primarily with research on the perennial horticultural crops of the temperate zone, especially grapevines.

For both drying and wine grapes it aims to provide better planting material through breeding new hybrids, selecting and producing virus-free and genetically superior clones of established varieties, and through testing newly imported varieties and rootstocks, in particular those resistant to nematodes. Research in spacing, trellising, pruning, and mechanical harvesting looks for better returns from vineyard operation, and investigation into the technology of grape drying helps towards the marketing of dried fruit. These studies, together with research in the ecology of apple and citrus orchards, take place at the Merbein (Victoria) laboratory of the Division. A Tasmanian group at Hobart studies the nutrition and physiological disorders of apples.

At the Division's headquarters in Adelaide, research in plant physiology and biochemistry provides a knowledge and understanding of economic crops used in the field. Problems of photosynthesis, plant hormones, flowering, ripening and abscission of fruit, and of plant parasitic nematodes are being studied.

Division of Mathematical Statistics

This Division has its headquarters in Adelaide but most of its officers are stationed in other CSIRO laboratories throughout Australia. These officers conduct research in applied statistics and act as consultants in the design of field and laboratory experiments and in the analysis and interpretation of experimental results. Some of the Divisional headquarters staff carry out these functions and the remainder are engaged on fundamental research in mathematical statistics on a broad front including distribution theory, multivariate analysis, scientific inference and experimental design and applied research in climatology, meteorology, agriculture and large scale agricultural and climatological surveys.

DEFENCE STANDARDS LABORATORIES

A South Australian Branch of the Defence Standards Laboratories (DSL) of the Department of Supply is located at Woodville North where it occupies a number of buildings in that portion of the wartime Finsbury Ammunition Factory which has been retained by the Department of Supply for joint use by DSL and the Stores and Transport Branch.

The laboratory which was established in 1947 provides a scientific service to all branches of the Defence Services. After meeting defence requirements the facilities may also be made available on a commercial basis to non-defence government departments and to private industry provided such facilities are not available elsewhere in the State.

The laboratory works principally in the fields of chemistry, physics and metallurgy, and it has a programme of long term defence research projects which are related to these disciplines. In addition it has excellent facilities for standards and calibration work and for providing a consulting and testing service in the fields mentioned.

The laboratory has been formally appointed a Verifying Authority under the *Weights and Measures (National Standards) Act 1960-1966* in ten fields of precision measurement. In these particular fields, the laboratory can verify and re-verify subsidiary standards for use by other laboratories in the State in accordance with the requirements of the *Weights and Measures Act*.

The major research projects of the establishment are concerned with the development of defence and commercial applications for electrophotography and electroradiography and with fundamental aspects of photoconductivity in order to provide basic information for use in establishing and improving electrophotographic processes.

A new process for the liquid development of electrophotographic images was invented at the laboratory in 1953 and world-wide patents have been taken out to cover this and many other related processes which have been established since that time. These new processes have found numerous defence applications including medical and industrial radiography, cartography, the printing of aerial photographs, the high density recording of electrical signals and facsimile transmission. In addition the DSL liquid development process has had wide commercial application in office copying equipment and in colour printing and proofing. At the

present time the royalties paid to the Commonwealth by overseas licensees of the electrophotography patents amount to approximately \$1 million each year.

The laboratory at the present time is also undertaking research in field ion microscopy, X-ray scattering by metal single crystals and brittle fracture of refractory metals.

At the end of 1971 the total staff of the laboratory was sixty-eight including twenty research scientists and experimental officers.

INSTITUTE OF MEDICAL AND VETERINARY SCIENCE

The Institute of Medical and Veterinary Science was established in 1937 under the Institute of Medical and Veterinary Science Act, 1937 to incorporate the functions of the former Adelaide Hospital Laboratory.

The Director of the Institute is the chief executive officer of the council which is responsible to the Minister of Health.

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	1966-67	1967-68	1968-69	1969-70	1970-71
Staff at end of year:					
Graduate	66	73	72	85	91
Other	213	246	260	305	366
Tests performed	721,993	860,910	933,083	1,133,123	1,470,474
Revenue:			Dollars		
State Government grant	836,217	1,000,000	913,955	1,195,976	1,371,130
Fees for laboratory tests	299,909	355,278	434,837	484,608	1,120,341
Other	52,897	56,899	94,841	100,431	153,894
Total	1,189,023	1,412,177	1,443,633	1,781,015	2,645,365
Expenditure:					
Salaries and wages	821,533	925,192	1,077,098	1,314,923	1,764,556
Other	294,847	337,631	373,409	503,527	682,126
Total	1,116,380	1,262,823	1,450,507	1,818,450	2,446,682

The Institute operates a Division of Nuclear Medicine in the Royal Adelaide Hospital which undertakes a variety of diagnostic tests using radio-active isotopes to indicate the anatomical and physiological state of different parts of the human body. To meet the growing needs for blood transfusion and services in rural areas Regional Laboratories, staffed and administered by the Institute, have been established in six towns.

The increase in volume of work is reflected in the increased number of tests performed: 27,000 in 1938-39; 175,528 in 1952-53; and 1,470,474 in 1970-71. Sections of the Institute that have recently grown in size and importance are the

Food Hygiene Laboratory, the Salmonella Reference Laboratory, the Tuberculosis Laboratory and a large, centralised, automated laboratory. To meet these demands a new wing, which doubles the laboratory space available, has been completed.

WAITE AGRICULTURAL RESEARCH INSTITUTE

The Waite Agricultural Research Institute was established, within the University of Adelaide, in 1924.

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 fertiliser 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; nutrition of the honey bee; and the biochemistry of nitrogen fixation.

Further details relating to the Waite Institute may be found on pages 181-2.

WEAPONS RESEARCH ESTABLISHMENT

The Weapons Research Establishment, situated at Salisbury, is the largest of three organisations within the Research and Development Branch of the Department of Supply. The Research and Development Branch, with its headquarters in Canberra, is responsible for research and scientific development in relation to defence, including the operations of the Joint United Kingdom-Australia Weapons Research Project. The Weapons Research Establishment is concerned with research, development and testing of guided missiles, experimental research in the upper atmosphere and research and development in areas related to defence including aerodynamics, propulsion, electronics, computing, systems analysis and operational research.

The headquarters of the Weapons Research Establishment occupies an area of 4.5 square miles at Salisbury. Facilities within the area have been provided for branches of British firms which have contracted with the British Ministry of Technology to develop weapons systems or components.

The establishment comprises four main sections or wings, namely, Trials Wing, Applied Physics Wing, Weapons Research and Development Wing and Engineering Wing. Trials Wing is concerned with the operation, development, and instrumentation of the Woomera Range and the planning, execution and assessment of trials there. Applied Physics Wing is responsible for Australian defence research programmes in the fields of electronics, optics, systems analysis, radio and optical propagation, radar, lasers, infra-red, visual surveillance and electronic warfare. Weapons Research and Development Wing supports Australian defence and development programmes in the fields of aero-ballistics, rocket propulsion, weapon systems and marine physics. Engineering Wing provides engineering support including specification, manufacture, installation and maintenance of equipment; design and development in electronic, communications and mechanical engineering fields; and library services in technical publications and associated activities.

Testing ranges have been established at Woomera, which is approximately 300 miles north-west of Adelaide. A township, together with modern amenities including 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. Woomera has a population of about 4,500

including dependants and support personnel. The total strength of the Weapons Research Establishment including staff at Salisbury and Woomera was about 4,500 at September 1971.

Edinburgh Airfield which adjoins Weapons Research Establishment at Salisbury is the headquarters of the RAAF in South Australia and is a fully operational RAAF base. When necessary, aircraft associated with joint project or other trials are operated from this base.

A special article on the Weapons Research Establishment together with maps and diagrams was included on pages 184-92 of the *South Australian Year Book* 1969.

United States Space Projects

As a result of an agreement between the Australian and United States Governments a Defence Space Communication facility has been constructed near Woomera. A deep space tracking station, part of the U.S. National Aeronautics and Space Agency global network, has been in operation for some years at Island Lagoan, Woomera.

6.4 CULTURE AND RECREATION

LIBRARIES

The State Library

The State 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 organised in three divisions; Reference Services, Lending Services and Technical Services.

The Library has a representative basic collection of nineteenth and twentieth 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 Aborigines, River Murray shipping, sailing ships, and nineteenth 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 and 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, except for rare, irreplaceable volumes, the books have been available for loan. Over 3,000 periodicals are taken annually, and the newspaper reading room files 340 foreign and local newspapers; in 1970-71, 54,400 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 15,400 enquiries in 1970-71, 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. *Pinpointer*, a monthly index of popular Australian periodicals and *Index to Australian Book Reviews* are 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 1971 there was 20,000 feet of occupied shelf space in the Archives. In 1970-71, 5,600 enquiries were received for which 19,300 issues (consisting of maps, views, documents or printed sources) were produced. A journal, *South Australiana*, is published twice a year.

The Children's Library was established in 1915 and is believed to be the oldest in Australia. The carefully selected books include about 6,000 rare and old books in a special study collection. School classes visit the Library, and talks are given to groups of parents and to various societies.

People living outside the Adelaide metropolitan area are served by the Country Lending Service which began lending books in 1938. This service has 13,000 active borrowers, of whom 6,600 are children. During 1970-71, 6,200 books were despatched in boxes to schools. Books are also lent to associations, clubs and gaols.

In 1946 the Adelaide Lending Service was opened to serve metropolitan readers. Books were lent to 45,400 borrowers in 1970-71. There are special collections of books in foreign languages and sets of plays are lent to play-reading and acting groups.

Another active section is the Youth Lending Service established in 1957 catering for the needs of young people between the ages of thirteen and eighteen years. The Service was used by over 19,500 young people in 1970-71. The collection, besides general literature, includes publications dealing with hobbies and careers of special interest to adolescents.

State Library of South Australia

Year	Reference Library	Children's Library	Country Lending Service (a)	Adelaide Lending Service	Youth Lending Service	Total
VOLUMES HELD						
At 30 June:						
1967.....	243,398	38,073	328,168	47,046	15,535	672,220
1968.....	250,721	38,937	360,965	48,266	15,292	714,181
1969.....	259,103	39,404	399,972	51,052	15,740	765,271
1970.....	268,899	40,756	437,250	53,687	16,132	816,724
1971.....	281,955	45,742	520,245	58,781	17,006	923,729
VOLUMES LENT						
To 30 June:						
1967.....	89,639	209,245	219,133	283,563	99,304	900,884
1968.....	107,662	261,248	199,951	316,575	111,513	996,949
1969.....	104,410	230,597	178,884	300,058	99,465	913,414
1970.....	100,445	202,506	157,130	308,261	85,692	854,034
1971.....	100,940	187,563	156,339	330,077	88,745	863,664

(a) Volumes held include volumes on loan to local public libraries. In 1970-71 such loans amounted to 274,735. These have not been included in volumes lent.

The Technical Services Division, besides the cataloguing and accessions sections, includes a bindery which employs more than fifty 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. Over 150 works have now been published. Long playing records have also been issued. Other publications include several series of *Occasional Papers* in various subject fields, and an annual *Miscellanea Musicologica*, published in association with the University of Adelaide.

Local Public Libraries

Local public libraries financed by municipal authorities are subsidised under the Libraries (Subsidies) Act, 1955-1958. With general oversight and planning by the Libraries Board, subsidies (\$226,151 in 1970-71) are paid on a dollar for dollar basis. Thirty-one libraries, operated by twenty-two local government authorities, serving over half of the population of the State had been established by June 1971. All book stocks are interchangeable with a central pool maintained by the Libraries Board.

Local Public Libraries, South Australia

Year	Libraries at end of year	Registered Readers	Books Lent	Stocks at End of Year
1966-67	28	111,205	1,808,768	195,684
1967-68	29	143,147	1,942,494	228,872
1968-69	29	143,963	2,103,129	255,934
1969-70	31	139,458	2,072,581	280,595
1970-71	31	145,166	2,083,872	274,735

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 had 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 government grant each year, is controlled by a committee elected by subscribers. At 30 June 1971 the Library contained over 85,000 volumes, and subscribers during the year 1970-71 numbered 2,000.

Institute Libraries

Several country and suburban centres had formed institutes in the early 1850s. The first legislation on libraries was passed in the 1855-56 session of Parliament and resulted in the establishment of the South Australian Institute. In 1861, a new building was erected on the corner of North Terrace and Kintore Avenue for the Institute, which in 1884 was divided into two organisations, the Public Library and the Adelaide Circulating Library.

Institute libraries, which are situated in metropolitan and country areas throughout the State, are largely dependent on members subscriptions and the income from the Institute hall, but they also receive a government subsidy and about two-thirds of them receive support in varying degrees 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 conduct of Institutes is regulated by The Libraries and Institutes Act, 1939-1967.

The borrowing facilities of Institutes are available to subscribers and the general public has access to, and the use of, reading facilities in the library. Many Institute libraries allow children to borrow books from the library without charge.

A report on the future role of the Institutes Association and the Institutes in South Australia, submitted to the Government in 1970, is under consideration.

Institute Libraries, South Australia At 31 December

Particulars	1967	1968	1969	1970	1971
Number of institutes	199	193	193	190	186
Subscribers	22,658	21,422	(a) 27,271	33,815	43,250
Number of volumes	755,877	769,656	759,524	762,263	761,560
Volumes circulated during year ..	1,629,300	1,478,375	1,580,443	1,703,295	1,736,245

(a) From 1969 includes also other users of the libraries.

Other Libraries

Particulars relating to the Barr Smith Library at the University of Adelaide (564,000 volumes, including over 47,000 microformes, at 30 April 1971) and the Flinders University Library (169,200 volumes at 30 April 1971) are given on pages 181 and 185 respectively. Other libraries include those of the Royal Society of South Australia (approximately 27,000 volumes), the South Australian Branch of the Royal Geographical Society of Australasia (approximately 16,000 volumes) and the Parliamentary Library (about 60,000 volumes).

MUSEUMS

The South Australian Museum

Founded in 1856 as part of the South Australian Institute the South Australian Museum became a separate institution with its own board in 1940 under the provisions of The Museum Act, 1939. The Museum's first permanent building, the West Wing, was opened in 1895 and the East Wing was added in 1912-15. Since then the Museum has expanded to occupy the historically and architecturally significant buildings of the Old Police Barracks. Similar to other major Museums in Australia and overseas, it makes and preserves collections, carries out research and acts as an education centre for primary, secondary and tertiary students and for the public.

Although no new buildings have been constructed since 1915 the staff of the South Australian Museum now numbers fifty-six with fifteen professional research workers responsible for the care of the collections and for carrying out research upon them.

Several of the collections of specimens and data are outstanding. The collection of Australian ethnological material is of world renown while those of New Guinea ethnological objects, insects and southern Australian animals are excellent.

The research of the scientific staff is primarily taxonomic, involving the naming, identification and classification of animals; however, considerable stress is laid on their ecology, and inter-relationships with the environment. With the current interest in, and need for knowledge concerning conservation and environmental deterioration, this work is of increasing importance. Results of the research work of staff members are published in the *Records of the South Australian Museum* and in scientific journals throughout the world. The Museum's scientific Library houses some 30,000 volumes.

Advice, based on their research results and on their specialised knowledge, is given by the scientific staff to many other research institutions and government departments. The anthropologists and archaeologists are, in addition to their research and other responsibilities, called upon to assist with the preservation of Aboriginal and historic relics (see pages 207-8).

The Museum has a general Information Service dealing with about 8,000 inquiries annually and approximately 25,000 school children pass through the Education Section each year.

Public entertainment and instruction includes the presentation of displays in galleries covering nearly 40,000 square feet of which about 10,000 square feet are being currently redesigned. Education booklets on a variety of subjects, some written by Museum staff and published by the Museum, are sold to visitors at a nominal price. Cards are also published and are sold throughout Australia.

The scientific work of the Museum is supported by that of a number of distinguished scientists who are appointed as honorary associates, by the Cave Exploration Group of South Australia and by the general public. In particular the Friends of the South Australian Museum have given considerable support since their foundation in 1964.

Other Museums

A number of historic residences serve as museums. In 1961 the 'Old Government House' at Belair was refurnished 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 historic house and Captain Charles Sturt's original home at Grange is open to the public. Items of historical interest are exhibited in old buildings in many of the early established country towns.

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. It is administered by a council and is financed by gifts, legacies and subscriptions. There are thirty-five branches of the Trust in South Australia.

The Trust encourages the preservation and maintenance for the people of South Australia of lands and buildings of beauty, historic, scientific, artistic or architectural interest and the preservation of natural features in land and the protection of flora and fauna.

Many early Adelaide buildings of architectural and historic merit are given one of the four following classifications by the Trust:

- A. buildings having great historic significance or high architectural qualities, the preservation of which is essential to the heritage of the State;
- B. buildings highly significant either architecturally or historically, the preservation of which is strongly recommended;
- C. buildings of considerable interest of which preservation is to be encouraged;
- D. buildings of sufficient interest to be recorded in accordance with the Australia-wide classification common to all Trusts.

This classification criterion is adhered to by all Trusts throughout Australia.

One of the National Trust properties is Beaumont House, Beaumont, built by Bishop Short, the first Bishop of the Diocese of Adelaide. 'Willabalangaloo' Berri is a beautiful property of natural land preserved by the Trust which also protects the native flora and fauna in properties such as 'Waliparinga' at Eden Hills and 'Roachdale' at Kersbrook. An area of great scientific interest to the world at large is the G. S. Sandison Reserve at Hallett Cove with its glacial pavements.

In 1963, the paddle steamer *Marion* was purchased and refitted by the Trust and now floats in the old graving dock at Mannum where it is open for inspection. In 1969, the Trust restored the old Willunga Court House and Police Station which were built in the middle of the nineteenth century. During 1970, the Robe Customs House at Robe was fully restored by the Trust. In 1971, the Trust was instrumental in persuading the State Government to preserve the ANZ Bank building in King William Street from demolition. This bank is the last commercial building in Adelaide with the Trust's 'A' classification.

At 31 December 1971, the Trust controlled some thirty reserves totalling 2,263 acres together with some twenty folk museums and restored buildings in various country centres.

Historic Ayers House with its coachhouse at 288 North Terrace, Adelaide, is the present home of the National Trust of South Australia.

Aboriginal and Historic Relics

The protection of Aboriginal relics and of traces of the early settlement of the State is governed by the Aboriginal and Historic Relics Preservation Act, 1965. The administration of this Act is the responsibility of the Minister of Environment and Conservation and the Director of the South Australian Museum as the *ex officio* Protector of Relics.

Remnants of Aboriginal culture such as prehistoric camp-sites, ceremonial grounds, cave paintings, rock engravings and canoe trees are to be found in various parts of the State. Although many such relics were destroyed following European settlement several remain which are of great scientific and tourist interest. Similarly there are many interesting examples of early European settlement, all of which are protected by the provisions of the Act.

A particular relic or series of relics may be protected by the Governor declaring the area in which it is found either a Prohibited Area or a Historic Reserve. Inspectors and Wardens are appointed to safeguard such areas and the Protector of Relics maintains a complete register of all prohibited areas and reserves, and also of unproclaimed known occurrences of relics.

A special article on Aboriginal relics together with a list of declared areas as at 30 June 1969 was included on pages 201-8 of the *South Australian Year Book* 1969.

Areas declared between 1 July 1969 and 30 June 1970 were included on page 212 of the *South Australian Year Book* 1970 and those declared between 1 July 1970 and 31 March 1971 on page 207 of the *South Australian Year Book* 1971.

Areas declared between 31 March 1971 and 30 November 1971 were as follows:

Mount Harvey Stone Arrangement <i>Historic Reserve</i>	Arabunna stone arrangement representing the body of Tjindulbi, a legendary lizard character.
Overland Corner Aboriginal Ochre and Flint Mine <i>Historic Reserve</i>	The only known source of highly valued red ochre and flint which was widely traded throughout the Murray Region.
Strangway Springs Historic Buildings <i>Historic Reserve</i>	Site of historic Overland Telegraph repeater station.
Old Peake Historic Buildings <i>Historic Reserve</i>	Depot for construction of Overland Telegraph line and site of former repeater station and copper mine.
Yappala Hills Cave Paintings Site <i>Historic Reserve</i>	Well preserved group of Aboriginal cave paintings executed in manganese and pipe clay.
Ibunga Stone Arrangement <i>Historic Reserve</i>	Aranda stone arrangement—snake dreaming site.
Miners' Dug-outs, Burra <i>Historic Reserve</i>	Reconstructed creek bank dwellings used by Burra miners during operations of copper mine.
Sacred Canyon <i>Historic Reserve</i>	Series of rock intaglios and ochre paintings.
Red Gorge Rock Engravings <i>Historic Reserve</i>	Outstanding series of rock intaglios including unique human and animal representation.
Hughes Pump House and Chimney, Moonta <i>Historic Reserve</i>	Relics of the former copper mining industry at Moonta. The buildings of Cornish architecture are now the property of the National Trust.
Customs House, Robe <i>Historic Reserve</i>	Historic customs buildings which served Robe as port of entry to Victoria during gold-rush period.
Wepowie Creek Rock Engravings <i>Historic Reserve</i>	Site of rock intaglios believed to date back many thousands of years.

ART GALLERIES

The Art Gallery of South Australia

The National Gallery of South Australia was founded in 1881 as a part of The South Australian Institute which in 1884 became The Public Library, Museum and Art Gallery of South Australia. This institution was dissolved by

Act of Parliament in 1940, and the Gallery became a government department under The Art Gallery Board. The name was changed to The Art Gallery of South Australia in 1968. The first portion of the present building, The Elder Wing, was completed in 1900, the Melrose Wing on the western side and the facade were added in 1936, and in 1962 a three storey air-conditioned wing was built at the northern end.

The collections are broad in scope and include a representative selection of Australian and European paintings and sculpture, a large collection of prints, drawings, silver, glass and ceramics including an important section devoted to South-East Asia, furniture, arms and armour and an important collection of coins and medals, and in addition the South Australian Historical Museum incorporates early South Australian relics and paintings.

In addition to the permanent collections, the Gallery has a full programme of visiting international and interstate exhibitions. With the establishment of The Adelaide Festival of Arts in 1960, the Gallery has participated as the organiser and venue of all the official art exhibitions brought to South Australia for this important cultural activity.

The Gallery has received many bequests, the Elder, Morgan Thomas, David Murray, Ragless, Boxall, Mortlock and Kolhagen bequests together totalling over \$252,000. Money has also been bequeathed for the Maude Vizard-Wholohan Prize awarded alternatively for a landscape or a figure subject in oils; there are additional Maude Vizard-Wholohan prizes for watercolour, print and sculpture from time to time. In addition the State Government makes an annual grant for the purchase of works of art.

The staff of professional and technical officers undertake the research and development, care and conservation of the collections and the preparation of exhibits for public education and enjoyment. Public enquiries for authentication of works of art and guidance in conservation are dealt with.

The Education Services have been extended, a regular programme of film evenings, lectures and demonstrations is given and the Travelling Art Exhibition, a fully equipped van with illuminated portable screens, accompanied by a driver and a lecturer, tours country centres during school term. In 1971, fifty-eight centres were visited and the exhibition was viewed by 20,000 adults and children. A Reproduction Lending Service is also conducted for the benefit of suburban and country schools and government departments.

A society, The Friends of The Art Gallery of South Australia, was founded in 1969 for people interested in the fine arts and to create a body of people who would be informed about the activities of the Gallery. Membership stands at 1,350 and falls into four categories—Institutional, Family, Ordinary and Junior.

Other Galleries

South Australia's first Regional gallery was opened at Naracoorte in 1968. The Royal South Australian Society of Arts, founded in 1859, has conducted exhibitions and maintained an exhibition gallery almost continuously since that date. The Contemporary Art Society, S.A. Branch, also has its own gallery.

Beginning with the Citizens Art Group in 1954 and The Advertiser open air exhibition in 1955, there has been a growing interest in outdoor exhibitions for the display of local art. The 1971 Advertiser exhibition contained 1,178 exhibits submitted by 1,014 entrants. In addition commercial galleries in the city and country present exhibitions throughout the year.

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 ten 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 the Musica Viva Society of Australia.

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 of South Australia. 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 thirty orchestral subscription concerts and twelve youth orchestral subscription concerts, usually featuring overseas conductors and/or soloists. The Australian Broadcasting Commission (ABC) also presents a recital series of six performances by overseas artists. In addition there are at least six free orchestral concerts annually and frequently a series of summer concerts.

During 1971 the Orchestra gave twenty-four free concerts for schoolchildren in the metropolitan area. Broken Hill had its own ABC subscription series of four concerts; one by the South Australian Symphony Orchestra and three by international recital artists. In addition the Symphony Orchestra toured the country areas and during 1971 visited six other centres giving at least one free concert for schoolchildren in each centre in addition to a public concert.

The Orchestra also presented a Summer Series of three concerts in Adelaide and three choral concerts with the Adelaide Philharmonic Choir.

The Elder Conservatorium of Music

The Elder Conservatorium of Music at the University of Adelaide 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.

Particulars relating to the Elder Conservatorium at the University of Adelaide are given on page 182.

DRAMA

Adelaide has one fully professional theatre, Her Majesty's, which is able to stage plays, opera and ballet and with a seating capacity of 1,150 usually stages overseas or interstate productions. Other theatres in Adelaide are 'intimate' and usually stage local productions although at times, especially during the Festival of Arts, they present interstate or overseas productions.

There are over twenty amateur theatrical groups operating in South Australia. The Adelaide Repertory Theatre Inc., which claims the largest membership (approximately 2,000) 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 numbers of these combine annually for the South East Drama Festival and the Yorke Peninsula Drama Festival.

The Australian Elizabethan Theatre Trust, as well as presenting its own productions in Adelaide and certain country centres, gives some financial and other support to non-professional productions.

The Arts Council of Australia (S.A. Division) arranges some country tours by theatre groups while the adult education centres of the South Australian Education Department provide accommodation and some teaching for several amateur theatrical groups in country towns.

THE ADELAIDE FESTIVAL OF ARTS

The idea of an arts festival was conceived late in 1958 by a group of Adelaide citizens, whose objective was a festival on international lines following generally the example of Edinburgh. Early in 1959 an administrative body was established supported by twelve volunteer committees—this reliance on voluntary effort has since remained as a feature of the festival organisation.

Although grants were made initially by the State and Commonwealth Governments and later by the Adelaide City Council, financing the Festival of Arts was established on a community basis with the support of business firms and individuals as guarantors for specified amounts. This has since been augmented by a Friends of the Festival plan under which private individuals donate a small fixed sum in return for benefits such as concessions on admission prices and membership of the Festival Club.

The first festival, held in March 1960 and extending over fourteen days, had total attendances exceeding 300,000. It covered almost every aspect of the arts, with seventy-four performances for adult audiences as well as an element of popular entertainment out of doors.

Subsequent festivals held biennially benefited from the longer planning periods available, the establishment of a small permanent secretariat and international promotion and publicity programmes. Programmes expanded and many ancillary activities were stimulated while attendances continued to rise with noticeable increases in the numbers from interstate and overseas.

The seven Festivals to date, have presented a blend of international and Australian performers. The programmes have been prepared with the co-operation and contributions of the Australian Broadcasting Commission, the Australian Elizabethan Theatre Trust, the Arts Council of Australia, the Musica Viva Society, the University of Adelaide, the Art Gallery of South Australia and many similar organisations.

There have been many exhibitions, several from overseas, shown at the Art Gallery of South Australia as part of the Festival's visual arts presentations. Outdoor activities such as National Flower Day and free entertainment in Elder Park have added much to the colour and atmosphere of the Festival.

The most recent Festival, held in March 1972, had the widest scope of attractions of all Festivals to date. An innovation was the special Youth Week attraction, Expression '72, which offered seminars, readings, workshops and entertainment for age groups in the range seven years to thirty years.

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 1942-1971*. 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 31 December 1971 were \$6.50 for a listener's licence, \$14.00 for a viewer's licence or \$20.00 for a combined licence. 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

There are at present five metropolitan and eleven 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 in the following table, all call signs in South Australia being prefixed by the number '5'.

**Radio Stations, South Australia
At 31 December 1971**

National Stations		Commercial Stations	
Call Sign	Location	Call Sign	Location
5AN	Adelaide	5AD	Adelaide
5CL	Adelaide	5DN	Adelaide
5CK	Port Pirie	5KA	Adelaide
5LC	Leigh Creek	5AU	Port Augusta
5LN	Port Lincoln	5MU	Murray Bridge
5MG	Mount Gambier	5PI	Crystal Brook
5MV	Renmark	5RM	Renmark
5PA	Penola	5SE	Mount Gambier
5WM	Woomera		

Adelaide's three commercial stations broadcast continuously, while all other stations operated between 121 and 128 hours a week at June 1971.

Since 1963, the Australian Broadcasting Control Board has made surveys of all metropolitan programmes twice yearly to obtain information as to the general availability of programmes in each city. The programme analysis covers the period of transmission between 6.00 a.m. and 10.30 p.m.

Results of the surveys indicate that commercial stations broadcast mainly light entertainment in contrast to the national stations which, being independent of advertising revenue, provide a much wider variety of programmes.

The distribution of types of programme matter is set out in the following table. Details for South Australia are not separately available but closely approximate those for the Australian distribution.

Broadcasting Programmes by Categories, Australia 1970-71
All Metropolitan Stations

Category	Commercial	National	All Stations
	Per cent		
Entertainment:			
Light and popular music	49.8	25.6	42.2
Incidental matter	7.2	5.8	6.8
Variety	1.2	1.1	1.2
Drama	0.2	3.2	1.2
The arts	0.2	21.3	6.8
Information and Services:			
News	10.5	11.4	10.8
Sport	6.5	3.9	5.6
Information	1.4	7.2	3.3
Religious	1.5	1.8	1.5
Social and political	4.3	12.9	7.0
Family	1.7	0.4	1.3
Children's	0.1	2.1	0.7
Educational	(a)	3.3	1.1
Advertisements	15.4	—	10.5
Total	100.0	100.0	100.0

(a) Less than 0.05 per cent.

Details of broadcast listeners' licences current at 30 June in each of the years 1967 to 1971 are given below.

Broadcast Listeners' Licences, South Australia^(a)
(Current at 30 June)

Type of Licence	1967	1968	1969	1970	1971
Ordinary	238,872	249,305	254,409	255,993	259,650
Hirers' and short-term hirers'	966	910	1,169	1,597	3,090
Pensioner	36,424	37,607	39,898	42,246	44,816
Other	1,807	2,229	2,401	2,683	2,929
Total	278,069	290,051	297,877	302,519	310,485

(a) Includes combined (broadcast and television) licences—241,384 at 30 June 1971. Includes Northern Territory (5,193 licences at 30 June 1971).

Television

Television stations have been established in South Australia in accordance with the Australian Broadcasting Control Board's planned development of television services in Australia.

The following table shows the stations in service and the dates on which they commenced operations.

**Television Stations, South Australia
At 31 December 1971**

Call Sign and Channel	Location	Date Service Commenced
NATIONAL STATIONS		
ABS—2	Adelaide	March 1960
ABNS—1	Port Pirie	April 1965
ABGS—1	Mount Gambier	December 1965
ABRS—3	Loxton	January 1971
COMMERCIAL STATIONS		
NWS—9	Adelaide	September 1959
ADS—7	Adelaide	October 1959
SAS—10	Adelaide	July 1965
SES—8	Mount Gambier	March 1966
GTS—4	Port Pirie	March 1968

In the next stage of development low power national television stations are to be established at Ceduna and Woomera.

As the early stations became established their transmitting time was increased until in December 1963 the two commercial stations were transmitting in excess of seventy-seven hours a week and the national station sixty-seven hours. Early in 1964 there was a substantial reduction in hours of service but by December 1971 the hours of service for the four Adelaide stations varied between 82 and 103 hours per week.

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. The Australian Broadcasting Control Board's analysis of television programmes is derived from data obtained directly from commercial and national stations and is calculated on the actual duration of the programmes and not, as formerly, on the scheduled duration as shown in programme journals. The time occupied by advertising is not dissected in the analysis but a separate study of advertising time based on data supplied in audience measurement survey reports carried out in Melbourne provides some indication of the proportion of time occupied by advertisements; in 1970-71 this was estimated at 15.8 per cent of the total televising time of commercial stations.

Results of surveys conducted by the Broadcasting Control Board in 1970-71 indicating the proportions of total broadcasting time (other than advertising) for various types of programmes are given in the following table. Details for South Australia are not separately available but closely approximate those for Australia.

Television Programmes: Categories, Australia, 1970-71

Category	Metropolitan Stations			Country Stations, Commercial
	Commercial	National	All Stations	
	Per cent			
Drama:				
Adventure	12.0	6.1	10.7	12.4
Domestic and comedy	15.4	13.7	15.0	17.1
Other	25.1	11.5	22.0	28.2
Light entertainment:				
Cartoons	6.2	4.7	5.9	4.9
Personality programmes	5.6	0.4	4.4	5.3
Variety	3.7	2.5	3.4	3.5
Other	4.9	3.0	4.4	6.4
Sport	6.0	9.6	6.8	5.4
News	4.9	6.9	5.4	6.2
Children	9.4	11.0	9.7	4.1
Family	2.5	1.9	2.3	1.7
Information	1.6	3.4	2.0	2.2
Current affairs and political	1.3	8.4	3.0	0.9
Religious	0.9	2.0	1.2	1.6
The arts	(a)	2.0	0.5	0.1
Education	0.5	12.9	3.3	(a)
Total	100.0	100.0	100.0	100.0

(a) Less than 0.05 per cent.

Details of television viewer's licences for the five years ending June 1971 are given in the next table.

Television Viewers Licences, South Australia^(a)
(Current at 30 June)

Class of Licence	1967	1968	1969	1970	1971
Ordinary	195,158	203,497	209,709	213,978	218,958
Hirers' and short-term hirers' ...	32,199	35,184	37,629	41,357	43,904
Pensioner	24,980	27,487	30,580	33,847	37,003
Other	2,167	2,427	2,502	3,177	3,387
Total	254,504	268,595	280,420	292,359	303,252

(a) Includes combined (broadcast and television) licences—241,384 at 30 June 1971.

THE PRESS

The State's first newspaper, *The South Australian Gazette & Colonial Register*, was first printed in London in 1836, six months before colonisation. 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 twelve 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 twenty years several more daily newspapers were introduced, and for many years there were two morning and two evening papers daily. However, since the mid-1920s 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* and absorbed *The Register* in 1931. It is distributed throughout the State, with about 30 per cent of its circulation in country districts.

The News, published each evening except Sunday, was introduced in 1923 replacing two evening newspapers, *The Express & Telegraph* and *The Journal*, which traced back their origins to the 1860s. Almost 80 per cent of sales of *The News* are in Adelaide and suburbs.

The Sunday Mail, printed on Saturday evenings and distributed mainly on Sunday mornings, first appeared under this name in 1955 following a merger between *The Mail*, first printed in 1912 and the *Sunday Advertiser*, which was introduced in 1953. About 27 per cent of sales of the *Sunday Mail* are in country districts.

In addition *The Chronicle* and the *Stock Journal* are published weekly. *The Chronicle*, established as a country newspaper in 1858, has the largest circulation (about 20,000) of any weekly agricultural newspaper in South Australia. *The Stock Journal*, previously the *Adelaide Stock and Station Journal*, was established in 1904 and has a circulation of 18,500. *The Stock Journal* provides up-to-date information on stock and wool markets and the technical aspects of farming and property management.

To support these major State-wide newspapers, a strong provincial press has been built up. There are at present thirty-one country newspapers operating in the State with a combined circulation of over 100,000. Most of these are published weekly, although two appear bi-weekly and three tri-weekly. Of those still existing, *The Border Watch* (Mount Gambier) in 1861 and *The Bunyip* (Gawler) in 1863 were first to appear. Earlier publications are, however, recorded; *The Port Lincoln Herald* for example was being printed in the early 1840s. There are also district papers containing items of local interest circulated in a number of suburbs of Adelaide.

PARKS AND GARDENS

The Adelaide Botanic Garden

The Adelaide Botanic Garden, occupying about 45 acres of the parklands east of the Royal Adelaide Hospital, was established in 1855 and was opened to the public in 1857. An area of about 75 acres north of the Garden was acquired in 1874 and this area, known as Botanic Park, has been developed as an arboretum.

Since 1860 powers of management have been vested in a Board of Governors of eight members who serve for a period of four years but who may be re-elected for further terms.

The Garden contains an extensive collection of about 6,000 species of plants mainly of tropical and subtropical origin. Important features are the collections of native plants from dryland regions, cacti and succulents, the glass ground, glass house displays and the Wisteria arbor. The Museum of Economic Botany, opened in 1879, houses a comprehensive carpological collection and displays of plant products.

In 1954 the State Herbarium was re-established within the Botanic Garden Department and a new herbarium building was completed and occupied in 1965. At present it contains about 250,000 specimens. State-wide advisory services are available on all matters relating to ornamental horticulture.

Experimental tree plantations have been established at Giles Corner, Kulpara, Lameroo, Stansbury and Meningie. Mount Lofty Botanic Garden of approximately 200 acres was established in 1960 and is expected to be opened to the public in the mid-1970s.

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 1970-71 a total of 112 species and varieties of mammals, including a large collection of marsupials, were exhibited. 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 240 species and varieties of Australian and exotic birds having been exhibited during 1970-71.

The many mammals, reptiles, and birds are displayed in cages and enclosures; the enclosures for some animals are moated yards freely open to public view.

The revenue necessary for maintaining and developing the gardens is obtained through an annual State Government grant, from gate receipts and sundry sources.

During 1970-71 about 364,000 persons visited the Zoological Gardens.

National Parks and National Parks Reserves

The National Parks Act, 1966 provides for the setting aside of certain lands as national parks and for the administration of such areas by the National Parks Commission.

At 31 December 1971 land vested in the National Parks Commission covered 8,584,000 acres and consisted of 95 separate areas.

Two of these areas, Belair National Park and Para Wirra National Park are extensively developed with recreational facilities such as tennis courts and ovals, while a third, Cleland National Park, contains a large native fauna reserve which is open to the public.

Limited development only has been permitted in all other parks to this time and they are retained where possible for the protection of native flora, fauna and areas of scenic value.

National Pleasure Resorts

The South Australian Government has designated twenty-one 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 Naracoorte and Tantanoola Caves 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, and accommodation, including a modern motel, has been provided for tourists at Wilpena Pound in the Flinders Ranges.

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 30 June 1971 there were 318 acres of gardens. Plantings during the year 1970-71 included 767 trees and 1,110 shrubs.

Most suburban and country local government authorities maintain parks and gardens within their areas.

PHYSICAL FITNESS

The National Fitness Movement began in Australia when the Commonwealth Government made funds available to each State for the purpose of setting up National Fitness Councils. A Commonwealth National Fitness Act was passed in 1941.

The National Fitness Council of South Australia, which is appointed by the Minister of Education, administers funds received from Federal and State Governments and other sources, and appoints its own staff.

The Council promotes physical fitness generally, conducting training and coaching courses in many games and outdoor activities as well as giving active support to youth and other organisations concerned with physical welfare.

Staff provide advice on all forms of recreation and maintain contact with bodies concerned with recreation. Council manages the Duke of Edinburgh's Scheme, and assists the Youth Council of S.A., the Women's Memorial Playing Fields, Outward Bound S.A. and similar bodies. It owns or controls camps at twelve sites through South Australia.

Publications of the Council include books and pamphlets on adventure training, physical conditioning, fitness programmes, sports coaching, walking tracks. Surveys are made of recreation space, recreational needs, government assistance, sports participation and youth activities. In addition the Council maintains a library which is available for loan or reference. It contains books, pamphlets, journals, maps, plans and films on physical education, sports, recreation and health education.

In 1964 and 1968 the Council conducted surveys of recreational facilities in the Adelaide Planning Area. Summarised results of these surveys are given in the following table. The total of 10,763 acres in 1968 represented approximately 13.5 acres per thousand persons.

Recreational Facilities, Adelaide Planning Area^(a)

Facility	1964	1968
	Acres	
Field sports (b)	2,576	2,824
Children's playgrounds	91	108
Parks and gardens	1,179	1,820
Other (c)	4,943	6,011
Total	8,789	10,763

(a) As defined by the State Planning Office. School recreational facilities and regional reserves such as Belair 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.

SPORTING FACILITIES

Adelaide Oval, occupying approximately 15 acres of the north parklands, is used for major cricket and Australian Rules football matches. The record attendances have been 62,543 on 2 October 1965 for Australian Rules football and 50,962 for Test cricket on 14 January 1933. In addition there are first class suburban ovals at which major sports are played.

In terms of attendance the most popular spectator sport is Australian Rules football; during the 1971 season the average attendance at the 105 minor round matches was 8,205 while the average at the four finals matches was 42,211.

The Olympic Sports Field is the Headquarters of the South Australian Amateur Athletics Association which is affiliated with the Australian Amateur Athletic Union. Each Saturday from October to March inter-club contests are held at this arena with an approximate annual attendance of 100,000 spectators. The Olympic Sports Field is also used by the South Australian Women's Amateur Athletic Association which conducts competitions on Saturday afternoons.

The parklands of the City of Adelaide are used extensively for sporting purposes and during 1970-71 permits were issued for the use of 319 sports grounds and 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 four registered metropolitan courses; Morphettville, Cheltenham, Victoria Park (occupying approximately 58 acres of the east parklands) and Oakbank. In addition there were, at 30 June 1971, forty-three registered racing clubs and twenty-eight registered country courses. Picnic race meetings are held at a number of outlying centres.

Trotting Tracks

Trotting is conducted at the Royal Agricultural and Horticultural Society showgrounds at Wayville. At 30 June 1971 there were also tracks at 'Globe Derby Park' Bolivar, Gawler and thirteen other centres in country areas. Wayville, Gawler and seven other country tracks have facilities for night meetings. Trotting is now conducted throughout the year in South Australia.

Golf Courses

At 30 June 1971 there were seven suburban public courses, four 18-hole courses including one at National Park, Belair, and three par-3 links. There were also fourteen private courses operating within suburban Adelaide. The last course completed was a par-3 links at West Beach in 1969. In addition there are courses at many country centres.

Tennis Courts

The South Australian Lawn Tennis Club's courts (thirty-four grass and eight hard) at Memorial Drive, North Adelaide occupy approximately 10 acres of the North Parklands. The Centre Court was the venue for Davis Cup matches in 1952, 1956, 1963 and 1968. In 1971-72 the parklands also contained 230 other tennis courts. Courts associated with schools, churches and private clubs exist throughout the State.

Bowling Greens

At 30 June 1971 there were 233 bowling clubs registered with the Royal South Australian Bowling Association—sixty-six in and near Adelaide, 163 in country areas, and four at Broken Hill, New South Wales. The size of clubs varied from thirty-five rinks at Bordertown to as few as six rinks, with the two largest suburban clubs being Holdfast Bay and Lockleys, each with thirty-two rinks. In addition in the metropolitan area there are five all-women clubs registered with the South Australian Women's Bowling Association.

Swimming Facilities

At 31 December 1971 there were seventy-four public swimming pools in South Australia, of which fifty-six were in country centres. Of these only eight country and two metropolitan pools had been in use before 1950, recent activity having been stimulated by a State Government subsidy on pool construction. Of the seventy-four pools, sixty-six had treated water, the remainder were in lakes, dams, rivers or the sea, or utilised sea water.

Swimming pools are provided at forty-four State schools, sixteen of these being in country areas. In addition four pools, (including a 25-metre pool) are at present under construction while several others are in the planning stage. Swimming facilities are also available at a number of private schools. The Education Department encourages school committees to build swimming pools by granting subsidies for their construction.

The Adelaide Swimming Centre in the north parklands, opened on 20 December 1969, is a complex of four pools, including a 50-metre eight lane pool, a diving/water polo pool, both of which comply fully with international competition requirements, a 60ft by 60ft learner's pool and a toddler's pool. The whole is contained in a four acre grassed area with spectator accommodation for 2,000 people forming an amphitheatre arrangement surrounding the competitive pools.

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.

LOTTERIES AND BETTING

LOTTERIES

The State Lotteries Act, 1966 provides for the promotion and control of lotteries by the Government of the State. In November 1966 a Lotteries Commission, consisting of a chairman and two other members, was appointed to administer the Act which came into operation by proclamation issued on 8 December 1966 and the first draw was made in May 1967.

In accordance with Section 16 of the Act all moneys received by the Commission are paid into a Lotteries Fund from which moneys are made available for meeting the expenses of the Commission and paying prizes. The balance of the Lotteries Fund which represents the surplus of income over expenditure and prize moneys not claimed for over six months is from time to time, as required by the Treasurer, transferred to a Hospitals Fund.

Up to 31 December 1971, \$25,950,000 was received from the sale of tickets of which \$15,726,990 was distributed in prize money, and approximately \$8.1 million has been transferred to the Hospitals Fund.

Originally, only one lottery, a 50 cent series was conducted but in July 1967 a Jackpot series was introduced. At the commencement, the Jackpot lottery filled

in approximately six weeks; it is now being drawn every three weeks. In addition a few special lotteries have been conducted with tickets sold at \$2 or \$3 each. The first \$5 lottery was conducted at the time of the Adelaide Cup in May 1972 and all tickets were sold within four days of opening.

The Commission operates an account service by accepting deposits from persons wishing to invest in each lottery without the need to purchase tickets themselves. At 31 December 1971, 1,890 subscribers availed themselves of this service.

At 31 December 1971 there were 219 Lotteries Commission Agents appointed in South Australia. Of these 131 were in the Adelaide and suburban area; fifty-nine in country areas and twenty-nine were subscriber (non-ticket selling) agents.

BETTING

Legalised betting in South Australia is governed by the provisions of the Lottery and Gaming Act, 1936-1972 and is restricted to horse racing, trotting, dog racing and coursing events. Betting on dog racing events was first authorised by an amendment to the Lottery and Gaming Act in December 1970.

The Act makes provision for betting with the totalisator and with bookmakers at horse race, trotting and dog race meetings. The totalisator cannot be used at coursing meetings but bookmakers may bet at them.

Before December 1933 legalised betting was restricted to totalisator betting at registered race meetings. From 1933 to 1967 it was limited to 'on-course' totalisators and to betting with bookmakers who were licensed to bet on courses where meetings were held, and also (from January 1934 to February 1942) with bookmakers who were licensed to bet 'off-course' in specially registered premises.

As a war-time measure racing and betting in South Australia were banned from March 1942 until October 1943. Off-course betting facilities were not re-established until 1946, when they were restricted to country areas. Port Pirie is the only town where bookmakers now operate in registered premises, but in October 1966, provision was made for the setting up of the Totalisator Agency system of 'off-course' betting, and agencies have since been established in the metropolitan area and at numerous country towns.

A Board consisting of a Chairman and seven other members representative of racing and trotting interests was appointed to administer the new system and the Totalisator Agency Board (TAB) Headquarters was established in Adelaide during December, 1966. The Board was enlarged during 1970-71 to include a representative of the greyhound racing interests. The TAB first operated on 29 March 1967 on a country race meeting while it operated for the first time on a metropolitan meeting on 1 April 1967.

Thirteen agencies were open on the first day of TAB operations. At 30 June 1971, 143 agencies were operating of which fifty-three were sub-agencies operated in conjunction with other businesses. Further premises in the city, suburbs and country towns are being established progressively to provide a complete coverage of the whole State. In addition, a system of telephone betting is available to persons who have established accounts with the TAB. At 30 June 1971 the Board employed seventy-three permanent officers and 646 part-time staff.

For the year ended 30 June 1971 off-course investments totalled \$31,465,762 of which approximately 86 per cent was payable as dividends. The following amounts became payable to the South Australian Government (to be paid into

the Hospitals Fund at the State Treasury) from the operations of the Board during that year:

	\$
Stamp Duty	1,513,008
Fractions	285,050
Unclaimed Dividends	58,907
Commission on N.S.W. investments	2,779
	<hr/>
	1,859,744
	<hr/>

In addition, for the year ended 30 June 1971, an amount of \$1,059,437 became available for distribution to racing, trotting and greyhound clubs under a scheme of distribution prepared by the Board and approved by the Chief Secretary. Since commencing operations in 1967 the Board has distributed a total of \$2,829,398 to participating clubs while in the same period, the South Australian Government has received \$5,392,227.

The Board now operates an on-course totalisator service for racing, trotting and greyhound clubs and at 30 June 1971 a total of fourteen clubs had availed themselves of these facilities.

6.5 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. 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 and measured 18 feet by 12 feet. The foundation stone of the first Adelaide Hospital was laid in 1840. This building, which was 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 Psychiatric Hospital (now Glenside Hospital) commenced operation in 1870 under the control of the Colonial Surgeon. The Enfield Receiving House and the Northfield Mental Hospital (now 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 South Australian Department of Public Health and Hospitals Department, and the Commonwealth Department of Health. Broadly their activities cover different fields as follows; the Department of Public Health concentrates on general health matters including the prevention of disease, the Hospitals Department on hospitalisation, and the Commonwealth Department of Health 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 Occupational Health Branch, the School Health Branch (including the School Dental Services and the Deafness Guidance Clinic), the Epidemiology 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, Narcotic and Psychotropic, Noxious Trades and Bakehouse Registration 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 twenty 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 137 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 subsidised 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 which is 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 the Advisory Council on Health and Medical Services 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 these matters.

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* 1908-1969 the Department is responsible for the various aspects of human, animal and plant quarantine. Persons ordered into quarantine are accommodated at 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 having been brought about by war service.

GENERAL HOSPITAL SERVICES

The control of hospitals in South Australia is vested in several authorities including the Hospitals Department, the Repatriation Department, religious and charitable organisations, local community committees and private owners.

PUBLIC HOSPITALS

The Hospitals Department administers two general hospitals in the metropolitan area, Royal Adelaide Hospital and The Queen Elizabeth Hospital. Work was begun in February 1968 on site preparation for the construction of a further general hospital in the north-eastern suburb of Modbury; 224 beds will be provided in the first stage which is expected to be completed late in 1972. In the country there are government hospitals at Port Pirie, Mount Gambier, Port Lincoln, Port Augusta, Wallaroo, Barmera and Whyalla.

In addition there are fifty-four 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, South Australia^(a)

Particulars	1966-67	1967-68	1968-69	1969-70	1970-71
Hospitals	65	65	65	66	67
Staff (at end of year):					
Medical;					
Permanent	300	346	358	381	402
Other (b)	671	667	692	734	623
Nursing	3,996	4,549	5,251	5,772	5,801
Attendants and others	3,865	4,003	4,258	4,673	4,684
Patients:					
Admitted and re-admitted	114,179	119,451	129,328	131,667	135,927
Average daily number resident:					
Males	1,489	1,540	1,559	1,612	1,677
Females	1,874	1,895	2,016	2,073	2,102
			\$'000		
Revenue:					
State Government aid	22,138	16,626	21,364	23,198	32,971
Commonwealth (c)	2,933	3,519	3,612	4,066	4,367
Fees	7,159	8,156	9,495	10,829	13,471
Other	2,302	2,738	2,593	3,408	3,132
Total	34,532	31,039	37,064	41,500	53,942
Expenditure:					
Salaries	15,573	17,661	19,323	22,025	29,644
Maintenance, etc.	8,143	8,890	9,783	10,765	11,818
Buildings;					
New	9,131	3,403	6,411	6,025	10,070
Repairs	1,291	1,167	1,229	1,450	1,784
Total	34,138	31,121	36,746	40,264	53,316

(a) Public hospitals comprise those operated and maintained by State Government or semi-government authorities and those which receive a conditional subsidy or a regular grant from the State Government for maintenance purposes, but exclude those which receive *only* Commonwealth hospital benefits.

(b) Includes visiting specialists paid on a sessional basis, unpaid visiting specialists and honorary consultants, and for hospitals in country districts includes general practitioners treating patients in those hospitals.

(c) Hospital, pharmaceutical and tuberculosis benefits.

Public General Hospitals, South Australia, 1970-71^(a)

Particulars	Royal Adelaide Hospital	Queen Elizabeth Hospital	Adelaide Childrens Hospital	Other General Hospitals	Total
Staff (at end of year):					
Medical;					
Permanent	210	106	71	15	402
Other (b)	270	105	65	183	623
Nursing	2,258	696	625	2,222	5,801
Attendants and others	1,709	762	675	1,538	4,684
Patients:					
Admitted and re-admitted	25,785	18,282	14,897	76,963	135,927
Average daily number resident	1,058	446	289	1,986	3,779

(a) Public hospitals comprise those operated and maintained by State Government or semi-government authorities and those which receive a conditional subsidy or a regular grant from the State Government for maintenance purposes but exclude those which receive *only* Commonwealth hospital benefits.

(b) Includes visiting specialists paid on a sessional basis, unpaid visiting specialists and honorary consultants and for hospitals in country districts includes general practitioners treating patients in those hospitals.

Royal Adelaide Hospital

The Royal Adelaide Hospital is a general hospital 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 school of medical and dental instruction in connection with the University of Adelaide. 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 for treatment.

In addition to the main hospital there are wards at Northfield, a section of which is used to accommodate patients with infectious conditions, and a section of the Morris Hospital, Northfield is occupied by the Spinal Injuries Unit.

At 30 June 1971 there were 1,219 beds at the hospital including 79 in the infectious diseases wards at Northfield.

The Queen Elizabeth Hospital

The Queen Elizabeth Hospital at Woodville, a general, casualty and maternity hospital controlled by a board of three members, is a university teaching hospital, which opened in 1954 with the completion of a temporary section. Permanent blocks followed in 1957 and 1959. Building extensions and additions to provide for an additional 270 beds, commenced in June 1968, are now mainly completed and are being progressively occupied. At 30 June 1971 there were 532 beds at The Queen Elizabeth Hospital.

Queen Victoria Hospital

The Queen Victoria Hospital, founded by public subscription, was opened in 1902. It primarily provides facilities for midwifery, neo-natal paediatrics and gynaecology and is a university teaching hospital. Controlled by a committee of management the hospital is financially dependent on State Government aid. In 1970-71 State aid constituted 50.8 per cent and fees from patients 43.7 per cent of the revenue received for maintenance purposes. Accommodation at 30 June 1971 was 176 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 1970-71 the hospital received 58 per cent of its revenue in the form of State Government Grants.

Children fourteen years and under may receive in-patient and out-patient treatment; however, eligibility for out-patient treatment is subject to a means test. The hospital provides a training school for nurses and nurse aides and instruction for medical students. The University of Adelaide Department of Child Health is situated at the hospital.

There were 448 beds at the hospital at 30 June 1971.

REPATRIATION HOSPITALS

The Repatriation Department maintains two hospitals in South Australia—the Repatriation General Hospital at Daw Park and the Repatriation Hospital 'Birralee' at Belair.

The Daw Park hospital was a military hospital during the 1939-45 War, coming under the control of the Department 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 1970-71 was 259 and the staff at the end of the year totalled 529. The auxiliary hospital, 'Birralee', at Belair caters for some general medical patients and has a section for the treatment of tuberculosis patients. The average occupancy during 1970-71 was twenty-five. Details of the number of patients treated at Daw Park and Belair are given on page 253.

PRIVATE HOSPITALS

Details of all private institutions approved for payment of Commonwealth hospital or nursing home benefits are given in the following table.

Private Hospitals and Nursing Homes, South Australia

Particulars	1966-67	1967-68	1968-69	1969-70	1970-71
Number of hospitals	59	61	62	59	56
Number of nursing homes	128	127	128	127	130
Number of beds at end of year:					
Hospitals	2,084	2,142	2,271	2,044	2,078
Nursing Homes	2,633	2,756	2,890	3,032	3,236

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. Kalyra Sanatorium at Belair conducted by the James Brown Memorial Trust Inc. is the main institution for in-patient treatment of tuberculosis. An extensive rebuilding programme to provide better facilities at this hospital was completed during 1972.

MENTAL HEALTH SERVICES

The Mental Health Services, a division of the Hospitals Department, is responsible for the management of public psychiatric services.

Glenside Hospital, situated on a site of approximately 130 acres, had accommodation for 930 patients at 30 June 1971. Hillcrest Hospital, Gilles Plains, had accommodation for 608 patients including two repatriation wards of fifty-eight beds and a ward of fifty beds for the treatment of alcoholic patients.

These two hospitals provide for admission and treatment on a 'short-term' basis, but in the main provide for the accommodation and treatment of 'long-term' patients, most of whom have been transferred from the receiving institutions.

The three receiving institutions, the Enfield Hospital (86 beds) and the receiving sections at Glenside (149 beds) and Hillcrest (114 beds) are 'short-term' establishments where treatment is directed towards early discharge. Generally, duration of stay in a receiving house is a few months terminating in either transfer to one of the 'long-term' institutions or in discharge.

On 24 March 1971 the new Strathmont Centre for the intellectually retarded was officially opened. The Centre when fully operative will have a bed capacity of 560. As at 30 June 1971, the bed capacity was 274.

In the following table, which covers the six institutions, particulars relate only to in-patients.

Psychiatric Hospitals, South Australia

Particulars	1966-67	1967-68	1968-69	1969-70	1970-71
Staff:					
Medical	27	27	37	39	51
Nursing and attendants	718	701	735	728	701
Patients:					
Admitted and re-admitted (a);					
Certified	671	685	618	661	729
Voluntary	2,195	2,048	2,346	2,717	2,798
Remaining end of year;					
Certified	1,574	1,475	1,246	995	870
Voluntary	923	990	1,037	1,274	1,323
			\$'000		
Revenue:					
Commonwealth benefits	158	186	121	165	188
Fees, etc.	254	250	261	397	501
Net cost met by State Government	4,309	4,798	5,224	5,639	7,080
Total	4,721	5,234	5,606	6,201	7,769
Expenditure:					
Salaries	2,814	3,062	3,398	3,779	4,669
Maintenance, etc.	1,453	1,652	1,562	1,660	1,733
Buildings;					
New	102	168	277	328	866
Repairs	352	352	370	435	500
Total	4,721	5,234	5,607	6,201	7,769

(a) Direct admissions and re-admissions only. Excludes inter-institutional transfers.

The total number of admissions for the year 1970-71 was 3,527 of which 729 were certified. The proportion of certified patients when expressed as a percentage of total admissions is 20.7.

The numbers of patients who attended the various non-residential public clinics and services during 1970-71 are as follows:

Outpatient Clinics	2,458
Day Hospital	496
Child Guidance Clinics	1,207
Intellectually Retarded Clinic	285
Community Mental Health Centres	632

The number of patients shown above total 5,078 but the actual number of patients who attended these clinics was 4,505. This discrepancy is a result of some patients attending more than one clinic during the year.

MATERNAL AND CHILD WELFARE

MATERNITY HOSPITALS

At the end of 1970 there were eighty-nine hospitals licensed to operate as maternity hospitals. Of these, one government hospital and fifteen private hospitals were located in the suburbs, while five government and sixty-eight subsidised and private hospitals were in country areas.

MOTHERS AND BABIES HEALTH ASSOCIATION

The Mothers and Babies Health Association, a voluntary body supported by government subsidy and public subscriptions, was established in 1909 and conducts maternal and infant welfare work throughout the State. At 294 regular centres, Association sisters give advice on the management of babies and infants while mothers who are unable to attend these centres may seek advice by correspondence.

The Association's mothercraft hospital, Torrens House, admits mothers with new born babies for assistance in management and also treats babies and children up to the age of three years for feeding or behavioural disorders. Torrens House also serves as a Training School for infant welfare and mothercraft nurses.

SCHOOL HEALTH SERVICES

The medical inspection of school children was first introduced into schools in 1913 and since 1951 these inspections have been the responsibility of a branch of the Department of Public Health. No treatment is carried out by the State but where a child has some defect the parents are notified and advised to obtain treatment.

State and private schools within a radius of 60 miles from Adelaide, and at six large country centres are visited annually. Pupils in Grades 1 and 7 in primary schools and in third year in secondary schools are medically examined by a doctor and a sister. In addition the vision and hearing only, of children in Grade 4 and in fifth year at secondary schools, are tested by a nursing sister. The remaining country schools are visited at approximately three-yearly intervals when all the children are examined.

During 1971, 83,951 children were examined by medical officers in 394 metropolitan and 138 country schools. Of these 4,158 required treatment for defective

vision, 4,258 for defective hearing and 6,383 for dental disorders. Hearing and vision tests were carried out also by screening sisters on 35,118 children. Of these 1,722 had hearing defects and 1,925 defective vision.

Dentists using mobile vans and therapists working in static clinics examined 24,667 children in 1971. Children offered treatment numbered 18,320, of which 15,662 accepted.

During 1971, 3,394 children attending the schools from which the training school for Dental Therapists draws its requirements were offered free dental treatment and 2,636 accepted. Of these 2,450 attended the training school during 1971 for examination and treatment. A dental research team working in metropolitan schools examined 1,200 children.

There were 2,968 children examined at the Deafness Guidance Clinic including 1,614 examined for the first time in 1971; 789 of those first examined in 1971 were referred to doctors or hospitals for treatment.

The staff of the School Health Branch at the beginning of 1972 included eleven medical officers (one part-time), thirteen nurses (one part-time), twenty-four dental officers, thirty-eight dental therapists, four otologists (three part-time), and two audiometrists.

COMMUNICABLE DISEASES

Under the Health Act, 1935-1971, 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, gonorrhoea and syphilis be notified directly to the Central Board.

Communicable Diseases: Cases Notified, South Australia

Disease	1967	1968	1969	1970	1971
Acute rheumatism	—	1	—	1	—
Diarrhoea, infantile	12	10	6	37	47
Diphtheria	—	—	3	3	—
Dysentery, bacillary	92	204	157	190	183
Encephalitis	20	5	28	5	3
Infective hepatitis	1,299	558	615	485	504
Malaria	1	4	6	5	5
Meningococcal infection	5	11	9	2	10
Paratyphoid	—	—	—	—	2
Poliomyelitis	—	—	—	1(a)	—
Rubella	969	442	354	223	59
Salmonella infection	110	240	166	226	286
Scarlet fever	60	44	67	44	44
Tetanus	1	—	—	2	1
Trachoma	—	—	—	—	11
Tuberculosis	141	110	141	172	137
Typhoid fever	1	13	3	1	2
Other diseases	447	561	744	872	956

(a) From Northern Territory.

The venereal diseases, gonorrhoea and syphilis, became notifiable in South Australia from November 1965. The Department of Public Health maintains venereal diseases investigation clinics, both at its Head Office and at the Royal

Adelaide Hospital. There were 817 cases of gonorrhoea, and 122 of syphilis notified during 1971; these are included in 'other diseases' in the preceding table.

Anti-Tuberculosis Campaign

The Department of Public Health chest clinic has complete facilities for investigation, diagnosis and treatment of individuals with tuberculosis. In addition suspected cases are investigated and contacts are advised of precautionary measures and are periodically re-examined. The chest clinic has a static X-ray unit available to individuals and to which any doctor can refer patients for routine chest X-rays. In addition there are mobile units which are used for chest X-ray surveys in metropolitan and country areas. The chest clinic staff undertake tuberculin skin tests and vaccination programmes in metropolitan schools.

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 twenty-one years and over every three or four years. Where necessary persons are subsequently referred to their medical practitioner.

Children in second year high school at most State and certain private schools in the metropolitan area are given a tuberculin test, and where appropriate the children are vaccinated.

Poliomyelitis Services

Following the development of Salk vaccine, a poliomyelitis immunisation programme began in 1956. All injections were given by the Poliomyelitis Services until 1961 when the vaccine became available to other authorities. In 1964 the vaccine was released for use by private medical practitioners.

Oral (Sabin) vaccine was first introduced in July 1967 and has now replaced the use of Salk vaccine. Immunisations with Salk vaccine were discontinued early in 1970, by which time 2,239,092 injections had been given. Up to the end of 1971, 504,221 doses of Sabin vaccine had been given, including 149,171 given in 1971. The figures include second, third and fourth injections and doses.

The programme has corresponded with a dramatic decline in the incidence of poliomyelitis, as illustrated by the table.

Poliomyelitis, South Australia

Period	Cases Notified	Deaths
1950-54	3,747	117
1955-59	331	11
1960-64	82	5
1965-69	—	—
1970-71	1	—

The last notification (in 1970) referred to an Aboriginal child from the Northern Territory. There have been no cases of poliomyelitis among the population of the State since 1963.

ABORTION

Until December 1969 the law relating to abortions was included in Sections 81 and 82 of the Criminal Law Consolidation Act, 1935-1966. These Sections prohibited abortions under any circumstances. However, it was possible for legally qualified medical practitioners to perform abortions in a limited number of cases, at their discretion, under Common Law provisions. No separate statistics of such operations were recorded.

In December 1969 this Act was amended by the Criminal Law Consolidation Act Amendment Act, 1969 which was assented to on 8 January 1970. The amendment inserted a new section (Section 82a) which provided for certain exceptions to the prohibitions in Sections 81 and 82. These exceptions allow for termination of the pregnancy where:

- (1) it is necessary to save life, or prevent grave injury to the woman's physical or mental health; or
- (2) the continued pregnancy would involve greater risk to the mental or physical health of the woman, or there was a substantial risk that the child would suffer from such physical or mental abnormalities as to be seriously handicapped.

To qualify under these grounds, a woman must have resided in South Australia for a period of at least two months before the termination of her pregnancy.

Under the amended Act (the Criminal Law Consolidation Act, 1935-1969), a legally qualified medical practitioner may perform an operation to terminate a pregnancy, provided that he and another legally qualified medical practitioner are both of the opinion that one of the above grounds is met. There is provision for one legally qualified medical practitioner to terminate the pregnancy without recourse to a second opinion where it is immediately necessary to save the life, or to prevent grave injury to the physical or mental health of the pregnant woman. All operations must be performed in hospitals prescribed under regulations to the Act.

The following tables give details of abortions notified, in each of the years 1970 and 1971. The incidence of abortions notified per 1,000 live births registered was 58.8 in 1970 and 109.5 in 1971.

Abortions Notified: Grounds on Which Granted, South Australia

Grounds	1970 (a)		1971	
	Number	Per Cent	Number	Per Cent
Assault	11	0.8	16	0.6
Potential damage to foetus	65	4.9	100	4.0
Specified medical disorders	138	10.4	179	7.1
Specified psychiatric disorders	1,116	83.9	2,224	88.3
Total	1,330	100.0	2,519	100.0

(a) Twelve months ended 7 January 1971.

Abortions Notified: Age Distribution, South Australia

Age Group	1970 (a)		1971	
	Number	Per Cent	Number	Per Cent
13-15	15	1.1	70	2.8
16-19	185	13.9	593	23.5
20-24	329	24.7	704	27.9
25-29	218	16.4	356	14.1
30-34	204	15.3	305	12.1
35-39	181	13.6	280	11.1
40-44	122	9.2	147	5.8
45 and over	22	1.7	12	0.5
Not stated	54	4.1	52	2.1
Total	1,330	100.0	2,519	100.0

(a) Twelve months ended 7 January 1971.

Abortions Notified: Marital Status, South Australia

Marital Status	1970 (a)		1971	
	Number	Per Cent	Number	Per Cent
Single	510	38.3	1,243	49.3
Married	704	52.9	1,035	41.1
Widowed	18	1.4	19	0.8
Divorced/separated	96	7.2	222	8.8
Not stated	2	0.2	—	0.0
Total	1,330	100.0	2,519	100.0

(a) Twelve months ended 7 January 1971.

OTHER HEALTH SERVICES

Blood Transfusion Service

The Red Cross Blood Transfusion Service collects and processes blood for the routine and emergency needs of all hospitals in South Australia. Blood donations are given at the Service's centre in Adelaide, at a mobile unit visiting metropolitan and country centres and at regional centres. In 1971 over 69,000 individual donations were received.

The Service maintains a blood bank at the Royal Adelaide Hospital, and a reference laboratory which, in addition to performing the necessary tests on donor blood, carries out investigations for hospitals and medical practitioners. There are subsidiary blood banks at the Queen Elizabeth Hospital, the Repatriation General Hospital and the Lyell McEwin Hospital, Elizabeth, and regional blood transfusion centres have been established at Mount Gambier, Whyalla, Berri and Port Lincoln.

The cost of maintaining the Blood Transfusion Service is met by the State Government (60 per cent), the Commonwealth Government (30 per cent) and the Red Cross Society (10 per cent).

Home Nursing

The Royal District and Bush Nursing Society of South Australia, through its thirty-three 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 1970-71 a total of 196,997 visits were made by sixty 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 (61 per cent of total revenue in 1970-71), branch maintenance, including payments from patients, local government and other sources (29 per cent), and legacies and donations (10 per cent).

Aerial Medical Services

The Royal Flying Doctor Service (RFDS) of Australia is a non-profit organisation and provides medical, dental, ophthalmic, School of the Air and telegram services in remote areas of Australia. The Royal Flying Doctor Service of Australia (S.A. Section) Inc. of the RFDS operates over an area of approximately 820,000 square miles in South Australia and the Northern Territory; it administers control stations at Port Augusta, and Alice Springs in the Northern Territory, two aircraft being based at each centre. For the year ended 30 June 1971 these aircraft flew a total of 249,402 miles in transporting 620 patients to hospital and treating 3,874 patients at outback clinics. A further 890 patients received dental treatment from Adelaide dentists on regular monthly visits. Doctors gave 6,250 radio consultations to outback residents and 69,886 telegrams were transmitted from 413 licensed fixed and portable outstations.

No flying charges are made to patients and the Service relies on donations, bequests and similar sources for approximately two-thirds of the finance required and one-third from State and Commonwealth Government grants.

Ambulance Services

The St John Council for South Australia Inc. provides a full-time ambulance service in the metropolitan area. This service is manned by the St John Ambulance Brigade. The Council also has administrative oversight over ambulance operations in country areas and in many cases the vehicles are manned by the Brigade. In the metropolitan area during 1971 St John ambulances travelled 817,059 miles and carried 109,805 patients. Two aerial ambulances, based at Whyalla, flew 1,033 hours in 1971. These aircraft are fitted out on the same basis as road ambulances and all the equipment throughout the State is interchangeable. A mobile radio communication system operates throughout the State on standard frequencies.

Common training programmes are based on a Manual of Ambulance Transport Nursing published by the St John organisation in Adelaide. The establishment of a branch of Medic Alert International, a United States organisation, has facilitated the identification of people suffering from diseases and allergies which are not readily apparent. This knowledge is of assistance to both ambulance and hospital staffs in handling and treating patients.

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.

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 and subsequently was closed in November 1959.

Cremations are currently conducted at two cemeteries in the State. The Centennial Park Crematorium was erected in 1956 and is operated by the Centennial Park Cemetery Trust. A second crematorium, constructed by the Enfield General Cemetery Trust, commenced operations in December 1969.

There were 2,917 cremations in South Australia during 1971.

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 the net expenditure by the State Government from Consolidated Revenue Account on various aspects of public health which is defined as excluding sewerage, drainage and water supply. The content of figures in some lines of the table is not strictly comparable from year to year because of changes in the pattern of expenditures from various Government funds, for example, expenditures met from Loan Fund or Hospitals Fund instead of from Consolidated Revenue Account. Subject to these qualifications the figures include both the cost of maintaining State Government activities and subsidies paid to semi-government and private organisations active in this field.

Net Expenditure on Public Health, South Australia^(a)

Category	1966-67	1967-68	1968-69	1969-70	1970-71
	\$'000				
Care of sick and mentally afflicted:					
Government general hospitals..	12,747	11,978	13,293	14,499	21,730
Subsidies to;					
General hospitals (including Adelaide Children's Hospital)	3,789	4,144	4,253	4,413	4,416
Other	316	333	405	453	500
Mental hospitals	4,719	5,199	5,558	6,140	7,085
Institutions for mentally deficient children	217	241	244	289	193
Health of mothers and children:					
Baby health centres	256	261	323	348	457
Maternity homes	516	506	485	540	532
Medical and dental examination of school children	270	321	424	602	789
Preservation of public health (including Public Health Department and administration of Health Acts)	663	735	845	930	1,057
Total	23,495	23,718	25,829	28,213	36,761

(a) From Consolidated Revenue Account only.

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.

Professional Medical Personnel, South Australia
Number Registered at 31 December

Profession	1967	1968	1969	1970	1971
Medical practitioners (a)	2,282	2,372	2,474	2,568	2,707
Dentists	313	304	350	389	414
Pharmaceutical chemists	883	836	917	921	891
Opticians	91	93	87	89	90
Nurses (b).....	8,467	8,832	9,275	9,855	10,506
Nurse aides (c).....	822	1,048	1,342	1,752	2,255
Midwives	3,483	3,565	3,640	3,837	4,040
Psychiatric nurses	515	588	646	708	771
Mental deficiency nurses	404	433	447	444	444
Infant welfare nurses (d).....	525	565	632	691	603
Infectious diseases nurses	36	37	37	37	34
Physiotherapists.....	405	423	452	452	475

(a) Includes personnel not practising in South Australia. Date of registration is 31 January in following year.

(b) Nurses may also be registered and included as midwives, psychiatric nurses, mental deficiency nurses, etc.

(c) Known as enrolled nurses from January 1971.

(d) Includes mothercraft nurses.

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.

Since the 1939-45 War there has been a considerable re-organisation of general practice in medicine with a movement away from single practices to partnership and group practice arrangements.

MEDICAL RESEARCH**The Institute of Medical and Veterinary Science**

Details of this organisation are given under the heading of Scientific Organisations on pages 200-1.

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 cancer research. In 1962 the Committee was

re-organised and became the Anti-Cancer Foundation of the University of Adelaide.

Early research was of a clinical nature, but more recently the Foundation has subsidised cancer research projects within the Institute of Medical and Veterinary Science, the Flinders University of South Australia, the University of Adelaide, the Queen Elizabeth Hospital and the Royal Adelaide Hospital.

An education programme is being conducted to encourage the public to seek early medical advice and prompt treatment. Financial assistance is provided to families in necessitous circumstances and the Foundation has established well-equipped, self-contained flats to accommodate country patients at the Royal Adelaide Hospital.

The income of the Foundation is derived from gifts and bequests, government grants and subsidies, and from direct public appeals. The Foundation has formed standing committees in the country districts of South Australia and the Northern Territory to assist in the expansion of its anti-cancer activities.

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 \$5,124,000 for the work of the Foundation, of which \$662,000 was contributed in South Australia. An appeal for further funds which was made during 1969 raised \$268,000 in South Australia.

The campaign funds are being spent on research (70 per cent), education (15 per cent) and rehabilitation (15 per cent). 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 Childrens Hospital. Research funds are also used in providing local and overseas fellowships and travel grants.

The National Heart Foundation Centre in Adelaide was established by the South Australian Division in 1963 for the rehabilitation of patients suffering from the effects of heart disease and stroke. Particular attention is given to professional and community education; to placement in suitable employment and to the provision of a full range of domiciliary rehabilitation services for stroke patients.

CHRONIC ILLNESSES, INJURIES AND IMPAIRMENTS

A population survey is conducted by the Commonwealth Bureau of Census and Statistics in February, May, August and November each year of a one per cent sample of households throughout Australia. At each selected household information is collected by means of personal interviews conducted by specially trained interviewers.

During the May 1968 survey this means of obtaining data was used in all States except Victoria to establish estimates of the incidence of chronic illnesses, injuries and impairments in the population, the nature of these conditions and their causes.

A condition was considered to be chronic if the respondent claimed to have suffered from it at the time of the interview and for more than six months

immediately preceding the interview. Each chronic condition was considered to be 'limiting' if the respondent reported that his or her activities were limited in any way as a result of the condition.

Each chronic condition reported was classified to the most appropriate category of the Eighth Revision (1965) of the International Classification of Diseases, Injuries and Causes of Death. The special procedures adopted in classifying the results of the survey are described, together with the relevant definitions and the tables derived, in the *Chronic Illnesses, Injuries and Impairments* bulletin (reference 17.3) published by the Commonwealth Statistician.

Some of the findings of the survey are given in the following tables, the first of which shows the number of persons reporting any chronic condition; the second table describes all conditions reported.

Persons Suffering from Chronic Illness, May 1968

State	Estimated Civilian Population (a) (^{'000})	Persons with a Chronic Illness		Persons with a Chronic Limiting Illness	
		Number (^{'000})	Rate (b)	Number (^{'000})	Rate (b)
MALES					
New South Wales	2,168.8	474.6	219	192.6	89
Queensland	867.3	188.0	217	80.0	92
South Australia . .	560.7	111.6	199	46.2	82
Western Australia	458.5	105.9	231	42.6	93
Tasmania	192.0	42.0	219	19.3	100
Total males (c)	4,247.3	922.1	217	380.7	90
FEMALES					
New South Wales	2,178.8	526.0	241	200.2	92
Queensland	852.2	196.1	230	74.8	88
South Australia . .	558.4	116.5	209	43.8	78
Western Australia	443.7	104.8	236	40.3	91
Tasmania	189.1	44.1	233	16.7	88
Total females (c)	4,222.2	987.4	234	375.7	89
PERSONS					
New South Wales	4,347.6	1,000.6	230	392.8	90
Queensland	1,719.5	384.1	223	154.7	90
South Australia . .	1,119.1	228.1	204	90.0	80
Western Australia	902.2	210.6	233	82.9	92
Tasmania	381.1	86.1	226	36.0	94
Total persons (c)	8,469.5	1,909.5	225	756.4	89

(a) Excludes members of permanent armed forces, national servicemen enlisted in the Regular Army supplement and certain diplomatic personnel customarily excluded from census and estimated populations.

(b) Number per 1,000 of estimated population in each group.

(c) Excludes Victoria, the Northern Territory and the Australian Capital Territory.

Chronic Illnesses Reported, South Australia and Five States, May 1968^(a)

Type of Illness	Number Reported per 1,000 of Population					
	South Australia			Five States (a)		
	Males	Females	Persons	Males	Females	Persons
Infective and parasitic diseases . .	(b)	(b)	(b)	3	2	3
Neoplasms	(b)	(b)	(b)	3	3	3
Endocrine, nutritional and metabolic diseases	8	9	9	8	9	9
Diseases of the blood and blood-forming organs	(b)	(b)	4	2	8	5
Mental disorders	15	10	12	17	19	18
Diseases of the nervous system and sense organs, and headache	27	30	28	27	28	27
Diseases of the circulatory system .	38	65	52	49	76	63
Diseases of the respiratory system	57	51	54	68	62	65
Diseases of the digestive system (c)	31	17	24	31	17	24
Diseases of the genito-urinary system	(b)	8	5	5	12	9
Diseases of the skin and subcutaneous tissue	8	(b)	6	8	10	9
Diseases of the musculoskeletal system and connective tissue . .	34	44	39	43	57	50
Congenital anomalies	(b)	(b)	(b)	4	3	3
Symptoms referable to system or organs	(b)	(b)	(b)	4	3	3
Nervousness and debility	(b)	10	7	3	6	4
Senility without mention of psychosis	(b)	(b)	(b)	(b)	1	1
Chronic conditions caused by accidents, poisonings and violence	15	(b)	11	14	6	10
Total, all illnesses	252	272	262	289	322	305

(a) Excludes Victoria, Northern Territory and Australian Capital Territory.

(b) Insufficient data obtained in sample.

(c) Excludes diseases of the oral cavity, salivary glands and jaws.

6.6 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 providing fixed monetary pensions and benefits and 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	1966-67	1967-68	1968-69	1969-70	1970-71
	\$'000				
Social services:					
Aged and invalid pensions (a)	43,720	46,711	50,828	58,720	64,714
Widows pensions	5,448	5,937	6,815	8,053	8,969
Child endowment	19,063	17,835	18,162	20,287	18,284
Maternity allowance	654	670	688	698	718
Unemployment benefits	1,653	1,637	1,286	1,008	1,378
Sickness benefits	554	563	461	576	840
Other	426	572	861	1,289	1,627
Total social service payments	71,518	73,925	79,105	90,631	96,530
National health benefits	23,100	25,448	28,411	33,476	41,773
Aged persons homes	3,274	2,090	2,359	2,176	2,944
War pensions (b)	13,642	13,836	15,355	15,182	15,754
Service pensions (b)	3,134	3,416	3,710	4,253	4,651
Total payments	114,668	118,715	128,940	145,718	161,652

(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.

Age and Invalid Pensions

Age pensions are payable to men aged sixty-five and over and women aged sixty and over, who have lived in Australia continuously for a period of ten years.

If a person has completed five years but not ten years continuous residence, but has lived in Australia for periods which, in total exceed ten 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 persons aged sixteen years and over who have lived in Australia continuously for five years and who are permanently incapacitated to an extent of at least 85 per cent, or are permanently blind. Where the incapacity or blindness occurred outside of Australia, other than during a temporary absence, ten years continuous residence is necessary. If a person subject to the ten year qualification has completed five years but not ten years continuous residence, but has lived in Australia for periods which, in total exceed ten 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.

SOCIAL ENVIRONMENT

Age and Invalid Pensions, South Australia
Number of Pensioners

At 30 June	Age Pensioners			Invalid Pensioners		
	Males	Females	Total	Males	Females	Total
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
1965.....	17,018	41,290	58,308	4,603	3,887	8,490
1966.....	17,330	42,148	59,478	4,607	3,914	8,521
1967.....	18,074	43,361	61,435	4,960	4,126	9,086
1968.....	18,810	45,622	64,432	5,243	4,341	9,584
1969.....	19,483	46,848	66,331	5,692	4,593	10,285
1970.....	21,806	51,571	73,377	6,473	5,226	11,699
1971.....	23,447	54,315	77,762	6,151	5,023	11,174

From May 1972, for both age and invalid pensions, the standard rate for an unmarried pensioner, or for a married pensioner whose spouse was not receiving an age or invalid pension, a tuberculosis allowance or a service pension, was \$18.25 a week. The married rate for a couple both being pensioners was \$16.00 a week each. Both the standard rate and married rate pensions are subject to a means test.

An additional pension of \$4.50 a week is payable for all children under sixteen years or student children under twenty-one years. An unmarried age or invalid pensioner having the custody, care and control of a child under sixteen years or a student child under twenty-one years is paid a guardian's allowance of \$4 a week in addition to the pension. The guardian's allowance is increased to \$6 a week if there is a child under six years, or if there is an invalid child under sixteen years requiring full-time care and attention.

The non-pensioner wife of an invalid pensioner, or of an age pensioner permanently incapacitated for work or permanently blind, or who has the custody, care and control of a child under sixteen years, or of a full-time student child under twenty-one years, can be granted a wife's allowance of up to \$8 a week.

A supplementary allowance of up to \$2 a week is payable to certain pensioners who pay rent for accommodation and who are entirely or substantially dependent on their pensions.

The standard rate and married rate pensions, including any additional pension for children, are subject to a means test. Under the means test, a full pension is paid if the annual income plus one-tenth of the value of property in excess of \$400 (for a single pensioner) or \$800 (for a pensioner couple) does not exceed \$520 (for a single pensioner) or \$884 (for a pensioner couple). If the combined income and property figure exceeds \$520 (or \$884), the pension is reduced. The value of a house owned by a pensioner and occupied as the permanent home of that pensioner is exempt from the means test. Persons permanently blind are not subject to the means test.

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 sixteen years of age or a student child under twenty-one years in her custody, care and control;

Class B, a widow of at least fifty years of age with no children under sixteen years, or student children under twenty-one years, or a widow of at least forty-five 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 fifty years of age who has no children under sixteen years of age but is in necessitous circumstances within twenty-six 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 who has been deserted at least six months, a divorcee, a woman whose husband has been in prison at least six months and a woman whose husband is in a mental hospital.

Widows Pensions, South Australia
Number of Pensioners
At 30 June

Class	1967	1968	1969	1970	1971
A	3,235	3,480	3,734	4,317	4,623
B	3,747	3,922	3,948	4,291	4,415
C	9	9	5	8	2
Total	6,991	7,411	7,687	8,616	9,040

The normal residential qualification is five years continuous residence immediately before claiming a pension; where however, a woman and her husband were living permanently in Australia at the time of the event which qualified her as a 'widow' within the meaning of the Social Services Act no minimum period of residence in Australia is required. Certain absences are not considered as breaking continuity of residence, and 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 to some degree.

From May 1972 the rates of pension were: for Class A widows, \$22.25 (including \$4 mothers allowance) a week, plus \$4.50 a week for each child under sixteen years or a student child under twenty-one years (the mothers allowance is increased to \$6 a week where there is a child under six years or an invalid child under sixteen years requiring full-time care and attention); for Class B widows, \$16.00 a week; for Class C widows, \$16.00 a week.

A supplementary allowance of up to \$2 a week is payable to certain pensioners who pay rent for accommodation.

Child Endowment

Persons resident in Australia who have the custody, care and control of one or more children under the age of sixteen 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 sixteen and twenty-one years. There is no means test on child endowment, but one year's residence in Australia is required if the mother and child were not born in Australia; this requirement is waived if the Department of Social Services is satisfied that they are likely to remain in Australia permanently.

At 31 December 1971 endowment was paid at the rate of 50 cents a week for the first eligible child under sixteen years; \$1 for the second; \$2 for the third; and for each subsequent eligible child the rate increases by 25 cents a week over that payable for the next elder child *i.e.* \$2.25 for the fourth; \$2.50 for the fifth etc. Endowment of \$2 a week is paid for each child under the age of sixteen years in an institution, and \$1.50 a week for each full-time student between the ages of sixteen and twenty-one years.

Child Endowment, South Australia

At 30 June	Families			Institutions			Total Endowed Children
	Endowed Families (a)	Endowed Children		Approved Institu- tions	Endowed Children		
		Under 16	Students 16-20 (b)		Under 16	Students 16-20 (b)	
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	13,121	57	1,738	—	350,697
1965.....	153,461	344,019	14,133	54	1,721	89	359,962
1966.....	157,204	350,927	15,276	55	1,677	94	367,974
1967.....	158,645	351,664	17,230	56	1,661	143	370,698
1968.....	159,723	351,366	18,801	56	1,912	197	372,276
1969.....	162,220	354,777	20,718	59	2,201	177	377,873
1970.....	165,245	358,421	20,794	59	1,297 (c)	135 (c)	380,647
1971.....	168,289	361,652	21,869	63	1,294	145	384,960

(a) Excludes those with only endowed student children.

(b) Student endowment commenced 14 January 1964.

(c) Payments in relation to children in certain Aboriginal mission stations made direct to families instead of to institutions as formerly.

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 sixteen years of age, and special allowance is made for multiple births. Maternity allowances are not subject to a means test.

At 31 December 1971 a mother with no other children under sixteen years of age was entitled to an allowance of \$30; where there were one or two such children the rate was \$32, and where there were three or more such children \$35. An extra amount of \$10 is paid for each additional child in multiple births.

Maternity Allowances, South Australia
(Claims granted during year)

Category	1966-67	1967-68	1968-69	1969-70	1970-71
Single births:					
No other children under 16 . . .	7,564	7,880	8,096	8,424	8,890
One or two children under 16 . .	9,501	9,860	10,202	10,368	10,796
Three or more children under 16	3,352	3,147	3,183	3,000	2,740
Multiple births:					
Twins	178	217	201	237	247
Triplets	1	3	2	2	3
Total	20,596	21,107	21,684	22,031	22,676

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 sixteen and sixty-five years of age (sixty for women) with either twelve months residence or the intention to reside permanently in Australia. A person receiving an alternative social service 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 because of 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 \$6 a week for an adult or married person under twenty-one, and \$3 a week for a single person under twenty-one. 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. In the case of sickness benefit the claimant's spouse has a separate allowable income of \$8 a week; any income in excess of \$8 is a direct deduction from the spouse's dependant allowance of \$8.

From May 1972 the maximum weekly unemployment benefits and the maximum weekly short term sickness benefits payable were \$17 for an adult or a married minor, or a minor whose parents did not reside in Australia, \$11 for an unmarried minor eighteen to twenty years of age and \$7.50 for an unmarried minor sixteen to seventeen years of age.

Unemployment and Sickness Benefits, South Australia

Year	Unemployment		Sickness		Special (a)	
	Number of Benefits Granted	Average Number on Benefit (b)	Number of Benefits Granted	Average Number on Benefit (b)	Number of Benefits Granted	Average Number on Benefit (b)
1966-67	22,812	3,094	6,424	871	151	112
1967-68	21,800	3,299	6,724	909	187	102
1968-69	18,153	2,576	5,895	755	(c) 894	(c) 243
1969-70	14,988	1,645	5,843	720	948	276
1970-71	20,015	2,025	6,603	868	1,063	286

(a) Excludes special benefits to migrants in accommodation centres.

(b) Average number at the end of each week.

(c) From 1968-69 includes ex-nuptial confinement cases previously granted sickness benefit.

Long term sickness benefit was payable after six weeks continuous receipt of the short term benefit. The rates were \$18.25 a week for a person who received the \$17 a week short term benefit, and \$12.00 a week for a person who received either the \$11 or \$7.50 a week short term benefit. The long term benefit was not payable to a person while a patient in a hospital approved for payment of Commonwealth hospital benefits unless that person had dependants.

For unemployment benefit and for the short term and long term sickness benefits an additional \$8 weekly was payable for a dependent spouse, plus \$4.50 for each child under sixteen years.

Persons in receipt of the long term sickness benefit who pay rent, board and/or lodgings and who are entirely or substantially dependent upon their benefit, may receive a supplementary allowance of up to \$2 a week.

A special benefit may be granted to a person not normally qualified for unemployment or sickness benefit and who is not in receipt of some other social service pension or allowance, or a service pension, if he is unable to earn a sufficient livelihood for himself and his dependants.

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 widows pension, unemployment, sickness or special benefit. Recipients of tuberculosis allowance and children of fourteen and fifteen years otherwise likely to qualify for invalid pension at age sixteen are also eligible.

All rehabilitation activities in South Australia are concentrated at the Commonwealth Rehabilitation Centre, Felixstow. The centre has a treatment capacity of approximately 120, comprising forty residents and eighty 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)
			\$
1966-67	282	179	249,027
1967-68	278	241	267,429
1968-69	235	176	289,962
1969-70	251	226	298,624
1970-71	280	223	394,448

(a) Excludes capital expenditure on sites and buildings, and administrative cost of the Rehabilitation Service.

There is also a training scheme for Class A or Class B widow pensioners to help them to acquire a vocational skill to enable them to undertake full or part-time employment. This operates in much the same way as for those selected for training above, except that the pensioner is not required to be disabled to be eligible for training selection.

Training Scheme for Widow Pensioners, South Australia^(a)

Year	Number Accepted for Training	Number Placed in Employment	Expenditure (b)
			\$
1968-69	104	7	13,720
1969-70	200	31	43,218
1970-71	302	70	68,164

(a) Scheme commenced September 1968.

(b) Excludes administrative costs of the Training Scheme.

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. It is also payable in respect of the deceased child or deceased spouse of a pensioner or person who becomes a pensioner within six months after the death of the deceased person.

A funeral benefit is also payable in respect of deceased tuberculosis allowees or to claimants for tuberculosis allowance who, but for their claim for tuberculosis allowance, would otherwise have been eligible for a pension.

At 31 December 1971 the maximum benefit payable was \$20, or \$40 if the person responsible for the funeral was a pensioner.

During 1970-71, 4,937 claims for funeral benefits were granted in South Australia.

Homes for the Aged

The *Aged Persons Homes Act 1954-1969* provides that grants may be made to certain organisations towards the capital cost of erecting or purchasing approved homes for aged people. Church, charitable, ex-servicemen's organisations and local governing bodies as well as any other approved organisation 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 organisation towards the capital cost, whichever is less.

At 30 June 1971, 489 grants had been approved in South Australia since the inception of the scheme in 1954. The amount granted, \$24,614,306, was associated with the accommodation of 7,888 persons.

The Aged Persons Homes Act also provides for a personal care subsidy to be paid to eligible organisations for persons aged eighty years and over who receive approved personal care while living in hostel type accommodation provided by these organisations. The present rate of subsidy is \$5 a week for each qualified person.

At 30 June 1971 there were forty-eight approved homes with 987 qualified residents and the total personal care subsidy paid at that date was \$242,260.

Delivered Meals Service

Under the *Delivered Meals Subsidy Act 1970*, financial assistance is provided to organisations to establish, maintain, expand and improve 'meals on wheels' services.

These organisations must be non-profit charitable, benevolent or welfare bodies not controlled by the Commonwealth or State Governments. The rate of subsidy is \$1 for each ten meals supplied.

At 30 June 1971 approvals had been given to seventeen metropolitan and twenty-one country meals services which had served a total of 432,930 meals and the total amount of subsidy paid was \$43,293.

Sheltered Employment Assistance

The *Sheltered Employment (Assistance) Act 1967-1970* provides for the payment of grants by the Commonwealth to eligible organisations to contribute towards the cost of purchasing, altering, or extending premises for use as sheltered workshops, purchasing equipment for workshops, renting premises for use as workshops and providing accommodation for disabled persons employed in sheltered workshops; the maximum amount payable by the Commonwealth is two-thirds of the total cost in each case. Religious, charitable, ex-servicemen's organisations and local governing bodies are eligible to receive financial assistance in establishing or extending workshops.

Approved workshops are expected to provide opportunities for disabled persons to earn up to the limits imposed by their disabilities. At 30 June 1971, sixteen grants amounting to \$370,154 had been approved for workshop premises in South Australia since the inception of the scheme on 30 June 1967.

From 26 October 1970 the range of Commonwealth grants has been extended to include \$2 for \$1 subsidies for hostels for disabled persons who are engaged in normal employment, \$1 for \$1 subsidies towards the salaries of certain staff members employed by approved workshops and hostels, and the payment of a training fee of \$500 to organisations for each eligible employee trained by these organisations placed in open employment for not less than twelve months.

The *Social Services Act 1947-1971* contains provision for the payment of a sheltered employment allowance, at the same rates as invalid pension, which reduces on a graduated scale as workshop earnings increase. The allowance is payable to eligible disabled persons employed at a workshop approved for payment of the allowance. At 30 June 1971, 306 persons in South Australia were receiving the allowance.

Handicapped Children Assistance

The *Handicapped Children (Assistance) Act 1970* provides for Commonwealth grants on a \$2 for \$1 basis towards costs incurred by eligible organisations in establishing and equipping training centres and also the cost of providing residential accommodation for handicapped children attending approved training centres. Organisations eligible to apply for subsidies are non-profit charitable, benevolent or welfare bodies (not controlled by the Commonwealth or State Governments), religious organisations and local governing bodies. Handicapped children for the purposes of this Act are persons suffering from a physical or mental disability who are under the age of twenty-one years and those who continue to receive approved training after reaching the age of twenty-one.

Training which is designed to teach handicapped children the activities of daily living or which is of a social, remedial, pre-vocational or vocational nature will be accepted as approved training. General education for which special facilities are required will also be accepted.

Reciprocal Agreements

New Zealand. An agreement exists between the Governments of Australia and New Zealand for reciprocity in social services. The arrangements cover age and invalid pensions, widows pensions, child endowment, and unemployment and sickness benefits, and apply to both permanent and temporary changes of residence. Residence in one country may be treated as residence in the other country in relation to entitlement to benefits in which a residential qualification applies. Persons from one country taking up permanent residence in the other country become eligible for any of the specified benefits of the new country under the same conditions (with one or two exceptions) as apply to citizens of that country. Persons in receipt of any of the specified benefits in one country may continue to receive those benefits while temporarily absent in the other country.

Britain. A reciprocal agreement on social services exists between Britain and Australia. Under the current agreement residence in one country may be treated as residence in the other country as the basis for entitlement to benefits in which a residential qualification applies. Australians going to Britain for permanent residence are treated in Britain as if they had been insured under the National Insurance Scheme while in Australia, so that they can qualify for various National Insurance benefits. There is also provision for the safeguard of social service rights for persons going from one country to the other for temporary residence.

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	1966-67	1967-68	1968-69	1969-70	1970-71
		\$'000				
Hospital and nursing home benefits (a)	1946	5,920	6,639	7,759	9,840	11,508
Medical benefits	1953	5,156	5,774	6,150	7,216	11,956
Pensioner medical service ...	1951	1,407	1,607	1,764	1,971	2,048
Pharmaceutical benefits (b) ..	1948	6,256	6,685	7,433	8,768	10,265
Pensioner pharmaceutical benefits (b)	1951	2,705	3,038	3,514	3,991	4,315
Anti-tuberculosis campaign ..	1947	750	700	632	611	597
Free milk for school children	1951	857	952	1,061	906	892
Miscellaneous	—	49	54	98	174	191
Total	—	23,100	25,448	28,411	33,476	41,773

(a) Includes Northern Territory for nursing home benefits.

(b) Includes Northern Territory.

Hospital Benefits

The Commonwealth pays hospital benefits to patients in approved hospitals under the following arrangements:

- (a) patients insured with a registered benefit organisation and in an approved hospital receive a benefit (\$2 a day at 1 January 1972) paid through the organisation. Details of registered organisations are given on page 260;
- (b) uninsured patients are entitled to a benefit (80c a 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 (\$5 a day) which is paid to the hospital;
- (d) from 1 July 1970 a benefit of \$2 a day is payable direct to approved hospitals for patients treated without charge;
- (e) from 1 January 1970 special financial assistance for hospital benefits insurance is provided through the subsidised medical services scheme to low income families, to people receiving unemployment, sickness or special benefits and to migrant settlers for hospital expenses incurred during the first two months in Australia.

In 1968 a committee, headed by Mr Justice Nimmo, was appointed by the Commonwealth Minister of Health to review the health insurance scheme. Its recommendations on hospital benefits were directed towards the establishment of a closer relationship between the public hospital fees and hospital benefits. The recommendations included the following:

- (a) 'that the hospital insurance scheme be rationalised by confining benefits tables to three benefits, each equal to one of the three levels of hospital fees in force in each of the States: standard, intermediate and private wards;

- (b) that under the Commonwealth-State Agreement, the States be asked to undertake that hospitals will charge a single comprehensive fee covering the cost of accommodation and treatment and all ancillary items including theatre fees, drugs and dressing, medical and para-medical services provided by the hospital, and the provision of standard prosthetic and other appliances such as wheelchairs; and,
- (c) that it be made a condition of hospital insurance that benefits will not be paid in excess of hospital accounts.'

South Australian organisations introduced three tables providing standard, intermediate and private ward cover from 1 March 1971 to coincide with the new charges. At the same time, after being informed by the majority of private hospitals in the State that an all-inclusive fee-charging system would be adopted, the organisations introduced a fourth table providing benefits of \$26 a day (including Commonwealth benefits) to cover private hospital accommodation. Contributors to South Australian hospital benefit organisations were automatically upgraded to tables providing a corresponding level of cover to that at which they had been insured. A period of grace was provided to allow a contributor the option to transfer to another level of insurance. Benefits are not paid in excess of the hospital accounts under any of the tables.

Hospital Benefits, South Australia

Type of Benefit	1966-67	1967-68	1968-69	1969-70	1970-71
	AMOUNT PAID (\$'000)				
Hospitals:					
Insured patients	1,939	1,998	2,037	2,173	2,356
Uninsured patients	111	103	99	88	56
Special Account patients (a) ..	279	367	574	1,439	2,040
Subsidised Health Benefit Plan patients	—	—	—	68	499
Patients treated without charge.	—	—	—	—	38(b)
Pensioner patients	1,582	1,969	2,105	1,978	1,999
Nursing home patients (c)	2,009	2,202	2,944	4,094	4,520
Total	5,920	6,639	7,759	9,840	11,508

(a) Covers amounts paid for special account deficits (these being reimbursements to registered hospital benefit organisations for losses incurred on chronic or pre-existing ailments and long-term illness and advances in respect of these deficits).

(b) Payable from 1 July 1970.

(c) Includes Northern Territory.

A Commonwealth nursing home benefit is paid for all eligible 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 1 January 1972 this benefit was \$2 a day. In addition, since 1 January 1969, a supplementary Commonwealth benefit of \$3 a day has been paid to nursing homes (and deducted from patients accounts) for patients requiring and receiving intensive nursing care as distinct from the lighter nursing care normally provided for the majority of patients in such homes. During 1969-70, the first full financial year for which the supplementary benefit was payable, the additional \$3 a day was paid for 43.4 per cent of all days on which eligible patients were accommodated in approved nursing homes. This figure rose to 44.2 per cent in 1970-71. Commonwealth benefit may not be payable where a patient receives a payment by way of compensation or damages.

Medical Benefits

Commonwealth medical benefits are paid in respect of medical expenses incurred by persons who are contributors to registered medical benefits organisations or by the dependants of such contributors. The benefits are normally paid through the organisations to the contributor upon receipt of a medical practitioner's account. Medical benefits organisations, with minor exceptions, also pay a fund benefit equal to or greater than the amount of the Commonwealth benefits. Commonwealth benefits may not be payable where a patient receives a payment by way of compensation or damages.

From 1 July 1971 combined Commonwealth and Fund benefits ranged from \$2.40 for a general practitioner consultation to \$270 for certain major operations.

From 1 January 1970 special financial assistance for medical benefits insurance is provided through the subsidised medical services scheme to low income families, to people receiving unemployment, sickness or special benefits, and to migrant settlers for medical expenses incurred during the first two months in Australia. Expenditure to 30 June 1971 was \$379,462.

Under the new Health Benefits Plan which came into operation on 1 July 1970, medical benefits are closely related to the most common fees charged by doctors. The amount of the most common fee to be met personally by a patient ranged from 80 cents for a general practitioner surgery consultation to \$5 for services with common fees of \$40 or more. The maximum of \$5 also applies to the most common fees for an operation and services directly associated with it.

Commonwealth expenditure on medical benefits in South Australia in 1970-71 was \$11,404,000, representing 43.4 per cent of the cost of medical services for which benefits were payable. An additional \$67,000 was paid by the Commonwealth to registered benefit organisations to cover losses incurred in paying benefits in cases of chronic or pre-existing ailments and long-term illness. Further details of medical benefits organisations are given on pages 260-1.

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 \$1 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 recognised organisations in isolated areas.

Pharmaceutical Benefits, South Australia^(a)

Year	Number of Benefit Prescriptions	Cost of Benefit Prescriptions			Additional Costs to Commonwealth (b)
		Total Cost	Patients Contributions	Net Cost to Commonwealth	
	'000			\$'000	
1966-67	3,322	6,794	1,659	5,135	1,121
1967-68	3,398	6,955	1,699	5,256	1,429
1968-69	3,798	7,905	1,890	6,015	1,417
1969-70	4,155	8,993	2,069	6,924	1,844
1970-71	4,527	10,338	2,255	8,083	2,182

(a) Excludes pensioner benefits. Includes Northern Territory. (b) Payments to hospitals and miscellaneous services.

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, x-rays, operations, or the treatment of fractures. Doctors participating in the service are remunerated by the Commonwealth on a concessional fee basis.

The two-yearly review of fees for pensioner medical services was made during 1970-71 and the Government decided to increase the fees from \$1.85 to \$2.50 for surgery consultations and from \$2.35 to \$3.60 for home visits. The increased fees operated from 1 July 1971 and will apply until 30 June 1973.

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 Pharmaceutical and Medical Benefits, South Australia^(a)

Year	Number of Pensioners and Dependants (b)	Number of Pharmaceutical Benefit Prescriptions	Commonwealth Payments for Services		
			Pharmaceutical	Medical	Total
		'000	\$'000		
1966-67 ..	100	1,528	2,705	1,407	4,112
1967-68 ..	108	1,693	3,038	1,612	4,650
1968-69 ..	113	1,874	3,514	1,770	5,284
1969-70 ..	117	2,053	3,991	1,979	5,970
1970-71 ..	120	2,127	4,315	2,056	6,371

(a) Includes Northern Territory.
(b) Enrolled at end of year.

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. At 31 December 1971 the maximum income permitted before allowances are affected was \$10 per week for a single person and \$17 for a married person.

Anti-Tuberculosis Campaign, South Australia

Commonwealth Expenditure	1966-67	1967-68	1968-69	1969-70	1970-71
\$'000					
Allowances paid to sufferers	98	80	61	60	52
Maintenance expenditure (a).....	708	651	602	585	582
Capital expenditure	5	31	60	69	108
Total	811	762	723	714	742

(a) Includes administrative expenses not paid from National Welfare Fund.

At 31 December 1971 the allowance for a married person with dependent wife was \$33.75 plus \$4.50 for each dependent child under sixteen years. A single person without dependants, if not hospitalised, received \$20.50 or if receiving hospital treatment free of charge \$17.25. Widows or widowers with dependent children under sixteen years received \$25.25.

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 under the age of thirteen years. During 1970 a total of 928 schools, made up of 485 State schools, 148 private schools, and 295 kindergartens, creches and Aboriginal missions were supplied with the free milk.

The State Government administers the scheme and the Commonwealth meets the cost of milk supplied and half the cost of capital, administrative and incidental expenditure. At 30 November 1971 the approximate number of children participating in the scheme in South Australia was 146,000 while the costs relating to the milk supplied during 1970-71 was \$922,100.

REPATRIATION BENEFITS

War Pensions

War pensions are paid by way of compensation to ex-servicemen and women who have suffered incapacity arising out of war service, to their eligible dependants, and to the dependants of those who have died as a result of war service.

War Pensions, South Australia^(a)

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
1966-67 ..	20,796	33,754	5,075	59,625	13,613
1967-68 ..	20,730	32,024	5,094	57,848	13,808
1968-69 ..	20,573	30,193	5,101	55,867	15,325
1969-70 ..	20,349	28,586	5,199	54,134	15,151
1970-71 ..	20,125	27,075	5,193	52,393	15,722

(a) Excludes pensions payable under Seaman's War Pensions and Allowance Act and various Cabinet decisions. Includes Northern Territory.

There are four main classes of war pensions:

The special (TPI) rate (\$44.50 a week from 27 April 1972) is payable to those who are deemed totally and permanently incapacitated.

The intermediate rate (\$31.25 a week from 27 April 1972) is payable to an ex-serviceman who, because of the severity of his war-caused incapacity, can work only part-time or intermittently and in consequence is unable to earn a living wage.

The general rate is payable to those who suffered war-caused disabilities but still retained some earning capacity. The pension payable depends on the degree of incapacity, the maximum at 31 December 1971 being \$12 a week, but an additional amount could be payable in some circumstances as a special compensation allowance, to a maximum of \$6 a week. Pensions are also payable for

a wife and each child under sixteen 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 sixteen years of age. An additional domestic allowance is payable to certain classes of widows. From 27 April 1972 the widows rate was \$18.25 a week and the domestic allowance \$8.

Service Pensions

Service pensions are payable to ex-servicemen who served in a theatre of war and have reached the age of sixty years (fifty-five for women) or who are permanently unemployable or 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^(a)

Year	Pensions in Force at End of Year				Expenditure
	Ex-Servicemen	Dependants of Pensioner Ex-Servicemen	Dependants of Deceased Pensioners	Total	
	Number				\$'000
1966-67 ..	5,250	1,308	363	6,921	3,134
1967-68 ..	5,379	1,395	391	7,165	3,416
1968-69 ..	5,399	1,245	414	7,058	3,710
1969-70 ..	5,810	1,490	434	7,734	4,253
1970-71 ..	5,949	1,540	465	7,954	4,651

(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 attributable to war service and for pulmonary tuberculosis. General medical services are also available to service pensioners, war pensioners receiving the special, intermediate or maximum general rates, widows and dependants of ex-servicemen whose deaths were due to war service, and nurses who served in the 1914-18 War.

Repatriation: Medical Services, South Australia^(a)

Year	In-Patients: Total Treated			Out-Patients: Number of Visits			Pharmaceutical Benefits
	Daw Park	Birralee	Other Hospitals	Outpatient Clinic	Other Institutions	Visits to or by Medical Officer	
	Number						\$
1966-67	5,100	153	813	45,368	14,328	195,743	1,155,839
1967-68	5,613	160	970	46,872	15,577	190,291	1,199,838
1968-69	5,707	146	975	46,123	12,027	204,602	1,170,715
1969-70	6,099	163	953	47,152	11,679	201,270	1,269,973
1970-71	5,919	138	900	47,547	13,830	194,107	1,322,498

(a) Includes Northern Territory.

In-patient and out-patient treatment is provided at the Repatriation General Hospital, Daw Park. Facilities at the Outpatient Department include radiological, pathological and physiotherapy services in addition to medical specialist examinations. The Repatriation Department also maintains an auxiliary hospital, 'Birrallee', 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 organisations.

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 pages 176-7).

In certain circumstances vocational training is also provided for disabled ex-servicemen and widows of ex-servicemen.

The Department is responsible under the *Defence (Re-establishment) Act 1965-1968* for the administration of the Vocational Training Scheme which is designed to provide national servicemen with post-discharge training where this is necessary for their effective resettlement.

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 up to \$50 are paid on the death of certain ex-servicemen and dependants.

STATE WELFARE SERVICES EXPENDITURE

The following table shows net cost to Consolidated Revenue of Welfare Services over the five years to 30 June 1971. The figures relate mainly to the Department of Social Welfare and Aboriginal Affairs (net cost of approximately \$6 million in 1970-71) but include also the provision of transport concessions and grants made to private welfare organisations.

State Expenditure on Welfare Services, South Australia
Net Cost to Consolidated Revenue Account^(a)

Service	1966-67	1967-68	1968-69	1969-70	1970-71
	\$				
Relief of destitute, aged, etc.	1,192,513	1,205,861	1,357,641	1,476,600	1,973,137
Child welfare:					
Institutions (b) ..	750,184	795,364	866,876	921,693	1,096,312
Other	638,534	671,550	727,622	890,753	1,083,162
Care of Aborigines ..	1,304,095	1,455,141	1,409,388	1,510,421	1,736,510
Other	221,700	220,953	235,191	338,780	342,327
Total	4,107,026	4,348,869	4,596,718	5,138,247	6,231,448

(a) Includes interest, maintenance of buildings, etc.; excludes capital expenditure from Loan Fund.

(b) Excludes reformative institutions.

FAMILY AND CHILD WELFARE

The first official activity for the social welfare of children and adults was taken soon after colonisation when 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 and assumed responsibility for the welfare of both children and adults. In 1886 a State Children's Council was formed to deal with children, while 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 then became the Department of Social Welfare. On 1 July 1970 this Department was amalgamated with the Department of Aboriginal Affairs to form the Department of Social Welfare and Aboriginal Affairs.

In addition to its head office at Adelaide, the Department maintains district offices at Brighton, Enfield, Elizabeth, Port Adelaide, Salisbury, Tea Tree Gully, Port Augusta, Port Lincoln, Mount Gambier, Berri and Whyalla while 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 of Social Welfare. A child from eight to eighteen years may be dealt with on an offence while any child up to eighteen years may be dealt with as a neglected or uncontrolled child. In any of these cases he may be made a State child. In most cases the committal is until eighteen years but a child between sixteen and eighteen years may be committed for any period between one year and two years provided that period does not expire before he reaches eighteen years. Where it is for the child's benefit, committal may be extended until twenty-one years, or in special cases for girls, beyond twenty-one years. Delinquent children may receive training in one of the reformatory institutions; neglected children may be cared for temporarily at departmental homes; uncontrolled children may be placed in reformatory or other institutions depending on the circumstances.

The McNally Training Centre (for senior boys) at Magill and Brookway Park (for junior boys) at Campbelltown are the proclaimed reformatory institutions for boys in South Australia. There are two proclaimed reformatory institutions for girls: Vaughan House at Enfield is the general reformatory institution for girls and is controlled and operated by the Department; 'The Pines' at Plympton, conducted by the Sisters of the Good Shepherd Congregation, is a proclaimed private reformatory institution controlled by the Minister for the training and rehabilitation of delinquent girls belonging to the Catholic Church. Neglected boys may be committed to the Glandore Boys Home while girls and very young children 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 had twenty official institutions

and homes for children at the end of June 1971. These include Lochiel Park, a training centre for retarded boys, Woorabinda at Stirling, a hostel and holiday camp for boys, two other boys hostels and two girls hostels for selected older children attending school and eight cottage homes where small groups of children of both sexes live in a family-like atmosphere. Windana, a remand home at Glandore is used to accommodate delinquent and neglected children of both sexes in four separate sections.

Details of the number of children committed to the Department in recent years are given in the following table. Of the 606 children committed during 1970-71, 181 were girls, of whom all but 63 were neglected or uncontrolled. Of 3,206 State children at 30 June 1971, 2,136 were boys and 1,070 girls.

State Children, South Australia^(a)

Particulars	1966-67	1967-68	1968-69	1969-70	1970-71
Number of children newly committed during the year:					
Offenders	443	529	609	515	386
Neglected	162	170	198	186	164
Uncontrolled	55	47	40	33	42
Truancy	12	10	6	16	14
From other States	10	1	—	4	—
Total	682	757	853	754	606
Number of State children at 30 June:					
Children in departmental institutions	454	530	636	620	539
Children not in institutions ..	2,421	2,480	2,631	2,710	2,667
Total	2,875	3,010	3,267	3,330	3,206

(a) Excludes children on remand, not committed (869 on remand during 1970-71).

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 reformatory institutions, 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.

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 case-work is carried out with a view to improving the circumstances of children and their parents. The homes of children under twelve years of 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 officers.

During 1970-71, in addition to State children, 799 children were placed on bonds requiring supervision by departmental officers; the total number of such

children under supervision at 30 June 1971 being 1,230. Children under voluntary supervision totalled 149 and 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 Foster Parents and Children's Homes

Under the Social Welfare Act, 1926-1971, every foster parent caring for a child under twelve years of age for gain or reward must be licensed by the Department; the children who are fostered are visited by departmental officers. All children's homes providing permanent care for children under twelve years of age must also be licensed by the Department.

Adoptions

South Australia has had an Adoption of Children Act since 1925, the current legislation being the Adoption of Children Act, 1966-1967. Under this Act the interests of the children are considered paramount, the right to place children for adoption is restricted to the Director of Social Welfare and of Aboriginal Affairs or to private adoption agencies which the Director has approved and the adoptive parents become the legal parents once the adoption order is made.

Adoptions made in other Australian States are recognised in South Australia; similarly South Australian adoptions are recognised in the other States.

A more detailed account of the South Australian legislation was included on pages 221-4 of *South Australian Year Book* 1968.

The following table gives the number of adoptions by age group of child for the five years to 1970-71.

Number of Adoptions, South Australia

Age of Child	1966-67	1967-68	1968-69	1969-70	1970-71
Under one year	572	562	590	582	635
One year and under two	30	38	31	44	44
Two years and under six	91	81	68	77	69
Six years and under thirteen	104	85	75	86	100
Thirteen years and under sixteen	27	6	19	23	15
Sixteen years and over	15	8	14	22	16
Total	839	780	797	834	879

Immigrant Children

The Department makes inquiries regarding accommodation and supervision of proposed migrants under twenty-one years of age, who will not be living with a parent or near relative. Under the Commonwealth *Immigration (Guardianship of Children) Act* 1946-1952 the Minister becomes guardian of these children who numbered thirty at 30 June 1971.

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 by providing reports on the circumstances of children whose cases are considered by the Courts.

Deserted wives and others are assisted to obtain maintenance from their husbands. When negotiations fail, legal proceedings may be instituted to obtain Court orders for separation, custody of children and maintenance. The Department collects and pays to deserted wives about 1,500 separate amounts weekly. Assistance is given to mothers of illegitimate children in affiliation cases.

Public Relief

Relief is issued to those in destitute circumstances; this is mainly in the form of cash, although occasionally an order for accommodation or food may be issued. During 1970-71 relief was issued to 6,428 applicants, representing 15,868 persons. Deserted wives accounted for 24 per cent and unemployed for 49 per cent of the total cases issued with relief.

The Department provides residential care in a home at Magill for destitute or necessitous adults, mostly pensioners. The daily average occupancy of the Magill home was 149 during 1970-71.

To deal with cases of emergency there is 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.

ABORIGINAL WELFARE

Aboriginal welfare in South Australia is administered by the Minister of Aboriginal Affairs, under legislation provided in the Aboriginal Affairs Act, 1962-1968. This Act aims at promoting the welfare of full-blood Aborigines 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. Guidance is provided by Welfare Officers in matters of finance, employment, education, housing, domestic problems and in the fostering of Aboriginal children.

Assistance is given to Aborigines by way of housing in the metropolitan area and country districts, grants to undergo secondary and higher education, loans for business and other purposes and relief to those in necessitous circumstances.

Aboriginal Reserves are maintained at Amata, Coober Pedy, Davenport, Gerard, Indulkana, Koonibba, Point McLeay and Point Pearce. These centres provide vocational training, health education and housing facilities and give Aborigines the opportunity to adapt their traditional way of living to western ways within the security of their own communities.

Hostels for secondary school students are conducted in Adelaide and Oodnadatta by voluntary organisations and medical hostels are conducted in Adelaide and Ceduna by the Department of Social Welfare and Aboriginal Affairs.

**Aboriginal Reserves, South Australia
Net Cost to Consolidated Revenue**

Year	Point Pearce	Point McLeay	Davenport	North-West Reserve	Coober Pedy	Gerard	Koonibba	Indulkana	Total
	Dollars								
1966-67	172,072	81,099	137,909	106,424	32,797	83,873	66,866	8,217	689,257
1967-68	136,638	83,046	158,741	135,970	32,441	101,312	101,514	51,855	801,517
1968-69	99,035	89,900	157,461	99,481	35,220	97,548	69,473	41,668	689,786
1969-70	134,764	84,350	147,355	105,978	38,151	87,395	83,596	65,177	746,766
1970-71	129,041	96,435	161,795	129,303	33,880	100,618	124,934	77,269	853,275

Legislation passed by the State Parliament in recent years specifically affecting Aborigines includes the removal of the prohibition on the sale of alcoholic liquor to Aborigines, the establishment of the Aboriginal Lands Trust to ensure land rights to Aborigines, the establishment of Aboriginal Reserve councils and business undertakings and an Act to prohibit the discrimination against persons by reasons of their race and colour.

Since the Constitutional amendment of August 1967 allowing the Commonwealth to make laws with respect to Aborigines, a Commonwealth Office of Aboriginal Affairs has been established in Canberra. The Commonwealth Government made \$660,000 available for Aboriginal welfare in South Australia in 1970-71 to be used mainly for housing, health, education and employment programmes. The financing of Aboriginal business enterprise is undertaken directly by the Commonwealth Office of Aboriginal Affairs.

At the 1966 Census 5,505 persons (2,914 males and 2,591 females) were reported as having 50 per cent or more Aboriginal blood. It has been estimated that excluding itinerant Aborigines and those who were not identified as Aborigines there were in South Australia at 30 June 1971 approximately 9,450 persons having 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 1970-71 was \$874,200 of which \$599,900 represented fare concessions to, and costs of transport to and from hospitals of, pensioners; \$20,000 to blind persons; and \$241,200 to blind and incapacitated ex-servicemen.

The Government through the Chief Secretary also makes annual grants to various charitable agencies and institutions. In 1970-71 these included \$172,000 to the Royal Institution for the Blind; \$13,200 for Meals on Wheels; \$66,400 for aged citizen clubs; \$6,800 for aged persons homes; \$21,800 to the Mentally Retarded Children's Society and \$22,000 to the Prisoners' Aid Association.

PRIVATE WELFARE SERVICES

There are numerous charitable and benevolent organisations working within South Australia. A large proportion of these derive 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 organisations before they may actively solicit funds.

Organisations which have a wide range of activities include the Australian Red Cross Society, Service to Youth Council, the welfare bureaux and missions of the various churches, and organisations catering for ex-servicemen and their dependants. Most of these agencies maintain full-time staff and generally employ professional social workers. Other organisations 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 organisations 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 Resources* 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 organisations.

REGISTERED MEDICAL AND HOSPITAL ORGANISATIONS

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 organisation. These are non-profit organisations and include a number of Friendly Societies. In most cases both medical and hospital benefits are provided by the one organisation.

Registered Hospital Organisations, South Australia

Particulars	Unit	1966-67	1967-68	1968-69	1969-70	1970-71
Registered organisations (a) . .	No.	13	13	13	12	10
Membership (a)	'000	403	411	419	430	434
Estimated persons covered (a)	'000	971	997	1,021	1,051	1,069
Fund benefits paid	\$'000	6,835	7,921	9,823	12,234	14,576

(a) At end of period.

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.

From 1 July 1970 all medical benefits organisations pay medical benefits at the same rate but contribution rates may vary slightly between funds. Contributions can be made to give either individual or family cover.

Details of registered medical organisations are given in the following table. The number of members has increased steadily over the past sixteen years from 152,000 at 30 June 1954 to 404,000 in 1971. In this period the number of professional services per member increased from 3.55 in 1953-54 to 11.04 in 1970-71 with most of the increase occurring in the mid-1950s.

Registered Medical Organisations, South Australia

Particulars	Unit	1967-68	1968-69	1969-70	1970-71
Registered organisations (a)	No.	8	8	7	7
Membership (a)	'000	381	392	403	408
Estimated persons covered (a)	'000	952	980	1,010	1,050
Cost of medical services:					
Met by fund benefit (b)	\$'000	5,608	6,077	7,124	7,948
Met by Commonwealth benefit (b)	\$'000	5,720	6,097	7,149	11,767
Met by insured member	\$'000	3,713	4,317	5,336	4,193
Total	\$'000	15,041	16,491	19,608	23,908
Proportion paid up:					
Fund benefit (b)	Per cent	37.3	36.8	36.3	33.2
Commonwealth benefit (b)	Per cent	38.0	37.0	36.5	43.5
Insured member	Per cent	24.7	26.2	27.2	23.3
Fund benefits for ancillary services (c)	\$'000	261	276	323	280
Professional services per member:					
General practitioner	No.	6.40	6.57	6.97	7.08
Other	No.	4.00	3.59	4.04	3.98
Total	No.	10.40	10.16	11.01	11.06

(a) At end of period.

(b) Based on proportions paid in relation to matched services, *i.e.* those which attract both Commonwealth and Fund benefits.

(c) Services for which Commonwealth benefits are not provided.

FRIENDLY SOCIETIES

Friendly Societies are mutual organisations 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, 1919-1968. 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 for all or for only a selection of benefits. However, a person is considered to be a full benefit member only if he contributes for sick pay and funeral benefits regardless of contributions for other benefits.

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 \$4,000 any payment for endowment or funeral benefits and to \$21 any weekly payment to members for sickness or superannuation.

Friendly Societies, South Australia

Particulars	1966-67	1967-68	1968-69	1969-70	1970-71
Number of registered societies (a)	14	14	14	14	14
Number of members (a) (b)	51,001	51,070	50,880	50,796	50,488
Revenue (c):			\$'000		
Contributions and levies	6,562	6,947	7,093	12,547	9,993
Interest, dividends and rent	755	808	869	938	1,110
Other	673	584	720	996	1,237
Total revenue	7,990	8,339	8,682	14,481	12,341
Expenditure (c):					
Sick pay	188	190	187	183	181
Medical attendance and medicine	2,305	2,473	2,680	4,612	3,386
Sums payable at death	139	143	145	153	151
Hospital benefits	2,441	2,738	3,347	6,563	4,982
Administration	997	1,057	1,143	1,260	1,483
Other	565	465	483	543	550
Total expenditure	6,635	7,065	7,985	13,314	10,733
Total funds	16,217	17,490	18,188	19,355	20,962

(a) At 30 June.

(b) Full benefit members; does not include those who contribute for medical and hospital benefits only.

(c) Receipts and payments of Commonwealth medical and hospital benefit subsidies excluded.

The Friendly Society Medical Association operates thirty pharmacies in the metropolitan area and one at 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 government securities, and a number of societies own valuable city freeholds.

6.7 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 legislation relating to marriages is the Commonwealth *Marriage Act* 1961-1966 which came into full operation on 1 September 1963 superseding, in South Australia, the *Marriage 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 twenty-two registration districts, authorised ministers of religion and other authorised celebrants may celebrate marriages.

After a marriage the celebrant is required to forward the official certificate of marriage to the Principal Registrar who maintains at his office a register of all marriages celebrated in South Australia. In addition a copy of the marriage certificate is forwarded by the office of the Principal Registrar to the District Registrar who maintains a register of the marriages celebrated in his district.

The average annual number of marriages and the rates per 1,000 of mean population in selected ten-yearly periods since 1906 and numbers and rates for each of the most recent six years are shown in the following table.

Marriages, South Australia

Ten-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
1906-15	3,596	8.86	1966	9,051	8.27
1916-25	3,978	8.16	1967	9,434	8.50
1926-35	4,001	6.97	1968	9,652	8.60
1936-45	6,122	10.14	1969	10,599	9.30
1946-55	6,436	8.92	1970	10,864	9.38
1956-65	7,016	7.35	1971	10,833	9.22

The crude marriage rate generally has risen from 7.0 in 1960 to the present level of 9.22 in 1971. Influences underlying this increase include the upsurge of births immediately following the 1939-45 War period together with the effects of post-War immigration policy.

Particulars relating to first marriages and remarriages annually since 1961 are shown in the following table.

Marital Status of Persons Marrying, South Australia

Year	Bridegrooms			Brides			Percentage of Total Married					
							Bridegrooms			Brides		
	Bach- elors	Wid- owers	Div- orced	Spin- sters	Wid- ows	Div- orced	Bach- elors	Wid- owers	Div- orced	Spin- sters	Wid- ows	Div- orced
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
1965	7,878	286	516	7,838	325	517	90.8	3.3	5.9	90.3	3.7	6.0
1966	8,168	323	560	8,165	306	580	90.2	3.6	6.2	90.2	3.4	6.4
1967	8,595	312	527	8,542	332	560	91.1	3.3	5.6	90.5	3.5	6.0
1968	8,828	309	515	8,821	324	507	91.5	3.2	5.3	91.4	3.3	5.3
1969	9,687	318	594	9,700	339	560	91.4	3.0	5.6	91.5	3.2	5.3
1970	9,900	333	631	9,961	339	564	91.2	3.0	5.8	91.7	3.1	5.2

Before 1951, of the widowed persons remarrying, the number of males usually exceeded the females but since then the number of males has in most years been less than the number of females. However, from 1968 the divorced males remarrying have outnumbered divorced females remarrying; this has reversed a tendency which had existed since 1940.

The following statement shows age at marriage of bridegrooms and brides who married during 1970 classified by marital status.

Age at Marriage and Marital Status, South Australia, 1970

Age	Marital Status at Marriage							
	Bridegrooms				Brides			
	Bachelors	Widowers	Divorced	Total	Spinsters	Widows	Divorced	Total
Under 21 years	1,718	—	—	1,718	5,024	1	2	5,027
21 to 24 years	5,543	3	21	5,567	3,945	6	58	4,009
25 to 29 years	1,920	15	104	2,039	706	11	121	838
30 to 34 years	397	5	117	519	139	14	90	243
35 to 39 years	158	17	92	267	59	27	77	163
40 to 44 years	78	22	92	192	34	31	63	128
45 years and over ..	86	271	205	562	54	249	153	456
All ages ...	9,900	333	631	10,864	9,961	339	564	10,864

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: Percentages to Total Marriages
South Australia

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
1961....	10.6	40.9	24.2	17.5	6.8	40.8	34.4	9.7	9.6	5.5
1966....	15.3	45.4	21.9	11.8	5.6	45.4	35.1	8.3	6.7	4.5
1967....	15.7	46.8	20.4	11.5	5.6	45.8	36.0	7.6	6.2	4.4
1968....	14.7	49.8	19.7	10.4	5.4	43.6	38.9	7.5	5.9	4.1
1969....	14.7	51.7	18.6	9.7	5.3	44.5	38.5	7.6	5.3	4.1
1970....	15.8	51.1	18.8	9.1	5.2	46.3	36.9	7.7	4.9	4.2
	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
1961....	11.9	45.5	26.3	14.9	1.4	46.1	38.2	9.3	5.3	1.1
1966....	16.9	50.0	23.2	8.7	1.0	50.2	38.2	7.6	3.2	0.8
1967....	17.2	51.2	21.7	8.7	1.2	50.5	39.1	7.0	2.7	0.7
1968....	16.1	54.3	20.5	8.0	1.1	47.7	41.9	6.9	2.9	0.6
1969....	16.1	56.4	19.3	7.1	1.1	48.6	41.5	7.0	2.2	0.7
1970....	17.4	56.0	19.3	6.4	0.9	50.4	39.6	7.1	2.3	0.6

In 1970, 73.4 per cent of first marriages of men and 90.0 per cent of first marriages of women were of persons who were under twenty-five years of age. This compares with the 1928 figures of 39.2 per cent and 64.4 per cent respectively.

The following table shows the average age of bridegrooms and brides during the last ten years.

Average Age at Marriage, South Australia

Year	Bridegrooms				Brides			
	Bachelors	Widowers	Divorced	All Bridegrooms	Spinsters	Widows	Divorced	All Brides
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
1965.....	24.9	56.0	42.3	26.9	21.8	51.4	37.8	23.9
1966.....	24.7	55.4	40.6	26.8	21.8	51.6	37.3	23.8
1967.....	24.6	56.0	41.8	26.6	21.8	50.4	37.9	23.7
1968.....	24.5	57.4	40.5	26.4	21.8	51.0	37.5	23.6
1969.....	24.3	55.8	40.8	26.2	21.7	50.0	37.6	23.5
1970.....	24.1	56.9	40.4	26.1	21.6	52.4	37.6	23.4

The difference in the average ages of bachelors and spinsters marrying was less than 3 years between 1942 and 1954. From then until 1966 it exceeded 3 years, but has narrowed from 3.4 in 1963 to 2.5 in 1970, the smallest difference since average ages of single bridegrooms and brides were first recorded in 1942.

MARRIAGE OF MINORS

The Commonwealth *Marriage Act* 1961-1966 stipulates the marriageable age to be eighteen years or over for a male and sixteen 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 sixteen in the case of a male or fourteen in the case of a female, authorise him or her to marry a particular person who is of marriageable age.

South Australian legislation operative before the Commonwealth Act, and proclaimed on 1 March 1958, provided that a marriage between persons either of whom was a boy under the age of eighteen years or a girl under the age of sixteen 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 fourteen to seventeen years and females aged twelve to fifteen years. Before this it had been the practice to apply the provisions of British common law prohibiting the marriage of either a male under fourteen or a female under twelve.

In all cases where a party to a marriage is under twenty-one 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 relating to the marriages of minors for the five years to 1970 are shown in the following table.

Marriage of Minors, South Australia

Year	Age in Years							Total Minors	Percentage of Total Marriages
	14 or Less	15	16	17	18	19	20		
BRIDEGROOMS									
1966.....	—	—	1	19	221	518	624	1,383	15.3
1967.....	—	—	2	19	228	513	718	1,480	15.7
1968.....	—	—	1	19	204	501	692	1,417	14.7
1969.....	—	—	—	20	224	476	839	1,559	14.7
1970.....	—	—	2	26	244	568	878	1,718	15.8
BRIDES									
1966.....	3	5	188	425	834	1,375	1,275	4,105	45.4
1967.....	1	4	179	440	823	1,265	1,605	4,317	45.8
1968.....	—	7	176	391	866	1,293	1,480	4,213	43.6
1969.....	1	10	167	402	947	1,486	1,703	4,716	44.5
1970.....	—	13	196	510	1,025	1,585	1,698	5,027	46.3

During the years 1965 to 1970 the proportion of minors being married has shown little variation. This levelling-off followed a general upward trend commencing in the late 1930's; in 1939 the percentages were 3.1 for males and 16.5 for females. However, the percentages of 15.8 for bridegrooms and 46.3 for brides in 1970, are the highest recorded since 1903, the year in which details for this age group were first separately tabulated.

RELIGIOUS DENOMINATION OF MARRIAGES

The number of marriages celebrated in South Australia by ministers of religion in 1970 was 9,475, representing 87.2 per cent of the total. Civil marriages numbered 1,389, or 12.8 per cent of the total. The following table shows the number and proportion of civil marriages and of marriages solemnised according to the rites of the principal religious denominations during the three years to 1970.

Marriages: Category of Celebrant, South Australia

Category of Celebrant	Number of Authorised Celebrants January 1970	Number of Marriages			Proportion of Total Marriages		
		1968	1969	1970	1968	1969	1970
Ministers of religion:							
Recognised denominations (a);							
Baptist	67	248	246	297	2.6	2.3	2.7
Catholic	240	2,005	2,171	2,275	20.8	20.5	20.9
Church of England	177	2,104	2,289	2,115	21.8	21.6	19.5
Churches of Christ	62	314	321	329	3.2	3.0	3.0
Congregational	53	321	347	342	3.3	3.3	3.2
Lutheran	118	488	624	585	5.0	5.9	5.4
Methodist	215	2,384	2,645	2,637	24.7	25.0	24.3
Orthodox (b)	17	202	176	184	2.1	1.7	1.7
Presbyterian	25	366	415	378	3.8	3.9	3.5
Salvation Army	30	50	49	59	0.5	0.5	0.5
Other	99	142	162	215	1.5	1.5	2.0
Other ministers	23	9	26	59	0.1	0.2	0.5
Civil Officers	26	1,019	1,128	1,389	10.6	10.6	12.8
Total	1,152	9,652	10,599	10,864	100.0	100.0	100.0

(a) Under authority of the Commonwealth *Marriage Act* 1961-1966.

(b) Includes churches grouped under this heading as proclaimed under the Commonwealth *Marriage Act* 1961-1966.

6.8 DIVORCE

LEGISLATION

The Supreme Court of South Australia has had jurisdiction in divorce from 1 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* 1959-1971 which came into operation on 1 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 before 1 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 three months, unless rescinded by the Court, or an appeal has been instituted or there are children of the marriage in respect of whom proper arrangements have not been made for welfare, advancement and education.

The grounds on which petitions can be filed for dissolution of marriage under the Commonwealth *Matrimonial Causes Act* 1959-1971 can be briefly described as: adultery; desertion for not less than two years; refusal to consummate the marriage; habitual cruelty for not less than one year; rape, sodomy or bestiality; habitual drunkenness or habitual intoxication by drugs for two years or more; frequent convictions for crime and failure to support (only on petition of wife); imprisonment for at least three years of a sentence of at least five years; conviction of attempted murder of or inflicting or attempting to inflict grievous bodily harm on the petitioner; failure for at least two years to pay maintenance; failure for at least one year to comply with a decree of restitution of conjugal rights; insanity; separation for at least five years; and presumption of death.

Details of the grounds covered in the 1858 Act and the changes to grounds made by enactment or amendment to State legislation before replacement by Commonwealth legislation were shown on page 264 of the *South Australian Year Book* 1971.

The main alterations to grounds in South Australia resulting from the Commonwealth legislation were that a petition on the ground of separation for five years no longer required a Court order granting judicial separation or relief from cohabitation as a pre-requisite, and the period for desertion to constitute a ground for dissolution of marriage was reduced from three to two years. In addition, the period of decree *nisi* is now three months, having been six months under State legislation.

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 five years to 1971 are shown in the following table. In each of these years petitions for dissolution lodged by wives outnumbered those lodged by husbands. This pattern has prevailed for over fifty years, as petitions by husbands have rarely exceeded those by wives.

**Dissolution of Marriage and Other Matrimonial Causes
Petitions Filed, South Australia**

Year	Dissolution of Marriage			Nullity of Marriage	Judicial Separation	Total Petitions (a)
	By Husbands	By Wives	Total			
1967....	429	749	1,178	11	15	1,207
1968....	422	764	1,186	5	8	1,201
1969....	480	874	1,354	7	6	1,369
1970....	507	858	1,365	7	4	1,380
1971....	622	1,026	1,648	5	9	1,668

(a) Includes petitions lodged for dissolution or nullity: 1962, 1; 1963, 1; 1964, 2; 1965, 2; 1966, 3; 1967, 2; 1968, 1; 1969, 2; 1970, 2; 1971, 2; and petitions lodged for dissolution or judicial separation: 1966, 2; 1967, 1; 1968, 1; 1970, 2; 1971, 4.

DECREES GRANTED

The table below shows the number of decrees absolute granted for dissolution and nullity of marriage and decrees granted for judicial separation. While the large increase in decrees absolute granted from 1940 is partly because of legislative changes enacted in 1939, it also reflects the abnormal conditions experienced during and immediately after the 1939-45 War.

**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		
Annual Average:					
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
1961-65	334.6	446.8	781.4	4.6	0.6
1966-70	363.8	599.2	963.0	5.8	1.8
Year:					
1967.....	360	569	929	9	1
1968.....	336	579	915	4	3
1969.....	362	601	963	6	1
1970.....	354	585	939	1	2
1971.....	473	791	1,264	8	3

In the table which follows details of the grounds on which petitions for dissolution have been granted are shown for the years 1967 to 1971.

Dissolution of Marriage: Grounds of Decrees Absolute, South Australia

Year	Grounds on which Granted							
	Single Grounds						Multiple Grounds	Total
	Adultery	Cruelty	Desertion	Drunkenness	Separation	Other		
HUSBAND AS PETITIONER								
1967.....	141	—	143	1	69	4	2	360
1968.....	126	3	144	—	46	5	12	336
1969.....	154	5	122	3	63	3	12	362
1970.....	143	3	146	2	52	2	6	354
1971.....	209	4	179	3	74	—	4	473
WIFE AS PETITIONER								
1967.....	130	116	198	11	97	3	14	569
1968.....	138	111	195	19	91	4	21	579
1969.....	142	136	191	19	80	6	27	601
1970.....	136	141	183	14	90	6	15	585
1971.....	237	170	258	24	86	4	12	791
ALL DISSOLUTIONS								
1967.....	271	116	341	12	166	7	16	929
1968.....	264	114	339	19	137	9	33	915
1969.....	296	141	313	22	143	9	39	963
1970.....	279	144	329	16	142	8	21	939
1971.....	446	174	437	27	160	4	16	1,264

The ages at marriage of persons divorced for the five years to 1971 are shown in the following table.

Dissolution of Marriages: Decrees Absolute, Age at Time of Marriage South Australia

Year	Age at Marriage								Total
	Under 20	20-24	25-29	30-34	35-39	40-44	45 and Over	Not Stated	
HUSBANDS									
1967....	76	459	206	99	41	24	23	1	929
1968....	73	460	202	79	36	23	42	—	915
1969....	93	489	216	77	39	19	29	1	963
1970....	95	471	222	77	29	20	23	2	939
1971....	139	694	254	82	37	25	32	1	1,264
WIVES									
1967....	340	371	119	34	33	9	21	2	929
1968....	308	394	109	42	19	16	27	—	915
1969....	362	422	93	41	16	10	19	—	963
1970....	374	372	94	46	22	14	16	1	939
1971....	486	562	120	34	24	14	24	—	1,264

Information of the relative ages at marriage of husbands and wives for marriages dissolved in 1970 is contained in the following table.

Dissolution of Marriage: Decrees Absolute, 1970
Relative Ages at Marriage of Husbands and Wives, South Australia

Age of Husband at Marriage	Age of Wife at Marriage							Total Husbands
	Under 20	20-24	25-29	30-34	35-39	40 and Over	Not Stated	
Under 20	81	13	1	—	—	—	—	95
20-24	226	216	24	3	1	1	—	471
25-29	55	106	45	14	1	1	—	222
30-34	11	28	14	17	6	1	—	77
35-39	—	7	7	5	8	2	—	29
40 and over	1	1	3	7	6	25	—	43
Not stated	—	1	—	—	—	—	1	2
Total wives....	374	372	94	46	22	30	1	939

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 during the last five years.

Dissolution of Marriage: Decrees Absolute, Duration of Marriage
South Australia

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	
1967....	89	248	184	170	127	65	25	15	6	929
1968....	99	273	165	137	117	70	34	13	7	915
1969....	89	260	192	147	144	78	34	12	7	963
1970....	94	250	182	157	108	93	32	15	8	939
1971....	108	380	247	185	169	100	54	11	10	1,264

Ages of husbands and of wives at time of decree absolute for each of the last five years are shown in the table which follows.

Dissolution of Marriage: Age at Time of Decree Absolute
South Australia

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		
HUSBANDS										
1967....	36	141	156	141	159	115	180	1	929	
1968....	42	152	153	147	119	112	190	—	915	
1969....	38	154	172	139	157	117	185	1	963	
1970....	45	153	162	139	133	134	171	2	939	
1971....	67	230	226	185	172	166	217	1	1,264	
WIVES										
1967....	105	187	133	156	135	89	122	2	929	
1968....	111	186	134	145	114	90	135	—	915	
1969....	119	193	153	130	145	100	123	—	963	
1970....	110	191	155	135	109	111	127	1	939	
1971....	144	293	216	160	158	138	155	—	1,264	

For marriages dissolved in 1970 the following table shows the relative ages of husbands and wives at the time of dissolution.

Dissolution of Marriage: Decrees Absolute, Relative Ages of Husbands and Wives at Time of Dissolution, South Australia, 1970

Age of Husband at Dissolution	Age of Wife at Dissolution							Total Husbands
	Under 25	25-29	30-34	35-39	40-44	45 and Over	Not Stated	
Under 25	36	9	—	—	—	—	—	45
25-29	63	84	4	—	1	1	—	153
30-34	9	83	61	9	—	—	—	162
35-39	1	14	67	47	8	2	—	139
40-44	1	—	19	58	45	10	—	133
45 and over	—	—	4	21	55	225	—	305
Not stated	—	1	—	—	—	—	1	2
Total wives....	110	191	155	135	109	238	1	939

The following table shows particulars of the number of children of marriages dissolved in the last five years.

Dissolution of Marriage: Decrees Absolute, Children of the Marriage South Australia

Year	Number of Children at Time of Petition							Total Dissolutions of Marriage	Total Children
	0	1	2	3	4	5	6 and Over		
1967.....	261	246	219	123	51	16	13	929	1,421
1968.....	279	213	216	117	53	22	15	915	1,415
1969.....	256	210	240	156	64	24	13	963	1,616
1970.....	283	196	228	131	53	32	16	939	1,517
1971.....	329	305	314	171	86	42	17	1,264	2,116

Information collected for petitions filed under State legislation covered only living 'issue' under sixteen years of age; information collected for petitions filed under Commonwealth legislation covers living 'children of the marriage' under twenty-one 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.

The numbers of orders absolute for dissolution granted in 1967 to 1971 include some which relate to petitions filed under the old legislation, but in insufficient numbers to have a significant effect upon the comparability of the figures relating to children in the foregoing table.

The following table shows the number of children of marriages related to duration of marriage for decrees absolute for dissolution granted in 1970.

Dissolution of Marriage: Decrees Absolute, 1970
Duration of Marriage and Children of the Marriage, South Australia

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	60	30	3	1	—	—	—	94	39
5-9	80	75	72	14	5	2	2	250	305
10-14	25	28	59	41	20	7	2	182	396
15-19	19	19	50	33	17	12	7	157	388
20-24	14	14	25	33	10	9	3	108	268
25-29	40	22	18	8	1	2	2	93	108
30-34	24	6	1	1	—	—	—	32	11
35-39	13	2	—	—	—	—	—	15	2
40 and over	8	—	—	—	—	—	—	8	—
Total dissolutions of marriage	283	196	228	131	53	32	16	939	—
Total children ...	—	196	456	393	212	160	100	—	1,517

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. For the 1966 census the definition of the work force was revised to accord with the recommendations of the Eighth International Conference of Labour Statisticians, and the revised approach was retained for the 1971 census. The major factor in this change was the inclusion of a number of females working part-time who did not previously consider themselves as 'engaged in an industry, business, profession, trade or service'.

More detailed definitions of the work force and of the new questions asked at the 1966 Census are available in Census Bulletin 4.1 published by the Commonwealth Statistician.

In the following table population at the 1961 and 1966 Censuses is classified by occupational status which refers to the status of each person in his or her occupation *e.g.* employer, worker on own account, working for wages etc. Those persons reporting themselves as not engaged in an industry, business, profession, trade or service take as their occupational status 'not in the work force'.

The growth in the female proportion of the work force evident between the 1954 and 1961 Censuses has continued and at the 1966 Census females constituted 29.0 per cent of the work force compared with 23.6 per cent in 1961. The main factor in this growth has been the increased participation of married females

in the work force; they comprised 10.3 per cent of the work force in 1961 and 13.8 per cent in 1966. Similarly the proportion of the female population in the work force rose from 18.6 per cent in 1961 to 24.1 per cent in 1966.

**Occupational Status of the Population, South Australia
Censuses 1961 and 1966**

Occupational Status	30 June 1961			30 June 1966		
	Males	Females	Persons	Males	Females	Persons
In work force:						
Employer	20,132	4,081	24,213	23,747	6,228	29,975
Self-employed ...	35,128	5,850	40,978	31,135	7,205	38,340
Employee	223,241	75,447	298,688	259,105	111,197	370,302
Helper	1,318	634	1,952	1,167	2,613	3,780
Not at work	8,520	3,210	11,730	(a)	(a)	(a)
Unemployed	(a)	(a)	(a)	4,464	3,563	8,027
Total work force	288,339	89,222	377,561	319,618	130,806	450,424
Not in work force ...	201,886	389,893	591,779	228,912	412,539	641,451
Total population	490,225	479,115	969,340	548,530	543,345	1,091,875

(a) Definitional and conceptual differences prevent derivation of figures for both Censuses.

Occupation refers to the kind of work a person normally performs *e.g.* carpenter, clerk, and is classified according to the Australian Classification of Occupations which has been adapted from and closely adheres to the principles embodied in the International Standard Classification of Occupations issued by the International Labour Office, Geneva 1958. It contains 11 major groupings subdivided into 72 minor groups further subdivided into 313 individual categories. The following table shows the work force at the 1966 Census classified by occupation.

Work Force: Occupation, South Australia, 30 June 1966

Occupation Group	Males		Females		Persons	
	Number	Proportion of Total	Number	Proportion of Total	Number	Proportion of Total
		%		%		%
Professional, technical and related workers	23,834	7.46	18,652	14.26	42,486	9.43
Administrative, executive and managerial workers	24,280	7.60	3,094	2.36	27,374	6.08
Clerical workers	25,423	7.95	36,000	27.52	61,423	13.64
Sales workers	17,374	5.44	19,161	14.65	36,535	8.11
Farmers, fishermen, hunters, timber-getters and related workers	40,723	12.74	8,420	6.44	49,143	10.91
Miners, quarrymen and related workers	1,741	0.55	26	0.02	1,767	0.39
Workers in transport and communication occupations	23,274	7.28	3,046	2.33	26,320	5.84
Craftsmen, production-process workers and labourers (n.e.i.) ...	145,427	45.50	15,802	12.08	161,229	35.79
Service, sport and recreation workers	11,611	3.63	21,986	16.81	33,597	7.46
Members of armed services, enlisted personnel	3,432	1.07	168	0.13	3,600	0.80
Occupation inadequately described or not stated	2,499	0.78	4,451	3.40	6,950	1.54
Total work force	319,618	100.00	130,806	100.00	450,424	100.00

Industry refers to the branch of productive activity, trade or service in which the individual works or carries out his occupation. The Australian Classification of Industries used for the 1966 Census divides the whole field of industry into 15 major industry groups which, in turn, are divided into 53 sub-groups and 342 individual categories.

In the next table the numbers of males and females in the work force at the 1966 Census are classified according to industry in conjunction with occupational status. The proportion of the work force engaged in primary production declined from 22.2 per cent in 1933 to 17.9 per cent in 1947 and to 10.6 per cent in 1966. In contrast, the percentage recorded as employed in manufacturing industries rose from 15.5 in 1933 to 26.8 in 1947 and to 27.8 in 1966.

Work Force: Industry and Occupational Status, South Australia
Census 30 June 1966

Industry Group	Employed					Un- employed	Total Work Force
	Employer	Self- Employed	Employee	Helper	Total		
MALES							
Primary production	8,407	16,756	12,650	809	38,622	263	38,885
Mining and quarrying	79	604	2,325	17	3,025	45	3,070
Manufacturing	2,207	1,783	96,011	73	100,074	721	100,795
Electricity, gas, water and sanitary services	14	19	10,726	6	10,765	40	10,805
Building and construction	3,137	3,965	29,084	46	36,232	687	36,919
Transport and storage	878	2,139	18,586	17	21,620	191	21,811
Communication	—	2	7,653	3	7,658	25	7,683
Finance and property	358	608	8,793	16	9,775	26	9,801
Commerce	5,355	3,492	35,609	79	44,535	326	44,861
Public authority (n.e.i.) and defence services	—	—	11,492	—	11,492	34	11,526
Community and business services (including professional)	1,807	522	17,758	46	20,133	90	20,223
Amusement, hotels and other accommodation, cafes, per- sonal services, etc.	1,452	1,149	7,063	33	9,697	99	9,796
Other industries	—	1	2	—	3	—	3
Industry inadequately described or not stated	53	95	1,353	22	1,523	1,917	3,440
Total males in work force	23,747	31,135	259,105	1,167	315,154	4,464	319,618
FEMALES							
Primary production	1,527	3,048	2,742	1,394	8,711	59	8,770
Mining and quarrying	6	24	128	2	160	1	161
Manufacturing	450	410	22,983	102	23,945	313	24,258
Electricity, gas, water and sanitary services	2	—	553	—	555	8	563
Building and construction	291	148	996	66	1,501	14	1,515
Transport and storage	145	170	1,809	32	2,156	15	2,171
Communication	—	1	2,183	—	2,184	16	2,200
Finance and property	40	88	5,912	17	6,057	34	6,091
Commerce	2,290	1,957	26,373	385	31,005	339	31,344
Public authority (n.e.i.) and defence services	—	—	3,510	—	3,510	31	3,541
Community and business services (including professional)	307	409	29,530	109	30,355	267	30,622
Amusement, hotels and other accommodation, cafes, per- sonal services, etc.	1,120	827	12,319	215	14,481	222	14,703
Other industries	—	—	1	—	1	2	3
Industry inadequately described or not stated	50	123	2,158	291	2,622	2,242	4,864
Total females in work force	6,228	7,205	111,197	2,613	127,243	3,563	130,806

Labour Force Survey

In addition to complete census counts, estimates of the civilian labour force are prepared each quarter from the results of surveys conducted at a sample of dwellings throughout Australia. These surveys began in 1960 and were initially

confined to the six State capital cities. During 1964 the surveys were extended to include non-metropolitan urban and rural areas, thereby enabling derivation of estimates of the total civilian labour force in Australia. Because of the nature of the sample used, national labour force estimates only are prepared, and information is not available for individual States.

Statistics obtained from the surveys include numbers employed and unemployed; labour force participation and unemployment rates; duration of unemployment; analyses of reasons for 'under employment'; as well as age, sex, occupation and industry characteristics.

Estimates of persons employed in agriculture and in other industries have been revised for the period from August 1968. The revised estimates are included in the following table which shows the employment status of the civilian population at August in each year from 1968 to 1971.

Civilian Population 15 Years of Age and Over: Employment Status, Australia

August	In Labour Force					Not in Labour Force	Civilian Population Aged 15 Years and Over
	Employed			Un-employed	Total		
	Agri-culture	Other Industries	Total				
MALES (per cent)							
1968.....	8.56	73.70	82.26	0.76	83.02	16.98	100.0
1969.....	8.19	74.07	82.26	0.73	82.99	17.01	100.0
1970.....	7.94	74.33	82.27	0.75	83.02	16.98	100.0
1971.....	7.40	74.00	81.40	0.87	82.27	17.73	100.0
MARRIED WOMEN (per cent)							
1968.....	<i>n.a.</i>	<i>n.a.</i>	29.79	0.67	30.46	69.54	100.0
1969.....	1.80	29.44	31.24	0.67	31.91	68.09	100.0
1970.....	1.86	31.55	33.41	0.58	33.99	66.01	100.0
1971.....	1.80	32.81	34.61	0.71	35.32	64.68	100.0
OTHER FEMALES (a) (per cent)							
1968.....	<i>n.a.</i>	<i>n.a.</i>	47.40	1.10	48.50	51.50	100.0
1969.....	0.88	45.72	46.60	1.01	47.61	52.39	100.0
1970.....	0.81	45.85	46.66	0.96	47.62	52.38	100.0
1971.....	0.76	43.70	44.46	0.92	45.38	54.62	100.0
PERSONS (per cent)							
1968.....	4.90	54.01	58.91	0.79	59.70	40.30	100.0
1969.....	4.82	54.39	59.21	0.76	59.97	40.03	100.0
1970.....	4.69	55.25	59.94	0.73	60.67	39.33	100.0
1971.....	4.41	55.11	59.52	0.83	60.35	39.65	100.0

(a) Includes never married, widowed and divorced.

n.a. not available.

Of particular note in recent years has been the increasing participation of married women in the work force. The following table shows the work force participation rates of all women, with separate measures for married and for non-married women with each category further classified into age groups.

**Employed Women^(a): Participation Rates^(b), Age and Marital Status
Australia**

August	Age Group (Years)								Total (a)
	15-19	20-24	25-34	35-44	45-54	55-59	60-64	65 and over	
	MARRIED WOMEN (per cent)								
1967.....	31.8	39.8	29.5	36.5	32.0	21.1	10.6	3.2	29.3
1968.....	35.6	40.0	31.1	36.9	34.0	23.5	12.1	2.8	30.5
1969.....	33.2	44.4	32.8	39.1	35.4	23.0	11.7	3.0	32.0
1970.....	38.4	44.6	36.2	42.1	37.6	23.0	11.6	2.9	34.0
1971.....	40.8	44.7	36.0	45.3	39.1	24.5	12.7	3.2	35.3
	OTHER FEMALES (c) (per cent)								
1967.....	64.1	91.2	78.3	69.7	58.4	46.7	25.2	4.5	49.2
1968.....	61.6	90.2	83.8	71.8	60.9	43.8	22.5	4.2	49.5
1969.....	59.2	89.4	82.9	71.9	58.3	44.9	21.8	4.4	47.6
1970.....	59.1	90.0	81.8	70.3	57.9	44.1	23.3	3.8	47.5
1971.....	54.2	86.1	79.3	76.7	60.3	42.8	24.7	4.4	45.4
	ALL FEMALES (per cent)								
1967.....	61.7	60.9	34.7	39.5	36.2	28.1	16.0	4.1	36.2
1968.....	59.8	60.4	36.2	40.1	38.1	29.1	15.9	3.7	36.7
1969.....	57.1	61.7	37.9	42.1	39.0	28.3	15.2	3.9	37.3
1970.....	57.4	61.8	41.3	44.6	40.7	28.2	15.6	3.5	38.6
1971.....	53.1	59.8	40.6	47.9	42.3	29.1	17.1	4.0	38.7

(a) Civilians 15 years of age and over.

(b) The labour force in each group as a percentage of the civilian population aged 15 years and over in the same group.

(c) Includes never married, widowed and divorced.

Special Employment Studies

The sample of dwellings referred to in respect of the Labour Force Survey (pages 275-6) has provided the framework for a number of special studies related to employment. These special studies have included: some characteristics of the attachment of school leavers to the labour force, information concerning the labour force participation of persons responsible for the care of children, measures of the extent of multiple job-holding in the civilian labour force, the effect of long term physical and mental disabilities on capacity to work and some indications of the time and means of travel to work. Brief summaries of these studies are given in the following pages and on pages 194-5 and 236-8. Since the estimates provided in these studies are based on sample surveys they are subject to sampling error, the magnitude of which is described in some detail in the bulletins for each topic published by the Commonwealth Statistician.

School Leavers

The definition of school leavers adopted for these surveys is 'persons aged fifteen to twenty-four who had attended full-time at a school, university or other educational institution at some time during the previous year and were not returning to full-time education in the year in which the survey was conducted.' The number of school leavers who entered the work force expressed as a percentage of total leavers describes their labour force participation rates. This rate for South Australian males in February 1971 was 94.8 compared with the national rate of 93.3, while the equivalent rates for females were 94.9 in this

State and 91.6 for Australia. The following table indicates both numbers and participation rates in February of the years 1967 to 1971.

Labour Force, Attachment of School Leavers

February	South Australia			Australia		
	Total in Labour Force	Total Leavers	Labour Force Participation Rate	Total in Labour Force	Total Leavers	Labour Force Participation Rate
	'000		Per cent	'000		Per cent
MALES						
1967....	7.7	7.9	97.5	79.9	85.0	94.0
1968....	8.7	9.1	95.4	84.8	88.5	95.8
1969....	9.7	10.3	94.0	89.7	95.0	94.4
1970....	10.7	10.9	98.2	90.8	95.1	95.5
1971....	9.9	10.5	94.8	96.4	103.3	93.3
FEMALES						
1967....	7.9	8.9	88.8	74.6	82.4	90.5
1968....	5.7	6.7	85.3	72.1	80.8	89.2
1969....	8.0	9.1	88.1	83.7	93.4	89.6
1970....	8.4	9.1	92.1	81.2	91.7	88.5
1971....	9.7	10.3	94.9	92.1	100.5	91.6
PERSONS						
1967....	15.7	16.8	93.5	154.5	167.4	92.2
1968....	14.4	15.8	91.1	156.9	169.4	92.6
1969....	17.7	19.4	91.2	173.4	188.3	92.1
1970....	19.0	20.0	95.4	171.9	186.8	92.0
1971....	19.7	20.7	94.9	188.4	203.8	92.4

Child Care

In May 1969 a survey, based on the quarterly population survey sample of households, was conducted throughout Australia in order to derive information about persons in the labour force who were responsible for the care of children under twelve years of age and the arrangements they made for the care of their children while they themselves were at work. In addition, the survey sought to establish the numbers of persons who would have entered the work force if suitable child care facilities had been available. The enquiry was directed mainly to working mothers, but males with the sole responsibility for children were also included.

The child care survey questions were asked of all female survey respondents who were under the age of sixty, and all males of the same age group who were widowed, divorced or permanently separated, with the following exceptions: persons attending school, university etc. full-time, persons permanently unable to work and inmates of institutions such as hospitals, sanatoria and gaols.

The following tables indicate the numbers of persons responsible for children under twelve years of age, their labour force attachment, and the number who stated they would have worked if suitable child care arrangements had been available.

The labour force participation rates for persons responsible for pre-school children (22.3 per cent overall) were found to be, as one would expect, markedly lower than the rates for persons responsible for children of primary school age. However, a significant number of persons responsible for pre-school children (91,500 throughout Australia, including 7,700 in South Australia) indicated that

they would have worked if suitable child care facilities were available whereas only an additional 11,300 persons throughout Australia responsible for older children indicated such a preference.

More details resulting from the survey are included in the bulletin, *Child Care* (reference 17.2), published by the Commonwealth Statistician.

**Persons Responsible for Children under 12 years of Age
Employment Status, States, May 1969^(a)**

State	In the Labour Force				Not in the Labour Force		Total	
	Full Time		Part Time					
	'000	%	'000	%	'000	%	'000	%
Responsible for children under 6 years only:								
N.S.W.	40.0	12.2	34.1	10.4	253.4	77.4	327.5	100.0
Vic.	35.5	13.9	24.4	9.5	195.6	76.6	255.5	100.0
Qld.	13.3	10.0	10.5	7.9	109.6	82.1	133.4	100.0
S.A.	8.7	10.0	10.5	12.2	67.1	77.8	86.3	100.0
W.A.	7.6	10.4	11.1	15.2	54.5	74.4	73.2	100.0
Tas.	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	23.8	79.3	30.0	100.0
Aust. (b)	109.5	11.9	96.0	10.4	715.5	77.7	921.0	100.0
Responsible for all children under 12 years:								
N.S.W.	149.0	29.4			358.4	70.6	507.4	100.0
Vic.	121.8	31.2			268.6	68.8	390.5	100.0
Qld.	46.8	23.3			154.3	76.7	201.2	100.0
S.A.	39.1	29.2			95.1	70.8	134.1	100.0
W.A.	36.1	31.8			77.3	68.2	113.4	100.0
Tas.	12.7	27.2			34.0	72.8	46.7	100.0
Aust. (b)	413.9	29.2			1,003.0	70.8	1417.0	100.0

(a) Females and widowed, divorced or separated males aged 15-59 years.

(b) Includes Northern Territory and Australian Capital Territory.

n.a. not available

**Females Not in the Labour Force Who Would Have Worked if Suitable Child
Care Arrangements had been Available: Number and Age of Children
States, May 1969**

Age and number of children	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust. (a)
	'000						
Under 3 years	28.4	12.7	9.8	5.5	5.1	(b)	64.3
3-5 years	25.8	11.3	8.5	4.8	4.7	(b)	58.4
Under 6 years	40.1	18.4	13.4	7.7	7.5	(b)	91.5
6 years and over	5.9	(b)	(b)	(b)	(b)	(b)	11.3
Total	46.0	20.8	14.8	8.6	7.9	(b)	102.8

(a) Includes Northern Territory and Australian Capital Territory.

(b) Insufficient data obtained in sample.

Journey to Work

A sample survey was conducted in May 1970 in order to obtain information about the principal means of transport by which employed persons travelled to work. The results of the survey also include the times at which employed

persons left home to travel to work and the amount of time spent on the journey to work.

The means of transport used refers to the principal means and when two or more were required, the principal means was taken as that which covered the greatest distance. The category 'other' referred to in the table below includes such methods as travel by taxi or as a pillion passenger on a motor cycle. The duration of journey to work was measured as the time taken by a person to travel from the door of his residence to the entrance to his place of work.

The survey indicated that in May 1970 of 382,500 South Australians who travelled to work, 268,000 or just over 70 per cent travelled by car either as driver or as passenger. The comparable rate for the whole of Australia was almost 63 per cent. Conversely less than 17 per cent of South Australians travelled to work by public transport (train, bus and tram) compared with almost 24 per cent for Australia. The following table reveals comparisons of the use of several methods of transport in capital city statistical divisions and in other areas for each State and for the whole of Australia.

**Persons Who Travelled to Work, by Method of Travel, Capital Cities
and Other Areas, May 1970
(Per cent)**

Method of Travel to Work	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust. (a)
CAPITAL CITIES (b)							
Public transport	36.7	30.9	28.5	19.6	21.0	19.7	30.6
Train	19.8	16.5	11.3	2.9	4.3	(c)	14.5
Bus	15.7	6.9	17.0	16.0	16.5	18.3	13.1
Tram or ferry	1.2	7.5	(c)	(c)	(c)	..	3.0
Car	53.4	58.0	63.6	69.5	69.8	64.2	59.1
As driver	43.4	46.2	49.2	53.3	56.3	51.6	47.1
As passenger	9.9	11.8	14.4	16.2	13.5	12.6	12.0
Bicycle	0.4	1.3	(c)	4.4	(c)	(c)	1.2
Walked	7.9	9.1	5.7	5.0	6.6	14.4	7.8
Other	1.6	0.7	1.6	1.6	(c)	(c)	1.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
OTHER AREAS							
Public transport	11.7	6.7	4.9	7.1	(c)	6.4	8.4
Bus	8.7	5.1	4.6	5.2	(c)	6.2	6.7
Car	69.3	71.8	71.6	72.9	70.1	72.5	71.0
As driver	53.0	57.5	56.7	59.5	56.6	58.5	55.9
As passenger	16.3	14.3	15.0	13.4	13.5	14.0	15.1
Bicycle	2.1	4.1	4.6	(c)	(c)	(c)	2.8
Walked	13.8	16.2	15.4	14.8	18.5	16.5	15.0
Other	3.1	1.2	3.4	3.0	(c)	(c)	2.8
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(a) Northern Territory and Australian Capital Territory included in 'other areas.'

(b) Statistical divisions.

(c) Insufficient data collected to provide reliable estimates.

The next table shows that in the Adelaide Statistical Division, almost 72 per cent of journeys to work (one direction only) were completed in less than half an hour, whereas for Australia as a whole only 66 per cent of journeys to work were completed in that time. Journeys to work by persons resident outside the

capital city statistical divisions were generally accomplished in a much shorter time, with about 60 per cent of South Australians in 'other areas' doing so in less than fifteen minutes and about 84 per cent in less than half an hour.

All Persons Who Travelled to Work, by Duration of Journey
Capital Cities and Other Areas, May 1970
(Per cent)

Duration of Journey to Work (minutes) (a)	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust. (b)
CAPITAL CITIES (c)							
1-14	22.0	22.3	23.6	28.6	27.9	38.4	23.7
15-29	27.2	31.2	33.7	43.1	41.5	45.3	32.3
30-44	23.2	24.6	25.1	20.7	22.1	12.3	23.3
45-59	11.7	10.9	9.8	4.9	4.8	(d)	9.8
60-74	9.8	7.4	5.2	2.0	2.4	(d)	7.0
75-89	2.8	1.5	(d)	(d)	(d)	(d)	1.6
90 and over	2.7	1.4	1.5	(d)	(d)	(d)	1.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
OTHER AREAS							
1-14	50.6	62.7	65.6	60.3	68.1	56.9	57.5
15-29	26.8	25.6	24.1	24.2	20.1	29.0	26.5
30-44	13.5	7.6	7.2	9.3	8.2	8.5	10.0
45 and over	8.5	3.5	3.0	6.0	(d)	(d)	5.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(a) One way only.

(b) Northern Territory and Australian Capital Territory included in 'other areas'.

(c) Statistical divisions.

(d) Insufficient data collected to provide reliable estimates.

Further details resulting from the survey are included in the *Journey to Work and Journey to School Bulletin* (reference 17.4) published by the Commonwealth Statistician.

Multiple Jobholding

The labour force survey was extended in May 1971 to permit derivation of estimates of the extent of multiple jobholding throughout Australia during that month. Similar surveys were conducted in November 1965, and August 1966 and 1967. The detailed results of each of these surveys have been published in Multiple Jobholding bulletins (reference 6.10) published by the Commonwealth Statistician.

Persons were classified as multiple jobholders if, during the survey week they:

- (a) worked in a second job or held a second job from which they were temporarily absent; and
- (b) were employed in at least one of their jobs as a wage or salary earner, provided they were not employed as an unpaid family helper in their second job. Persons who by the very nature of their employment worked for more than one employer, e.g. domestics, odd-job men, baby-sitters, etc., were not counted as multiple jobholders unless they also held another job of a different kind; nor were those who worked for more than one employer solely by reason of changing jobs during the survey week.

The survey indicated that the extent of multiple jobholding has increased throughout Australia in the period from 1966 to 1971. For males the increase was from 3.7 per cent of the male labour force in 1966, to 4.4 per cent in 1971, while for females the corresponding rise was from 1.4 per cent to 2.1 per cent. For South Australia the proportion of the labour force who held more than one job in May 1971 was 5.8 per cent for males while there was insufficient data collected to provide a reliable estimate for females in this State.

The incidence of multiple jobholding in 1971 was highest in the 25-34 age groups at 5.2 per cent, and was greater overall for married men (4.9 per cent) than for single men (2.8 per cent). Of those persons who held more than one job 23 per cent had their main activity in manufacturing industries, while 30 per cent maintained a second job in the amusements, hotels and personal services group of industries. In their main jobs 31 per cent of multiple jobholders were described as craftsmen, production process workers and similar occupations, and almost 25 per cent were described as service, sport or recreation workers in their second jobs.

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 agriculture and private domestic service, are based on information obtained at population censuses, known as bench-marks, with adjustments to these bench-marks being made from certain current information. The results of these surveys have been published in bulletins issued by the Commonwealth Statistician.

Estimated employment for June in the years 1967 to 1971 classified by industry group, is given in the following table.

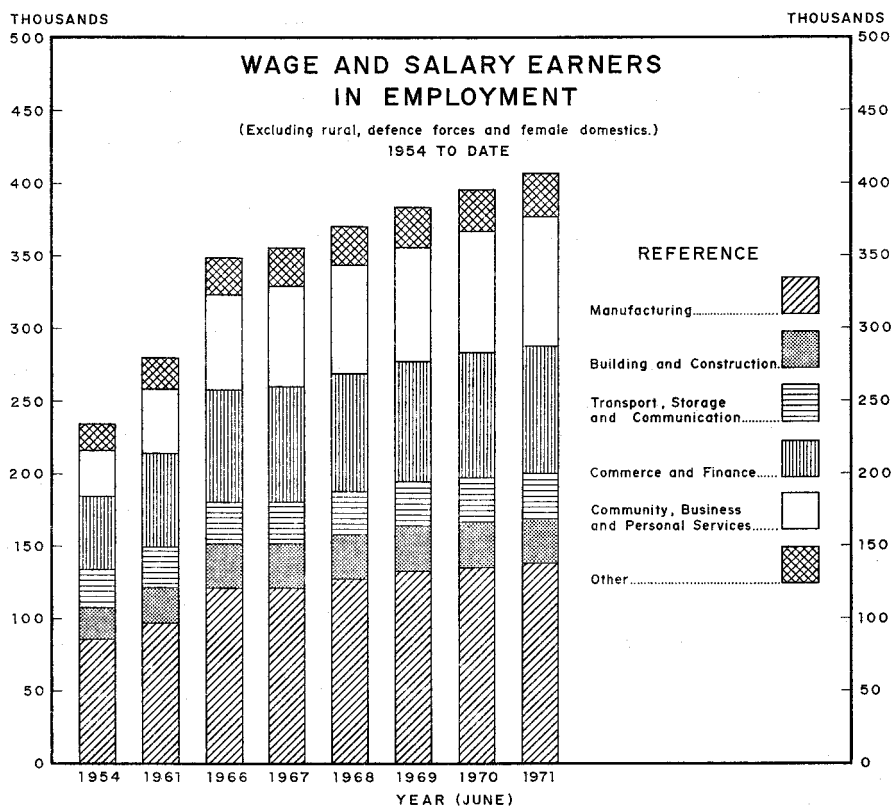
Wage and Salary Earners in Employment, South Australia^(a)

June	Manufacturing	Building and Construction	Transport, Storage and Communication	Commerce and Finance	Community, Business and Personal Services	Other	Total Employment
MALES ('000)							
1967.....	97.3	29.9	24.8	45.6	25.9	22.3	245.7
1968.....	101.9	29.3	25.5	46.6	27.7	22.7	254.0
1969.....	106.1	30.2	25.9	47.8	28.3	23.2	261.6
1970.....	107.5	30.2	26.1	49.3	29.6	23.7	266.6
1971.....	110.1	30.0	26.5	49.5	31.4	24.2	271.7
FEMALES ('000)							
1967.....	23.4	1.0	4.2	33.6	43.2	4.4	109.8
1968.....	25.1	1.1	4.3	34.7	46.8	4.4	116.2
1969.....	26.2	1.2	4.3	35.6	49.4	4.7	121.4
1970.....	27.7	1.2	4.6	37.1	54.4	4.9	129.9
1971.....	28.2	1.3	4.7	38.8	58.3	5.2	136.3
PERSONS ('000)							
1967.....	120.7	30.9	29.0	79.2	69.1	26.7	355.5
1968.....	127.0	30.9	29.6	81.3	74.5	27.1	370.2
1969.....	132.3	31.4	30.2	83.4	77.7	27.9	383.0
1970.....	135.2	31.4	30.7	86.5	84.0	28.6	396.5
1971.....	138.3	31.3	31.2	88.3	89.7	29.4	408.0

(a) Excludes employees in agriculture, private domestics and defence forces.

In 1970 a new series of estimates for June 1966 and subsequent months, and based on 1966 census bench-marks was published. The new series includes a larger number of persons in the work force because of the more inclusive nature of the definitions used at the 1966 Census (see page 273). For this reason the estimates for June 1966 and later months are not directly comparable with estimates for months before June 1966.

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. '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 private domestics.



Government and semi-government departments or authorities employ over 26 per cent of total civilian wage and salary earners. The following table shows the distribution of wage and salary earners at June 1970 and June 1971 by class of employer.

**Wage and Salary Earners in Employment: Class of Employer
South Australia^(a)**

Class of Employer	June 1970			June 1971		
	Males	Females	Persons	Males	Females	Persons
	'000					
Private.....	190.5	100.2	290.6	194.4	104.6	299.1
Government (b):						
Commonwealth .	22.4	6.0	28.4	22.7	6.1	28.8
State	49.1	23.0	72.1	50.3	24.8	75.1
Local	4.7	0.7	5.4	4.3	0.8	5.1
Total government	76.1	29.7	105.9	77.3	31.7	108.9
Total employment	266.6	129.9	396.5	271.7	136.3	408.0

(a) Excludes employees in agriculture, private domestics and defence forces.

(b) Includes employees, within Australia, of government bodies (Commonwealth, State, local and semi-government) on services such as railways, tramways, banks, post office, air transport, education (including universities), broadcasting, television, police, public works, government factories and munitions establishments, government hospitals and institutions, migrant hostels, etc., as well as administrative employees.

Further information on employment in specific sectors such as factories, agriculture, the building industry etc. is found in the relevant sections.

UNEMPLOYMENT

At the 1966 Census the definition of 'unemployed' recommended by the Eighth International Conference of Labour Statisticians was adopted. The new concept includes as unemployed those who, in the week before the Census, were actively looking for work and those who had been temporarily laid off by their employer without pay for the whole of that week. The term 'not at work' used in 1947, 1954 and 1961 Censuses, therefore, is not comparable with the 1966 approach. The count of persons unemployed in South Australia at the 1966 Census was 4,464 males and 3,563 females.

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.

The next table gives the seasonally adjusted number of persons and vacancies registered at the end of each month for the years 1967 to 1971 *i.e.* it does not show the actual numbers unemployed, but a series from which seasonal variations have been removed so that long-term trends can be seen.

Registration with Commonwealth Employment Service, South Australia^(a)
(Seasonally Adjusted Series)

Month	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Year:	PERSONS REGISTERED FOR EMPLOYMENT (b) ('000)											
1967.....	8.0	8.2	8.0	8.4	8.4	8.5	8.6	8.9	8.3	7.8	8.2	8.2
1968.....	8.1	7.8	8.4	8.3	8.3	8.4	8.2	7.8	7.6	7.3	7.9	7.6
1969.....	7.8	7.8	7.4	7.3	6.8	6.3	6.2	6.0	5.8	6.4	6.0	6.5
1970.....	6.5	6.2	6.2	5.7	6.4	6.2	6.5	6.3	7.0	6.6	6.7	7.0
1971.....	7.3	7.4	7.7	7.7	7.8	8.0	8.0	8.5	9.2	9.6	9.2	9.8
	VACANCIES REGISTERED ('000)											
1967.....	2.3	2.3	1.8	2.0	1.9	1.8	1.8	2.0	1.9	2.0	1.9	2.2
1968.....	2.5	1.9	2.2	2.2	2.2	2.2	2.3	2.1	2.1	2.2	2.2	2.3
1969.....	2.4	2.4	2.5	2.8	3.0	3.6	3.4	3.4	3.2	2.9	3.1	3.2
1970.....	3.3	3.7	4.1	4.0	3.5	3.6	3.3	3.1	3.2	2.8	3.1	2.6
1971.....	3.4	2.9	3.2	3.0	3.6	3.4	3.8	3.7	3.3	3.0	2.3	2.3
	EXCESS OF PERSONS REGISTERED OVER VACANCIES ('000)											
1967.....	5.8	5.9	6.2	6.4	6.5	6.7	6.8	6.9	6.4	5.8	6.2	6.0
1968.....	5.6	5.9	6.1	6.2	6.1	6.2	5.9	5.7	5.4	5.1	5.7	5.3
1969.....	5.4	5.5	4.9	4.5	4.7	2.7	2.8	2.5	2.6	3.4	3.0	3.3
1970.....	3.3	2.5	2.1	1.7	2.9	2.6	3.2	3.2	3.8	3.8	3.6	4.4
1971.....	3.9	4.5	4.5	4.7	4.3	4.5	4.3	4.8	5.9	6.6	6.9	7.5

(a) Includes Northern Territory.

(b) Persons who claimed they were unemployed.

One of the primary functions of the Labour Force Survey (see pages 275-7) is to provide regular and detailed information on unemployment in Australia. Separate details for South Australia are not available. The following table shows the number of unemployed persons and their duration of unemployment at the time of surveys conducted in August of each year from 1967 to 1971.

Unemployed Persons, Australia^(a)

August	Unemployed		Proportion Unemployed for:				Total
	Number	Proportion of Labour Force	Under 2 Weeks	2 and Under 4 Weeks	4 and Under 13 Weeks	13 Weeks and Over	
	'000		Per cent				
			MALES				
1967.....	38.1	1.1	25.2	30.7	26.8	17.3	100.0
1968.....	32.1	0.9	20.6	37.4	26.8	15.3	100.0
1969.....	31.8	0.9	23.9	30.4	31.2	14.5	100.0
1970.....	33.5	0.9	25.7	31.3	31.1	11.9	100.0
1971.....	39.3	1.1	25.0	35.6	27.2	12.2	100.0
			FEMALES				
1967.....	34.8	2.3	21.0	20.4	27.6	31.0	100.0
1968.....	35.0	2.2	19.7	24.8	35.0	20.5	100.0
1969.....	34.3	2.1	23.6	29.0	34.0	13.4	100.0
1970.....	31.5	1.8	26.3	25.4	34.0	14.3	100.0
1971.....	35.8	2.0	26.4	27.4	32.5	13.7	100.0
			PERSONS				
1967.....	72.9	1.5	23.2	25.8	27.2	23.8	100.0
1968.....	67.1	1.3	20.1	30.7	31.1	18.0	100.0
1969.....	66.1	1.3	23.6	29.7	32.9	13.9	100.0
1970.....	65.0	1.2	26.0	28.3	32.6	13.0	100.0
1971.....	75.1	1.4	25.6	31.7	29.7	13.0	100.0

(a) Civilians 15 years of age and over.

EMPLOYMENT SERVICES

The Commonwealth Employment Service commenced operations in South Australia in May 1946. 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.

Specialised facilities are provided for young people, persons with physical and mental handicaps, ex-members of the defence forces, Aborigines, migrants, rural workers, and persons with professional and technical qualifications. Vocational guidance, provided without charge by psychologists, 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.

Before unemployment benefit can be paid, persons seeking such benefit must be registered with the Employment Service which is responsible for certifying that suitable employment is not available.

In association with placement activities, regular surveys of the labour market are carried out. These include a monthly survey of employment in larger private factories covering practically all private factories with 100 or more employees and a large section of those with between 50 and 100 employees. The results of this survey give an earlier indication of current monthly trends in private factory employment than is available from any other source. A survey of the level of overtime and/or short-time being worked in a similar but slightly smaller sample of factories is conducted concurrently with this survey.

The Department of Labour and National Service operates nine Commonwealth Employment Service offices including a Professional Employment Office in the metropolitan area and has offices in seven country areas backed up by agents in smaller centres. The South Australian Regional Office of the Department of Labour and National Service is also responsible for district offices at Alice Springs and Darwin in the Northern Territory. The Professional Employment Office in Adelaide specialises in placement of the more highly qualified and professional applicants.

There are also a number of private employment agencies, all of which are required to register with the State Department of Labour and Industry. At 31 December 1971 there were twenty-nine such agencies registered.

7.2 ARBITRATION AND INDUSTRIAL ORGANISATIONS

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 but where an award or determination of a State industrial tribunal is in conflict with an award of a Commonwealth tribunal, the latter prevails. Commonwealth jurisdiction is now the predominant influence in employer-employee relationships.

Commonwealth Industrial Tribunals

Before 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. In that year substantial amendments were made to the Conciliation and Arbitration Act separating the judicial and arbitral functions of the Court by the establishment of the Commonwealth Industrial Court and the Commonwealth Conciliation and Arbitration Commission.

The Industrial Court, which is comprised of a Chief Judge and five other Judges, interprets and enforces awards, passes judgment on questions of law and determines questions arising in relation to organisations registered under the Act. Decisions of the Industrial Court are final, although in certain matters an appeal lies to the High Court, but only by leave of the High Court.

The Commonwealth Conciliation and Arbitration Commission comprises a President, five Deputy Presidents, a Senior Commissioner, fourteen Commissioners, and four 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 three 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.

An appeal may be lodged against awards and certain decisions made by a Commissioner if in the opinion of the Commission the matter is of such importance that in the public interest an appeal should lie. These appeals are heard by the Commission consisting of not less than three members of whom at least two are presidential members.

State Industrial Tribunals

The South Australian legislation governing State intervention in industrial relations is the Industrial Code, 1967-1972. The Code provides for:

- (1) An Industrial Court which deals with matters of law and hears claims for recovery of money payable under awards or agreements;
- (2) An Industrial Commission which makes awards covering workers not under the jurisdiction of Conciliation Committees; and
- (3) Conciliation Committees which make or vary awards for an industry or area of the State in relation to which each Committee is appointed.

The President and any Deputy President of the Industrial Court are Judges of that Court. The Court itself consists of one or more Judges or the Industrial Magistrate as the President directs. The President and each Deputy President

of the Industrial Court are also President and Deputy Presidents respectively of the Industrial Commission. Arbitral functions of the Commission may be exercised by the President or any one of the Deputy Presidents or Commissioners as directed by the President. When required a Full Commission is constituted by either the President and two Commissioners or (as directed by the President) a Deputy President and two Commissioners.

Although the President and Deputy Presidents must be persons eligible for appointment as Judges of the Supreme Court, the two Commissioners appointed by the Governor do not require law qualifications. The Act provides that one must be experienced in industrial affairs through association with employers' interests, and the other must have similar experience by having been associated with trade union affairs.

Conciliation Committees with one of the Commissioners as chairman are appointed for a three year term by the Minister of Labour and Industry on the recommendation of the President and have the same jurisdiction in industrial matters as the Commission. If the process of conciliation before a committee fails, then the chairman sits as a Commissioner to determine the unresolved matters. The awards of the Committees operate as common rules in the industries concerned, but the awards of the Commission are binding only on the parties before the Commission unless the Commission makes an order declaring the award a common rule.

Provision is made for a Commissioner, whether dealing with a matter as Commissioner or as Chairman of a Conciliation Committee, to consult with the President as to whether a matter should be dealt with by the Full Commission and he is required to so consult with the President on the application of any party to an industrial matter before him.

There is a right of appeal against awards and decisions of a Commissioner or of a Conciliation Committee. As one Commissioner is the Chairman of each Conciliation Committee a provision is included to enable the appeal to be heard by a bench of three, namely the President, a Deputy President and the Commissioner not concerned in the matter which is the subject of the appeal. This tribunal is described as the Commission in Appeal Session.

Power is given to the Industrial Court to hear claims for the recovery of sums due under awards or registered agreements, but there is no power to award costs against either party. Where the amount of the claim exceeds \$60 and the claim has been heard by the Industrial Magistrate an appeal may be heard by a Judge of the Industrial Court.

Proceedings against persons or organisations 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.

Proceedings before the Industrial Commission may be commenced by an application submitted by:

- (i) the Minister for Labour and Industry;
- (ii) an employer, or group or registered association of employers in an industry employing in the aggregate not less than twenty employees or 75 per cent of the employees in the industry, whichever is the lesser; or
- (iii) a group or registered association consisting of not less than twenty employees or 75 per cent of the employees within an industry, whichever is the lesser.

At 31 December 1971 there were two associations of employers and fifty-one associations of employees registered with the Industrial Commission.

EMPLOYEE ORGANISATIONS

At 31 December 1970 there were 137 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 centralised control while others are practically independent and self-governing, the federal bond existing only for limited specified purposes.

The central labour organisation for the State is the United Trades and Labor Council of South Australia, and combined union councils exist for Mount Gambier, Port Augusta, Port Lincoln, Port Pirie, the Upper Murray, Leigh Creek and Whyalla. These central organisations, together with individual unions are affiliated with the Australian Council of Trade Unions (ACTU). All major unions are affiliated with the Council, which was founded at an All-Australian Trade Union Congress in 1927. The Trades and Labor Council is the State branch of the ACTU 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 1966 to 1970. 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.

In comparing the percentages shown in this table with those shown in previous Year Books, allowances should be made for the fact that the present estimates are based on a new series of employment estimates from June 1966. The change is most significant for female employees as the new employment estimates include a considerable number of part-time employees who had previously been excluded.

Trade Unions, South Australia
At 31 December

Year	Separate Unions	Members			Proportion of Members to Total Wage and Salary Earners		
		Males	Females	Persons	Males	Females	Persons
	No.		'000		Per cent		
1966.....	136	149.9	28.6	178.5	59	25	48
1967.....	133	151.9	30.3	182.2	58	26	48
1968.....	133	153.1	32.5	185.6	57	26	47
1969.....	135	158.6	35.6	194.2	57	27	48
1970.....	137	163.2	39.4	202.7	57	28	48

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 31 December**

Year	Manu- facturing	Building and Con- struction	Transport	Public Authority (n.e.i.)	Other	Total
NUMBER OF SEPARATE UNIONS						
1966....	41	6	20	37	32	136
1967....	40	6	20	36	31	133
1968....	39	6	20	35	33	133
1969....	39	6	19	36	35	135
1970....	39	7	20	37	34	137
NUMBER OF MEMBERS ('000)						
1966....	65.6	11.0	19.5	41.7	40.7	178.5
1967....	64.4	11.0	19.5	43.9	43.4	182.2
1968....	65.4	10.1	19.4	45.4	45.3	185.6
1969....	68.5	9.9	20.5	48.4	46.9	194.2
1970....	72.6	10.7	20.5	50.6	48.3	202.7

A historical summary of the growth of the trade union movement in South Australia was included on pages 280-1 of the *South Australian Year Book* 1969.

EMPLOYER ORGANISATIONS

In industrial matters there are two dominant employer organisations in the State. These are the South Australian Chamber of Manufactures Inc., which was established in 1869, and the South Australian Employers' Federation Inc., founded in 1889. These two organisations provide industrial services for the majority of South Australian employers and employer groups.

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 3,000 members organised, where possible, into more than fifty trade sections. Administration is by a council of some 130 members representative of industry groups and trade sections, which in turn elect an executive of six 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.

The Employer's Federation is an incorporated body being largely a federation of employer associations, although provision is made for individual membership. In 1971 there were forty affiliated associations encompassing some 10,000 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 by the Federation 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. A comprehensive Industrial Service letter is forwarded to all members and affiliated associations monthly while an apprenticeship newsletter is published twice per month.

INDUSTRIAL DISPUTES

Details of the number and extent of industrial disputes occurring in South Australia are shown in the next table. 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. Because of difficulties in identifying all participants in every dispute the statistics given below should be regarded as giving only a broad measure of the extent of work stoppages.

Industrial Disputes, South Australia^(a)

Period	Disputes	Workers Involved (b)	Working Days Lost	Estimated Loss in Wages
				\$'000
Annual Averages:				
1951-55	30	17,800	50,500	310.0
1956-60	24	12,800	22,400	157.4
1961-65	39	18,500	26,000	234.6
1966-70	82	45,100	62,600	717.6
Year:				
1967	55	17,400	18,700	199.0
1968	83	39,400	51,100	514.6
1969	72	102,800	129,000	1,551.4
1970	156	57,000	93,100	1,123.1
1971	135	64,100	111,200	1,484.9

(a) Disputes involving a stoppage of work of ten man-days or more.

(b) Includes 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 1970 and 1971 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: Industry Groups, South Australia^(a)

Industry Group	1970				1971			
	Disputes	Workers Involved (b)	Working Days Lost	Estimated Loss in Wages	Disputes	Workers Involved (b)	Working Days Lost	Estimated Loss in Wages
		'000	'000	\$'000		'000	'000	\$'000
Engineering, metals, vehicles, etc.	56	26.5	45.4	545.0	37	30.2	54.3	741.3
Food, drink and tobacco	2	3.4	2.6	29.5	10	5.1	12.8	176.7
Other manufacturing	19	5.4	18.7	232.2	17	5.5	6.3	80.4
Building and construction	15	6.8	7.1	86.7	8	2.9	3.5	48.2
Railway and tramway services.	2	1.6	1.5	14.2	5	6.8	10.8	132.0
Road and air transport.....	6	0.6	0.3	3.5	3	4.3	15.4	201.5
Stevedoring	47	8.8	11.1	136.6	35	3.7	3.1	40.2
Other industries ...	9	3.9	6.4	75.4	20	5.6	5.0	64.6
Total	156	57.0	93.1	1,123.1	135	64.1	111.2	1,484.9

(a) Disputes involving a stoppage of work of ten man-days or more.

(b) Includes workers indirectly involved.

7.3 WAGES AND HOURS

WAGES

Before the National Wage Cases of 1967, wages as determined by Commonwealth and State industrial authorities consisted of two distinct elements; a basic or living wage to which was added margins and loadings reflecting various features of employee activity. A more detailed description of these elements was included on pages 253 and 257-8 of the *South Australian Year Book 1967*.

The total wage concept was accepted by the decision of the Conciliation and Arbitration Commission in June 1967. The application of this concept, referred to on page 293, has limited the number of national wage cases in any year to one and provided the Commission with a flexible basis for decisions.

Commonwealth Wages Fixation

The *Conciliation and Arbitration Act 1904-1970* 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 wage inquiries from time to time with its findings applicable to industrial awards within its jurisdiction.

A detailed account of the history of Commonwealth wage fixation before the introduction of the total wage concept appears in Commonwealth Arbitration Reports and a summary was included on pages 257-60 of the *South Australian Year Book 1968*.

On 5 June 1967 the Full Bench of the Commonwealth Arbitration Commission decided to dispense with the separation of wages into basic rates, margins for skill and prosperity loadings and to accept the total wage concept instead. As well as the total wage policy the Commission had thus indicated a discontinuance of separate wage variations for males and females. Union claims for restoration of the basic wage and margins for skill system of wage fixing were rejected by the Commission in the 1968 and 1969 National Wage Cases.

For the first time employers as well as the trade unions applied for unconditional wage increases in the 1970 National Wage Case. The Australian Council of Trade Unions sought a \$9.00 a week increase and a return to quarterly cost of living adjustments, the white collar unions sought a 16 per cent increase in both Federal rates and those of the Commonwealth Public Service and private employers sought an increase in the minimum wage of 2 per cent. The Commission again rejected quarterly adjustments but ordered a 6 per cent increase in all total wages and raised the minimum wage for adult males to \$45.90 (\$46.40 at Whyalla and Iron Knob). The new wage rates came into effect from the first pay period on or after 1 January 1971.

In November 1971 the Australian Council of Trade Unions and other employee organisations requested that the Commonwealth Conciliation and Arbitration Commission split the hearing of the minimum and total wage claims. The Commonwealth Government and the employers' representatives objected to this application for separate hearings and the Commission ruled against the employees' request. Because the employees' cases for both claims were not fully prepared, it was agreed to defer the hearing of the 1971 National Wage Case.

When the hearing was resumed in February 1972, four separate claims were made regarding National Wage. For the purpose of taking evidence and hearing argument, all matters were joined. Details of the specific claims made can be ascertained from the National Wage Case 1971-72 judgment published by the Commission. On 5 May 1972, the Commission ordered that the minimum total wage be increased by \$4.70 a week and all other rates by \$2.00 a week. Proportionate increases were also given to females and juniors as prescribed in the various awards. The increases came into force as from the beginning of the first pay period to commence on or after 19 May 1972 and were to remain in force until 19 February 1973. In its judgment the Commission again rejected quarterly adjustments of the minimum wage in line with movements in the Consumer Price Index.

State Wage Fixation

All awards or determinations of a State industrial tribunal include a 'living wage' which, according to the Industrial Code, 1967-1972, is a sum sufficient for the 'normal and reasonable needs of the average employee'.

Although the Full Bench of the Industrial Commission has the power to amend the living wage, all variations between 1949 and 1968 were made by proclamation following judgments of the Commonwealth Conciliation and Arbitration Commission. In 1969 however, following the 1969 National Wage Case, the South Australian Industrial Commission decided to approve as a temporary measure an 'economic' loading of 3 per cent to State awards with the living wage and margins for skill remaining unchanged. The introduction of the loading was to avoid the necessity for a separate application to be made to the Commission for amendment of each award. In 1970 the Industrial Code was amended to overcome the need for separate applications.

Basic wage, living wage and minimum wage rates applicable since 1961 are recorded in the following table.

Living Wage and Minimum Wage, South Australia

Month First Operative	State Awards				Commonwealth Awards	
	Living Wage			Minimum Wage	Basic Wage	Minimum Wage
	State, except Whyalla and Iron Knob		Whyalla and Iron Knob			
	Males	Females	Males	Adult Males (a)	Males (b)	Adult Males
	Dollars					
July 1961 ...	28.30	21.20	28.80	..	28.30	..
June 1964 ..	30.30	22.70	30.80	..	30.30	..
July 1966 ...	32.30	24.20	32.80	..	32.30	36.05
Sept „ ...	32.30	24.20	32.80	36.05	32.30	36.05
July 1967 ...	33.30	25.20	33.80	37.05	(c)	37.05
Oct. 1968 ...	34.65	26.55	35.15	38.40	..	38.40
Dec. 1969 ..	34.65	26.55	35.15	41.90	..	41.90
Jan. 1971 ...	37.85	29.00	38.35	45.90	..	45.90
May 1972 ...	39.85	31.00	40.35	50.60	..	50.60

(a) Before December 1969 not all State awards contained a minimum wage provision.

(b) Basic wage for females is 75 per cent of male rate.

(c) Basic wage eliminated from Commonwealth awards.

.. not applicable

Relativities of Male and Female Wage Rates

In recent years there have been significant developments in the attitude of government and arbitration authorities towards the awarding of differential rates of wages for male and female employees.

In 1965 the South Australian Government decided to introduce progressively, over five years from July 1966, equal pay for women teachers employed by the South Australian Education Department. In 1966 this principle was extended to the State Public Service.

In June 1969 the Commonwealth Conciliation and Arbitration Commission, in what was accepted as a test case, granted equal pay to some women in the meat processing industry, set a timetable for implementation of equality of remuneration by 1 January 1972, and set out principles to be followed by individual commissioners or the Public Service Arbitrator in deciding future applications for the extension of equal pay provisions to other awards. In February 1970 Commissioner Winter of the Commonwealth Conciliation and Arbitration Commission granted progressive increases in the pay rates of adult female process workers employed under the Commonwealth Metal Trades Award, so that from 1 January 1972 their rates would be equal to adult male rates. An appeal by the employees to the Full Bench of the Commission was rejected.

Progressive introduction of equal pay rates for adult females is now going on in industries under both Commonwealth and State jurisdiction.

A more complete historical discussion on the relativities of male and female wage rates was included on pages 290-2 of the *South Australian Year Book* 1970.

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 weighted average minimum weekly wage rates for adult males and adult females with separate details shown for male employees covered by awards, etc. within Commonwealth and State jurisdictions. The index numbers refer to the total adult male and female wage rates.

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: South Australia^(a)

31 December	Rates of Wage				Index Numbers (Base: Australia 1954 = 100)	
	Adult Males			Adult Females (All Awards)	Adult Males	Adult Females
	Common- wealth Awards, Etc.	State Awards, Etc.	All Awards			
	\$	\$	\$	\$		
1939.....	9.52	9.18	9.41	(b)	33.3	(b)
1945.....	11.76	11.25	11.60	(b)	41.1	(b)
1948.....	15.41	14.81	15.22	(b)	53.9	(b)
1951.....	23.72	23.35	23.60	17.02	83.6	85.5
1954.....	28.51	27.42	28.16	19.99	99.7	100.4
1957.....	30.92	30.22	30.69	21.95	108.7	110.3
1960.....	34.54	33.49	34.22	24.29	121.2	122.0
1963.....	36.81	35.48	36.40	25.52	128.9	128.2
1966.....	42.13	40.90	41.75	29.42	147.8	147.8
1969.....	51.65	48.72	50.76	35.94	179.7	180.5
1970.....	52.80	50.54	52.11	37.49	184.5	188.3
1971.....	59.61	57.00	58.85	43.47	208.2	218.3

(a) Weighted average of minimum weekly rates payable for a full weeks work (excluding overtime) as prescribed in awards, determinations and agreements. Excludes rural industries.

(b) Comparable figures are not available.

In the next table weighted average minimum weekly wage rates for males and females are shown for individual industrial groups.

Minimum Weekly Wage Rates: Industrial Groups, South Australia^(a)

At 31 December

Industrial Group	1967	1968	1969	1970	1971
Dollars					
ADULT MALES					
All industrial groups	43.79	48.23	50.76	52.11	58.64
Mining and quarrying	43.12	46.25	49.31	50.34	56.84
All manufacturing groups	43.12	47.87	49.95	50.73	57.73
Engineering, metal works etc. .	43.08	48.44	50.30	50.33	57.94
Textiles, clothing and footwear	41.28	44.17	46.94	49.84	54.05
Food, drink and tobacco	41.99	44.98	47.35	50.02	55.66
Sawmilling, furniture, etc.	42.70	47.75	50.08	50.08	57.67
Paper, printing, etc.	47.85	52.13	54.43	56.62	64.51
Other manufacturing	43.34	47.68	49.99	51.48	57.58
Building and construction	45.59	50.50	53.11	55.43	61.36
Railway services	42.49	45.26	49.18	49.23	55.19
Road and air transport	43.19	46.50	49.13	50.55	55.23
Shipping and stevedoring	43.85	51.60	55.10	59.54	63.93
Communication	52.77	58.50	64.16	68.88	77.05
Wholesale and retail trade	43.67	47.11	49.40	50.64	57.07
Public authority (n.e.i.) and community and business services...	43.10	45.56	49.36	49.59	56.40
Amusement, hotels, personal services, etc.	40.99	43.42	45.54	48.86	54.36
ADULT FEMALES					
All industrial groups	31.32	33.60	35.94	37.49	43.46
All manufacturing groups	30.43	32.44	34.78	36.66	43.05
Engineering, metal works, etc. .	30.22	32.52	34.64	37.84	45.57
Textiles, clothing and footwear.	30.72	32.48	35.01	36.71	43.06
Food, drink and tobacco	30.17	31.98	34.21	35.53	40.45
Other manufacturing	30.58	32.64	35.14	35.78	41.45
Transport and communication ..	34.73	37.16	40.67	43.64	50.77
Wholesale and retail trade	32.22	34.99	36.83	38.01	43.51
Public authority (n.e.i.) and community and business services...	32.24	33.59	37.17	37.99	43.16
Amusement, hotels, personal services, etc.	29.18	31.59	33.84	35.01	40.78

(a) For details of coverage see text above.

In May of 1963 and 1968 surveys were 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 from the survey.

**Incidence of Awards, Determinations, and Registered Agreements
South Australia, May 1963 and 1968**

Date	Employees			
	Represented in Estimates	Affected by Commonwealth Awards, Etc.	Affected by State Awards, Etc.	Not Affected by Awards, Etc.
	'000	Per cent		
		MALES		
May 1963	194	55.7	29.0	15.3
May 1968	218	58.0	28.6	13.4
		FEMALES		
May 1963	64	23.7	62.3	14.0
May 1968	78	27.9	60.9	11.3

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.

Average Weekly Earnings per Employed Male Unit, South Australia^(a)

Year	September Quarter	December Quarter	March Quarter	June Quarter	Year
	Dollars				
1966-67 ..	57.30	58.40	56.00	58.60	57.60
1967-68 ..	60.30	62.00	59.60	62.20	61.10
1968-69 ..	63.70	66.60	63.80	66.60	65.20
1969-70 ..	69.30	72.90	68.10	73.50	70.90
1970-71 ..	76.10	78.70	76.50	82.20	78.40
1971-72 ..	85.00	88.70	83.70		

(a) Includes Northern Territory.

As quarterly figures are affected by seasonal influences, comparisons for trends should be made by relating complete years or corresponding quarters. Because of variation in coverage, etc. these figures cannot be related to the minimum weekly wage rates shown in the preceding section.

Separate estimates of the average weekly earnings of males and females, and of adults and juniors, shown in the next table, have been obtained from sample surveys conducted in the last pay-periods of October 1967-1971.

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 organisations exempt from pay-roll tax are excluded. Also specifically excluded are employees in agriculture and private domestic service and casual waterside workers. Waterside workers on weekly hire employed under the permanent employment scheme were included in the October 1968 and subsequent surveys.

Summarised results of the last five surveys are given in the following table.

Average Earnings, South Australia

October	Average Weekly Earnings				Average Hourly Earnings			
	Males		Females		Males		Females	
	Adult	Junior	Adult	Junior	Adult	Junior	Adult	Junior
	Dollars							
1967.....	60.90	30.30	35.80	23.70	1.41	0.74	0.90	0.61
1968.....	64.60	31.70	37.20	23.90	1.51	0.77	0.93	0.61
1969.....	68.90	34.40	39.90	27.00	1.58	0.83	1.01	0.68
1970.....	73.90	36.20	43.50	28.50	1.72	0.88	1.11	0.73
1971.....	83.70	40.60	50.70	33.30	1.96	0.99	1.28	0.85

Similar surveys are conducted at irregular intervals to determine the distribution of employees at various levels of earnings. The latest survey was conducted in May 1971 and a summary of preliminary results is given in the following table. The survey coverage was restricted to adult male employees with part-time and casual employees being excluded.

Adult Male Employees: Level of Earnings, South Australia, May 1971^(a)

Earnings Per Week	Managerial		Earnings Per Week	Other than Managerial (b)	
	Number	Percentage		Number	Percentage
\$	'000	%	\$	'000	%
Up to 79.99	2.6	10.9	Up to 46.99	0.9	0.5
80.00 to 99.99	3.8	16.0	47.00 to 51.99	6.2	3.4
100.00 to 119.99	5.0	21.0	52.00 to 55.99	8.1	4.4
120.00 to 139.99	3.7	15.5	56.00 to 59.99	11.2	6.1
140.00 to 159.99	3.3	13.9	60.00 to 64.99	17.2	9.4
160.00 to 179.99	1.9	8.0	65.00 to 69.99	19.5	10.8
180.00 to 199.99	1.2	5.0	70.00 to 74.99	17.6	9.6
200.00 to 219.99	0.8	3.4	75.00 to 79.99	14.9	8.1
220.00 to 239.99	0.4	1.7	80.00 to 84.99	16.0	8.8
240.00 to 259.99	0.4	1.7	85.00 to 89.99	15.0	8.2
260.00 to 279.99	0.2	0.8	90.00 to 99.99	19.7	10.8
280.00 to 299.99	0.3	1.3	100.00 to 119.99	21.3	11.7
300.00 and over	0.2	0.8	120.00 and over	15.1	8.3
Total	23.8	100.0	Total	182.9	100.0

(a) Statistics collected for pay-period which included 12 May 1971.

(b) Includes minor supervisory employees, leading hands, clerical and office staff as well as ordinary wages employees.

HOURS OF WORK

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 forty, while other occupations by tradition work less than forty hours, although forty 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 31 May 1971. This compared with 44.62 hours at 31 March 1939 and 43.83 hours at 30 September 1947 immediately before the introduction of the 40-hour week. The weighted average for female employees at 31 May 1971 was 39.77 hours. The weighted average figure for South Australian male employees has not changed significantly since 1953, nor for females since 1951.

The normal working day is of eight 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. Provisions usually restrict overtime so that the employee has a break of at least eight 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 in Australia according to the number of hours worked in a specified week, as recorded in the August Labour Force Surveys for each of the years 1967 to 1971.

The distribution is based on actual hours worked, including overtime, rather than hours paid for, and is therefore affected by public holidays, leave, absenteeism, temporary absence from work because of sickness, accident and industrial disputes, and work stoppages caused by plant breakdowns and weather.

Employed Persons: Hours Worked, Australia^(a)

August	Proportion who Worked the Following Hours in the Specified Week							Total
	0	1-29	30-34	35-39	40	41-48	Over 49	
	Per cent							
1967.....	3.8	8.6	5.4	10.0	45.7	11.8	14.7	100.0
1968.....	5.2	9.2	4.9	9.9	44.2	11.7	14.9	100.0
1969.....	5.3	9.9	5.2	10.3	41.6	12.2	15.5	100.0
1970.....	5.2	10.2	5.3	11.9	39.3	12.2	15.9	100.0
1971.....	4.4	10.2	4.1	11.3	42.3	11.8	15.9	100.0

(a) Employed civilian population, fifteen 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 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. From 1971 authorised public holidays are:

- New Years Day (1 January or the following Monday if that day falls on a Saturday or Sunday),
- Australia Day (first Monday after 25 January),
- Good Friday,
- Easter Saturday,
- Easter Monday,
- Anzac Day (25 April or the following Monday if 25 falls on a Sunday),
- Adelaide Cup Day (third Monday in May),
- Queen's Birthday (traditionally falls on the Monday following the second Saturday in June),
- Labour Day (second Monday in October),
- Christmas Day (25 December or the following Monday if 25 falls on a Saturday or Sunday), and
- Proclamation Day (28 December or the following Monday if 28 falls on a Saturday or Sunday).

The Holidays Act makes provision for other days to be proclaimed in lieu of the authorised holidays.

Annual Leave

Under Commonwealth awards generally three weeks annual recreation leave is granted to employees who have completed twelve months continuous service and there are provisions for a proportionate credit where employment is terminated before the completion of twelve months. Under State awards the Commonwealth standard has generally been adopted.

From 1 July 1971 employees of the South Australian Public Service became entitled to four weeks annual recreation leave. However, with the exception of some employees engaged in essential services *e.g.*, hospitals, motor vehicle registrations etc., State public servants are required to take three days of their recreation leave between the Christmas and New Year holidays. Four weeks annual recreation leave was granted to employees of some South Australian semi-government instrumentalities in the latter months of 1971.

Certain employees in special occupations or where regular shift work is involved *e.g.* police officers, nurses, etc., are entitled to annual recreation leave in excess of four weeks.

Most Commonwealth and State awards provide a sick leave entitlement. Generally employees are entitled to at least one weeks sick leave on full pay during each year of service, with varying provisions for the accumulation of unused leave.

Long Service Leave

In 1964 the Commonwealth Conciliation and Arbitration Commission included, for the first time in a Commonwealth award, long service leave, granting employees in the graphic arts and metal trades industries leave on the basis of thirteen weeks for twenty years service in respect of employment before the date of the decision, and thirteen years in respect of subsequent service; these provisions have been extended to certain other Commonwealth awards. In a number of other cases, registered agreements provide for thirteen weeks leave after fifteen years service.

The South Australian Long Service Leave Act entitles employees in respect of continuous service after 1 January 1966 to thirteen weeks leave for fifteen years service and eight and two thirds weeks for each succeeding ten years service. In respect of service before 1 January 1966 the entitlement is calculated at the rate of thirteen weeks for twenty years service.

The obligation to grant leave is imposed on all employers in South Australia except in regard to employees entitled to long service leave pursuant to an award of the Commonwealth Conciliation and Arbitration Commission. The Industrial Commission has the power to exempt an employer from the provisions of the Act where the employees involved have access to benefits not less favourable than those prescribed by the Act. Other provisions of the Act relate to payment for leave, deferment of leave, claim for leave on termination of employment, and notice of granting of leave.

State and local government employees are in general entitled to thirteen weeks leave after ten years service, and Commonwealth Government employees to four and a half months after fifteen years service. During 1971, the South Australian Government extended to teachers employed under the Education Act the same long service leave provisions as had previously applied to other State public servants.

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

On 7 April 1971, a Parliamentary Select Committee was appointed by the South Australian House of Assembly 'to enquire into and report upon what legislative measures, if any, are considered to be desirable to make proper provision for occupational safety, health and welfare in industry and commerce and related matters.' Evidence was presented to this Committee during 1971 by a number of interested parties. At present 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, 1967-1972. Inspections are made by departmental officers to ensure that the requirements of the Industrial Code 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 Boilers and Pressure Vessels Act, 1968-1971. The Lifts and Cranes Act, 1960-1971 regulates the use of lifts, escalators, cranes and hoists, and requires the Department to approve new installations and to inspect regularly existing lift equipment. The Inflammable Liquids Act, 1961, and the Liquefied Petroleum Gas Act, 1960, regulate the storage and carriage of these products. The Construction Safety Act, 1967 regulates the safety, health and welfare of employees on building, demolition and excavation work and the safety of equipment (scaffolding, hoists, etc.) used on building and construction sites.

Department of Mines

Regulations under the Mines and Works Inspection Act, 1920-1970 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 and complaints associated with mining activities and give advice to industry in matters pertaining to mining and explosives.

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 radio-active and irradiating apparatus is in use for industrial, scientific, or medical purposes.

Chemistry Department

The Explosives Act, 1936-1968, 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. Persons engaged in the installation, maintenance or repair of electrical services and permanently connected equipment must be licensed to do this work in accordance with the provisions of the Electrical Workers and Contractors Licensing Act, 1965-1966.

WORKMEN'S COMPENSATION

Legislation

Provisions describing assistance for workmen sustaining personal injury out of or in the course of their employment are included in the South Australian Workmen's Compensation Act, 1971. The provisions of the Act extend to accidents during recess periods, travelling to or from work, travelling to or from or

while in attendance at a place of pick up, travelling to or from or attending a trade or technical school, and travelling for medical treatment while on compensation. Diseases attributable to the nature of the employment are within the terms of the Act and special provision is made for silicosis and for certain industrial diseases contracted at Port Pirie. The present Act provides for compensation for two diseases which had not been compensatable previously namely noise induced hearing loss and asbestosis.

Compensation is payable when the injury results in death, or in total or partial, permanent or temporary incapacity. Where death results from the injury the Act provides for the payment of a lump sum based on the previous six year's earnings plus \$300 for each dependent child under eighteen years, with a minimum payment of \$5,000 and a maximum of \$15,000 plus the dependent child allowance. Proportionate payments are made to partial dependants, and where there are no dependants medical and funeral expenses (up to \$300) are met. The minimum weekly rate of compensation payable during work caused total incapacity is \$19 unless the workman is unmarried, under 21 years of age and without dependants, in which case the minimum is \$19 or average weekly earnings, whichever is lower. The maximum weekly payments are \$43 for an unmarried workman and \$65 for a married workman with dependants or average weekly earnings, whichever is the lower.

Provision is made for lump sum payments in lieu of weekly payments. Such payments are arranged by agreement; or after six months, by proceedings in the Industrial Court of South Australia on application of either employer or employee. The total liability of the employer is limited to \$15,000 in the case of total incapacity and \$12,000 for partial incapacity, in addition to weekly payments already made. Lump sum payments are payable for certain specified injuries e.g. loss of limbs, for permanent injuries which may involve total or partial incapacity for work whether actual or potential e.g. speech loss, or no incapacity for work e.g. severe facial scarring. In addition to other compensation reasonable medical, hospital, nursing, constant attendance, rehabilitation and ambulance expenses are paid and compensation is provided to \$60 for loss or damage to clothing and \$200 for loss or damage to tools of trade.

Excluded from the scope of the Act are casual workers, persons working at home or sub-contracting, members of the crews of fishing vessels remunerated by a share in the profits or the gross earnings of the working of such vessels, service personnel and Commonwealth employees. Compensation for employees of the Commonwealth Government is provided by the *Compensation (Commonwealth Employees) Act 1971*.

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 State Government Insurance Fund, the South Australian Railways Commissioner, and any employer who can satisfy the Treasurer of his ability to meet all probable claims and who is accordingly issued with a certificate of exemption.

The following table shows the number of effective claims lodged with, and total compensation payments made by, insurance companies and self insurers during each of the last five years. Payments shown against any year will include some payments arising from claims lodged in earlier years.

Workmen's Compensation Claims, South Australia

Year	Claims Lodged	Payments Made	Average Payment per Claim
	No.	\$'000	\$
1966-67	56,500	5,395	95.48
1967-68	54,200	5,774	106.54
1968-69	54,500	6,078	111.62
1969-70	58,300	6,799	116.62
1970-71	56,300	7,688	136.56

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 insurers 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, or occurring during a recess period, are excluded.

Particulars of the number of industrial accidents, of time lost, and compensation paid are given below for the years 1966-67 to 1970-71. 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. Fluctuations in the flow of processing and reporting of claims can significantly affect the figures for any given year. Of the 9,460 non-fatal accidents in 1970-71, 1,191 or 12.6 per cent involved females. The eight reports of fatal accidents received during the year all referred to male workmen.

Industrial Accidents, South Australia

Particulars	Unit	1966-67	1967-68	1968-69	1969-70	1970-71
Accidents:						
Fatal	No.	14	12	14	10	8
Non-fatal	No.	10,453	9,562	9,888	9,859	9,460
Time lost (non-fatal accidents):						
Total	week	40,306	38,942	40,089	40,919	36,245
Average per accident	week	3.9	4.1	4.1	4.2	3.8
Amount Paid (a):						
Fatal accidents	\$'000	131.7	117.8	113.7	90.5	136.9
Non-fatal accidents	\$'000	2,784.5	3,041.0	3,143.1	3,360.5	3,235.7
Total	\$'000	2,916.2	3,158.8	3,256.8	3,451.0	3,372.6
Average per non-fatal accident	\$	266	318	318	341	342

(a) Compensation for wages lost, hospital and medical expenses, and lump sum settlements.

Industrial accidents for 1970-71 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 communication, are not covered at all while coverage is reduced in other groups, particularly in commerce and primary production.

Industrial Accidents: Industry Groups, South Australia, 1970-71

Industry Group	Fatal Accidents		Non-fatal Accidents			
	Number	Amount Paid (a)	Number	Proportion of Total	Time Lost	Amount Paid (a)
		\$'000		Per Cent	Weeks	\$'000
Primary production	1	15.4	824	8.7	3,371	253.7
Mining and quarrying	—	—	97	1.0	387	35.7
Manufacturing	5	97.0	4,313	45.6	15,972	1,609.0
Electricity, gas, water, and sanitary services	—	—	369	3.9	1,591	188.0
Building and construction ..	1	11.5	1,259	13.3	5,032	437.5
Transport and storage	1	13.0	650	6.9	2,342	163.2
Finance and property	—	—	25	0.3	108	8.7
Commerce	—	—	1,087	11.5	3,555	282.8
Public authority (n.e.i.) and community and business services	—	—	483	5.1	2,341	149.5
Amusement, hotels accommodation, cafes, etc.	—	—	353	3.7	1,547	107.5
Total	8	136.9	9,460	100.0	36,245	3,235.7

(a) Compensation for wages lost, hospital and medical expenses, and lump sum settlements.

Almost half of the accidents reported during 1970-71 resulted in absences from work of one week or more but less than two weeks' duration (49.9 per cent for males and 48.1 per cent for females). A further 26.5 per cent of males and 27.9 per cent of females involved in reported accidents experienced work absences of two to four weeks. Work absences of one year or more were reported in respect of 0.5 per cent males and 0.7 per cent females.

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	1968-69		1969-70		1970-71	
	Fatal	Non-fatal	Fatal	Non-fatal	Fatal	Non-fatal
Machinery	—	1,093	—	1,129	—	904
Vehicles	10	375	2	425	3	408
Electricity, explosions, flames, hot substances	2	250	2	243	2	263
Falling, slipping, stumbling, etc.	1	2,198	5	2,209	—	2,106
Striking against, stepping on, etc. ...	—	411	—	408	1	523
Handling	—	2,528	—	2,387	—	2,404
Objects moving or falling	—	1,699	—	1,602	—	1,510
Hand tools	1	778	1	875	1	743
Miscellaneous	—	556	—	581	1	599
Total	14	9,888	10	9,859	8	9,460

The following table indicates the distribution of non-fatal accidents for 1970-71 by the nature and location of injury.

**Industrial Accidents: Non-fatal Accidents, Nature and Location of Injury
South Australia, 1970-71**

Nature of Injury	Head (including eye)	Neck and Spine	Trunk	Arm and Hand	Leg and Foot	Total (including other)
Persons						
Contusion, bruising and superficial injury	66	30	254	457	624	1,431
Lacerations	105	2	21	1,546	337	2,011
Foreign bodies	176	—	—	—	—	176
Burns and scalds	68	3	16	142	128	357
Fractures	26	21	151	517	484	1,199
Dislocations	—	76	5	31	15	127
Sprains, strains, hernias ..	—	406	1,957	688	804	3,855
Traumatic amputations ..	—	—	—	74	4	78
Concussion	113	—	—	—	—	113
Internal and nerve injury ..	1	6	32	18	5	62
Other and unspecified	1	—	—	—	—	51
Total	556	544	2,436	3,473	2,401	9,460

INDUSTRIAL DISEASES

During 1969-70 information on industrial diseases was published for the first time. Although industrial disease cases are treated as injuries under the Workmen's Compensation Act, previously they have been excluded from industrial accident statistics. The disease cases described in the table below are additional to the accidents referred to above.

The International Labour Office distinguishes an industrial disease from a work injury in that it exhibits the following characteristics:

- (i) the slow and protracted nature of its cause,
- (ii) its ascribability to repeated continuous action of a mechanical, physical or chemical cause; it is not the effect of a single event but of a cause acting imperceptibly and constantly,
- (iii) indeterminateness of the time of its beginning due to its slow and insidious development,
- (iv) the possible importance of individual predisposition as a factor in the development of the pathological conditions.

Where there is any evidence at all that a disease has resulted from an initial injury, the episode is classified as an injury rather than a disease. On the other hand, disabilities caused purely by continuous movements of a joint are treated as a disease.

Industrial Diseases: South Australia, 1970-71

Disease	Number		Time Lost: Non-fatal Diseases		Amount Paid: Fatal and Non-fatal Diseases	
	Fatal	Non-fatal	Male	Female	Male	Female
			Weeks		\$'000	
Infective and parasitic diseases	—	44	276	109	30.5	3.6
Neoplasms	—	—	—	—	—	—
Diseases of the nervous system and sense organs.....	—	12	118	23	29.4	2.6
Disease of the circulatory system: Arteriosclerotic and degenerative heart disease.....	14	10	147	—	104.8	—
Other.....	—	4	23	—	1.6	—
Diseases of respiratory system	—	10	14	9	0.6	0.3
Diseases of skin and cellular tissue:						
Occupational dermatitis ..	—	111	143	123	14.5	—
Other.....	—	47	78	14	6.6	—
Diseases of bone and organs of movement	—	127	260	223	18.3	11.8
Other.....	—	5	8	4	3.9	0.2
Total	14	370	1,067	506	115.1	23.8

PART 8

PHYSICAL DEVELOPMENT

8.1 WATER SUPPLY AND SEWERAGE

WATER SUPPLY

With 96 per cent of the State receiving less than 20 inches of rain a year, and high evaporation increasing the demand for water and causing heavy losses from reservoirs, water conservation is of vital importance to South Australia.

The Waterworks Act, 1932-1971 gives the Minister of Works power to divert and impound the water from any streams or springs and take the water found in or under any lands for the purpose of constructing, completing, extending or maintaining any waterworks or for supplying water to or in any water district. The Act also gives the Minister power to declare any district, place or town a water district. The function of exploiting water resources is performed through the Engineering and Water Supply Department.

The Control of Waters Act, 1919-1925 provides that any stream in the State may be brought within the Act by proclamation. This Act has only been applied to the River Murray, making water available to riparian users through annual licence.

The Underground Waters Preservation Act, 1969-1970 provides for strict control within certain areas which may be defined by the Government. In such areas the owners must record full details of all wells with the Department of Mines and must have a permit to alter a well or sink others. Underground water usage can also be regulated. Further details concerning underground water appear on pages 21-3.

The Water Conservation Act, 1936-1969 provides for the control of small reservoirs, bores, tanks etc. established in remote areas as emergency water supplies or to assist local development.

The following table gives details of water supplies in South Australia at 30 June in selected years since 1881 and for the five most recent years.

Water Supplies, South Australia^(a)

At 30 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	1,988
1891.....	(d)2,167	6,825	976	3,570
1901.....	2,279	18,554	1,577	5,964
1911.....	4,383	28,079	2,793	9,096
1921.....	7,740	46,924	4,126	13,876
1931.....	18,677	62,229	6,030	26,136
1941.....	18,544	87,774	6,450	31,218
1951.....	18,701	88,244	7,203	50,380
1961.....	20,498	130,488	9,292	142,104
1967.....	21,700	166,564	11,287	235,621
1968.....	21,760	167,063	11,447	250,288
1969.....	22,317	167,150	11,582	261,483
1970.....	25,136	185,800	11,753	280,198
1971.....	25,150	185,800	12,023	298,792

(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

DISTRIBUTION OF WATER RESOURCES

Drainage Systems

The Australian Water Resources Council has divided Australia into twelve surface water drainage divisions. The divisions which constitute major surface water resources for South Australia are the South Australian Gulf Drainage Division which lies wholly within the State and forms the basis of all important reservoirs, and the Murray-Darling Division, the waters of which are allocated between this State, Victoria and New South Wales in accordance with the terms of the River Murray Waters Agreement (see pages 318-9).

Part of the large Lake Eyre Drainage Division covers the north-eastern corner of the State but, although streams in the area may flood extensively on occasions, they are generally unreliable and significant only to the local pastoral industry. A section of the South-east Coast Drainage Division which intrudes into South Australia has no co-ordinated drainage patterns in this State to form a significant surface water resource but a high rainfall in the area is related to underground resources of considerable importance to the State. Local rainfall is also related to underground resources on the seaward edge of the Western Plateau Division in South Australia.

South Australian Gulf Drainage Division

The eastern boundary of this Division is formed partly by the Mount Lofty Ranges which rise to a maximum of 2,384 feet east of Adelaide and to over 3,000 feet north of Burra and further north it follows the Flinders Ranges which reach a height of 3,822 feet at St Mary Peak. The boundary then rounds Lake Torrens and, further south, the western boundary is formed by a discontinuous line of hills on Eyre Peninsula. Kangaroo Island is also included.

The individual river basins in this division are very small. Rainfall in excess of 30 inches per year occurs only on a very small area in the Mount Lofty Ranges and in the north-west of the Division the annual average is less than 6 inches.

In the south, apart from the more elevated areas, average precipitation exceeds evaporation only from May to August, and over most of the Division monthly evaporation rates exceed rainfall throughout the year.

Development of the streams in the Mount Lofty Ranges, mainly for supply to the closely settled area around Adelaide, has in most cases reached the practicable limit and there seems to be little scope for further development of surface water elsewhere in the Division. In fact this Division has long been an area of net import of water with supplies coming by pipeline to Adelaide and Whyalla from the River Murray.

The average annual run-off in this Division at the lowest practical dam sites is estimated at 350,000 acre feet but is subject to considerable variation. The two best streams, the Onkaparinga and the Torrens, account for 110,000 acre feet of the average flow and the combined annual flow of these two has varied between 380,000 acre feet down to 7,000 acre feet in the last eighty years.

The present average annual extraction of water by the Department from the Gulf Drainage Division is about 80,000 acre feet; private diversion may take a further 10,000 acre feet. In the future a yield of 150,000 acre feet a year might be achieved.

Most of the South Australian reservoirs are situated in this Division as can be seen from the map on page 313. The following table shows the capacity, area at full supply level and the catchment area of the nine largest at 30 June 1971.

Major Reservoirs, South Australia^(a)

At 31 December 1971

Reservoir	Capacity		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
Kangaroo Creek	19,791	300	111
Millbrook	13,441	440	90
Happy Valley.....	10,334	465	174
Tod River.....	9,196	330	76
Bundaleer	5,163	210	645
Warren	5,163	338	46

(a) All reservoirs with a capacity in excess of 5,000 acre feet.

River Murray

The River Murray is the most important source of water supply for South Australia. Under the Terms of the River Murray Waters Agreement (see pages 318-9) South Australia is entitled to 1,254,000 acre feet of water annually which is available subject to the declaration of restriction by the River Murray Commission. Most of this water is used for irrigation purposes but more than 100,000 acre feet is used for water supply. The completion of present works will give pipelines with an ultimate demand of 325,000 acre feet.

At present water supply is supplemented by Murray water mainly through the Mannum-Adelaide, Morgan-Whyalla, Swan Reach-Stockwell and Tailem Bend-Keith pipelines.

The first water pumped through the Mannum-Adelaide pipeline reached the metropolitan system in 1954. The water is drawn from the River at Mannum nearly forty-two 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*.

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 was completed in 1966 and appurtenant works comprising additional storages and four new pumping stations were commissioned early in 1970. The second main which more than doubles the capacity of the scheme, parallels the original main to Baroota Reservoir, then extends westerly to Whyalla *via* a 7½ mile undersea crossing of Spencer Gulf.

A 33-mile pipeline between Swan Reach and Stockwell commenced operating in 1969 to supplement the supplies for lower northern areas from the Murray.

An 89-mile pipeline between Tailem Bend and Keith completed in 1969 forms the backbone of a scheme involving 500 miles of branch mains now being laid to supply River Murray water to towns and farmlands in the Upper South East.

The River Murray also supplies towns along its banks by means of direct pumping.

Other Water Resources

The South East

The hydrology of the South East covers a complex of surface and underground waters with substantial water resources but to date most work has been concentrated on the removal of water by drainage and this is discussed on pages 318-9.

The Eight Mile Creek to the east of Port MacDonnell carries a permanent natural overflow from the springs of the Ewen Ponds area and discharges 50,000 acre feet a year into the Indian Ocean and there are other visible outlets. The Blue Lake now provides 3,000 acre feet annually to Mount Gambier. There is scope for considerable development in the South East and it is likely that 100,000 acre feet could be used annually from this source.

Other Underground Supplies

The Adelaide and North Adelaide Plains and other areas provide usable waters, but in total the quantities are not large. The aquifers of the North Adelaide Plains have provided an increasing supply for market gardens and related irrigation, but the demand level of 20,000 acre feet has been found to be beyond the permanent capability of the area and this is being reduced by rigid control in the hope of reaching a balance. A more complete discussion on underground water together with a map appears on pages 21-3.

Water Consumption

The following table gives details of water used during the year and storage capacity at the end of the year for metropolitan and country districts for the years 1966-67 to 1970-71. The quantity of water pumped from the River Murray through the major pipelines is also shown.

Water Storage and Consumption, South Australia

Particulars	1966-67	1967-68	1968-69	1969-70	1970-71
Water storage (capacity at end of year):	Acre feet				
Adelaide metropolitan water supply (a)	134,619	134,649	134,653	153,050	153,050
Country water supply	31,945	32,424	32,497	32,750	32,750
Water consumption:					
Adelaide metropolitan water supply (b)	102,901	94,719	94,874	111,024	118,700
Country water supply (c)	45,960	46,438	43,777	51,985	54,000
Pumped from River Murray:					
Mannum-Adelaide pipeline	38,050	78,488	18,445	39,764	19,771
Morgan-Whyalla pipeline	18,343	20,296	13,335	17,613	18,853
Other supply systems	5,270	5,617	4,444	8,838	9,225

(a) Includes Myponga, South Para and Barossa reservoirs.

(b) Consumption within the Adelaide Statistical Division.

(c) Includes consumption in various areas outside of the Adelaide Statistical Division supplied from the Metropolitan distribution system.

Metropolitan Water Supply

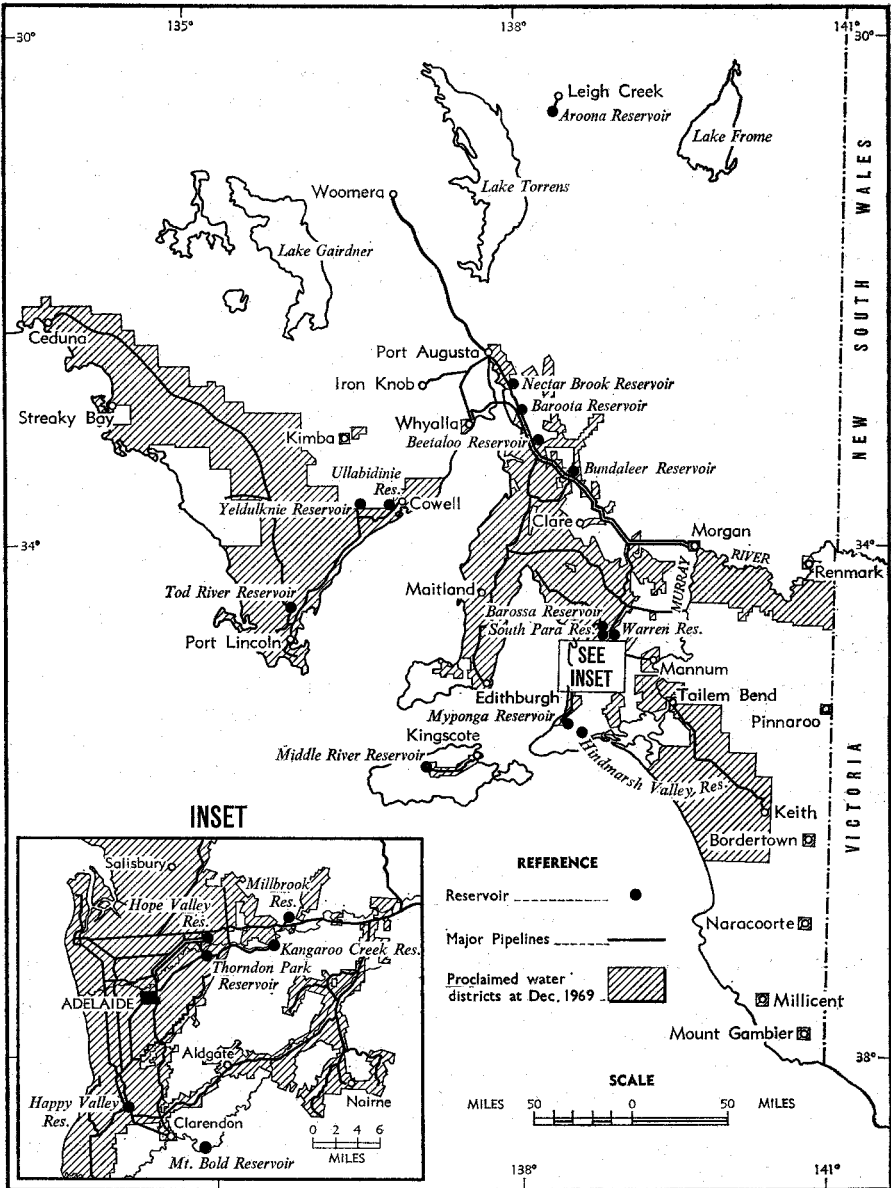
In the following table, details of metropolitan services as well as revenue and expenditure are given for the metropolitan water supply district for the years 1966-67 to 1970-71.

Adelaide Metropolitan Waterworks, South Australia

Particulars (a)	1966-67	1967-68	1968-69	1969-70	1970-71
Length of mains (miles)	3,650	3,735	3,833	3,910	3,978
Number of services	238,121	242,193	245,331	251,259	257,614
	\$'000				
Revenue:					
Rates and excess water	11,003	10,187	10,685	12,634	14,412
Other	80	80	108	88	101
Total	11,083	10,267	10,793	12,722	14,513
Expenditure:					
Working expenses	5,142	6,746	5,552	6,237	6,787
Interest	4,500	4,730	4,919	5,399	5,887
Total	9,642	11,476	10,471	11,636	12,674
Surplus	1,441	-1,209	322	1,086	1,839

(a) Includes particulars relating to near country areas supplied by extensions of Metropolitan distribution systems.

PORTION OF SOUTH AUSTRALIA
WATER SUPPLIES



WATER RATES AND CHARGES

Water rates are levied on all properties served from or abutting a water main except for properties specifically exempted from rating or in cases where supply by measure is given to properties outside of proclaimed water districts. Payment of rates permits the use of a quantity of water without further charge.

This quantity, termed the rebate allowance, is determined by dividing the rate by the current price of rebate water. Water used in excess of the allowance in any year is charged for by measure at the current price of excess water.

Two systems of rating are employed. In both cases scales of rates and prices of rebate and excess water vary in different districts, according to costs of construction and operation, and are subject to review from year to year.

In city and township water districts, rates are calculated on assessed annual property values which may be three-fourths of the gross annual rental value or 5 per cent of the capital value of the fee simple. The present scale of rates at Adelaide is 7½ per cent per annum up to the assessed annual value of \$2,000 and 5 per cent of the assessed annual value above \$2,000, with a minimum annual charge of \$12.00. The current price of rebate water at Adelaide is 40 cents per thousand gallons and the current price of excess water is 35 cents per thousand gallons. Rates in country township water districts vary according to costs of constructing and operating schemes and are generally higher than in Adelaide. However, in most cases prices of rebate and excess water are the same as in the city.

Farmlands within certain proclaimed Country Lands Water Districts are rated on the area of land which is within one mile of a water main at a rate per acre based on unimproved land values. Current Country Lands rates vary from \$4.80 per hundred acres on land valued at \$2.00 per acre in the lowest rated district up to \$37.00 per hundred acres on land valued at \$24.00 or more per acre in the highest rated district. A minimum rate of \$12.00 is levied in most districts.

Services from mains to property boundaries are installed and maintained by the Engineering and Water Supply Department. Connection fees are uniform throughout the State and are currently \$45.00 for a half inch service and \$50.00 for a three-quarter inch service, with commensurately higher fees for larger services.

SEWERAGE

ADMINISTRATION

Sewerage of cities and towns in South Australia is undertaken by the State Government under the authority of the Sewerage Act, 1929-1970. The Act is administered by the Engineering and Water Supply Department for the Minister of Works and provides for waterborne sanitary sewerage schemes within proclaimed drainage areas. As a general rule the Government sewerage schemes are provided only in densely populated cities and towns where they are essential for public health reasons or in areas where it is necessary to protect surface or underground water resources from pollution by domestic or industrial wastes.

Local Government authorities are empowered under the Local Government Act, 1934-1971 to provide sanitary drainage schemes and in recent years a number of these authorities have installed common septic tank effluent drainage schemes discharging to biological filters or oxidation ponds. A Drainage Co-ordinating Committee comprising an independent chairman and representatives of the Engineering and Water Supply and Public Health Departments has been established by the Government to provide guidance to local authorities and co-ordinate their planning with the State authority.

METROPOLITAN SEWERAGE

Sewerage for Adelaide was first authorised by an Act of Parliament in 1878. Construction began in 1879 and by 1881 sewage from the city and inner suburbs was admitted to a sewage farm at Islington. Since then continual expansion of sewerage systems has kept pace with development of the metropolitan area as far as physical and financial factors permit and Adelaide is now the most completely sewered of the Australian capital cities.

The proclaimed Adelaide Drainage Area at 30 June 1971 served an estimated population of 827,000 persons and covered 207 square miles of the Adelaide Plains between Darlington and Elizabeth and a segment of southern development around Christies Beach. Sewerage of the Blackwood-Belair area is proceeding. Subdivision developers are required to make capital contributions towards the cost of sewer and water extensions for all new allotments in areas capable of being served within the Drainage Area.

The next table shows details of metropolitan sewers for the last five years.

Metropolitan Sewers, South Australia

Particulars	1966-67	1967-68	1968-69	1969-70	1970-71
Adelaide Drainage Area (square miles)	184	191	195	197	207
Length of sewers (miles)	2,039	2,125	2,193	2,276	2,335
Number of connections	220,799	227,479	234,818	244,239	254,495
	\$'000				
Revenue:					
Rates	6,723	7,072	7,513	8,551	10,375
Other	81	84	87	92	102
Total	6,804	7,156	7,600	8,643	10,477
Expenditure:					
Working expenses	2,880	3,375	3,463	3,716	4,270
Interest	2,195	2,822	3,072	3,600	3,910
Total	5,075	6,197	6,535	7,316	8,180
Surplus	1,729	959	1,065	1,327	2,297
Capital cost to date (a)	69,836	79,367	81,823	88,277	94,950

(a) Total capital funds provided from State revenue and loan funds, Commonwealth Government Grants and other sources.

Four major sewerage systems are employed, each draining to separate sewage treatment works at Bolivar, Glenelg, Port Adelaide and Christies Beach. Islington Sewage Farm was abandoned in 1966 when the Bolivar Treatment Works were put into service. The new Christies Beach Treatment Works began operating in August 1971, and will serve a much larger area of the South Coast when fully completed. At present there are a number of small temporary treatment works installed in the Reynella-Morphett Vale area which will be phased out following the completion of the new Christies Beach Works.

A few common effluent drainage systems have been installed in fringe areas by local government authorities and some of these have been, or are planned to be, connected to the sewerage systems. A charge for each house connected is levied against local government authorities whose common effluent drainage systems discharge to sewer mains.

COUNTRY SEWERAGE

At 30 June 1971 the drainage areas of country sewerage schemes constructed and operated by the Engineering and Water Supply Department totalled 36 square miles; the length of sewers laid was 308 miles and the number of connections totalled 16,955. Capital cost to this date amounted to \$19,021,000.

Sewerage schemes are located at Angaston, Gawler, Gumeracha, Lobethal, Mannum, Millicent, Mount Gambier, Murray Bridge, Myponga, Naracoorte, Port Lincoln, Port Pirie and Whyalla.

Construction of the Port Pirie, Gawler and Murray Bridge sewerage systems is still in progress. In 1970-71, 29 miles of sewers and 2,179 new connections were laid in country drainage areas. In addition, the Engineering and Water Supply Department has constructed schemes at Mount Burr and Nangwarry townships for the Woods and Forests Department and numerous schemes to serve country hospitals, institutions etc. operated by other authorities.

Common effluent drainage schemes have been installed by local government authorities at Berri, Bordertown, Cleve, Eudunda, Kapunda, Maitland, Nuriootpa, Pinnaroo, Port Elliot, Renmark and Waikerie and the construction or design of schemes for a number of other towns is in progress.

SEWER RATES AND CHARGES

The Engineering and Water Supply Department provides sewer connections to property boundaries but internal drainage systems which are the responsibility of landholders must conform to regulations under the Sewerage Act and must be installed by authorised plumbers. Standard fees for sewer connections are \$100 and \$150 for 4-inch and 6-inch sizes respectively.

Sewer rates are levied on properties connected to or abutting a sewer, with a minimum annual charge of \$12. Current scales of rates in the Adelaide Drainage Area vary from 6½ per cent to 10 per cent of assessed annual property values; the higher rates being charged in Sub Areas where costs of construction or operation are abnormal.

Country charges for sewer connections are the same as for the metropolitan area. Current sewer rates in all country towns are 10 per cent of assessed annual property values, with a minimum annual charge of \$12.

Rates levied by local government authorities on properties connected to common effluent schemes are usually proportionate to the costs and interest charges involved in the schemes.

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 administrative authority for Government irrigation areas has been the Department of Lands with the Engineering and Water Supply Department the constructing authority for the Minister of Irrigation. A more detailed historical discussion of irrigation in South Australia was included on pages 314-6 of the *South Australian Year Book* 1970.

Irrigation areas are confined almost exclusively to the Murray Valley and can be classified into two groups; highland areas requiring the pumping of water, and reclaimed lands watered by gravitation. During 1970-71, 382,619 acre feet (approximately 103,815 million gallons) of water was diverted from the River Murray in South Australia for irrigation purposes. Details of the production of these areas are given in Part 9, pages 366-7.

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.

These 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 overhead or under-tree 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 on Government controlled areas and on private lands constituted under special Parliamentary Acts pay an annual rate for routine irrigation and a charge is made for additional water, except at Loxton and Cooltong where water is supplied on a measurement basis.

Irrigation systems must also provide for the removal of surplus water which accumulates beneath the surface of the land. Blocks have internal drainage systems either leading to shafts and bores or 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.

Although these reclaimed areas contain some 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 back into the river. Approximately 950 acres of highlands adjacent to reclaimed areas have also been developed for the production of fodder crops through the use of spray irrigation and there are 600 acres at Mypolonga used for horticultural crops.

Irrigation Areas, South Australia

Area Irrigated	1966-67	1967-68	1968-69	1969-70	1970-71
	Acres				
Government controlled:					
War Service schemes (1939-45 War)	8,067	8,069	8,107	8,222	8,222
Other	30,968	31,036	31,292	31,268	32,471
Non-Government (a):					
Trusts, boards and association areas	10,912	17,784	19,479	19,445	19,445
Private schemes	24,711	42,491	47,594	47,414	46,605

(a) Areas below Mannum on the River Murray are not included before 1967-68.

Further details of the 40,693 acres irrigated in Government-controlled schemes in the year 1970-71 are as follows:

Area Irrigated	Highland Areas		Reclaimed Areas	Total
	Surface Reticulation	Spray Irrigation		
	Acres			
War Service schemes (1939-45 War)	4,206	4,022	—	8,228
Other	18,594	3,775	8,982	31,351
Total	22,800	7,797	8,982	39,579

THE RIVER MURRAY AGREEMENT

In early 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 Commonwealth River Murray Waters Act was passed ratifying and providing for the carrying out of an agreement entered into between the Parliaments of the Commonwealth and the States of New South Wales, Victoria and South Australia. The River Murray Agreement provides that the minimum quantity of water to be allowed to be passed for supply to South Australia in each year shall be sufficient to maintain certain specified monthly flows in the lower river. The flow at Albury is shared equally by New South Wales and Victoria, and each of these States has full control of its tributaries below Albury, subject in each case to the fulfilment of the South Australian allocation.

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. Between 1922 and 1930 six locks and weirs were erected between Blanchetown and the Victorian border. In addition five barrages were 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. These barrages were completed in 1940.

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 2.5 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 5 million acre feet and covering 503 square miles with its dam at Chowilla, just inside the State border. Tenders were received during 1967 for the embankment, spillway and lock features which were considerably in excess of the original estimate. On 30 June 1967 work on the project was suspended pending further review by the River Murray Commission into the cost structure and certain technical problems which arose. Early in 1969 the River Murray Commission recommended that an alternative dam be built at Dartmouth in Victoria before further

consideration be given to the completion of the Chowilla dam. Legislation ratifying an agreement based on the Commission's recommendation was passed by the Commonwealth, New South Wales and Victorian Parliaments in 1970 and a Bill ratifying the agreement was passed in the South Australian Parliament in August 1971.

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 \$300,000, this cost subsequently being included in the land allotment price. The 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 forty-two years; *Scheme Act Drains*, commenced in 1908, provided for the Government and the landholders to share the cost, the landholders share being repayable over forty-two 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 \$1,441,752. 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 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 and construction on this scheme was completed in November 1969.

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 forty-two years.

At 30 June 1971, more than 800 miles of drains (excluding the Millicent scheme) had been constructed at a capital cost of \$18,164,000. 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 are 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, 1931-1971.

8.3 ROADS

Roads in South Australia are officially classified either as 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 roads carrying heavy traffic are constructed and maintained by the Highways Department. In areas outside the control of local government authorities road works are carried out by the Highways Department.

Funds used for road works in South Australia are derived from four main sources, namely 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, charges imposed under the Road Maintenance (Contribution) Act and rates levied by local government authorities.

Commonwealth funds are provided under the Commonwealth Aid Roads Act for construction and maintenance of specific categories of urban and rural roads. Portion of this money is spent directly by the Highways Department and allocations are made to local authorities. State funds also are made available to local government authorities for construction and maintenance works. In approved cases the Highways Department assists local authorities (by way of interest-free loans) to purchase road-making equipment. Some local government authorities, having adequate resources of manpower and equipment, undertake specific work on behalf of, and financed by, the Highways 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 30 June 1971 as advised by the Highways Department.

**Main and District Roads: Type of Surface, South Australia
At 30 June 1971**

Type of Surface	Main Roads	District Roads	Total
	Miles		
Bitumen or concrete	4,823	4,952	9,775
Gravel or crushed stone.....	3,097	15,691	18,788
Formed only	196	7,442	7,638
Unformed.....	40	39,276	39,316
Total	8,156	67,361	75,517

The unformed roads shown in the table include 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.

A continuous programme of upgrading the State's road network is carried out by reconstructing and widening arterial roads in the metropolitan area and the construction and sealing of important rural roads. Extensive road construction also is carried out in new housing development areas.

A detailed historical survey of roads in South Australia was included on pages 257-9 of the *South Australian Year Book* 1966.

Road Needs Survey

During 1968 the National Association of Australian State Roads Authorities (NAASRA) in association with the Commonwealth Bureau of Roads conducted a survey of 'road needs' throughout Australia, covering the backlog of work existing to June 1969 and additional work necessary for each of the five-year periods ending in June 1974 and 1979. Findings relating to South Australia are summarised in the following table.

Nature of Work	Unit	Backlog at June 1969	Additional Work Needed	
			July 1969 to June 1974	July 1974 to June 1979
New freeways	miles	11.9	2.9	6.7
Divided highways	miles	38.5	3.6	1.9
Undivided highways and major realignment of existing highways	miles	1,612	557.2	213.4
Duplication of existing highways	miles	55	5.7	—
Improvement of existing pavements	miles	4,809	3,743.2	2,939.0
New or reconstructed bridges	No.	573	11	1
Railway level crossing grade separations (overways or subways)	No.	5	1	—
Other railway level crossing improvements	No.	515	88	89

For the purpose of this survey a new classification of roads was devised and this classification was substantially reflected in the conditions attaching to expenditure of Commonwealth Aid Roads Grants from July 1969.

The main features of the classification are distinctions according to location (type of area), and classes of roads. Four main areas are specified; capital cities, major provincial urban, other urban, and rural. The nine classes of road were stated and defined on pages 320-1 of the *South Australian Year Book* 1970.

A similar survey designated as the Australian Roads Survey 1969-74 is proceeding as a joint undertaking by NAASRA and the Commonwealth Bureau of Roads in order to assess the effectiveness of the current Commonwealth Aid Road legislation and to form the basis for the allocation of Commonwealth Aid Road grants after the expiry of the present legislation in 1974.

FUTURE DEVELOPMENT

The *South Australian Year Book* 1970, on pages 319-25, contained some details of the reports of two major studies: these were the reports of the Town Planning Committee of South Australia (Metropolitan Development Plan), submitted in 1962, and the Metropolitan Adelaide Transportation Study (MATS) report, released in 1968. In June 1970, the Government undertook to review the MATS proposals with particular reference to public transport. The resultant Adelaide Transportation Report 1970 or 'Breuning Report', was discussed in the *South Australian Year Book* 1971, on pages 317-8.

Some extensive and important road works have proceeded, and will continue, along lines recommended in the earlier reports. These include major arterial road and street improvements and the construction of a freeway from Crafers to Verdun which was completed in May 1972. Ultimately, as part of the progressive improvement of the main route to Melbourne, it is intended to extend the South East Freeway from Verdun to the outskirts of Murray Bridge: this project is tentatively scheduled for completion by 1979. Also as part of the development of this route a new bridge at Swanport, south of Murray Bridge, and an associated approach road are planned for completion in 1975.

Supplementary Metropolitan Development Plan

In November 1971 the Government authorised a supplement to the Metropolitan Development Plan of 1962. The effect of the Supplementary Development Plan is firstly to amend the freeway proposals contained in the Metropolitan Development Plan by deleting some sections and varying others, and secondly to recognise that freeway rights-of-way may eventually be used for newer forms of vehicular transport.

The Metropolitan Development Plan and the Supplementary Development Plan, with their reports, must be read together to obtain a complete picture of the routes proposed.

The combined proposals comprise a north-south route west of the City of Adelaide extending from near Dry Creek in the north to Noarlunga in the south; routes serving Port Adelaide north-west along Port Road and west from The Levels; a route north-east toward Modbury along the River Torrens valley and north to Hillbank; and necessary connections around the City of Adelaide.

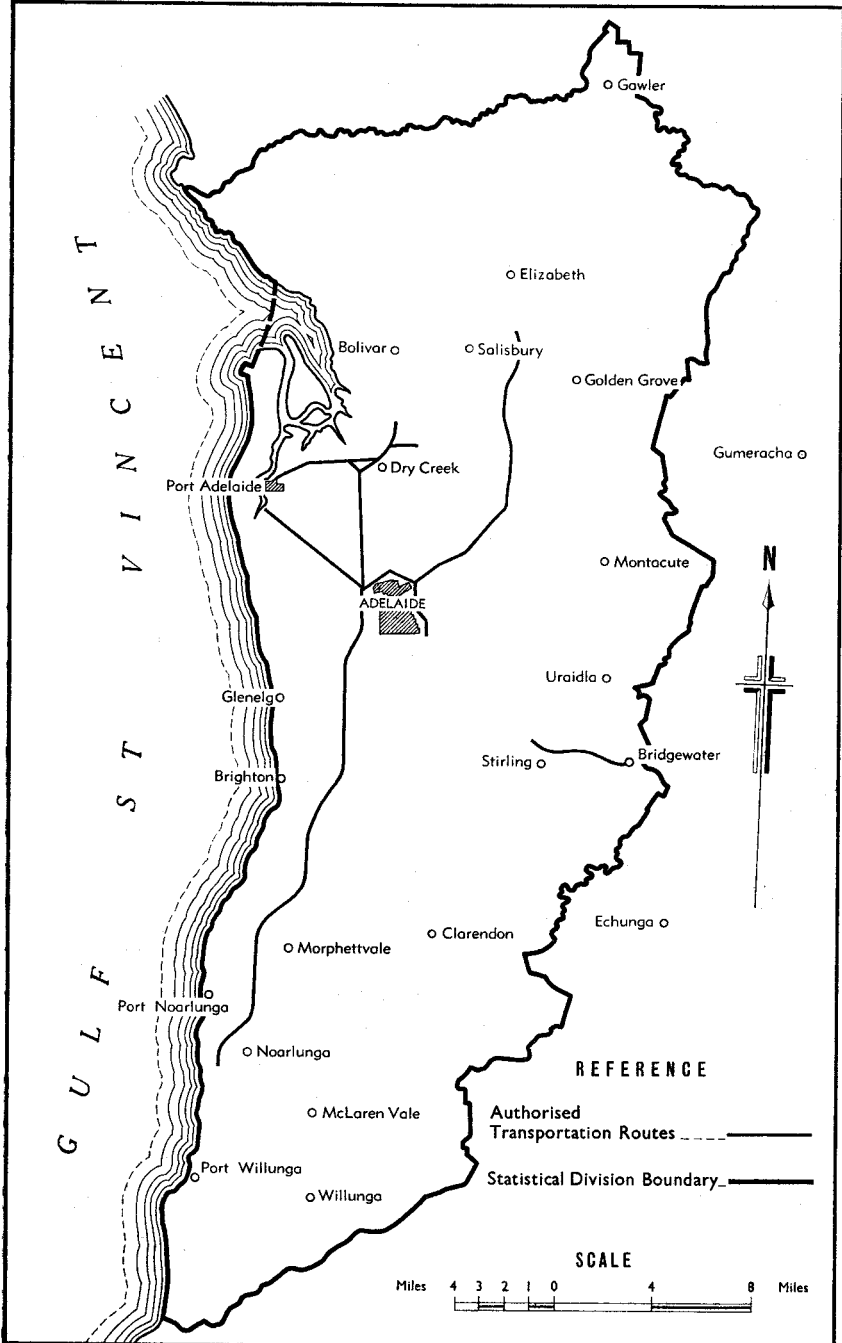
The Metropolitan Development Plan report also draws attention to the likely future need for new routes to the east, south-east and south of the City of Adelaide.

RESEARCH

Because of the great area of South Australia and the wide variety of climatic and soil conditions, special sections of the Highways 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, plant and equipment, and long-term planning. The association in 1960 established the Australian Road Research Board whose functions include the co-ordination and organisation of road research.

METROPOLITAN ADELAIDE AUTHORISED TRANSPORTATION ROUTES



ROAD FINANCE

As indicated earlier, the four main sources of road finance are:

- (1) State motor vehicle taxation and drivers licence fees;
- (2) Commonwealth grants;
- (3) charges imposed under the Road Maintenance (Contribution) Act;
- (4) property rates and other levies imposed by municipal and district councils.

Finance received from the first three 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 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 roads; hawkers licence fees collected under the Hawkers Act, 1934-1960, and other minor sundry receipts. Receipts under the Road Maintenance (Contribution) Act are paid into a special account at the State Treasury and applied only on maintenance of public roads.

Highways Department, South Australia
Receipts and Payments

Particulars	1966-67	1967-68	1968-69	1969-70	1970-71
RECEIPTS (\$'000)					
Motor vehicle registrations, licences, fees, fines, etc.	11,504	11,856	12,534	13,250	14,212
Road Maintenance Charges	2,070	2,324	2,557	2,839	2,958
Commonwealth Aid Roads Grants:					
For rural roads	7,603	7,478	9,200	9,950	} 23,500
For other roads	9,620	10,906	10,232	11,050	
Loans from State Government.	—	—	—	1,000	—
Repayments of, and interest on, advances to local authorities.	1,263	1,196	1,044	1,002	917
Other	165	174	200	321	147
Total	32,225	33,934	35,767	39,412	41,733
PAYMENTS (\$'000)					
Construction and reconstruction of roads, bridges, etc.	22,834	20,799	23,837	30,200	27,056
Maintenance of roads, bridges, etc.	6,000	7,128	8,211	10,271	11,575
Interest, debt redemption, etc.	514	518	522	544	556
Advances to local authorities	1,091	1,386	1,253	402	251
Net purchases of land, buildings, plant, equipment, materials, etc.	1,536	2,238	Cr.312	451	Cr. 62
Other (a)	(b)1,257	(b)868	206	130	921
Total	33,231	32,936	33,718	41,998	40,298

(a) This item includes provision for leave and for plant overhauls which may be a negative figure in some years.

(b) Includes \$1,000,000 in 1966-67 and \$240,000 in 1967-68, representing repayment to revenue under Section 31 (a) of the Highways Act.

The \$23.5 million received in Commonwealth Aid Roads Grants for 1970-71 consisted of a principal grant of \$20.19 million, of which \$9.45 million was for urban roads and \$10.74 million for rural roads; a supplementary grant of \$3 million, available for any class of roads; and \$310,000 for planning and research.

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 the *Official Year Book of the Commonwealth of Australia* No. 38 pp. 787-8, No. 41 p. 621, No. 46 p. 838 and No. 49 p. 934.

The South Australian share of Commonwealth Aid Roads Grants for the five years to June 1969 was approximately \$86 million. This represented approximately 11.5 per cent of the total grants which were distributed as follows: 5 per cent to Tasmania and the remaining 95 per cent to the mainland States; one-third according to population, one-third according to area and one-third proportionately to the number of motor vehicles registered. Portion of these grants was subject to matching expenditure by the States.

Commonwealth Aid Roads Grants for the five years 1969-70 to 1973-74 were announced after the Premiers' Conference in March 1969. A basic sum of \$1,200 million was allocated to the various States according to a formula which took into account both the formula applied in the preceding five years and principles of distribution recommended by the Commonwealth Bureau of Roads after consideration of results of the Road Needs Survey already mentioned. A supplementary amount slightly exceeding \$52 million is to be shared by South Australia, Western Australia and Tasmania to ensure that all States received grants at least 50 per cent higher than for the preceding five years. However, the \$129 million allocated to South Australia for the five years to 1973-74 represents only 10.3 per cent of total grants compared with 11.5 per cent of grants for the preceding five years.

Conditions attaching to these grants relate to the expenditure of specified sums on different classes of roads in particular areas, with a general proviso that State expenditure on roads shall increase proportionately to the increase in numbers of motor vehicles registered.

The linking of expenditure of Commonwealth Aid Roads Grants with the classification of roads discussed earlier will necessitate examination of the financial relationships between Adelaide City Council, previously responsible for all work on roads within its area, and the Highways Department as administrator of the roads grants: it is apparent that some arterial and other relevant classes of roads are located within the Adelaide City Council area.

Exact figures are not available for total expenditure in South Australia on the construction, reconstruction, and maintenance of roads, streets, bridges, ferries, and associated works. During five recent years approximate total expenditure by State and local government authorities has been: 1966-67, \$48 million;

1967-68, \$47 million; 1968-69, \$48 million; 1969-70, \$57 million; and 1970-71, \$57 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 footpath maintenance and stormwater drainage.

The biggest single element of roads expenditure omitted from the above figures is the cost of work carried out under the provisions of the Planning and Development Act, 1966-1971 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 in most cases these roads are constructed by private contractors or by direct employees of the subdivider and few details are available.

8.4 RAILWAYS

OWNERSHIP AND CONTROL

Railway systems in South Australia are operated by both the State and Commonwealth Governments.

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 Railways 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. The present South Australian Railways Commissioners Act, 1936-1971, under which the Commissioner is appointed for a period of seven years, incorporates many of the provisions of the 1887 Act, including those for financial control.

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 owned by the Broken Hill Proprietary Co. Ltd: from Iron Knob and Iron Baron to Whyalla (51 miles) used for the carriage of iron ore; and from Coffin Bay to Port Lincoln (25 miles) used for the carriage of limestone.

HISTORICAL 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. A number of scattered lines totalling approximately 300 miles had been constructed before 1877.

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 twenty-two 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 3 feet 6 inch lines either to 4 feet 8½ inch directly or to 5 feet 3 inch 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 tenth year from 1856 and for each of the last five years.

**State and Commonwealth Government Railways
Gauges, Route-mileage Open in South Australia**

Date	5ft 3in Gauge	4ft 8½in Gauge	3ft 6in Gauge	Total (a)
Miles				
31 December:				
1856.....	7	—	—	7
1866.....	56	—	—	56
1876.....	133	—	137	270
1886.....	495	—	716	1,211
1896.....	493	—	1,229	1,722
1906.....	594	—	1,238	1,832
30 June:				
1916.....	977	361	1,688	3,026
1926.....	1,238	598	1,739	3,575
1936.....	1,451	598	1,676	3,725
1946.....	1,480	654	1,665	3,799
1956.....	1,622	654	1,540	3,816
1966.....	1,649	871	1,256	3,776
1967.....	1,651	871	1,254	3,776
1968.....	1,651	870	1,253	3,774
1969.....	1,630	870	1,253	3,753
1970.....	1,601	(b) 1,087	1,022	3,711
1971.....	1,570	(b) 1,087	1,022	3,680

(a) Excluding private railways.

(b) Excludes 29 miles of line between Cockburn and Broken Hill owned and operated by South Australia Railways.

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 before 1884-85 when the route was converted from horse to locomotive traction.

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 and to all traffic beyond Port Stanvac, 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 King William Street route was converted to its present use as a tramway.

Lines operated by the Commonwealth Government in South Australia at 30 June 1971 were: 3 feet 6 inch gauge from Stirling North to Hawker, 61 miles, and Marree to the Northern Territory Border, 364 miles; and 4 feet 8½ inch gauge from Port Pirie Junction to the Western Australian Border, 653 miles, and Stirling North to Marree, 217 miles.

Construction of a standard gauge line between Whyalla and Port Augusta, to be financed and operated by the Commonwealth, is expected to be completed late in 1972. The 47-mile line will allow uninterrupted movement of steel from Whyalla steel works to other States.

The Commonwealth Government is considering the construction of a standard gauge line between Tarcoola in South Australia and Alice Springs in the Northern Territory to replace the existing line to Alice Springs, which is subject to periodic flooding and other damage.

A more detailed historical survey was included on pages 263-6 of the *South Australian Year Book* 1966.

STANDARDISATION OF RAIL GAUGES

The existence in South Australia of 3 feet 6 inch, 4 feet 8½ inch, and 5 feet 3 inch 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 standardisation of rail gauges in the interests of efficiency and economy of operation of transport services as a whole.

As part of an agreement enacted in 1949 to convert much of the South Australian Railways system to standard gauge, in 1963 the Commonwealth Government decided to proceed with standardisation of the Port Pirie-Broken Hill Railway. During 1967 agreement was reached between the Governments of the Commonwealth, New South Wales and South Australia to link Cockburn and Broken Hill along a new line of 30 miles instead of converting the 35 miles previously owned and operated by the Silverton Tramway Company. Conversion of the Port Pirie-Cockburn section was completed during 1969, and the new Cockburn-Broken Hill line, owned and operated by the South Australian Railways, was completed in January 1970. The Broken Hill-Port Pirie line was opened to goods traffic on 12 January 1970, and the first revenue-earning passenger train to use the coast-to-coast standard gauge line left Sydney on 2 March 1970 for the 2,461 mile run to Perth.

With the opening of the Port Pirie-Broken Hill standard gauge railway and the extension of the broad gauge from Terowie to Peterborough, the South Australian Railways now operate two bogie exchange depots, one at Port Pirie and the other at Peterborough.

Before the financial provisions of the railways standardisation agreement can become effective in relation to any specific project Commonwealth Government acceptance of that project is necessary. Early in August 1969 it was announced that the Commonwealth and South Australian Governments had agreed on the terms of reference for a feasibility study on standardisation of the Adelaide-Port

Pirie line and the carrying of traffic on existing narrow gauge lines affected by standardisation. Consultants were engaged to carry out the study and in March 1970 they submitted a report to the Commonwealth Government.

The State Government submitted alternative proposals expected to provide a more comprehensive scheme of standardisation and offering greater operational savings at a cost not greater than that estimated by the consultants. At June 1971 agreement in principle on a compromise proposal had been reached by negotiation between the Commonwealth and State Governments. The scheme provides for the standardisation of the existing line from Snowtown to Wallaroo and the construction of a new 120 mile standard gauge line linking Adelaide with the east-west standard gauge system through Crystal Brook. Standard gauge connections will be provided to Mile End, Dry Creek, Port Adelaide, Woodville, Pooraka, Salisbury, General Motors Holden at Elizabeth, and to Islington. The South Australian Railways will be the constructing authority for the project, estimated to cost about \$50 million, which is to be financed by the Commonwealth Government on a 70 per cent grant and a 30 per cent loan basis.

8.5 HARBOURS AND AERODROMES

HARBOURS

The State of South Australia, including Kangaroo Island, has a coastline of more than 2,400 miles. There are two large indentations, Gulf St Vincent and Spencer Gulf, which have many harbours for shipping.

Of many seaports in South Australia, at present only twenty are used by commercial shipping: thirteen of these have State-owned wharves or jetties and seven have privately-owned wharves or jetties. In addition the State maintains jetties or wharves for promenade and fishing purposes at forty-five ports that are no longer used by commercial shipping and sixteen jetties are leased to district councils.

The Broken Hill Proprietary Co. Ltd owns and operates bulk handling facilities at Ardrossan, Rapid Bay, Whyalla and Proper Bay, while 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 Port Stanvac oil terminal is owned by Petroleum Refineries (Aust.) Pty Ltd.

There are seven deep-sea ports operated by the State, namely Port Adelaide, Port Pirie, Port Lincoln, Thevenard, Wallaroo, Edithburgh and Port Giles while overseas vessels are also accommodated at Port Stanvac, Port Augusta, Whyalla and Ardrossan. Port Giles, completed in May 1970, provides for bulk shipment of wheat and barley from the Lower Yorke Peninsula and is able to accommodate vessels up to 40,000 tons deadweight.

CONTROL OF HARBOURS

The control of State-owned harbours (including the River Murray) is vested in the Minister of Marine; he is responsible for navigation within harbours and all harbour facilities including lights, buoys, beacons, bulk loading plants and fishing boat accommodation. Relevant legislation includes the Harbors Act, 1936-1971, the Marine Act, 1936-1970 and the Fisheries Act, 1971.

In 1970-71 the Department of Marine and Harbors handled 7,201,340 tons of cargo (including general cargo at private ports) or approximately 36 per cent of the total tonnage of 19,881,565 tons passing through all the ports in South Australia, the balance being handled independently at the privately owned wharves.

PHYSICAL DEVELOPMENT

Department of Marine and Harbors^(a)
Indebtedness, Revenue and Expenditure

Year	Loan Fund Indebtedness	Revenue	Expenditure from Revenue			Surplus
			Working Expenses	Interest	Total	
\$'000						
1966-67	44,264	6,734	4,019	1,807	5,827	907
1967-68	45,478	6,418	4,196	1,869	6,066	352
1968-69	47,614	6,653	4,365	1,957	6,322	331
1969-70	50,736	7,282	4,265	2,176	6,442	840
1970-71	55,081	7,628	5,056	2,431	7,487	141

(a) South Australian Harbors Board before 20 March 1967.

HISTORICAL

For a detailed description of development in the nineteenth century see pages 270-1 of the *South Australian Year Book* 1966.

Trend of Development

As shipping increased through growth in trade many wharves and jetties were strengthened or replaced by better structures. To keep most harbours open for larger vessels it has been necessary to deepen and widen navigation channels, deepen existing berths and extend jetties into deeper water. A recent example of this type of project is the redevelopment of Thevenard harbour which commenced in January 1970 and entails the dredging of a deeper channel and the reconstruction of the jetty. During 1970-71 a large proportion of the dredging project was completed and approximately 800 feet of sheet-piled bulkhead was driven in preparation for the strengthening and widening of the jetty.

Since the establishment of new soldier settlements in the 1950s, shipping to and from Kangaroo Island has increased. Additional harbour 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.

A change in the pattern of intrastate shipping has occurred with the erection of bulk handling facilities for grain at major ports progressively since 1952. These facilities are now available at Port Adelaide, Port Pirie, Wallaroo, Port Lincoln, Thevenard and Port Giles, and wheat and barley are loaded at Ardrossan under agreement with the owner of the private wharf. Grain is railed or trucked overland to terminal silos and loaded aboard ocean going vessels by means of conveyors, so eliminating ketch trade from the smaller ports. Competition from intrastate road and rail transport 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 turn-around of vessels (especially overseas and interstate vessels) and improve the handling of shipping cargo, port facilities in the major harbours have been or are being improved by such measures as the reconstruction of wharves, deepening of berths and channels, installation of cranes and increasing storage capacity.

The construction of boat havens for fishing and pleasure craft, and the provision of slipways at several ports throughout the State are other aspects of recent development.

Future developments at ports other than Adelaide are likely to be concerned primarily with bulk trades and the increasing size of bulk carriers. For example, the installation of bulk handling facilities at Port Lincoln, expected to cost \$7.5 million and to be completed by 1976, has commenced. The project involves extension of an existing jetty to provide two outer berths for loading grain ships and an inner berth for unloading phosphate-rock carriers: the grain berths will cater at first for ships up to 60,000 tons but could be modified for ships of 100,000 tons, while the phosphate-rock berth will cater for ships up to 35,000 tons.

Development of Port Adelaide

The Greater Port Adelaide Plan, details of which were released in 1949, included proposals for twenty projects for port development over the ensuing 50 years. Among those projects were:

- (1) the improvement and extension of wharves and allied cargo facilities;
- (2) the deepening, and widening of the shipping channels and provision of larger swinging basins;
- (3) the reclamation and development of low-lying land adjacent to the port for the creation of industrial, commercial and dock estates.

Some of these projects have been completed while others are still in progress. In April 1964 approval was given for a start on a scheme to widen and deepen the Port River at a cost of \$6.6 million. Under this plan, the Port River has been deepened to 30ft at Low Water and a swinging basin of 1,050ft diameter has been provided at the Outer Harbor. Currently the river channel is being widened to a minimum width of 500ft. The material dredged in this operation is being used to reclaim part of the 2,000 acres of low-lying land intended to be used for industrial and commercial sites and for port extensions.

The advent of containerised cargo has affected only Port Adelaide as other ports in the State do not handle a sufficient quantity of cargo that is suitable for large containers. Although Port Adelaide has not yet been selected as a terminal port by any of the container ship operators, planning is proceeding on the assumption that it will fulfil such a role in the future. As a result 400 acres of land are being reclaimed at Pelican Point near the Outer Harbor where it will be possible to provide up to 7,000ft of berth length with a depth of 45ft Low Water if necessary. One berth on this waterfront is being planned in detail for possible use by large container ships.

Two container depots have been built by private enterprise in the dock industrial estate half a mile from the waterfront and offer acceptance, forwarding, packing and unpacking facilities for international and interstate containers and other unit loads: to facilitate shipment of wool in containers a large wool store and a high density wool dumping centre have been established adjacent to these depots.

An interstate roll-on roll-off terminal in No. 3 Dock was opened early in 1971 and later in the year the facilities were extended to serve larger vessels engaged in overseas trade. A berth in No. 1 Dock has been modified to provide a reinforced concrete pad for the stern-loading type of vessel to operate between Port Adelaide and ports in Tasmania. Possible future developments include the provision of a steel handling berth to accommodate roll-on roll-off vessels.

A modern two-storey passenger terminal for overseas vessels is being erected at one of the Outer Harbor berths.

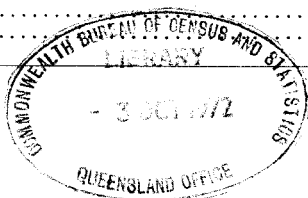
TIDES AND WATER DEPTH

Tides—the daily ebb and flow of the waters of the ocean—are brought about by the 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'; that is, the forenoon and afternoon tides may differ considerably in height. The mean tide rises in the following table are shown as higher high water and lower high water, rather than high water springs and neaps. This method of measuring tides is used for the majority of Australian ports.

Tides and Water Depths: South Australian Ports, 1 January 1972

Port	Maximum Depth below Low Water Datum (a)		Tides				
			At	Mean Rise			
				Higher High Water	Lower High Water		
	Ft	In		Ft	In	Ft	In
Outer Harbor:							
Channel	33	0	Wharf	7	11	6	5
Wharf	35	0					
Port Adelaide:							
Channel	30	0	Wharf	8	0	6	6
Wharf	35	0					
Ardrossan:							
Channel	(b)		Jetty	8	10	7	0
Jetty—BHP	27	0					
Port Augusta:							
Channel	16	0	Wharf	9	2	7	4
Wharves	20	0					
Port Giles:							
Channel	(b)		Jetty	6	1	4	11
Jetty	38	0					
Port Lincoln:							
Channel	(c)		Jetty	4	11	3	6
Wharf (Bulk Loading)	32	0					
Port Pirie:							
Channel	21	0	Wharf	8	4	5	11
Wharves	27	0					
Port Stanvac:							
Channel	(b)		Wharf	6	1	4	7
Wharf	35	0					
Proper Bay (BHP):							
Channel	30	0	Jetty	4	11	3	6
Wharf	34	0					
Thevenard:							
Channel	23	9	Jetty	5	0	3	7
Wharf	27	0					
Wallaroo:							
Channel	27	9	Jetty	4	10	2	11
Wharf	31	0					



Tides and Water Depths: South Australian Ports, 1 January 1972 (continued)

Port	Maximum Depth below Low Water Datum (a)	Tides			
		At	Mean Rise		
			Higher High Water	Lower High Water	
	Ft In		Ft In	Ft In	
Whyalla (BHP):					
Inner harbour;					
Channel	25 0	Jetty and	8 1	6 0	
Wharf	30 0	Wharf			
Outer harbour;					
Channel—ore jetty (No. 2) approach	34 0	Jetty and	8 1	6 0	
Ore jetty (No. 2)	36 0	Wharf			

(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.

AERODROMES

There were 503 civil aerodromes in Australia at 30 June 1971 including 106 owned and operated by the Commonwealth Government and 397 licensed aerodromes owned and operated by local authorities or private interests. In addition there are some hundreds of authorised 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 30 June 1971 there were nine government and twenty licensed aerodromes as set out below:

<i>Government Owned</i>		
Adelaide	Leigh Creek	Parafield
Ceduna	Mount Gambier	Port Lincoln
Kingscote	Oodnadatta	Whyalla
<i>Licensed</i>		
Cleve	Innamincka	Naracoorte
Cordillo Downs	Kimba	Port Pirie
Cowell	Millicent	Renmark
De Rose Hill	Minnipa	Tieyon
Ernabella Mission	Moomba	Tintinara
Fregon	Mount Dare	Waikerie
Granite Downs	Musgrave Park	

The main 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. Since this airport was opened to commercial aircraft in February 1955, the Department

of Civil Aviation has installed modern navigational aid systems and equipment (e.g. Australian designed visual approach slope guidance systems and long range radar) and has carried out various improvements to general airport facilities.

Since the opening of the Adelaide Airport the aerodrome at Parafield, about eleven miles north of Adelaide, has been restricted principally to use by light aircraft.

Other aerodromes are situated near the larger towns e.g. Mount Gambier, Whyalla, Port Lincoln and Port Pirie. About half of the licensed aerodromes are on stations, missions, etc. in the northern part of the State.

In addition to the civil aerodromes there are two major aerodromes, one at Woomera controlled by the Department of Supply, through the Weapons Research Establishment, and the other at Salisbury (Edinburgh Airfield) which are used by aircraft associated with trials operations and by civil charter aircraft carrying passengers and freight. Edinburgh Airfield is also the base for an RAAF maritime squadron.

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 13 October 1919. The *Air Navigation Act 1920*, under which a Controller of Civil Aviation was appointed as head of the Civil Aviation Branch which came under the jurisdiction of the Department of Defence, 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 periodic inspection of aircraft, licensing of aerodromes, examination and licensing of personnel engaged in flying and in upkeep of machines, control of aircraft movements, rules of the air, etc.

The South Australian Parliament passed the Commonwealth Powers (Air Navigation) Act, 1921 in which 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 1920-1971*, the *Australian National Airlines Act 1945-1970* and several other Acts, while the State legislation in South Australia includes the 1937 Act and the Civil Aviation (Carriers' Liability) Act, 1962-1971.

Since 1939 civil aviation administration has been a separate department under the Minister for Civil Aviation.

Historical

A description of early aerodromes in South Australia and development was included on pages 277-8 of the *South Australian Year Book 1966*: an article describing the first flight from England to Australia, in 1919, appeared on pages 334-5 of the *South Australian Year Book 1969*.

8.6 ELECTRICITY AND GAS

ELECTRICITY

In 1946 the Electricity Trust of South Australia, a semi-government authority, acquired the assets of the Adelaide Electric Supply Company and since that time the Trust has been responsible for electricity supply throughout most of the State. Generally local fuel supplies have replaced fuel imported from other States.

A more detailed description of the development of electricity supply was included on pages 278-81 of the *South Australian Year Book 1966*.

Power Generation

The rapid growth of generating plant operated by the Electricity Trust of South Australia and the decline of plant operated by other producers since 1946 can be seen from the following table.

Electricity Generation, South Australia
Installed Capacity of Generating Plant in Power Stations at 30 June^(a)

Power Stations	1946	1964	1967	1970	1971
	KILOWATTS				
Electricity Trust:					
Osborne	82,000	264,000	314,025	242,500	242,500
Port Augusta	—	332,700	332,700	332,700	332,700
Torrens Island	—	—	120,200	360,200	480,200
Mount Gambier	—	22,230	22,230	22,230	22,300
Port Lincoln	—	6,890	9,600	9,600	9,600
Total ETSA	82,000	625,820	798,755	967,230	1,087,230
Other government authorities ...	205	3,372	3,803	n.a.	n.a.
Local authorities	33,401	6,561	4,404	n.a.	n.a.
Private	29,855	33,109	4,818	n.a.	n.a.
Total	145,461	668,862	811,780	n.a.	n.a.

^(a) Includes house plants used for emergency generation.
n.a. not available

The Osborne 'A' station produced all of the requirements of the South Australian electricity net-work from 1923 until 1947 when the 'B' station commenced operations and the 'A' station was subsequently closed in 1968. At 30 June 1971 the remaining generating capacity at Osborne (excluding emergency generating plants) was 240,000 kilowatts.

A major decision by the Trust was the construction of the Thomas Playford Power Station at Port Augusta, designed to burn Leigh Creek coal exclusively. The 'A' section was completed in 1954 while the 'B' section was completed in 1964 to give a combined total generating capacity of 330,000 kilowatts.

Following the passing of the Electricity Trust of South Australia (Torrens Island Power Station) Act in 1962 work commenced on the construction of section 'A' of the Torrens Island Power Station. Section 'A' was completed in the first half of 1971 and comprises four 120,000 kilowatt turbo-generators with associated boiler equipment. Preliminary work has begun on section 'B' and the erection of the first of four units, each with a 200,000 kilowatt turbo-generator and associated boiler equipment, will commence in 1973. The first unit is scheduled to commence generation in 1975.

Three gas turbo-generators each with a capacity of 52,000 kilowatts have been ordered by the Trust to meet high load demands of short duration, and will be installed in a station being constructed at Dry Creek. It is anticipated that the first of these units will be ready for production in late 1972.

Fuels

The development of the Leigh Creek coal field and the use of this coal as a source of power freed the Trust from its relative dependence upon New South Wales coal as a fuel source. Since commissioning, the Thomas Playford Power Station at Port Augusta has used this type of fuel exclusively.

The construction of oil refineries in Australia resulted in residual oil being supplied at a price competitive with coal and, over the years, the Osborne Power Station and, more recently, the Torrens Island Power Station, have used this type of fuel.

Natural gas discoveries in the north-eastern areas of South Australia and the construction of a natural gas pipeline to Adelaide has given the Trust a further source of indigenous fuel. The four 120,000 kilowatt boilers at Torrens Island have been equipped to use natural gas or oil, or both fuels simultaneously. The Trust is the only major electricity authority in Australia generating electricity from natural gas. Gas was first used for this purpose at Torrens Island on 18 November 1969.

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.

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 South Australia, Fuels Consumed in Steam Power Stations

Year	N.S.W. Coal	Leigh Creek Coal	Oil	Wood	Coke	Natural Gas
	Tons					Millions of Therms
1945-46 (a)	190,889	15,101	—	—	—	—
1957-58	328,214	668,128	47,019	61,032	14,268	—
1963-64	72,253	1,566,986	110,165	166,735	1,818	—
1966-67	50,241	2,089,916	228,999	184,722	—	—
1969-70	3,376	2,121,194	294,454	182,697	—	53.75
1970-71	2,384	1,576,641	67,857	185,354	—	219.13

(a) Consumed by Adelaide Electric Supply Co.

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 South Australia, Transmission Lines

At 30 June

Rated Voltage	1946	1964	1967	1970	1971
	ROUTE MILES				
275,000 volt	—	370	370	445	445
132,000 volt	—	1,043	1,249	1,387	1,460
66,000 volt	105	430	466	517	641
33,000 volt	477	1,774	2,119	2,174	2,156
19,000 volt (SWER) (a)	—	5,065	8,445	10,615	11,213
11,000 and 7,600 volt	564	4,627	5,607	6,668	7,011
Total mileage.....	1,146	13,309	18,256	21,806	22,926

(a) Single wire earth return system.

Electric power is transmitted over considerable distances at very high voltages and is stepped down at substations and distribution centres.

Transmission lines of 275,000 volts link power stations at Port Augusta and Torrens Island to a major substation at Para from which 275,000 volt connections radiate to Magill, Cherry Gardens and Happy Valley substations serving the Adelaide metropolitan area. Both lines from Port Augusta are tapped into a new substation at Brinkworth to reinforce distribution to the mid-north area of the State.

Two 132,000 volt lines also link Port Augusta and Adelaide. These lines follow similar routes from Port Augusta to Bungama, near Port Pirie, where a substation serves the mid-north area. From Bungama the lines diverge, one passing through South Hummocks where a substation serves Yorke Peninsula, and the other running *via* Brinkworth to Waterloo where a substation serves the Upper Murray.

Transmission lines of 132,000 volts also extend from the central network to Woomera (Commonwealth Line), Berri (completed 1954-55), Leigh Creek (1961-62), Mount Gambier (1962-63), Whyalla (2 circuits completed 1963-64 and 1966-67 respectively), Port Lincoln (1966-67), Port Pirie (1968-69), Waterloo to North West Bend, near Morgan (1969) and Cherry Gardens to Mobilong, near Murray Bridge (1969-1970). An additional 132,000 volt line is currently being constructed between Tailem Bend and Mount Gambier; this line is scheduled for completion in 1972.

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.

In the following table the numbers of Electricity Trust consumers in the various categories are given at selected dates.

Electricity Trust of South Australia, Number of Consumers

At 30 June

Consumers	1946 (a)	1964	1967	1970	1971
Residential	<i>n.a.</i>	277,399	321,731	353,289	365,403
General Purpose	<i>n.a.</i>	35,477	38,950	41,773	42,281
Industrial	<i>n.a.</i>	15,579	19,956	22,776	23,741
Bulk and traction	<i>n.a.</i>	10	7	7	8
Total	118,262	328,465	380,644	417,845	431,433

(a) At 31 August. *n.a.* not available

GAS

The South Australian Gas Company, a privately owned company regulated by State legislation, 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 authorising 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 higher 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, respectively. 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 1930s depression.

Since the 1939-45 War a considerable expansion of manufacturing capacity and distribution facilities has taken place. This is evident from the following table which gives details of capital employed, number of consumers and miles of mains at 30 June in selected years.

South Australian Gas Company, Capital, Consumers, and Mains

At 30 June

Particulars	1940	1950	1960	1970	1971
Capital employed (\$m).....	5.4	6.0	19.4	40.0	40.1
Number of consumers (a)	61,207	84,629	121,720	186,670	189,642
Miles of mains.....	904	1,042	1,569	2,239	2,313

(a) Includes consumers of bottled gas.

The manufacture of gas by the carbonisation of black coal imported from New South Wales was the conventional method of production until the end of the 1939-45 War. Under this process large quantities of coke and tar are produced as by-products but 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.

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 could be brought into production much more rapidly than carbonising retorts.

In 1964 the first of four reforming plants was installed at Brompton. These plants operated initially on refinery tail gases and modifications were subsequently made to enable all four plants to reform a wider range of feedstocks, including light virgin naphtha and natural gas. A similar plant is in operation at Port Pirie for reforming light virgin naphtha.

When natural gas became available, the South Australian Gas Company contracted with the producers for a supply of this indigenous fuel. November 1969 marked the introduction of natural gas into Adelaide when a start was made on converting all consumers' appliances to use this fuel.

All coal carbonising plant and carburetted water gas plant making gas for distribution in the metropolitan area has now been shut down. The reforming plants ceased to operate early in 1971, when the conversion of all appliances to use natural gas was completed.

One section of the coal carbonising plant has been retained at the Osborne Works for the manufacture of metallurgical grade coke. Gas resulting from carbonisation is used partly for heating the coal chambers, the remainder being sold.

Gas 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 Whyalla by the South Australian Gas Company, and is available elsewhere as bottled gas.

An inter-connected system of high and intermediate pressure mains traverses the metropolitan area from the Brompton and Osborne works and mains extend south to Hackham, north-east to Tea Tree Gully and north to Elizabeth. The Elizabeth main was first laid for industrial use but now serves over 6,000 domestic consumers including 2,000 in the Elizabeth area. The pressure in these mains is reduced by means of governors for distribution to consumers.

The conversion of the metropolitan distribution system to use straight natural gas has produced a marked change in the Company's operations. The Company is now concerned largely with the distribution and marketing of gas, with the elimination of the manufacturing function.

Great emphasis is now placed on marketing gas to industry, where as a cheap, non-polluting fuel it is now able to compete successfully with other fuels. This has produced the situation where industrial gas sales made up 36 per cent of all gas sold in 1971 compared with 14 per cent in 1969.

At 30 June 1971 the company was maintaining 2,241 miles of main in the metropolitan area serving 160,154 consumers with natural gas. The Port Pirie system involves 52 miles of mains serving 4,308 consumers. A distribution system has also been developed in Whyalla over the past three years, and at 30 June 1971 involved 20 miles of main serving 673 consumers. An additional 24,507 customers are supplied with liquefied petroleum gas in bottles.

8.7 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 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. In recent years brick veneer homes have become more popular, particularly in Urban Adelaide, but this is partly because of the poor building soil in some of the areas in and near Urban Adelaide.

DWELLINGS: CENSUS DATA

Information on housing is obtained mainly from particulars of dwellings collected at each census. For the purpose of the Census a 'dwelling' is 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' includes houses and flats, and in addition habitations ranging from a single-roomed shack to a multi-roomed hotel or institution. Detailed information relating to dwellings at the 1971 Census is not yet available. Dwellings have been classified as 'private' or 'non-private'. Private dwellings include private houses, shares of private houses, self-contained flats, shares of self-contained flats, rooms, apartments, sheds and huts; non-private dwellings include hotels, motels, boarding houses, lodging houses and hostels, educational, religious, and charitable institutions, hospitals, and defence and penal establishments. Dwelling counts from the six censuses to 1966 are shown in the next table; figures exclude dwellings occupied solely by full-blood Aborigines.

Dwellings in South Australia, Censuses 1921 to 1966

Census	Occupied			Unoccupied (a)	Total Dwellings
	Private	Non-private	Total		
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
1966.....	299,630	2,684	302,314	25,110	327,424

(a) See page 346 'Unoccupied Dwellings'.

Total dwellings almost trebled in the forty-five years to 1966, with the greatest increase (about 155,000 out of a total of 215,000) occurring subsequent to the 1947 Census.

In most of the tables which follow, details of dwellings at the 1966 Census are given by geographical distribution. New criteria were adopted at the 1966 Census for the delimitation of urban centres, a full description of which is

contained in part 5.2 pages 110-2. The relevant tables show totals for each section of the State only, namely:

- (a) Urban Adelaide; this area is the 'urban centre' of Adelaide.
- (b) Other Urban; includes all urban centres other than Urban Adelaide.
- (c) Rural; includes all areas not included in (a) or (b) above.

Occupied Dwellings

The next table gives details of occupied dwellings only, according to the type of dwelling. Private dwellings were classified into the following six categories:

Private House; houses (including semi-detached and terrace houses) used for dwelling purposes by a household group;

Share of a Private House; a portion of a private house which is shared without structural subdivision by two or more household groups;

Self-contained Flat; a part of a house or other building which can be completely closed off and which has its own cooking and bathing facilities (includes home-units);

Share of a Self-contained Flat; a portion of a self-contained flat which is shared without structural subdivision by two or more household groups;

Shed, Hut, Tent, etc.; sheds, huts, caravans, tents, boats, etc. occupied by a household group;

Other Private Dwellings; includes private dwellings such as rooms, apartments, flats, etc., which are parts of buildings but not self-contained units.

Occupied Dwellings by Class, South Australia Censuses 1961 and 1966

Class of Dwelling	30 June 1961	30 June 1966			
	Total	Urban		Rural	Total
		Adelaide	Other		
Private dwellings:					
Private house	231,640	180,416	43,779	46,850	271,045
Share of private house	8,534	1,899	102	139	2,140
Self-contained flat	14,094	18,451	1,697	654	20,802
Share of self-contained flat	(a)	59	2	—	61
Shed, hut, tent, etc.	2,887	227	432	1,279	1,938
Other private dwellings	2,189	3,176	299	169	3,644
Total private dwellings	259,344	204,228	46,311	49,091	299,630
Non-private dwellings:					
Licensed hotel	577	230	149	214	593
Motel	24	24	35	15	74
Boarding house	1,142	593	225	74	892
Educational institution	50	28	5	3	36
Religious institution	79	46	25	9	80
Charitable institution	44	44	4	4	52
Hospital	180	111	40	40	191
Other non-private dwellings	468	153	132	481	766
Total non-private dwellings	2,564	1,229	615	840	2,684
Total occupied dwellings	261,908	205,457	46,926	49,931	302,314

(a) At the 1961 Census share of self-contained flat was not separately identified.

During the five year intercensal period, the number of houses increased by approximately 17 per cent while the number of flats increased by approximately 48 per cent. Share of private houses and sheds, huts, tents, etc. used as private

dwellings decreased. The number of flats in 1966 (20,802) was almost four times the figure of 5,674 at 30 June 1954. The following table shows the number of persons enumerated in each class of dwelling at the last two censuses.

**Number of Inmates by Class of Dwelling, South Australia
Censuses 1961 and 1966**

Particulars	30 June 1961		30 June 1966		
	Total	Urban		Rural	Total
		Adelaide	Other		
Persons enumerated:					
In private dwellings:					
Private house	848,793	647,017	157,806	176,010	980,833
Share of private house	22,758	4,776	271	451	5,498
Self-contained flat	34,894	38,696	4,516	2,049	45,261
Share of self-contained flat	(a)	125	3	—	128
Shed, hut, tent, etc.	7,974	487	1,068	2,789	4,344
Other private dwellings	4,354	5,664	634	400	6,698
Total private dwellings	918,773	696,765	164,298	181,699	1,042,762
In non-private dwellings	45,834	30,982	9,268	6,561	46,811
Total occupied dwellings ..	964,607	727,747	173,566	188,260	1,089,573
Persons not enumerated in dwellings:					
Campers-out	795	169	230	330	729
Migratory	3,938	..	..	..	1,573
Total population	969,340	727,916	173,796	188,590	1,091,875

(a) At the 1961 Census share of self-contained flat was not separately identified. .. not applicable

The percentage of persons enumerated in private dwellings was 94.8 at the 1961 Census, and by 1966 this percentage had increased slightly to 95.5. The percentage of persons enumerated in non-private dwellings decreased from 4.7 to 4.3 while the percentage not enumerated in dwellings also decreased (from 0.5 to 0.2) over the same period.

Occupied Private Dwellings

There were 259,344 occupied private dwellings at 30 June 1961, and by 30 June 1966 this number had increased by 15.5 per cent to 299,630. Characteristics of these dwellings are shown in the tables which follow.

**Occupied Private Dwellings by Number of Rooms, South Australia
Censuses 1961 and 1966**

Number of Rooms per Dwelling	30 June 1961			30 June 1966		
	Private House	Self-contained Flat	Total (including other)	Private House	Self-contained Flat	Total (including other)
1.....	79	94	2,278	144	301	2,520
2.....	1,340	1,265	5,721	986	3,048	6,109
3.....	5,712	4,869	14,251	4,511	7,399	13,682
4.....	31,510	4,680	38,699	30,405	6,922	38,235
5.....	104,421	2,066	107,849	131,081	2,096	133,699
6.....	59,283	702	60,207	65,431	628	66,295
7.....	18,816	226	19,092	24,862	233	25,206
8.....	6,210	99	6,333	8,384	97	8,528
9.....	2,171	33	2,213	2,833	40	2,887
10.....	1,047	3	1,059	1,266	17	1,295
11 and over	876	10	892	1,142	21	1,174
Not stated	175	47	750	(a)	(a)	(a)
Total	231,640	14,094	259,344	271,045	20,802	299,630
Average number of rooms per dwelling	5.38	3.80	5.17	5.46	3.56	5.25

The number of rooms includes kitchen and enclosed sleep-out, but does not include bathroom, toilet, pantry, laundry or storehouse. A combined living-dining room or combined kitchen-living or kitchen-dining room was counted as one room.

The largest increase in the five year period was in five-roomed dwellings. In 1961 five-roomed dwellings were 41.6 per cent of all occupied dwellings; by 1966 this percentage had increased to 44.6. The total increase in private dwellings was approximately 40,000 and nearly 26,000 of these were five-roomed dwellings.

**Occupied Private Dwellings by Number of Inmates, South Australia
Censuses 1961 and 1966**

Number of Inmates per Dwelling	30 June 1961			30 June 1966		
	Private House	Self-contained Flat	Total (including other)	Private House	Self-contained Flat	Total (including other)
1.....	17,320	3,345	25,007	22,494	6,782	32,831
2.....	53,047	5,491	62,128	63,068	8,238	73,233
3.....	44,555	2,493	49,312	51,733	2,981	55,714
4.....	49,757	1,543	53,034	57,179	1,634	59,500
5.....	34,193	726	35,779	39,355	722	40,423
6.....	18,312	282	19,050	21,098	286	21,546
7.....	8,286	144	8,625	9,094	98	9,252
8.....	3,674	52	3,840	4,192	48	4,274
9.....	1,404	14	1,456	1,615	8	1,626
10.....	597	2	608	673	1	683
11 and over.....	495	2	505	544	4	548
Total	231,640	14,094	259,344	271,045	20,802	299,630
Total inmates	848,793	34,894	918,773	980,833	45,261	1,042,762
Average number of inmates per dwelling	3.66	2.48	3.54	3.62	2.18	3.48

The average number of occupants per occupied private dwelling had fallen progressively from 4.03 in 1933 to 3.65 in 1947 and to 3.49 in 1954. The figures then rose slightly to 3.54 in 1961 and fell to 3.48 in 1966.

Occupied Private Houses and Self-contained Flats

The tables in this section give details of occupied private houses and self-contained flats only.

The following two tables give details of occupied private houses and self-contained flats by the type of occupancy and material of outer walls respectively.

For occupied private houses the proportion of owners and purchasers by instalments rose from 74.7 per cent to 77.0 per cent between the 1961 and 1966 Censuses and the proportion of tenants decreased from 23.0 per cent to 21.2 per cent. On the other hand the increase in occupancy of flats was largely on a rental basis, up from 75.8 per cent to 78.6 per cent.

**Occupied Private Houses and Self-contained Flats by Nature of Occupancy
South Australia, Censuses 1961 and 1966**

Nature of Occupancy	30 June 1961		30 June 1966		
	Total	Urban		Rural	Total
		Adelaide	Other		
PRIVATE HOUSES					
Owner, purchaser by instalments . . .	173,146	145,337	29,019	34,378	208,734
Tenant of Housing Trust	19,660	18,726	6,366	304	25,396
Other tenant	33,661	14,785	7,623	9,684	32,092
Other methods of occupancy	4,397	1,119	534	1,867	3,520
Not stated	776	449	237	617	1,303
Total private houses	231,640	180,416	43,779	46,850	271,045
SELF-CONTAINED FLATS					
Owner, purchaser by instalments . . .	3,080	3,585	214	219	4,018
Tenant of Housing Trust	1,604	1,994	84	5	2,083
Other tenant	9,082	12,568	1,324	378	14,270
Other methods of occupancy	280	235	59	45	339
Not stated	48	69	16	7	92
Total self-contained flats	14,094	18,451	1,697	654	20,802

**Occupied Private Houses and Self-contained Flats by Material of Outer Walls
South Australia, Censuses 1961 and 1966**

Material of Outer Walls	30 June 1961		30 June 1966		
	Total	Urban		Rural	Total
		Adelaide	Other		
PRIVATE HOUSES					
Brick	116,741	124,069	13,146	7,626	144,841
Brick veneer	(a)	11,251	2,051	515	13,817
Stone	57,379	18,229	15,415	21,357	55,001
Concrete	16,087	9,374	2,656	3,793	15,823
Wood	12,159	6,076	3,177	3,415	12,668
Iron, tin	7,898	1,499	1,660	2,579	5,738
Fibro-cement	20,359	9,679	5,449	7,330	22,458
Other	915	239	225	235	699
Not stated	102	(b)	(b)	(b)	(b)
Total private houses	231,640	180,416	43,779	46,850	271,045
SELF-CONTAINED FLATS					
Brick	8,262	12,961	646	115	13,722
Brick veneer	(a)	437	38	13	488
Stone	3,259	2,270	560	294	3,124
Concrete	1,802	2,152	129	66	2,347
Wood	203	116	61	45	222
Iron, tin	164	84	73	40	197
Fibro-cement	325	419	181	80	680
Other	32	12	9	1	22
Not stated	47	(b)	(b)	(b)	(b)
Total self-contained flats	14,094	18,451	1,697	654	20,802

(a) At the 1961 Census dwellings with walls of brick veneer were not separately identified.

(b) At the 1966 Census material of outer walls was allocated before tabulation where this information was not stated.

At the 1966 Census the number of private dwellings with outer walls of brick (including brick veneer) represented almost 60 per cent of all private houses and self-contained flats. This was a significant increase over the 1961 proportion of just over 50 per cent, and well above the 1966 Australian figure of almost 40 per cent. Dwellings of stone walls accounted for nearly 25 per cent of the total in 1961 and fell to below 20 per cent in 1966. Despite this falling proportion, almost 80 per cent of all stone houses in Australia in 1966 were located in this

State. In Australia more than 35 per cent of occupied private houses and self-contained flats had outer walls of wood, but in South Australia this proportion was less than 5 per cent.

**Occupied Private Houses and Self-contained Flats by Facilities
South Australia, Censuses 1961 and 1966**

Facilities	30 June 1961		30 June 1966			
	Total	Urban		Rural	Total	
		Adelaide	Other			
PRIVATE HOUSES						
Gas only	655	178	25	329	532	
Electricity	125,539	66,262	33,886	35,954	136,102	
Gas and electricity	100,293	113,762	9,565	9,253	132,580	
Neither gas nor electricity	7,291	79	190	1,056	1,325	
Not stated	749	135	113	238	506	
Total private houses (a) ...	234,527	180,416	43,779	46,850	271,045	
Television set	115,602	158,756	31,441	30,234	220,431	
SELF-CONTAINED FLATS						
Gas only	16	30	2	6	38	
Electricity	6,024	6,427	1,405	491	8,323	
Gas and electricity	7,998	11,944	276	145	12,365	
Neither gas nor electricity	20	8	2	5	15	
Not stated	36	42	12	7	61	
Total self-contained flats ...	14,094	18,451	1,697	654	20,802	
Television set	5,978	12,907	705	369	13,981	

(a) Includes sheds, huts, tents, etc.

The proportion of private houses that were stated to have gas and/or electricity increased from 96.6 per cent in 1961 to 99.3 per cent in 1966; the proportion for self-contained flats remained at 99.6 per cent over the same period. The percentage of private houses with television sets rose from 49.3 to 81.3 over the intercensal period while the percentage of self-contained flats with television rose from 42.6 to 67.2.

At the 1966 Census each householder was asked to state the number of motor vehicles (excluding motor cycles and scooters) used by members of that household that were garaged or parked at or near that dwelling on census night. Data were obtained only for private dwellings.

**Occupied Private Houses and Self-contained Flats by Number of Motor Vehicles
South Australia, Census 1966**

Number of Vehicles	30 June 1966							
	Urban				Rural		Total	
	Adelaide		Other					
	Houses	Flats	Houses	Flats	Houses	Flats	Houses	Flats
No vehicles	36,497	7,314	7,051	389	3,640	90	47,188	7,793
One vehicle	98,834	8,772	25,155	1,031	18,739	373	142,728	10,176
Two vehicles	34,969	1,281	8,623	196	13,036	127	56,628	1,604
Three vehicles	6,255	159	1,759	22	6,831	29	14,845	210
Four or more vehicles	1,247	43	546	12	3,864	14	5,657	69
Not stated	2,614	882	645	47	740	21	3,999	950
Total dwellings..	180,416	18,451	43,779	1,697	46,850	654	271,045	20,802
Total vehicles..	192,929	12,010	50,118	1,549	82,794	778	325,841	14,337

Unoccupied Dwellings

Unoccupied dwellings include vacant dwellings available for sale or renting; dwellings such as weekenders or holiday homes and seasonal workers quarters which were not occupied on Census night; dwellings normally occupied but whose occupants were temporarily absent on the night of the Census; newly completed dwellings where owners or tenants had not entered into occupation on Census night; dwellings described as 'to be demolished', 'condemned', 'exhibition home', etc.; and buildings constructed as dwellings but used for non-dwelling purposes on the night of the Census.

**Number of Unoccupied Dwellings by Class, South Australia
Censuses 1961 and 1966**

Class of Dwelling	30 June 1961	30 June 1966			
	Total	Urban		Rural	Total
		Adelaide	Other		
Private house	15,073	7,339	4,122	8,330	19,791
Self-contained flat	1,132	2,178	344	135	2,657
Other private dwellings	109	161	482	1,650	2,293
Non-private dwellings	102	6	28	335	369
Not stated	645	—	—	—	—
Total unoccupied dwellings.	17,061	9,684	4,976	10,450	25,110

The intercensal increase in unoccupied other private and non-private dwellings was mainly the result of a better coverage at the 1966 Census of dwellings occupied for only a short period of time each year, such as shearers huts, seasonal workers quarters, etc.

The following table shows unoccupied dwellings classified by reason for being unoccupied.

**Unoccupied Dwellings by Reason for being Unoccupied, South Australia
Censuses 1961 and 1966**

Reason for Being Unoccupied	30 June 1961	30 June 1966
For sale or renting	3,386	6,014
Holiday house, 'weekender', seasonal workers quarters	5,065	6,704
Occupants temporarily absent	4,767	4,832
Condemned or to be demolished	625	624
Other and not stated	3,218	6,936
Total unoccupied dwellings	17,061	25,110

DWELLINGS: INTERCENSAL ESTIMATES

Intercensal estimates of private dwellings are derived from results of the previous census and recorded particulars of subsequent completions, demolitions, and conversions of dwellings. The estimates include all private dwellings whether occupied or unoccupied (for an explanation of those dwellings classified as 'private' see page 341).

The following table shows private dwellings in each statistical division in South Australia at the 1966 Census together with estimates for each year subsequent to that date.

Private Dwellings: Statistical Divisions, South Australia

Statistical Division	Census 30 June 1966	Estimate 30 June			
		1967	1968	1969	1970
Adelaide	228,393	235,900	241,440	246,930	253,770
Central	12,291	12,410	12,540	12,670	12,790
Kangaroo Island	995	1,020	1,040	1,060	1,090
Mount Lofty Ranges	17,807	18,170	18,500	18,740	19,040
Murray	17,332	17,710	18,040	18,300	18,540
South East	16,096	16,440	16,820	17,170	17,480
Eyre	8,213	8,460	8,720	8,920	9,180
Northern	20,506	21,350	22,190	22,970	23,640
Far North	3,041	3,070	3,090	3,100	3,120
Total	324,674	334,530	342,380	349,860	358,650

Since 1966 almost 75 per cent of the estimated increase of private dwellings in this State has occurred in the Adelaide Statistical Division while over 9 per cent has been in the Northern Statistical Division. In both these divisions the rate of increase of private dwellings has been greater than the South Australian average of 2.5 per cent per year; the rates being 2.7 and 3.6 per cent per annum in Adelaide and Northern respectively. During this period the only other Statistical Division which has increased at a rate greater than the State average is Eyre which has increased at the annual rate of 2.8 per cent.

The increase in the Adelaide Statistical Division has been predominantly in the outer urban Adelaide local government areas, with Salisbury and Tea Tree Gully cities to the north and Noarlunga district council in the south showing the most significant increases.

The rapid expansion of Whyalla and to a lesser extent the growth of Port Augusta have been the main reasons for the high rate of increase in the Northern Statistical Division.

In other statistical divisions the local government areas which have shown the greatest increases are Port Elliot and Goolwa in Mount Lofty Ranges, Port Lincoln in Eyre, Mount Gambier and Millicent in South East, and Murray Bridge in Murray.

BUILDING

BUILDING CONTROL

The Building Act, 1923-1965 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, 1934-1971 apply.

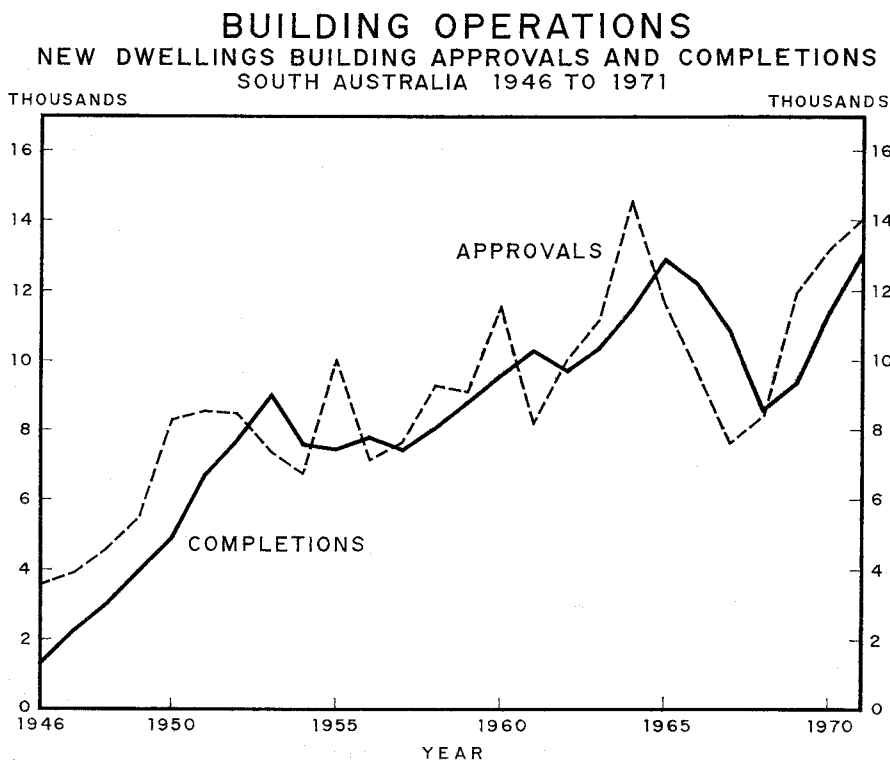
Persons erecting or altering buildings on land coming under the Building Act are required to submit to a building surveyor appointed by the local government authority details and plans of the work envisaged and to receive written approval

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, subject to a right of appeal. 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 under the Local Government Act, 1934-1971. 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-laws 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. In some local government areas such by-laws have been replaced by regulations under the Planning and Development Act, 1966-1971. During 1971 the Builders Licensing Act, 1967-1971 came into force with provisions for the licensing of builders.

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. Alterations and additions of \$10,000 and over to existing buildings 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 1970 and 1971. In addition to information on permits issued to private persons and organisations 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 authorised by government and semi-government authorities.

Building Approvals, South Australia

Type of Building	1970			1971		
	Private	Govt	Total	Private	Govt	Total
\$'000						
New buildings:						
Houses	70,545	14,120	84,665	77,137	13,094	90,231
Flats	28,119	926	29,045	32,577	1,177	33,754
Shops	8,277	—	8,277	2,697	—	2,697
Hotels, hostels, etc.	3,851	251	4,102	4,244	—	4,244
Factories	9,767	1,214	10,981	9,677	7,147	16,824
Office premises	7,486	1,906	9,392	20,901	3,214	24,116
Other business premises ..	7,229	13,613	20,842	8,603	3,751	12,354
Entertainment and recreation .	976	5,103	6,079	1,495	91	1,586
Educational	1,916	20,387	22,303	1,512	27,876	29,389
Religious	1,050	—	1,050	1,123	—	1,123
Health	1,175	2,979	4,154	1,685	13,390	15,074
Miscellaneous	642	6,037	6,679	865	2,992	3,857
Total value	141,033	66,536	207,569	162,516	72,733	235,249
Alterations and additions (a)	15,949	1,164	17,113	17,995	609	18,604
Total value all building ...	156,982	67,700	224,682	180,511	73,342	253,853

(a) Alterations and additions of \$10,000 or more are included with new buildings.

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 vary over the period of construction.

Value of Work Done

Possibly the best 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 \$3.4 million, \$3.9 million, and \$3.5 million for 1969, 1970 and 1971 respectively.

New Buildings: Value of Work Done, South Australia

Type of Building	1967	1968	1969	1970	1971
	\$'000				
Houses (a)	61,589	58,055	67,374	79,010	89,468
Flats (b)	6,311	8,810	14,188	23,839	27,369
Total dwellings (a)	67,900	66,865	81,562	102,849	116,837
Shops	8,425	8,731	8,469	12,129	2,225
Hotels, hostels, etc.	2,572	2,553	2,683	5,189	3,028
Factories	10,633	8,446	8,569	10,886	12,333
Office premises	11,243	8,924	7,853	11,540	15,578
Other business premises	8,144	11,997	8,954	11,992	14,284
Entertainment and recreation ...	1,708	1,725	2,375	1,715	3,029
Educational	11,145	12,079	15,730	16,929	20,751
Religious	806	806	803	829	944
Health	8,045	9,397	10,263	10,480	15,660
Miscellaneous	2,284	2,515	3,791	8,440	3,652
Total new buildings (a)	132,905	134,038	151,052	192,978	208,319

(a) Excludes owner-built houses. (b) Includes home units.

Buildings Under Construction

At the end of 1971 new buildings with an anticipated value when completed of \$161,349,000 were in the process of construction, with work done on these buildings valued at \$74,058,000. There were 3,647 houses and 2,107 flats in the course of construction, having an anticipated value when completed of \$53,117,000.

New Buildings Commenced, South Australia^(a)

Type of Building	1970			1971		
	Private	Govt	Total	Private	Govt	Total
	\$'000 (c)					
Houses	71,057	16,226	87,281	75,958	13,534	89,492
Flats (b)	22,849	623	23,471	26,820	635	27,455
Shops	7,843	16	7,859	2,269	6	2,275
Hotels, hostels, etc.	4,026	356	4,382	3,285	—	3,285
Factories	9,103	2,049	11,153	7,759	13,003	20,760
Office premises	6,260	2,447	8,704	15,446	9,547	24,993
Other business premises	6,422	15,165	21,586	5,340	3,624	8,964
Entertainment and recreation	1,125	5,222	6,347	1,410	568	1,977
Educational	2,648	12,712	15,359	1,921	17,989	19,911
Religious	935	—	935	955	—	955
Health	2,613	13,965	16,578	1,334	5,798	7,131
Miscellaneous	1,147	6,158	7,304	1,923	1,797	3,720
Total value of new buildings commenced	136,021	74,940	210,961	144,421	66,502	210,920

(a) Alterations and additions of \$10,000 or more are included with new buildings. (b) Includes home units.
(c) Anticipated completion value.

New Buildings Commenced

A building is recorded as commenced when work on the foundation has begun. In the table on page 350 commencements during 1970 and 1971 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 Completed

Details of new buildings completed for the years 1962 to 1971 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			
1962.....	9,280	583	61,966	3,198	49,404	114,568
1963.....	10,316	816	70,396	4,162	45,092	119,650
1964.....	10,869	1,279	78,148	6,264	54,288	138,700
1965.....	10,597	2,149	79,443	11,612	66,257	157,312
1966.....	10,095	1,607	78,810	8,288	56,824	143,922
1967.....	8,335	1,317	69,132	6,191	65,890	141,213
1968.....	6,896	1,603	61,138	8,173	73,003	142,314
1969.....	7,226	2,108	68,686	12,038	73,629	154,353
1970.....	7,902	3,511	78,369	22,627	79,892	180,887
1971.....	8,893	4,093	92,025	26,319	87,569	205,913

(a) Includes home units.

The following table gives further details of dwellings completed over the five years to 1971. A noticeable feature of the table is the increasing relative importance of flats which accounted for 31.5 per cent of dwelling completions in 1971.

Number of New Dwellings Completed, South Australia

Type of Dwelling	1967	1968	1969	1970	1971
Private:					
Contract-built houses	5,136	4,473	5,284	5,735	6,337
Owner-built houses (a).....	596	402	359	362	317
Total houses	5,732	4,875	5,643	6,097	6,654
Flats (b)	1,317	1,580	2,051	3,290	4,003
Total private dwellings..	7,049	6,455	7,694	9,387	10,657
Government:					
Houses	2,603	2,021	1,583	1,805	2,239
Flats	—	23	57	221	90
Total government dwellings	2,603	2,044	1,640	2,026	2,329
Total all dwellings ...	9,652	8,499	9,334	11,413	12,986

(a) Owner-built are houses erected without services of contractor for whole job. (b) 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, South Australia^(a)

Type of Building	1967	1968	1969	1970	1971
	\$'000				
Shops	4,133	12,487	8,200	13,002	3,396
Hotels, hostels, etc.....	2,340	2,561	2,526	4,261	3,114
Factories.....	12,271	7,965	6,942	10,698	16,784
Office premises	8,870	14,898	11,656	12,722	11,989
Other business premises	7,026	7,635	11,695	10,874	8,079
Entertainment and recreation ...	1,448	1,835	2,393	1,416	1,797
Educational	17,006	9,588	15,089	11,021	24,530
Religious	971	723	841	788	1,078
Health	9,020	13,014	10,593	7,017	12,692
Miscellaneous	2,805	2,297	3,694	8,093	4,113
Total	65,890	73,003	73,629	79,892	87,569

(a) Includes alterations and additions of \$10,000 and over to existing buildings.

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 majority of South Australian houses being of solid construction. In the table below new houses are classified according to the materials used in the outer walls.

New Houses: Material of Outer Walls, South Australia

Year	Brick, Concrete, Stone		Brick Veneer and Stone Veneer		Asbestos-Cement		Other	
	Number	Value	Number	Value	Number	Value	Number	Value
	\$'000		\$'000		\$'000		\$'000	
	COMMENCED							
1967.....	4,598	43,150	2,091	15,472	557	3,636	55	333
1968.....	4,415	44,330	1,784	13,055	549	3,637	76	430
1969.....	4,741	49,916	2,135	16,908	593	4,241	46	403
1970.....	4,860	54,520	3,218	27,511	683	4,854	59	395
1971.....	4,707	56,878	2,833	26,705	747	5,606	33	304
	COMPLETED							
1967.....	5,060	46,534	2,634	18,380	594	3,919	47	299
1968.....	4,179	41,719	2,129	15,612	509	3,387	79	420
1969.....	4,645	48,559	1,980	15,861	557	3,907	44	359
1970.....	4,512	50,036	2,655	22,985	676	4,893	59	456
1971.....	4,882	57,343	3,206	28,605	763	5,696	42	378

In 1971 brick veneer houses constituted 34 per cent of commencements. Although the larger proportion of brick veneer houses are built by the South Australian Housing Trust a wider acceptance of this type of construction is indicated by the increasing number being erected by private contractors.

Location of New Dwellings

In recent years the greatest development has occurred in the local government areas of Noarlunga, Salisbury and Tea Tree Gully; during the five years 1966 to 1970 new dwellings in these areas accounted for 27 per cent of the total

State completions. Of the country local government areas Whyalla has recorded the greatest number of completions each year from 1959.

Location of New Houses and Flats Completed, South Australia

Local Government Area	1967	1968	1969	1970	1971
Brighton	129	122	106	92	232
Burnside	337	244	253	277	280
Campbelltown	518	322	351	351	397
Elizabeth	225	113	18	83	315
Enfield	353	322	264	299	450
Glenside	146	179	174	386	296
Henley and Grange	91	196	127	261	197
Marion	380	328	409	452	529
Meadows	112	126	166	244	322
Millicent	70	80	51	44	77
Mitcham	461	421	540	585	748
Mount Gambier Municipality	126	104	130	86	108
Munno Para	370	332	101	69	148
Murray Bridge	85	32	57	38	79
Noarlunga	605	716	894	1,049	1,227
Payneham	129	62	163	163	248
Port Adelaide	263	93	145	169	187
Port Augusta	80	99	135	115	206
Port Lincoln Municipality	101	90	62	94	111
Salisbury	1,078	612	993	1,303	1,276
Stirling	73	94	88	85	124
Tea Tree Gully	580	567	788	1,108	1,210
Unley	205	209	198	327	274
West Torrens	435	505	512	656	581
Whyalla	682	617	514	412	402
Woodville	284	311	386	596	720
Other	1,734	1,603	1,709	2,069	2,242
Total State	9,652	8,499	9,334	11,413	12,986

Building Employment

Details of building employment in South Australia are given in the next table. The figures are an average of the number of persons employed on four days in the year, namely 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 average employment figure of 14,015 for 1971 was made up of 7,337 persons working on new private dwellings, 4,835 working on other new buildings and 1,843 employed on additions, alterations, repairs and maintenance.

Building Employment, South Australia

Classification	1967	1968	1969	1970	1971
	PERSONS ENGAGED				
Occupational status:					
Contractors	647	639	607	578	563
Sub-contractors	2,900	2,830	3,232	3,515	3,786
Wage-earners	8,862	8,327	8,494	9,453	9,666
Trade:					
Carpenters	3,299	3,118	3,147	3,235	3,378
Bricklayers	1,983	1,931	2,079	2,206	2,204
Painters	1,116	1,059	1,094	1,219	1,244
Electricians	705	690	729	890	928
Plumbers	1,090	1,060	1,133	1,245	1,256
Builders labourers	1,697	1,545	1,545	1,685	1,738
Other	2,519	2,393	2,606	3,066	3,267
Total	12,409	11,796	12,333	13,546	14,015

THE SOUTH AUSTRALIAN HOUSING TRUST

The South Australian Housing Trust was constituted by Act of Parliament in 1936 and it provides houses and flats for rental and houses for sale.

Rental Dwellings

When the South Australian Housing Trust commenced operations in 1937 it undertook, in the words of its first Annual Report, 'the provision of accommodation necessary for decent living at low rentals for persons coming within the lower income group.' The enabling legislation confined the Trust's activities for many years to the building and letting of double-unit attached houses. Subsequent legislation provided for the construction of single unit houses for rental and an eventual removal of statutory limitations on the capital cost of houses permitted the construction of larger single-unit houses. At 30 June 1971 the Trust had completed 33,488 houses for rental; of these 1,440 were completed during 1970-71.

In 1952 Trust rental accommodation was expanded with the construction of the first flats for single persons and for married couples without young children. Originally only two-storey flat developments were built; since 1953, however, three-storey flats and single-storey villa flats have also been constructed. At 30 June 1971 the Trust had built 1,766 flat units. In 1954 construction of small groups of cottage flats for elderly persons began on five sites in the metropolitan area. At 30 June 1971, 1,902 of these units had been built; 758 for charitable organisations and 1,144 for rental by the Trust.

Dwellings for Sale

Since the inception of its programme of building houses for sale in 1946, the Trust has greatly expanded its operations in this area. Under the original scheme, purchasers were required to provide their own finance, either from a lending institution or from their own resources. Since 1952, however, the Trust has been able to advance money on second mortgage. During the year ending 30 June 1971, 362 houses for sale were completed under this scheme.

In addition, under the rental-purchase scheme established in 1962, houses are made available for a minimum deposit of \$100 under an agreement to purchase. At the end of June 1971, 4,846 houses had been sold under this agreement.

The Trust provides a variety of sizes and designs for sale houses, depending on cost, location, and availability of building materials. Houses are provided for primary producers on their own land and for employees of State Government departments at the request of the departments concerned.

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^(a)

Period	Houses		Flats		Rural Dwellings including Soldier Settlers	Total
	Single Units	Double Units (b)	Cottage Flats	Other		
1937-1966 ..	30,357	(c)22,063	1,248	1,429	1,234	56,331
1966-67	2,292	722	214	—	—	3,228
1967-68	1,519	745	94	17	—	2,375
1968-69	1,232	532	104	30	—	1,898
1969-70	1,299	303	65	45	—	1,712
1970-71	1,371	420	177	245	—	2,213
Total ..	38,070	24,785	1,902	1,766	1,234	67,757

(a) Excludes emergency and temporary dwellings. (b) Number of individual dwelling units.

(c) Includes a small number of triple-units.

The Trust's early activities concentrated on the provision of rental and sales dwellings in small and usually separate groups. The expansion of its activities has led the Trust into the more complex areas of town planning and urban development. At Elizabeth, 17 miles north of Adelaide, a comprehensive development including a wider range of houses for sale and houses and flats for rent has grown into a city, complete with commercial and industrial areas. The rapid expansion of the industrial areas at Elizabeth, one of many areas throughout the State where the Trust is helping to provide employment and housing in close proximity, illustrates the contribution of the Trust to the industrial development of 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 borrowings 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 561.

COMMONWEALTH-STATE HOUSING AGREEMENTS

In July 1953 the State Government became party to an agreement already existing between Commonwealth and certain other States under which the Commonwealth Government makes substantial loans to the States for the provisions of housing. The initial agreement was renewed in 1956, 1961 and again in 1966 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 per cent of the funds provided must be channelled through the Home Builders Fund. The advances with interest are repayable by the State over fifty-three years.

A total of \$276,929,000 had been loaned to the State under these agreements to 30 June 1971 providing for a total of 51,342 dwellings to 30 June 1971.

Commonwealth-State Housing Agreement, South Australia

Particulars	1966-67	1967-68	1968-69	1969-70	1970-71
	\$'000				
Advances for year:					
Housing Trust	10,000	10,150	9,500	9,750	11,750
Home Builders Fund	10,750	10,850	10,000	11,500	13,250
Total	20,750	21,000	19,500	21,250	25,000
Liability at end of year:					
Housing Trust	110,452	119,709	128,228	136,913	147,505
Home Builders Fund	71,680	82,054	91,504	102,379	114,932
Total	182,132	201,763	219,732	239,292	262,437

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 Home Savings Grant Scheme.

War Service Homes

The War Service Homes Branch 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, Malaya or Vietnam 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 before 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 to building a home, in purchasing a new or existing home, or in discharging a mortgage which has been arranged with the prior approval of the Branch. 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 30 June 1971 was \$9,000 and the interest rate 3½ per cent.

Funds used by the War Service Homes Branch are made available from Commonwealth Consolidated Revenue.

War Service Homes Branch, South Australia

Year	Activities During Year		Advances Outstanding at End of Year	
	Homes Provided	Capital Advanced	Number	Amount
		\$'000		\$'000
1966-67	566	4,150	16,693	75,402
1967-68	419	3,000	16,729	75,476
1968-69	450	3,470	16,700	75,916
1969-70	509	4,100	16,693	76,405
1970-71	537	4,380	16,719	77,248

Homes Savings Grant

Under the Commonwealth Homes Savings Grant Scheme introduced in 1964, married, widowed and divorced persons under thirty-six years of age who have lived and saved in Australia for at least three years may become eligible for a grant of \$500 to assist them in obtaining a home. To be eligible for the maximum grant a couple must have saved \$1,500 in an acceptable form and have entered into a contract for the purchase or construction of a dwelling on or after 2 December 1963 or, if an owner-builder, have commenced construction on or after that date. Persons who have saved less than \$1,500 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 twelve months after signing a contract (or commencing to build if an owner-builder) although, in special circumstances an application lodged after twelve months will be considered.

A total of 20,817 home savings grants had been approved in South Australia to 30 June 1971, the total payment of \$8,819,000 representing an average of \$424 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, 1928-1970, 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 1 October 1971 maximum loans available from the above institutions varied with differing rates for new and existing houses and for solid and timber frame construction. Interest rates charged ranged from 6½ per cent to 8 per cent and periods of repayment from fifteen to forty years.

The private trading banks make overdraft advances, dependent on the credit status of the borrower, for short periods normally not exceeding five years. Interest rates on these advances varied between 6 and 8½ per cent.

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 thirty years and interest rates at 1 October 1971 varied between 7½ and 10 per cent.

Another source of housing finance is the building societies, details of which are given on pages 595-6. Three societies advance money made available from the Home Builders Fund.

Housing Loans Insurance Scheme

The Housing Loans Insurance Corporation was established by the *Housing Loans Insurance Act 1965* to insure approved lenders against losses arising from the making of housing loans. The main purpose of the activities of the Housing Loans Insurance Corporation is to assist people to obtain, as a single loan and at a reasonable rate of interest, the money they need and can afford to borrow to obtain a home suited to their requirements.

The Housing Loans Insurance Corporation insures loans that are made for a wide range of purposes in addition to the purchase or construction of a dwelling. The other purposes include alterations, extensions or improvements to a dwelling, and the provision or improvement of roads, kerbing and footpaths. An insured loan may be made only by an approved lender. The approved classes of lenders include banks, building societies, co-operative housing societies, friendly societies, life insurance companies and trustee companies.

During 1970-71, 1,696 housing loans aggregating \$15,688,000 were insured in South Australia.

PART 9

PRODUCTION

9.1 RURAL INDUSTRIES

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 a year. High day temperatures during a large part of the year cause 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 five 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 a year but the 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.

The following table gives details of average rainfall over most of the crop-growing area of the State for each month of the wheatgrowing season for the years 1965 to 1970.

**Average Rainfall Over Agricultural Areas, Monthly, South Australia
Wheatgrowing Seasons**

Month	1965	1966	1967	1968	1969	1970
	Inches					
April	0.52	0.24	0.14	1.79	0.99	1.40
May	2.00	1.42	0.78	2.93	2.38	1.39
June	1.34	1.87	0.35	2.92	1.30	1.62
July	1.88	2.41	1.81	2.27	2.45	1.26
August	2.28	1.18	1.73	2.67	1.16	2.60
September	1.24	2.04	1.12	0.95	2.01	2.29
October	0.23	1.22	0.38	1.80	0.18	0.39
November	1.02	0.71	0.05	1.28	0.60	1.37
Total	10.51	11.09	6.37	16.63	11.07	12.32

The average rainfall for the wheatgrowing season fell as low as 6.83 inches in the 1914 drought, 6.28 inches in 1959 and 6.37 inches in 1967 while the highest average recorded for the wheatgrowing season was 19.18 inches in 1916. A more detailed discussion of rainfall over agricultural areas was included on pages 5-9 of the *South Australian Year Book* 1966.

Rural Statistics

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 31 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.

In issues of the *South Australian Year Book* before 1971 rural production statistics were given for statistical divisions which were combinations of a number of counties. These counties are proclaimed areas with immutable boundaries. In the 1971 issue and this Year Book the statistics are given for statistical divisions based on combinations of local government areas—a map showing the new divisions is included inside the back cover.

The number and area of holdings in each division for the past two years are shown in the following table.

Rural Holdings, Statistical Divisions, South Australia

Statistical Division	Holdings		Area of Holdings	
	1969-70	1970-71	1969-70	1970-71
	Number		'000 acres	
Adelaide	4,287	4,307	265	263
Central	3,151	3,141	3,177	3,178
Kangaroo Island	454	452	778	776
Mount Lofty Ranges	5,493	5,530	1,894	1,895
Murray	6,135	6,144	7,513	7,498
South East	4,460	4,456	5,654	5,647
Eyre	2,360	2,371	9,889	9,810
Northern	2,375	2,366	7,608	7,314
Far North	320	320	125,913	126,202
Total	29,035	29,087	162,692	162,584

The classification of holdings by type of main activity is based on estimates of gross receipts of each activity made by allocating values to areas of crops and livestock numbers reported on the returns submitted for the year ended 31 March 1969.

The following table gives a summary of the type of activity of rural holdings in each statistical division.

Rural Holdings: Classified by Type of Activity, South Australia, 1968-69

Type of Activity	Statistical Division							Total (a)
	Adelaide	Central	Mount Lofty Ranges	Murray	South East	Eyre	Northern	
	Number of Holdings							
Commercial hold- ings:								
Sheep—cereal grain	70	1,239	517	1,505	512	1,471	908	6,303
Sheep	77	18	554	160	1,725	100	286	3,442
Cereal grain ..	20	1,177	106	434	27	490	450	2,720
Cattle (meat production) ..	26	3	121	22	329	5	5	562
Cattle (milk production) ..	223	80	1,318	371	676	12	33	2,715
Vineyards	116	1	329	1,049	4	—	—	1,499
Fruit (other than vine)	341	1	269	997	3	1	8	1,621
Vegetables:								
Potatoes ..	45	12	145	5	24	—	3	234
Other and mixed	805	72	45	188	15	—	69	1,194
Poultry	92	38	61	70	7	1	10	279
Pigs	42	39	61	58	21	17	23	263
Other	55	3	16	8	11	—	11	104
Multi-purpose ..	59	92	412	294	286	39	131	1,326
Total classified ..	1,971	2,775	3,954	5,161	3,640	2,136	1,937	22,262
Unclassified:								
Sub-commercial	1,064	286	1,196	625	525	109	293	4,134
Unused, special, etc.	1,163	148	403	383	306	113	181	2,741
Total holdings	4,198	3,209	5,553	6,169	4,471	2,358	2,411	29,137

(a) Includes Kangaroo Island and Far North Divisions.

A classification of rural holdings by size and by type of main activity has been prepared for 1968-69. The following table gives a summary of all rural holdings, those under wheat, barley, and oats and those carrying sheep and cattle classified by area of the holding in 1968-69.

**Rural Holdings: Classified by Size and Principal Activities, South Australia
1968-69**

Size of Holding	Total Holdings	Holdings with					
		Wheat for Grain	Barley for Grain	Oats for Grain	Sheep	Cattle (Milk Production)	Cattle (Meat Production)
Acres		Number					
1- 99 ...	11,335	335	317	155	1,366	1,761	1,176
100- 199 ...	2,030	263	195	152	796	1,016	558
200- 499 ...	2,914	994	819	633	1,949	1,256	1,009
500- 999 ...	3,778	2,426	1,998	1,595	3,410	1,177	1,554
1,000-1,999 ...	4,237	2,960	2,625	2,185	3,983	1,051	2,010
2,000-4,999 ...	3,250	2,425	1,980	1,689	3,868	654	1,559
5,000 and over.	1,593	959	649	720	641	244	840
Total .	29,137	10,362	8,583	7,129	16,013	7,159	8,706

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 declined by about 5 per cent over the ten year period, while the State population has risen by almost 25 per cent.

**Persons Permanently Resident on Rural Holdings, South Australia
At 31 March**

Year	Males	Females	Persons	Year	Males	Females	Persons
1962.	59,441	52,243	111,684	1967.	58,028	51,270	109,298
1963.	58,668	51,825	110,493	1968.	56,992	50,411	107,403
1964.	58,510	51,854	110,364	1969.	56,059	49,737	105,796
1965.	58,016	51,361	109,377	1970.	54,833	48,824	103,657
1966.	57,932	51,298	109,230	1971.	53,347	47,529	100,876

Rural Employment

In the following table particulars are given of permanent and temporary rural employment and salaries and wages paid during the last five years. The figures include male and female workers. Females engaged mainly in domestic duties are excluded from the table.

**Rural Employment and Wages, South Australia
At 31 March**

Particulars	1967	1968	1969	1970	1971
	Persons				
Permanent workers:					
Owners, lessees, etc.	22,993	22,048	22,102	21,526	21,436
Relatives (not paid wages)...	712	433	319	449	316
Employees	8,398	7,902	7,650	7,535	6,992
Total	32,103	30,383	30,071	29,510	28,744
Temporary workers	16,178	15,106	16,214	13,720	13,926
Total workers	48,281	45,489	46,285	43,230	42,670
	\$'000				
Salaries and wages (a):					
Permanent workers	15,225	15,410	15,865	16,690	16,815
Temporary workers	12,399	12,499	13,501	14,887	16,357
Total	27,624	27,909	29,366	31,576	33,172

(a) During year ended 31 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 31 March 1971 are given in the next two tables.

**Farm Machinery on Rural Holdings, South Australia
At 31 March**

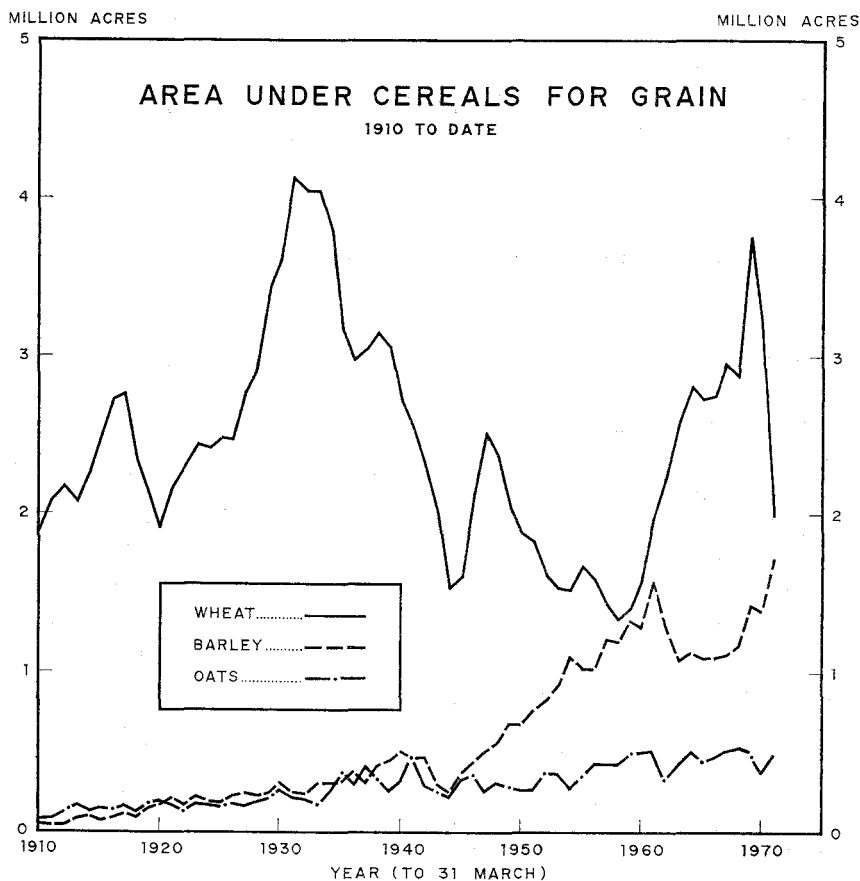
Type of Machine	1966	1967	1968	1969	1970	1971
Shearing machines:						
Machines	15,386	15,392	15,758	15,693	15,746	15,852
Stands	29,291	29,343	29,786	29,868	30,080	30,205
Milking machines:						
Machines	7,040	6,634	6,645	6,263	5,947	5,571
Units	18,833	18,143	18,399	17,908	17,642	17,082
Rotary hoes and rotary tillers	5,883	5,442	5,597	5,787	5,612	5,442
Tractors:						
Wheeled	30,984	32,507	33,230	33,534	34,121	33,971
Crawler	3,014	3,322	3,360	3,040	3,143	3,052
Grain drills:						
Combine	15,589	15,489	15,665	15,763	15,481	15,100
Other	5,201	5,093	5,240	5,074	4,953	4,804
Fertiliser distributors .	8,893	9,166	9,710	9,772	9,736	9,667
Harvesters, headers and strippers	12,393	11,579	11,905	12,042	11,218	11,208
Forage harvesters	764	765	845	896	914	814
Pick-up balers	4,609	4,760	4,992	5,305	5,367	5,404

PRODUCTION

**Farm Machinery on Rural Holdings, Statistical Divisions, South Australia
At 31 March 1971**

Type of Machine	Statistical Division							Total (a)
	Adelaide	Central	Mount Lofty Ranges	Murray	South East	Eyre	Northern	
Shearing machines:								
Machines	357	2,372	2,271	2,585	3,254	2,209	1,918	15,852
Stands	501	4,322	3,584	4,473	6,643	4,377	3,748	30,205
Milking machines:								
Machines	298	728	1,881	803	1,167	242	370	5,571
Units	903	1,420	6,371	2,758	4,318	409	741	17,082
Rotary hoes and rotary tillers	1,421	465	929	1,376	488	365	335	5,442
Tractors:								
Wheeled	2,270	4,524	5,664	7,931	5,096	4,735	2,786	33,971
Crawler	383	184	458	392	545	629	220	3,052
Grain drills:								
Combine	320	2,982	1,902	3,127	1,635	2,998	1,860	15,100
Other	127	511	777	1,039	924	1,074	193	4,804
Fertiliser distributors	798	719	2,515	1,743	2,061	1,065	377	9,667
Harvesters, headers and strippers	175	2,426	1,162	2,362	1,079	2,347	1,373	11,208
Forage harvesters	44	66	207	177	209	72	24	814
Pick-up balers	147	934	1,108	855	1,221	461	547	5,404

(a) Includes Kangaroo Island and Far North Divisions.



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 160 million acres in rural holdings are devoted to cropping or permanent improved pasture. The area under crop in recent years has varied between 5 and 7 million acres most of which is planted to cereals for the production of grain, hay and forage. About 130,000 acres are used for the production of fruit and vegetables.

The cereals wheat, barley and oats sown for grain account for about 80 per cent of the total area cropped in South Australia. Hay and green forage of all kinds account for about 12 to 15 per cent 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	1966-67	1967-68	1968-69	1969-70	1970-71
	'000 acres				
Grain:					
Wheat	2,960.3	2,864.2	3,748.4	3,209.7	1,982.5
Barley	1,107.0	1,156.6	1,412.3	1,383.6	1,713.6
Oats	508.8	524.9	515.6	371.6	481.7
Rye	56.6	57.9	67.4	47.9	48.7
Hay:					
Oaten	135.1	157.8	150.3	101.4	128.1
Other	346.7	271.2	464.6	282.4	356.9
Green forage	419.9	399.5	304.4	310.6	339.8
Vegetables:					
Potatoes	5.9	6.5	7.6	8.0	7.2
Tomatoes	1.4	1.4	1.1	1.2	1.3
Other	10.1	9.6	10.7	12.3	14.6
Fruit:					
Grapes	57.1	58.1	60.6	64.8	68.3
Oranges	17.4	17.5	17.1	17.2	17.1
Apples	5.9	5.9	5.9	5.9	5.9
Apricots	4.8	4.8	4.6	4.4	4.4
Other	16.0	16.9	16.9	17.3	17.9
Other crops	83.5	55.8	88.2	109.5	103.7
Total area under crop ..	5,736.5	5,608.6	6,875.8	5,947.8	5,291.6

The numbers of holdings growing twenty or more acres of the principal cereals or one acre or more of the principal fruits and vegetables are shown in the following table.

Rural Holdings Growing Principal Crops, South Australia

Holdings (a)	1966-67	1967-68	1968-69	1969-70	1970-71
With 20 acres or more of:	Number				
Wheat	9,419	8,905	9,884	9,529	8,548
Barley	6,772	6,850	7,916	7,685	8,254
Oats	5,532	4,979	5,682	4,326	5,105
With 1 acre or more of:					
Grapes	3,104	3,065	3,082	3,173	3,239
Citrus fruits	1,674	1,629	1,574	1,650	1,598
Other orchard fruits	3,253	3,175	3,073	3,360	3,320
Potatoes	674	682	722	752	569

(a) Holdings growing more than one of the crops shown are counted for each crop.

The extent of fluctuations since 1905 in the area under the three main cereal crops is illustrated by the graph on page 364.

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 316-9. The remainder of the areas under irrigation are located mainly in the Mount Lofty Ranges and South East Divisions.

The following table shows the approximate area of all irrigated culture in South Australia for the seasons 1966-67 to 1970-71. Of the areas shown below, about 70 per cent of orchards, 80 per cent of vineyards and about 15 per cent of green forage and pastures are in the River Murray irrigation areas listed in the table on page 367. The acreage shown as green forage is area cut for green forage and silage.

Area Under Irrigated Culture, South Australia^(a)

Season	Orchards	Vineyards	Vegetables	Green Forage	Other Crops	Pasture	Total
Acres							
1966-67	32,122	28,268	12,341	3,257	20,463	42,306	138,757
1967-68	32,512	30,616	13,290	7,400	25,738	63,622	173,178
1968-69	32,570	31,108	14,414	6,412	27,990	61,417	173,911
1969-70	33,712	34,998	15,232	5,069	28,438	68,509	185,958
1970-71	34,082	37,991	15,948	4,145	30,139	68,498	190,803

(a) Approximations only.

The main crops are grapes, citrus fruit and stone fruit in the Upper Murray irrigation areas, and green forage and pastures in the reclaimed swamp areas of the Lower Murray irrigation areas. Details for individual areas in 1970-71 are given in the next table. It should be noted that area of vineyards is shown for drying or wine according to the purposes for which the grapes were used and not according to variety. The acreages can fluctuate from year to year because of dual purpose grapes (e.g. sultanas) grown in South Australia.

**River Murray Irrigation Areas: Area and Production of Principal Crops
1970-71^(a)**

Irrigation Area	Area				Production				
	Green Forage and Pasture (b)	Vineyards		Orchards	Vineyards			Orchards	
		For Drying	For Wine		Total Grapes Produced	Grapes Used for Wine	Currantans, Sultanans and Raisins Dried	Oranges	Peaches
	Acres	Acres	Acres	Acres	Tons	Tons	Tons	'000 bushels	'000 bushels
Upper Murray:									
Berri	497	748	4,356	3,488	24,460	21,262	854	483.1	103.2
Cadell	8	132	305	394	1,704	1,231	138	50.0	6.2
Cobdogla	95	120	1,112	48	8,655	8,104	174	3.6	1.5
Cooltong	83	19	523	823	3,986	3,793	31	278.7	7.6
Holder	1	18	258	435	1,638	1,567	23	55.0	10.0
Loveday	342	269	1,930	445	14,404	13,026	379	76.9	2.9
Loxton	50	340	3,611	3,146	25,027	23,598	408	1,288.6	60.5
Moorook	5	38	398	628	2,271	2,064	64	99.9	16.0
Nookamka	25	220	1,603	207	11,802	10,656	323	42.3	0.8
Rai Rai	207	197	589	291	2,982	2,285	207	3.9	35.6
Renmark	743	1,057	4,497	3,698	20,323	16,387	1,140	426.4	290.2
Sunlands	—	—	177	1,505	903	903	—	647.5	35.1
Waikerie	17	82	1,697	3,019	10,173	9,724	117	507.3	139.1
Other	42	257	808	2,700	4,534	3,691	259	331.2	215.4
Total	2,115	3,497	21,864	20,827	132,862	118,291	4,115	4,294.5	924.1
Lower Murray:									
Cowirra	797	—	—	—	—	—	—	—	—
Jervois	5,498	—	—	10	—	—	—	0.7	—
Monteith	1,244	—	—	—	—	—	—	—	—
Mypolonga	1,705	—	5	1,035	24	24	—	213.4	19.3
Neeta	631	—	—	—	—	—	—	—	—
Pompoota	682	—	—	—	—	—	—	—	—
Other	2,140	—	—	6	—	—	—	—	—
Total	12,697	—	5	1,051	24	24	—	214.1	19.3

(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.

FERTILISERS

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 fertiliser used in 1970 is shown in the following table.

Principal Crops and Pasture Fertilised, South Australia 1970

Type of Crop	Area Fertilised	Super-phosphate	Other	Total	Per Acre
	'000 acres	Tons	Tons	Tons	Cwt
Wheat	1,903	95,407	4,107	99,514	1.05
Barley, oats and rye	2,438	117,953	5,627	123,580	1.01
Vegetables	18	3,202	7,248	10,450	11.69
Fruit trees and vines	69	8,325	9,722	18,047	5.24
Other and unspecified crops	226	13,813	1,225	15,038	1.33
Total crops	4,654	238,700	27,929	266,629	1.15
Pasture	4,788	263,022	8,863	271,885	1.14
Total	9,442	501,722	36,792	538,514	1.14

The following table shows the area of crops and pastures treated and the quantity of fertiliser used in each division in 1970.

Use of Artificial Fertilisers: Statistical Divisions, South Australia

1970

Statistical Division	Crops				Pastures		
	Area Fertilised	Proportion of Total Area Cropped	Fertiliser Used	Fertiliser Used per Acre	Area Fertilised	Fertiliser Used	Fertiliser Used per Acre
	'000 acres	Per cent	Tons	Cwt	'000 acres	Tons	Cwt
Adelaide	42	68.48	8,981	4.31	56	3,427	1.22
Central	1,074	91.78	58,301	1.09	230	10,357	0.90
Kangaroo Island	39	81.01	2,598	1.34	306	18,033	1.18
Mount Lofty Ranges	287	80.74	19,832	1.38	591	35,086	1.19
Murray	972	89.09	57,470	1.18	337	17,771	1.06
South East	296	76.08	18,359	1.24	2,567	152,454	1.19
Eyre	1,466	90.26	79,343	1.08	560	27,939	1.00
Northern	439	87.40	20,173	0.92	139	6,812	0.97
Far North	39	78.54	1,572	0.80	—	6	1.00
Total	4,654	87.96	266,629	1.15	4,788	271,885	1.14

The next table gives the area of crops and pastures treated in the State for the years 1961 to 1970.

Use of Artificial Fertilisers, South Australia

Year	Crops				Pastures		
	Area Fertilised	Proportion of Total Area Cropped	Fertiliser Used	Fertiliser Used per Acre	Area Fertilised	Fertiliser Used	Fertiliser Used per Acre
	'000 acres	Per cent	Tons	Cwt	'000 acres	Tons	Cwt
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
1965	4,869	91.99	265,132	1.09	5,093	296,830	1.17
1966	5,123	89.30	286,896	1.12	5,237	311,129	1.19
1967	5,033	89.73	292,400	1.16	5,130	307,477	1.20
1968	6,007	87.37	334,666	1.11	4,270	246,091	1.15
1969	5,284	88.84	307,380	1.16	4,962	282,887	1.14
1970	4,654	87.96	266,629	1.15	4,788	271,885	1.14

Aerial Agriculture

During recent years less use has been made of aircraft for top-dressing and seeding, for spraying of crops and pastures, and for pest and vermin extermination.

The following table shows details of area treated, materials used and flying time for the five years ended 31 March 1971.

Aerial Agriculture, South Australia

Year	Area Treated			Material Used		Flying Time
	Fertiliser and Seed	Sprayed	Total (a)	Super-phosphate	Seed	
	'000 acres			Tons	'000 lb	Hours
1966-67	903	372	1,276	46,850	n.a.	7,822
1967-68	n.a.	237	n.a.	n.a.	217	5,609
1968-69	n.a.	369	856	n.a.	n.a.	4,794
1969-70	609	281	901	39,598	n.a.	6,065
1970-71	n.a.	157	576	23,551	n.a.	4,605

(a) Includes other type of treatment.

n.a. not available

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 per cent of agricultural and pastoral production and 23 per cent of total State production while for the period 1963-64 to 1967-68 the percentages were 22 and 7 respectively. The increase in woolgrowing in the first instance and the rapid industrialisation of the State in the second have been the significant factors in this decline.

South Australia as a wheat producing State now ranks fourth in order of importance, and for the ten harvests ending 1970-71 averaged 13 per cent of Australian wheat production.

In the past twenty years a feature of the industry has been that average yields have fluctuated about a higher level of average yield (*i.e.* about 20 bushels per acre), mainly because of improved farming practices including the adoption of nitrogen-building clovers in the rotation. The average yield per acre for the ten seasons ended 1970-71 was 16.90 bushels, a record of 23.56 bushels being attained in 1960-61. The record wheat crop was 83,160,000 bushels in 1968-69. Production in 1970-71 was 29,028,000 bushels.

Varieties of Wheat

The early wheatgrowers recognised 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. Although stem rust, which can be a serious problem in other States, is rarely troublesome in South Australia, breeders still consider rust resistance as important as other qualities such as yield, baking quality and resistance to other diseases.

Of the varieties sown in the 1970-71 season, Heron, Insignia, Gamenya and Gabo were the four most important. The main attributes of Heron, the leading variety, are 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. Insignia, Gamenya and Gabo have very similar features to Heron. Both Heron and Insignia are classified as fair average quality standard wheat while at present Gamenya is the most widely grown hard variety in this State. The similar

climatic requirements of these four 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.

In each of the Australian States a committee has been set up to examine and recommend the wheat varieties which should be grown by farmers for marketing through the Australian Wheat Board. In South Australia the Advisory Committee on Wheat Quality was established in 1962 to consider advice from the State Department of Agriculture, which carries out tests of wheat varieties being developed and recommends which wheat varieties should be sown by farmers in the various districts. The Department of Agriculture and the Australian Wheat Board want the growers to try and produce wheat with uniform characteristics in both the Hard class and F.A.Q. class and this can be done more successfully if only a few of the best varieties are grown by the farmers. Up to and including the sowings of wheat in 1970, the State wheat lands were divided into fourteen zones by the Advisory Committee and varieties most suited for sowing in these zones were recommended to farmers.

For the 1971 and subsequent sowings the Advisory Committee adopted a new approach to the basis on which the Committee now recommends wheat varieties for planting in South Australia. The Committee has divided the State into seven wheat growing zones and recommends to farmers only those wheat varieties which are likely to give the best results as far as the protein content of the wheat is concerned, while maintaining a high rate of yield, at the same time.

The leading varieties of wheat sown for all purposes for the years 1968-69 to 1970-71 are shown in the following table.

Principal Varieties of Wheat Sown, South Australia

Variety	Area			Proportion of Total Area		
	1968-69	1969-70	1970-71	1968-69	1969-70	1970-71
	'000 acres			Per cent		
Dirk.....	167	140	102	4.4	4.3	5.0
Gabo.....	294	233	160	7.7	7.1	7.9
Gamenya.....	335	288	206	8.8	8.8	10.1
Glaive.....	(a)	38	50	(a)	1.2	2.5
Heron.....	1,304	1,288	766	34.2	39.4	37.6
Insignia.....	1,046	744	337	27.5	22.8	16.5
Raven.....	198	150	110	5.2	4.6	5.4
Sabre.....	163	128	84	4.3	3.9	4.1
Other.....	233	253	222	6.1	7.9	10.9
Total area...	3,806	3,272	2,037	100.0	100.0	100.0

(a) Not collected separately.

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 in the Eyre, Central, Murray and Northern Divisions. These districts accounted for over 90 per cent of the area sown in 1970-71.

**Wheat Sown for Grain: Area and Production, Statistical Divisions
South Australia**

Statistical Division	Area		Production	
	1969-70	1970-71	1969-70	1970-71
	'000 acres		'000 bushels	
Adelaide	4	3	99	67
Central	587	413	14,634	9,442
Kangaroo Island	4	1	57	29
Mount Lofty Ranges	106	73	2,633	1,830
Murray	673	363	9,568	3,088
South East	90	57	1,906	1,134
Eyre	1,290	819	20,713	8,715
Northern	399	225	8,924	4,603
Far North	56	29	625	120
Total	3,210	1,983	59,159	29,028

Research

Under the *Wheat Tax Act 1957-1966* a tax of a quarter of a cent 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 and it has currently recommended a broad field of research in wheat production, wheat storage and wheat quality.

Organisations such as the Commonwealth Scientific and Industrial Research Organization and the Department of Agriculture are constantly conducting research into the problems of wheat diseases, producing better wheat varieties and improving soil structure.

Marketing

Australian Wheat Board

The Board consists of fourteen members; a chairman, a finance member, a flour millers' representative and a representative of employees, appointed by the Minister of Primary Industry, and ten representatives of wheatgrowers (two from each mainland State).

The Board has control over the receipt and disposal of all wheat and wheat products including the handling, storage and shipment of wheat. Under the stabilisation 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. For the past eleven seasons wheat receipts have exceeded 200 million bushels with a record delivery of 516 million bushels during 1968-69.

Deliveries to the Australian Wheat Board^(a)

Season	South Australia	Australia	Season	South Australia	Australia
	'000 bushels			'000 bushels	
1961-62	30,738	224,290	1966-67	50,007	439,236
1962-63	35,121	285,722	1967-68	22,084	247,370
1963-64	51,660	307,837	1968-69	79,447	515,614
1964-65	49,991	346,511	1969-70	55,693	358,143
1965-66	36,160	234,396	1970-71	25,023	254,829

(a) Mostly in bulk, but includes weight of bags where used.

During the year ended 30 November 1970 total exports of wheat (including wheat equivalent of flour and wheat products) were 301 million bushels. The value of the Wheat Board's sales on both the local and export market is shown in the following table.

Australian Wheat Board Sales of Wheat and Wheat Flour

Crop Year	Sales		Value	
	Local	Export	Local	Export
	'000 bushels		\$'000	
1960-61	54,920	195,582	83,255	261,906
1961-62	52,371	171,412	82,486	244,990
1962-63	51,180	233,806	81,042	317,292
1963-64	56,613	250,281	82,282	357,660
1964-65	74,730	270,835	108,924	362,337
1965-66	66,869	166,917	101,480	240,654
1966-67	61,229	377,384	94,424	545,928
1967-68	70,031	206,832	114,671	290,101
1968-69	56,011	241,768	95,171	331,530
1969-70	58,863	300,757	91,624	371,720

Wheat Delivery Quotas Plan

In March 1969 the Australian Wheat Growers' Federation put forward proposals to the Australian Agricultural Council for the allotment of quotas on deliveries of wheat to the Australian Wheat Board. The Federation's proposals were mainly designed to bring marketable supplies of wheat more into line with available outlets, following the record 1968-69 harvest. The proposals were approved by the Council and later by the Commonwealth Government and became effective for the 1969-70 harvest with total Australian quotas of 357 million bushels. State Governments had the responsibility of implementing the quota plan within the States. Each State (except Queensland where the legislation operated from 1970) enacted the necessary legislation in 1969. The period of operation of the legislation varies among the States.

The Australian Wheatgrowers Federation successfully recommended in February 1970 that the total wheat quotas for Australia in the 1970-71 season should be 318 million bushels. The 1971-72 quotas were approved at 339 million bushels. The quotas for South Australia were 36 and 40 million bushels respectively.

Deliveries in 1969-70 and 1970-71 made within the quotas established received the usual first advance payment of \$1.10 per bushel for f.a.q. bulk wheat, f.o.r. ports basis. The same arrangement applies to 1971-72 season's quota wheat.

The States were responsible for determining the method of allocation of individual quotas within their respective boundaries. In South Australia, Parliament enacted the Wheat Delivery Quotas Act, 1969 which instituted a Wheat Delivery Quota Advisory Committee consisting of eight members representing wheat growers and one representative each from the Wheat Board, the South Australian Co-operative Bulk Handling Limited and the Department of Agriculture. A Review Committee of three members was also provided to deal with the appeals by growers against the quota quantities allotted to them.

The basis on which quotas were allocated in South Australia for the 1969-70 season was the average quantity of wheat obtained after listing deliveries from the various farm properties to the Australian Wheat Board during the five-year period from 1964-65 Season to 1968-69 Season, less 10 per cent.

The Act permitted the Quota Advisory Committee to grant special quotas in certain financial hardship cases involving sickness, or National Service training, and in cases where growers were affected by drought or excessive rain during the five-year period, and those who had heavy financial commitments as a result of developing land for wheat growing. The Act provides for quotas to be allotted only to growers who were owners of the wheat farming properties and to lessees, but not to people who were simply share-farmers.

Before establishing the nominal quotas to apply for the 1970-71 season, the Advisory Committee reviewed the cases in which special quotas were issued in the 1969-70 season and in many cases reduced the quota quantities to what were considered to be more correct quota allocations.

Bulk Handling

The South Australian Co-operative Bulk Handling Ltd which was incorporated on 7 December 1954 is the sole bulk grain handling authority in this State, and is owned, financed and controlled by the growers. At 31 December 1971 the Co-operative had a total storage capacity, including current contracts let, of 118.2 million bushels (105.9 million bushels permanent storage and 12.3 million bushels emergency storage). A further 4 million bushels of permanent storage capacity is planned for the next season. No additional emergency storage capacity is planned for 1972 and some old emergency storage has been phased out since last season.

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 one million bushels capacity, which began operating in 1952, encouraged rapid development. The Co-operative purchased the Ardrossan silo from the Australian Wheat Board after the Bulk Handling of Grain Act, 1955 was passed 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 1.7 cents for each bushel delivered to the silo in the first year. Thereafter the toll for members and charge for non-members was 5 cents per bushel (4 cents in 1970-71) and 3.4 cents per bushel respectively. After twelve years of membership, members are gradually refunded all tolls paid. The first repayment of wheat tolls was made in June 1968 to growers who paid tolls in the 1955-56 season. 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
31 December 1971^(a)

Division	Wheat		Barley		Oats	
	Permanent	Emergency	Permanent	Emergency	Permanent	Emergency
	'000 bushels					
Port Adelaide.....	23,534	1,860	6,450	—	500	95
Ardrossan.....	6,350	—	5,600	400	—	—
Wallaroo.....	12,460	—	2,375	700	—	—
Port Pirie.....	11,342	2,790	1,335	180	—	—
Port Lincoln.....	20,695	3,500	5,060	100	110	—
Thevenard.....	9,020	2,345	920	—	110	415
Total.....	83,401	10,495	21,740	1,380	720	510

(a) Includes current contracts let.

During the 1970-71 season the Co-operative received 25 million bushels of bulk wheat representing almost 100 per cent of total State deliveries.

A certified claim showing particulars of the wheat received from a grower is forwarded by the bulk handling authority to the Australian Wheat Board, which then makes payment to the grower.

Under the system of pooling wheat, the cost of handling wheat by the Co-operative is reimbursed by the Wheat Board.

Grading of Wheat

The grading of wheat for export is based on a fair average quality (f.a.q.) standard. A separate 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 delivered to the Wheat Board.

Since 1957-58 in South Australia, two standards have been fixed in each season with the exception of the 1960-61 and 1966-67 seasons when three standards were fixed.

Currently the two standards are known as F.A.Q. and Hard (called Semi-hard before December 1966), 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 per cent is mottled or bleached. Because of hard wheat's better baking qualities, resulting in a keener overseas demand, growers of this grade receive a premium of up to 5 cents 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 ten seasons 1961-62 to 1970-71 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.	Hard	Season	F.A.Q.	Hard
1961-62	63½	63	1966-67 (a) ...	62	64
1962-63	62½	63½	1967-68	62½	63
1963-64	64½	64½	1968-69	63½	63½
1964-65	62½	63	1969-70	63	62½
1965-66	63	62½	1970-71	63	62½

(a) A third standard of No. 1 off-grade—57½ lb—was fixed in 1966-67.

Wheat Stabilisation Plan

Wheat grown in Australia is marketed under a government stabilisation 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 varied by changes in costs of production and the operation of a stabilisation fund into which are paid the proceeds of a tax on exports.

The first post-war Wheat Stabilisation Plan operated between 1948 and 1953. Subsequent stabilisation plans were introduced in 1954 (for seasons 1953-54 to 1957-58), 1958 (for seasons 1958-59 to 1962-63), 1963 (for seasons 1963-64 to 1967-68) and 1968 (for seasons 1968-69 to 1972-73).

In the third year of the present plan the Commonwealth Government guaranteed to growers a price of \$1.475 per bushel as compared to \$1.459 in 1969-70 for average quality wheat of the 1970-71 season on up to 200 million bushels of wheat exported from the crop. In fixing the guaranteed price for subsequent seasons the Minister can vary the price by the amount he considers appropriate by reason of increases or decreases in prices, wages or rates of charges (including rates of interest) payable in connection with (i) the carrying on of operations wholly or partly for the purposes of the production of wheat; or (ii) the transport, handling or storage of wheat. The home consumption price on or after 1 December 1970 is \$1.74 per bushel for f.a.q. bulk wheat f.o.r. at a port of export, plus one cent per bushel to cover the cost of transporting wheat from the mainland States to Tasmania.

Under the *Wheat Export Act* 1968, wheat exported is subject to a tax which is equivalent to the excess of returns from export sales over the guaranteed price, plus 5 cents. The export tax, which is paid into the stabilisation fund, is restricted to a maximum rate of 15 cents per bushel. In addition the balance in the stabilisation fund may not exceed \$80 million, any surplus being returned to the growers.

The stabilisation fund is used to make up deficiencies in respect to 200 million bushels from each crop where the average export realisation 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 Grains Agreements

The fifth International Wheat Agreement came into effect on 1 August 1962 for a period of three years, but was extended until 31 July 1968. Under this agreement the participating importing countries undertook 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 this agreement it was not necessary for a maximum price declaration to be made.

The International Grains Arrangement, 1967 embraced a Wheat Trade Convention and a Food Aid Convention and came into force on 1 July 1968 for a period of three years. The Arrangement covered new ground in its pricing provisions; whereas the 1962 International Wheat Agreement specified a maximum and minimum price for one wheat, the new Arrangement specified maximum and minimum prices for fourteen wheats. The Food Aid Convention of the Arrangement provided for a programme of food aid amounting to 4.5 million metric tons of grain for human consumption in each of the three years of the Arrangement.

The new agreement, the International Wheat Agreement 1971, has a life of three years from 1 July 1971. Like the International Grains Arrangement, the Agreement comprises two separate legal instruments, the Wheat Trade Convention and the Food Aid Convention, linked by a common preamble.

The Wheat Trade Convention 1971 ensures that the machinery for consultation and co-operation on wheat marketing existing under earlier Agreements will be maintained. The administrative body, the International Wheat Council, continues in existence. The Convention provides for the continuation of the full reporting and recording of all commercial and concessional transactions in wheat and flour. There is an important departure from earlier agreements in that the latest Wheat Trade Convention contains no specific pricing provisions. However, the Convention specifically provides that when it is judged that prices and related rights and obligations are capable of successful negotiation, the International Wheat Council shall arrange a further conference with the objective of bringing them into effect within the life of the Convention.

A newly established Advisory Sub-Committee on Market Conditions will keep the wheat market under continuous review. This Sub-Committee will report to the Executive Committee of the Council if it considers that a situation of market instability has arisen, or threatens to arise. The Executive Committee will then review the situation and try to find mutually acceptable solutions.

With the entry of U.S.S.R. and Brazil which were not members of the 1967 International Grains Agreement all major wheat trading nations except the People's Republic of China participate in the Wheat Trade Convention. The membership accounts for over 95 per cent of the world trade in wheat.

The new Food Aid Convention is basically unchanged from its predecessor. Under this Convention a number of developed countries, importers and exporters alike, will continue to provide developing countries with food aid in the form of grains or flour for human consumption. Australia's contribution will remain unchanged at 225,000 tons annually. Since the new convention has fewer members and total annual contributions have fallen from 4,259,000 metric tons to 3,974,000 tons, Australia's share has risen marginally to 5.6 per cent.

Several minor changes have been incorporated in the new Food Aid Convention. A new clause provides that in exceptional cases, and on request, limited quantities of rice may be included in the programme. Also, sales on credit terms of

twenty years or more will be eligible to be counted against aid commitments provided that maximum use is made of the other eligible forms of aid such as grants and sales for non-transferable local currency.

Prices

The table below shows the trend in export and domestic prices of Australian wheat for the years 1961-62 to 1970-71.

Export and Domestic Prices of Australian Wheat

Year	Export Price per Bushel (a)	Home Price per Bushel
	\$	\$
1961-62	1.44	1.58
1962-63	1.44	1.59
1963-64	1.53	1.46
1964-65	1.43	1.47
1965-66	1.43	1.53
1966-67	1.54	1.57
1967-68	1.43	1.66
1968-69	1.34	1.71
1969-70	1.31	1.73
1970-71	1.40	1.74

(a) Average of the twelve monthly prices, year ended July (From 1 December 1970, 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 grinding into flour for consumption in Australia. The prices charged by the Board for wheat for stock feed in Australia were the same as those charged for wheat for human consumption. However, from 1 December 1969 the pricing arrangements for wheat sold in Australia underwent a change with the result that home prices in the relative avenues of sale, on a f.o.r. terminal ports basis for f.a.q. bulk wheat for the year ended 30 November 1970 were home consumption price \$1.725, stock feed/industrial \$1.435, flour mills (for home consumption flour) \$1.645, stock feed buyers (not acceptors of Wheat Board contract arrangements) \$1.500.

BARLEY

Production

South Australia is by far the most important barley producing State and in 1969-70 the acreage sown represented 37 per cent of the Australian total and yielded 41 per cent of the grain produced. Of the area sown in South Australia, 96 per cent was 2-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 is required, and this can best be obtained when the ripening period is somewhat prolonged by cool conditions, without high temperature or drying winds.

Although formerly a crop of comparatively minor importance, barley growing increased greatly after the 1939-45 War. 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. The highest production recorded was 42.2 million bushels in 1960-61.

Area and Production of Barley for Grain, Statistical Divisions, South Australia

Statistical Division	Area		Production	
	1969-70	1970-71	1969-70	1970-71
	'000 acres		'000 bushels	
Adelaide	13	13	396	390
Central	474	586	13,336	15,152
Kangaroo Island	6	7	138	176
Mount Lofty Ranges	53	65	1,319	1,795
Murray	372	402	5,581	4,080
South East	66	61	1,276	1,199
Eyre	318	465	6,476	7,461
Northern	79	110	1,912	2,452
Far North	2	5	19	32
Total	1,384	1,714	30,454	32,738

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 an acre and except for the severe drought of 1914-15 the lowest was 13.67 bushels an 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 over the period the average yield has increased, the record yield being 28.27 bushels per acre in 1958-59. The average yield in 1970-71 was 19.10 bushels.

Yorke Peninsula, reputed to be the best barley growing area in Australia, has been the major producing district in South Australia since the 1914-18 War. In the 1970-71 season this area contributed just over 35 per cent 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.

Varieties

The most widely grown barley variety before 1970-71 was Prior, which for the three seasons ended 1969-70 averaged about 60 per cent of the total area sown. 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.

Another 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 resulted in a significant switch to this variety from one per cent in 1961-62 to 30 per cent of total area sown in 1968-69.

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.

A new malting variety, Clipper, was released in South Australia to replace Prior and it was estimated that some 15,000 bags of Clipper seed were sown in 1969. Reported acreage sown to Clipper in the 1969-70 season was 53,000 acres and in the 1970-71 season 815,000 acres. The variety has greater straw strength, much less subject to wind damage, is adapted to conditions of high soil

fertility and in tests produced substantially higher yields than Prior. These features together with improved malting quality represent considerable advantages for the grower and the industry as a whole.

In 1970-71 Clipper became the most widely grown variety accounting for 45 per cent of total area sown to barley. The percentage sown to Prior and Noyep dropped to 27 and 20 per cent respectively.

Research

The barley research programme is conducted by the Department of Agriculture and the Waite Agricultural Research Institute for which the Australian Barley Board provides financial support.

Because of the inherent similarities, the barley industry has in many instances benefited from the technological advances achieved by the wheat industry, namely 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 super phosphate have greatly increased soil fertility. Excess nitrogen induces rank growth which is detrimental to grain quality.

Research is continuing at a number of sites in the main barley growing areas, to establish correct times and rates of seeding for the variety of Clipper and a new variety Ketch is being grown on selected holdings to provide seed for replacement of the variety Noyep.

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.

Australian Barley Board Receipts, South Australia^(a)

Season	2-Row			6-Row		Total
	Malting	Milling	Feed	Malting	Feed	
	'000 bushels					
1962-63	4,210	6,318	3,328	3	88	13,947
1963-64	5,621	8,036	6,343	12	348	20,360
1964-65	6,947	10,211	5,166	30	269	22,623
1965-66	1,151	2,923	9,115	8	100	13,297
1966-67	5,122	8,974	4,397	34	194	18,721
1967-68	126	864	6,099	—	33	7,122
1968-69	5,539	8,033	7,365	29	401	21,367
1969-70	3,529	6,472	13,736	22	228	23,988

(a) Includes weight of bags but some bulk handling since 1963-64.

In the first season of South Australian and Victorian joint marketing in 1942-43 the Board received 3,810,000 bushels. Since then, barley receivals have increased considerably and in the 1960-61 season the Board received a record total of 44,624,000 bushels. Receivals by the Board in 1969-70 were 31,429,000 bushels (27,702,000 bushels in bulk and 3,727,000 bushels in bags). Since 1966-67 receivals of bulk barley have been greater than receivals of bagged barley.

The Board has been able to dispose of each season's receivals with little difficulty. Major export markets are Europe, the Middle East, Japan and the United Kingdom.

Following recommendations submitted in a report by an investigating committee in October 1963 a bulk handling scheme for barley was introduced. In 1963-64, the first full year of its operation, bulk barley was received direct from growers at terminal ports in South Australia, and a total of 1,172,113 bushels was handled; 20,432,000 bushels were handled in 1969-70. In 1964-65 bulk barley was received for the first time at other than terminal silos.

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 2-row and Malting and Feed (No. 4 and No. 5) for 6-row.

The prices paid to growers in the 1969-70 season ranged from \$0.889 a bushel for 2-row bagged barley of Malting No. 1 quality to \$0.579 a bushel for 6-row bagged barley of No. 5 (feed) quality. Growers who delivered barley in bulk received 4 cents less a bushel.

The payments to the growers are made in a series of four advances; in 1969-70 the first was 62 cents a bushel for first quality bagged barley and 58 cents for bulk barley being made on delivery.

The price of malting barley is determined on the basis of an agreed formula and subsequently the prices of barley for distilling and pearling are calculated—the prices for feed purposes are determined monthly.

The home consumption prices determined by the Board for barley for season 1969-70 and preceding years are shown below.

Price per Bushel of Barley for Home Consumption

Season	Malting No. 1	Distilling and Pearling No. 3 Grade	Feed No. 4 Grade	Feed No. 5 Grade
Dollars				
Bagged Barley				
1963-64	1.35	1.28	1.10	1.05
1964-65	1.37	1.29	1.10	1.05
1965-66	1.44	1.36	1.18	1.13
1966-67	1.51	1.43	1.25	1.20
1967-68	1.54	1.46	1.33	1.27
1968-69	1.50	1.42	1.18	1.13
1969-70	1.50	1.42	0.93	0.88
Bulk Barley				
1965-66	1.34	1.26	1.10	1.05
1966-67	1.41	1.33	1.17	1.12
1967-68	1.45	1.37	1.25	1.19
1968-69	1.42	1.34	1.10	1.05
1969-70	1.42	1.34	0.85	0.80

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 Area	Production	
	Grain	Hay	Forage		Grain	Hay
	'000 acres				'000 bushels	'000 tons
1963-64	500	141	315	956	9,149	185
1964-65	444	110	397	951	8,977	157
1965-66	455	112	404	971	5,622	118
1966-67	509	135	314	958	10,276	183
1967-68	525	158	287	969	3,299	114
1968-69	516	150	187	853	11,895	238
1969-70	372	101	207	680	6,665	154
1970-71	482	128	217	827	8,408	177

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 re-growth 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 1970-71, 78 per cent of the total area of oats was sown in four varieties—Avon 284,000 acres, Irwin 129,000 acres, Kherson 117,000 acres and Swan 116,000 acres.

RYE

Rye is a minor crop, but it has been used to control sand drift and to help stabilise the light soils of the Murray Mallee. Because the sands are deficient in two main nutrients (nitrogen and phosphorus), a mixed superphosphate-ammonia fertiliser is sown with the rye seed early in the season. The rapid early growth of the rye while the ground is still warm and before the strong winds of winter cause sandblast is at present the most effective form of controlling drifting sand.

Rye provides early greenfeed and a few bushels of grain per acre is produced on some farms. 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 1970-71, 49,000 acres of rye for grain yielded 232,000 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 more than half of all hay produced. The quantity of lucerne hay produced increased from a few thousand tons twenty years ago to 134,000 tons in 1969-70 and 160,000 tons in 1970-71.

PRODUCTION

Hay: Area and Production, South Australia

Season	Oaten	Wheaten	Lucerne	Barley and Rye	Clover and Grass	Total
	AREA ('000 acres)					
1963-64	141	41	38	15	123	358
1964-65	110	40	43	11	110	314
1965-66	112	46	38	15	88	299
1966-67	135	48	67	19	213	482
1967-68	158	81	49	42	100	429
1968-69	150	53	78	38	296	615
1969-70	101	55	67	25	136	384
1970-71	128	47	81	34	196	485
	PRODUCTION ('000 tons)					
1963-64	185	57	65	18	163	488
1964-65	157	60	81	13	176	487
1965-66	118	54	66	14	116	368
1966-67	183	65	122	21	339	729
1967-68	114	68	97	30	110	418
1968-69	238	86	153	47	461	985
1969-70	154	86	134	31	204	608
1970-71	177	65	160	38	303	743

Between 50,000 and 100,000 tons of silage are produced in most years and in certain areas this is an important supplementary stock food, however, in 1970-71 production was 46,000 tons.

VEGETABLES

The market garden industry in South Australia is characterised by a large number of growers, most of whom cultivate a few acres only. Many of the gardens form part of a larger holding. Much of the production of the industry comes from properties within easy reach of the Adelaide market.

Of the total area of 21,500 acres devoted to market gardens, districts adjacent to Adelaide account for 13,000 acres producing all types of vegetables, including large quantities of celery and early tomatoes for export. An area of some 2,000 acres in Northern Division (mainly on the coastal plains near Port Pirie) is used for the production of peas and early tomatoes 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 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 5.5 tons an acre in 1947-48 to a record of 10.1 tons an acre in 1966-67. In 1970-71 the average yield was 10 tons an acre. This improvement is largely because of better quality seed, improved fertilisers and 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.

In 1970-71, 5,283 acres were sown to green peas in the South East Division for factory processing. Production of green peas from this acreage accounted for about 85 per cent of the total crop. The Port Pirie-Mambray Creek area, the hills to the south of Adelaide and Upper Murray irrigation areas are other important areas for pea production.

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 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 high yields have resulted from the introduction of new varieties.

The following table shows the area and production of the principal vegetables for human consumption in South Australia in 1969-70 and 1970-71.

Vegetables for Human Consumption, South Australia

Vegetable	Area		Unit of Quantity	Production	
	1969-70	1970-71		1969-70	1970-71
	Acres				
Beans	326	258	bushel	44,808	42,298
Cabbages	499	500	dozen	233,771	248,161
Carrots	608	606	ton	6,863	7,101
Cauliflowers	700	688	dozen	312,498	314,069
Celery	278	255	crate	213,288	203,724
Lettuce	572	547	case	320,005	279,786
Melons	315	345	ton	1,555	1,877
Onions	2,026	2,229	ton	22,793	24,054
Peas	5,292	7,156	bushel	583,296	911,947
Potatoes	8,021	7,160	ton	78,624	71,380
Pumpkins	751	944	ton	4,694	8,597
Tomatoes	1,181	1,281	half-case	1,884,128	1,918,788
Turnips	207	215	ton	965	1,114
Other.....	679	812	..	..	..
Total	21,455	22,995		..	..

.. not applicable

GRAPES

Approximately 43 per cent of Australia's vineyard area is located in South Australia where the bulk of the grapes grown are used for winemaking. In 1969-70 South Australia produced 43.8 million gallons of wine and 6,494 tons of dried vine fruit representing 69 per cent and 7 per cent respectively of total Australian production. The following table shows the area, production and utilisation of grapes for the seasons 1961-62 to 1970-71.

Area, Production and Utilisation 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		
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	58,857	234,297	28,022	100,875	264,054	62,440
1965-66	58,730	183,802	23,884	63,063	193,794	44,498
1966-67	57,080	225,416	29,324	75,452	248,288	22,597
1967-68	58,129	201,228	30,055	62,243	91,949	12,051
1968-69	60,574	217,536	36,186	45,226	31,555	3,290
1969-70	64,837	268,020	43,301	66,502	58,675	4,709
1970-71	68,346	221,070	37,233	62,999	22,282	3,984

(a) Excludes grape spirit added.

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 (e.g. Upper Murray irrigation areas). The following table gives particulars of area of vines and production of grapes in the main statistical divisions in 1970-71.

Area and Production of Vines: Statistical Divisions, South Australia
1970-71

Statistical Division	Area			Production of Fresh Grapes			
	Wine	Table	Drying	Wine	Table	Drying	Total
	Acres			Tons			
Adelaide	10,031	n.a.	205	21,339	n.a.	429	21,781
Mount Lofty Ranges	24,129	n.a.	262	43,981	n.a.	392	44,374
Murray	27,347	194	3,558	137,515	1,026	13,976	152,517
South East ...	2,404	—	—	2,209	—	—	2,209
Total (a) .	64,104	209	4,033	205,229	1,041	14,800	221,070

(a) Includes remainder of divisions.

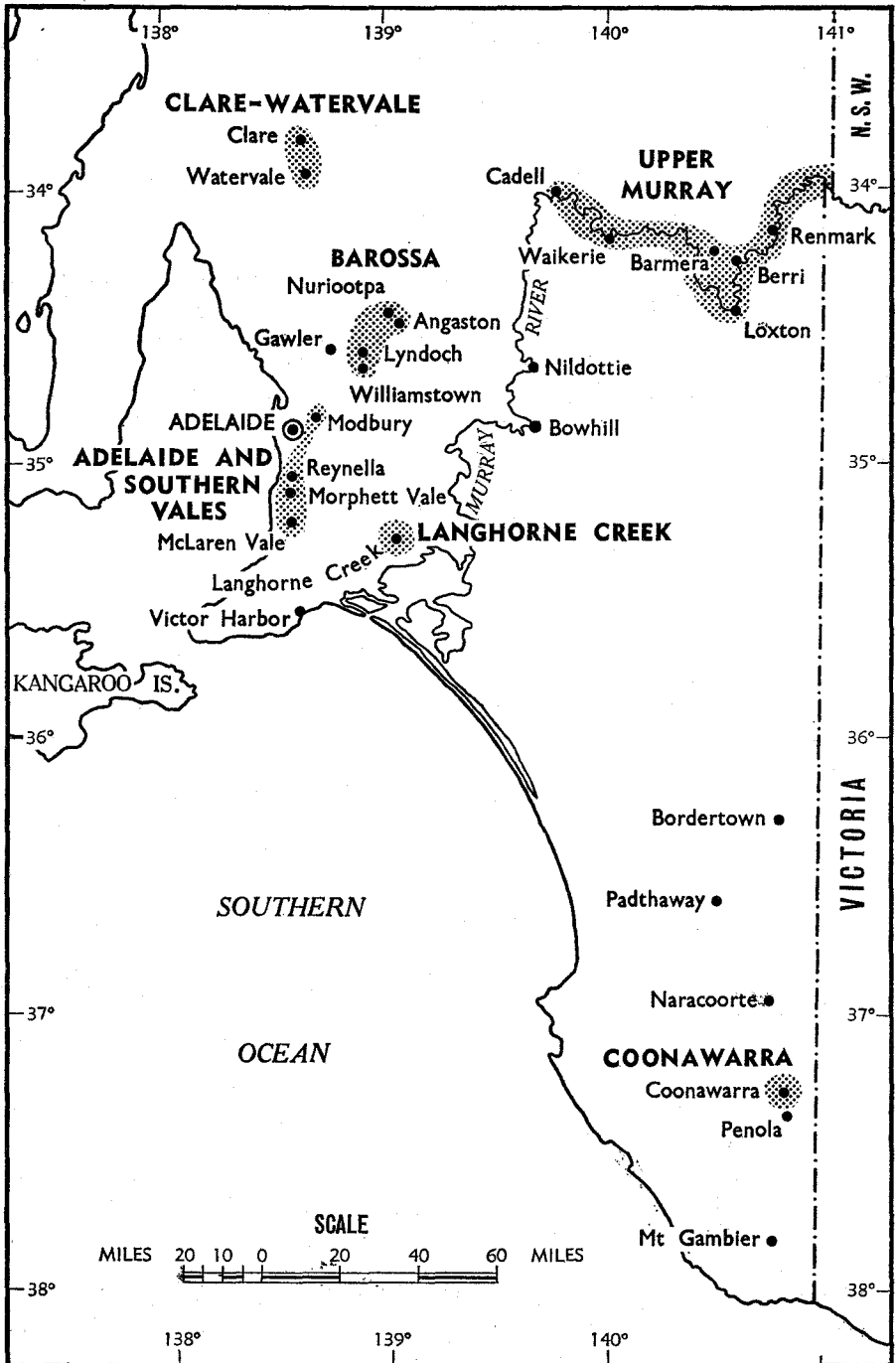
n.a. not available

Grape Growing Districts

The grape growing districts of South Australia are subject to substantial variety in geographical location, climatic variations and soil conditions and can be divided into six easily recognisable regions (see map on page 385) ranging from the Clare-Watervale district in the north to the southern limit of the grape growing area at Coonawarra in the south-east of the State and bounded by the warm irrigated areas of the Murray to the east.

Supplementary irrigation is to be found in some portions of the so-called non-irrigated grape growing districts especially Langhorne Creek and Coonawarra where approximately 50 to 60 per cent of all grapes are under irrigation. The other areas are mainly dependent on winter rainfall stored in the sub-soil by careful dry-farming methods to be used during the summer growing season of the vine—the non-irrigated districts are less uniform than the Upper Murray irrigation areas.

PORTION OF SOUTH AUSTRALIA GRAPE GROWING DISTRICTS



Area of Vineyards, South Australia^(a)

Particulars	1968-69		1969-70		1970-71	
	Bearing	Not Bearing	Bearing	Not Bearing	Bearing	Not Bearing
	Acres					
Vines:						
Wine grapes	49,405	6,993	48,694	11,002	51,365	12,739
Table grapes	127	14	188	24	191	18
Drying grapes	3,681	354	4,686	243	3,786	247

(a) Classified according to purpose for which grapes are used—not according to variety.

District average yields in the irrigated areas are 7 to 8 tons an acre although individual vineyard yields of 15, and even 20 tons an acre are not uncommon. In the non-irrigated districts the average is 1.5 to 3 tons an acre with individual vineyards producing 8 to 10 tons an acre in favourable years. About half of the State's wine-grapes are sold by private treaty to proprietary wine-makers at prices, according to variety, which are determined by the South Australian Prices Commissioner.

About one-third of the State's wine-grape crop is received by the co-operative wineries. Nearly all of this is grown by members who receive a down payment on each ton, followed by further payments over a period of up to five years according to realisation made on the product. Most of the wine, brandy and spirit made by co-operatives is sold in bulk to proprietary wineries.

Production of Grapes, South Australia^(a)

Particulars	1966-67	1967-68	1968-69	1969-70	1970-71
	Tons				
Grapes:					
For wine	163,780	170,581	202,937	240,393	205,229
For table	1,027	1,031	587	1,294	1,041
For drying	60,609	29,616	14,01	26,333	14,800

(a) Classified according to purpose for which grapes are used.

Grape Varieties

The most common grape varieties in South Australia include sultana and currant which can be used for dried fruit as well as wine or spirit production. Production of sultanas in 1970-71 from 8,132 acres of bearing sultanas was approximately 37,550 tons. The main wine-grape variety, grenache, produced 33,709 tons from 10,414 acres of bearing vines but since three-quarters of the grenache is grown in non-irrigated districts where yields are lower, the total crop was less than that of the sultana.

Another leading variety is Muscat Gordo Blanco, or more commonly Gordo in the River districts and often called Muscatel when sold as a table grape. Although known as a drying variety, more than 90 per cent of it is crushed for wine or spirit production.

Riesling and Cabernet Sauvignon (6,332 and 2,838 acres respectively in 1971), while not leading in acreage, are most important in white and red table wine production because of their superior quality.

Principal Varieties of Vines, South Australia

Variety	March 1968	March 1969	March 1970	March 1971
	Acres			
Sultana	9,029	8,727	8,583	8,262
Muscat Gordo Blanco	5,468	5,360	5,385	5,263
Currants	3,567	3,356	3,224	3,093
Grenache	10,469	11,383	12,170	12,770
Shiraz	5,918	6,677	8,320	9,787
Doradillo	4,606	4,660	4,724	4,680
Pedro Ximinez.....	6,534	6,511	6,567	6,639
Pedro False				
Semillon	3,908	4,389	5,046	6,332
Rhine Riesling				
Clare Riesling				
Mataro	2,733	2,986	3,295	3,538
Other.....	5,895	6,528	7,524	7,974
Total	58,125	60,574	64,837	68,332

Less than one per cent of the total crop (approximately 1,000 tons) is sold each year as table grapes as the majority of table grapes are grown in home gardens.

A special article on the wine industry in South Australia was included on pages 375-96 of the *South Australian Year Book* 1968.

ORCHARD FRUIT

A large variety of fruit crops is grown in South Australia. The main types are oranges, peaches and apricots (predominantly grown in the irrigation settlements of the Upper Murray) and apples (nearly all grown in the Adelaide Hills). The following table relating to 1970-71 production shows the concentration of fruitgrowing in the Adelaide, Mount Lofty Ranges and Murray Divisions.

Production of Principal Fruit Crops: Statistical Divisions, South Australia
1970-71

Fruit	Statistical Division				Total
	Adelaide	Mount Lofty Ranges	Murray	Other	
Citrus fruit:	'000 bushels				
Oranges;					
Navel	3.0	1.5	2,071.4	10.6	2,086.6
Other	3.5	1.1	3,272.5	13.3	3,290.4
Other citrus fruit	11.9	0.3	489.6	3.9	505.7
Non-citrus fruit:					
Apples	534.7	1,017.2	32.1	4.5	1,588.5
Apricots	19.3	58.8	1,188.4	7.4	1,273.9
Peaches	9.0	17.3	1,250.6	6.5	1,283.3
Pears	118.3	157.0	371.8	1.8	648.9
Plums and prunes	28.6	36.5	18.7	1.3	85.2

Citrus growing is concentrated in the irrigation settlements of the Upper Murray where approximately 80 per cent of the total crop is produced. The industry has shown great expansion in the last decade; production first exceeded 2,500,000 bushels in 1962-63 while in 1968-69 a record level of over 4,048,000 bushels was achieved. A new record production of 5,883,000 bushels was achieved in 1970-71. This increase was largely because of the extensive orange tree plantings in newly-developed irrigation schemes, including those of Sunlands and Golden Heights near Waikerie. Another factor has been a change from furrow to overhead sprinkler irrigation for citrus trees planted since 1950. This change, together with advances in irrigation timing techniques, has raised the potential yield of recent plantings. High salinity in irrigated water over the last few years has led to the introduction of under-tree sprinklers.

Over 20 per cent of the State's orange production is exported, this being about 60 per cent of total orange exports from Australia.

The following table of citrus trees of bearing age and production during the past five seasons shows the predominance of navel and valencia oranges. Other types of oranges, lemons and limes, mandarins, grapefruit, etc., together represent only 10 to 15 per cent of total citrus production.

Citrus Fruit: Trees and Production, South Australia

Season	Oranges			Lemons and Limes	Mandarins	Grapefruit and Other Citrus	Total Citrus
	Navel	Valencia	Other				
TREES OF BEARING AGE ('000)							
1966-67	397	451	10	23	27	30	937
1967-68	419	499	8	26	34	32	1,018
1968-69	469	606	7	31	40	34	1,187
1969-70	479	628	6	35	48	37	1,234
1970-71	544	750	6	50	59	41	1,450
PRODUCTION ('000 bushels)							
1966-67	1,298	1,706	31	55	70	148	3,307
1967-68	945	1,272	26	51	79	215	2,588
1968-69	1,464	2,216	23	75	92	178	4,048
1969-70	1,315	1,639	21	77	83	214	3,347
1970-71	2,087	3,268	23	146	126	233	5,883

Apple growing is the principal non-citrus fruit industry. Although the area of apple orchards has decreased by some 50 per cent over the last forty years, production has gradually increased, partly because of the removal of lower yielding orchards and partly because of the general adoption of supplementary irrigation and lighter pruning practices. The yield per bearing acre, which averaged 197 bushels for the ten seasons ended 1961-62, rose to a record 342 bushels per bearing acre in 1968-69. A record production of 1,625,000 bushels was achieved in 1964-65. About 20 to 25 per cent 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 1970-71 harvest was a record 649,000 bushels from 1,572 acres. Pear acreage reached a peak in 1922, then declined gradually until 1952. An expansion of the canned fruit industry caused a subsequent increase in plantings along the River Murray.

The stone fruits industry became important following development of the irrigation schemes. Production of peaches has shown the greatest increase: the 1951-52 yield of 157,000 bushels from 2,064 acres was typical for the crop until

that time, but by 1966-67 the yield was a record 1,427,000 bushels from 4,754 acres. In the same period production of apricots rose from 507,000 to 1,307,000 bushels. South Australia is the major apricot-producing State, with the greater part 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	Apricots	Cherries	Peaches	Pears	Plums and Prunes
TREES OF BEARING AGE ('000)						
1966-67	529	382	50	397	166	78
1967-68	526	380	50	390	167	75
1968-69	520	369	49	374	162	69
1969-70	528	350	47	363	161	66
1970-71	538	361	47	384	166	66
PRODUCTION ('000 bushels)						
1966-67	1,544	1,307	41	1,427	530	105
1967-68	1,378	683	53	1,243	610	80
1968-69	1,561	1,149	39	1,154	405	58
1969-70	1,561	936	55	1,092	644	69
1970-71	1,588	1,274	50	1,283	649	85

South Australia accounts for almost the entire Australian production of dried apricots, peaches, pears and nectarines—mostly in the Upper Murray irrigation areas and the Barossa Valley. A small proportion of the Australian production of dried prunes is produced in the Barossa Valley and in the Noarlunga district.

Production in 1970-71 included 56,235 cwt of dried apricots, 7,539 cwt of dried peaches, 5,811 cwt of plums and prunes and 5,117 cwt of dried pears.

The Dried Fruits Board, constituted under the Dried Fruits Act, 1934-1966, regulates marketing in South Australia by determining a quota for home sale of dried fruits in each year. In addition by the use of advertising the Board encourages the consumption of dried fruits.

OTHER CROPS

Other crops cultivated in South Australia include field peas, nursery products, cut flowers, pasture seeds, vegetable seeds, chicory and linseed.

In 1970-71, 33,000 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 of the State. During the 1970-71 season approximately 45 per cent of the 5,477,128 lb of lucerne seed produced in the State was grown in the South East Division.

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.

PLANTING AND HARVESTING OF CROPS

The main crops of South Australia are normally planted and harvested during the periods listed below.

Usual Months of Planting and Harvesting, South Australia

Crop	Planting	Harvesting
Cereals:		
Wheat	April-June	November-January
Barley	May-July	November-January
Oats	April-June	November-January
Fruit:		
Grapes .....	..	February-May
Citrus .....	..	May-February
Apples .....	..	January-April
Apricots .....	..	December-January
Peaches .....	..	December-March
Pears .....	..	January-April
Vegetables:		
Potatoes	July-January	November-June
Tomatoes;		
Field	September-February	January-June
Glasshouse	March-June	July-January

.. not applicable

VALUE AND PRICES OF CROPS

The estimated gross value of agricultural production for South Australia in the 1970-71 season was \$166,737,000. Gross value is defined as the value placed on recorded production at wholesale prices realised 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 1966-67 to 1970-71 are shown.

Gross Value of Principal Crops, South Australia

Crop	1966-67	1967-68	1968-69	1969-70	1970-71 <i>p</i>
	\$'000				
Cereals:					
Wheat	79,612	42,183	112,551	84,814	41,854
Barley	26,912	12,818	25,657	23,724	35,337
Oats	5,914	3,197	5,686	3,303	5,047
Rye	307	270	370	165	357
Grass seeds	2,566	1,853	2,422	2,280	2,055
Hay	12,089	10,384	14,113	7,367	8,613
Green fodder	2,540	2,385	1,729	1,463	1,485
Field peas	695	177	749	909	826

Gross Value of Principal Crops, South Australia (continued)

Crop	1966-67	1967-68	1968-69	1969-70	1970-71 <i>p</i>
Orchard and berry fruit:	\$'000				
Citrus	7,655	6,333	8,104	8,395	12,635
Apples	3,811	3,746	3,655	4,372	4,343
Apricots	3,439	2,117	4,201	3,850	5,160
Peaches	2,576	2,419	2,556	2,914	2,939
Other	3,371	3,658	4,033	4,961	4,744
Vine fruit:					
Wine grapes	10,019	10,823	13,514	15,904	14,122
Table grapes	199	221	136	342	289
Dried currants, raisins, etc.	5,710	3,106	1,617	2,592	1,908
Vegetables:					
Potatoes	3,138	5,176	4,045	2,610	6,059
Green peas	772	879	546	924	1,138
Other	11,069	13,581	13,333	13,607	15,438
Other crops	1,697	1,963	2,080	2,270	2,389
Total	184,090	127,288	221,097	186,766	166,737

p preliminary

Market prices of principal crops grown in South Australia for years 1966-67 to 1970-71 are set out in the following table. Wheat prices, which were as low as 23c per bushel in 1930-31, have shown little fluctuation in recent years, and have not been below \$1.30 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 \$1.68 and as low as 83c, while in the same period oats prices have been as high as \$1.17 and as low as 42c per bushel.

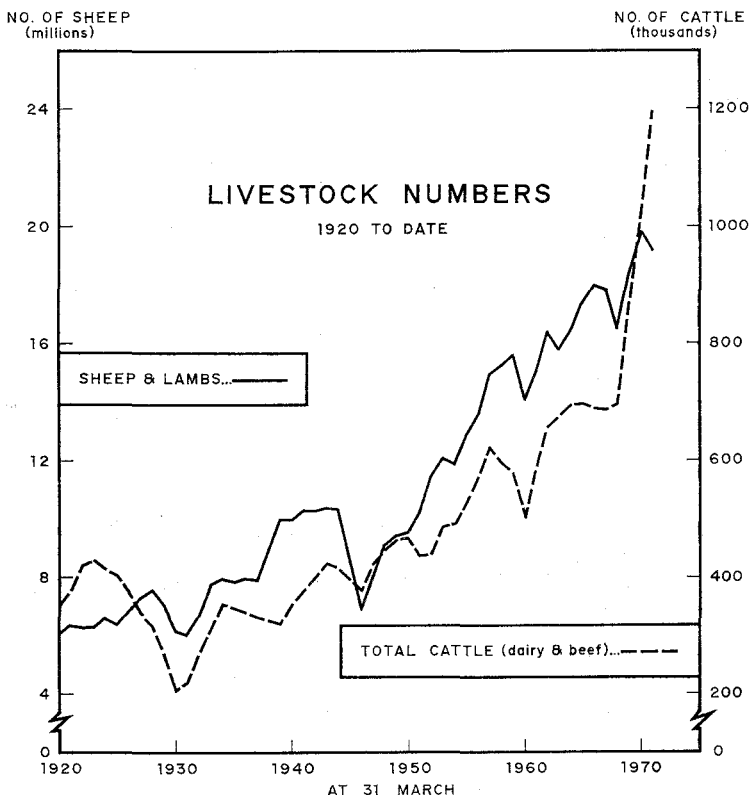
Prices of Agricultural Products, South Australia

Crop	Unit	1966-67	1967-68	1968-69	1969-70	1970-71 <i>p</i>
Cereals:		Dollars				
Wheat (<i>a</i>):						
Bulk	bushel	1.488	1.602	1.361	1.451	1.481
Bagged	bushel	1.579	1.670			
Barley (<i>a</i>)	bushel	1.192	1.190	0.932	0.835	1.129
Oats	bushel	0.673	1.113	0.528	0.599	0.690
Rye	bushel	1.327	1.454	1.049	1.262	1.609
Fruit:						
Apples	bushel	3.38	3.18	3.29	3.35	3.43
Apricots	bushel	4.84	5.76	5.28	6.17	6.68
Peaches	bushel	4.89	5.28	6.74	8.58	7.62
Pears	bushel	3.32	3.65	4.47	4.61	3.98
Oranges:						
Navel (<i>a</i>)	bushel	2.55	2.76	2.20	2.45	2.12
Other (<i>a</i>)	bushel	2.14	2.32	1.85	2.46	2.05
Grapes:						
Table	ton	193.92	214.08	231.36	264.00	277.44
Wine (<i>b</i>)	ton	60.61	63.45	66.59	66.16	68.81
Vegetables:						
Potatoes (<i>a</i>)	ton	52.27	81.94	59.77	33.45	85.15
Onions	ton	105.20	113.50	100.97	98.78	89.00
Tomatoes:						
Glasshouse	½ case	3.57	3.86	3.98	3.49	3.49
Other	½ case	1.82	3.03	2.31	2.60	3.34

(*a*) Average price realised. (*b*) Weighted average price at winery. *n.a.* not available *p* preliminar

PASTORAL AND DAIRYING

Pastoral activities, with sheep grazing predominant, are widespread in South Australia 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.



Livestock numbers have increased markedly in recent years (although, because of the effect of drought, sheep numbers fell by approximately 1,500,000 in 1967-68). The bulk of the 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 Dog Fence

This fence is an unbroken barrier of wire netting 5 to 6 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 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

There has been a significant increase in the area of sown pastures over the past ten years. Area under pasture in October for the years 1966 to 1970 is shown for statistical divisions in the following table.

Area Under Pasture: Statistical Divisions, South Australia^(a)

Statistical Division	October				
	1966	1967	1968	1969	1970
	'000 acres				
Adelaide			57	62	60
Central			364	437	469
Kangaroo Island			348	349	349
Mount Lofty Ranges			584	636	642
Murray	<i>n.a.</i>	<i>n.a.</i>	934	1,044	1,083
South East			2,866	3,033	3,131
Eyre			1,079	1,151	1,152
Northern			213	236	273
Far North			22	27	31
Total	6,738	6,713	6,468	6,974	7,190

(a) Lucerne, clovers (all kinds), rye grasses (all kinds), cocksfoot, paspalum, phalaris, primrose, sudan and veldt.

n.a. not available

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. The Murray Mallee and Eyre Peninsula have been transformed from unstable farming districts to highly productive areas through the sowing of more and improved pastures.

In earlier years most pasture plants available flourished only in the higher rainfall zones of the State.

At that time Mount Barker subterranean clover was the predominant pasture. New varieties have been introduced, including Clare, Geraldton, Dwalganup and Yarloop subterranean 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. Five medics are grown: Hannaford, Jemalong Barrel, Harbinger Strand, Gama Paragosa 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 naturalised annual grasses which occur over the whole of the State contribute substantially to total pasture production.

Details of fertilisers used on pasture are given on pages 367-9.

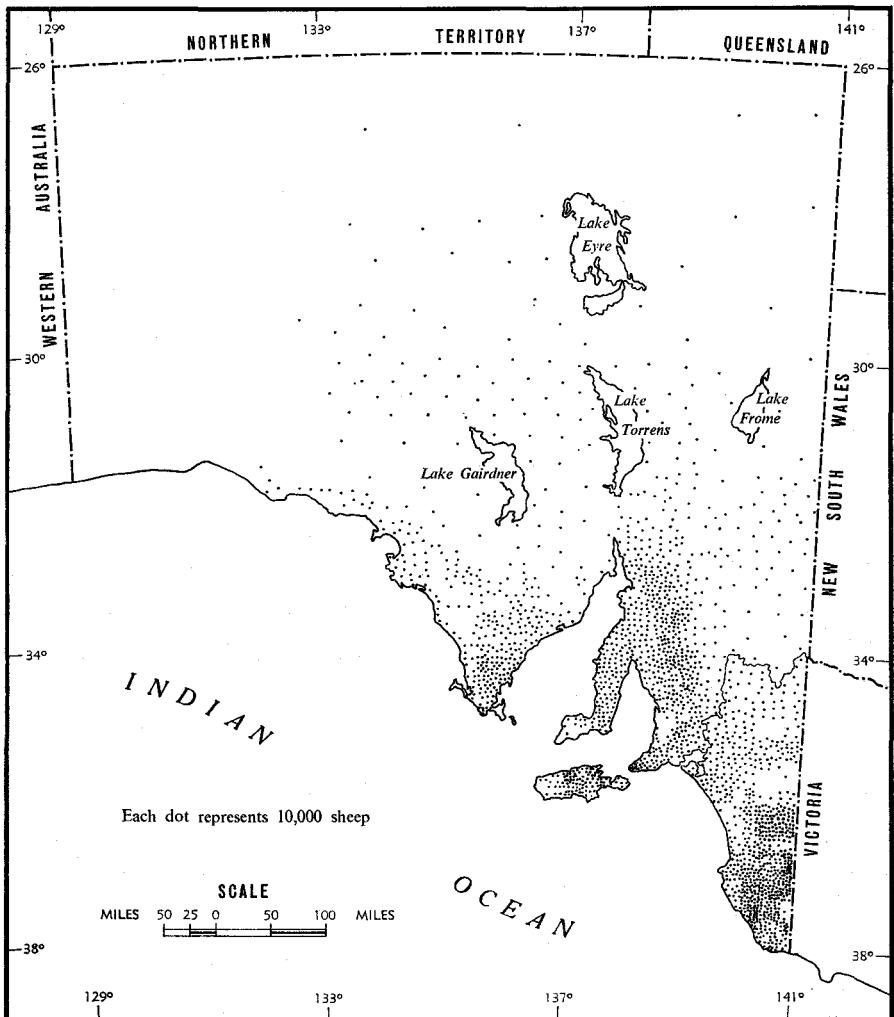
PRODUCTION

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. Sheep numbers were as high as 7.6 million by 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).

SOUTH AUSTRALIA
SHEEP DISTRIBUTION
At 31 March 1970.



After 1932 sheep 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 31 March 1970 a record number of 19,747,000 sheep were being maintained in South Australia, the previous highest number being 18,392,000 at 31 March 1969. The number of sheep in South Australia at 31 March 1971 was 19,166,000.

By far the greatest concentration of sheep is in the South East Division which carried 5.7 million sheep at 31 March 1971. In the Upper South East sub-division large scale land development schemes have, in the last ten to fifteen years, doubled the sheep carrying capacity in many areas by the application of trace elements to deficient soils. A similar scheme was undertaken in the Kangaroo Island Division where the sheep population rose from 258,000 in 1956 to 896,000 in 1971.

The next largest concentration of sheep at 31 March 1971 was in the Eyre Division (2,723,000) and sheep numbers of approximately 2 million were reported in each of the Central, Murray and Northern Divisions.

Sheep Numbers: Statistical Divisions, South Australia
At 31 March

Statistical Division	1967	1968	1969	1970	1971
			'000		
Adelaide			179	186	164
Central			1,753	1,975	1,916
Kangaroo Island			836	875	896
Mount Lofty Ranges			1,680	1,756	1,740
Murray	<i>n.a.</i>	<i>n.a.</i>	2,057	2,351	2,223
South East			5,725	5,775	5,719
Eyre			2,484	2,758	2,723
Northern			1,804	2,128	2,003
Far North			1,875	1,942	1,782
Total	17,864	16,405	18,392	19,747	19,166

n.a. not available

Between 1960 and 1966 there was a substantial increase in the number of sheep but a decrease in the number of flocks—the number of smaller flocks (less than 500 sheep) falling quite considerably although this was partly offset by an increase in flocks of 1,000 to 5,000 sheep. The number of sheep continued to increase between 1966 and 1969, and the number of flocks fell at about the same rate as between 1960 and 1966.

The distribution in statistical divisions of sheep flocks classified by size of flock at 31 March 1969 is given in the following table.

**Sheep Flocks Classified by Size of Flock: Statistical Divisions, South Australia
At 31 March 1969**

Number of Sheep in Flock	Statistical Division							Total (a)
	Adelaide	Central	Mount Lofty Ranges	Murray	South East	Eyre	Northern	
	Number of Flocks							
Under 50	225	92	487	167	211	31	72	1,288
50- 99	75	60	185	89	75	17	41	548
100- 199	83	146	308	165	101	29	100	943
200- 499	122	761	639	645	306	154	480	3,148
500- 999	63	840	554	829	516	695	578	4,140
1,000- 1,999	29	434	362	539	1,010	826	377	3,704
2,000- 4,999	10	91	138	122	804	264	139	1,847
5,000- 9,999	1	7	16	12	150	8	28	298
10,000-19,999	—	—	2	4	28	—	4	74
20,000 or more	—	—	—	—	2	—	2	23
Total flocks ...	608	2,431	2,691	2,572	3,203	2,024	1,821	16,013

(a) Includes Kangaroo Island and Far North Divisions.

At present about 21 per cent of the total sheep population consists of lambs and hoggets under one year. The proportion of lambs to sheep has remained fairly constant for a number of years although it is subject to some fluctuations. For example, lamb numbers which had fallen after some relatively poor lambing seasons were built up considerably during the 1961-62 season, the number increasing from 2,824,000 at 31 March 1961 to 3,798,000 at 31 March 1962.

**Age and Sex of Sheep, South Australia
At 31 March**

Year	Rams	Breeding Ewes	Other Ewes	Wethers	Lambs and Hoggets (under one year)	Total Sheep
	'000					
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
1966....	218	8,165	831	4,694	4,085	17,993
1967....	220	8,331	804	4,729	3,780	17,864
1968....	215	7,751	788	4,118	3,534	16,405
1969....	228	8,874	706	4,646	3,938	18,392
1970....	234	9,183	857	4,789	4,684	19,747
1971....	240	9,223	1,021	4,657	4,025	19,166

Breeds of Sheep

The predominant breed in South Australia is the Merino which accounts for more than 80 per cent 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 developed a large-framed type of Merino, yielding an exceptionally high clip of medium to broad quality wool.

Of the remaining recognised 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 useful types of comeback and crossbred wools, are also yielded. British shortwools (Dorset Horn, Ryeland, Suffolk, Southdown and Shropshire) are used principally for production of export lambs.

Breeds of Sheep, South Australia
At 31 March

Breed	1967	1968	1969	1970	1971
	'000				
Merino	14,856.9	13,418.1	15,275.1	16,749.3	16,304.1
Corriedale	1,158.6	1,113.0	1,085.3	973.1	940.6
Dorset Horn	46.5	58.9	62.0	67.4	77.9
Border Leicester	26.6	37.5	32.3	29.6	27.7
Polwarth	104.4	113.9	114.1	139.6	147.6
Romney Marsh	23.9	25.7	26.6	21.1	17.6
Ryeland	4.4	5.7	7.1	6.7	5.7
Southdown	5.4	7.8	5.3	4.9	4.7
Suffolk	16.7	17.0	16.9	14.9	18.4
Other	3.4	3.1	4.3	3.8	4.3
Merino-Comeback ...	220.1	213.6	198.8	168.4	214.7
Crossbred	1,396.7	1,391.0	1,564.3	1,568.3	1,402.6
Total	17,863.6	16,405.3	18,392.1	19,747.1	19,165.8

Lambing

In 1969 a record 8,598,000 ewes were mated and the number of lambs marked totalled 7,193,000. In 1970, 8,550,000 ewes were mated and the number of lambs marked was 6,757,000. Early reports from farmers indicated that they intended to mate 9.1 million ewes in 1971—approximately 6.1 million to Merino rams, 1.1 million to other longwool rams and 1.8 million to shortwool rams.

Before 1969 the lambing percentage (*i.e.* of lambs marked to ewes mated) had never quite reached 80 per cent in South Australia, although it had been regularly over 70 per cent for a number of years. This represented a considerable improvement over the period before the 1939-45 War when the percentage quite often fell below 60 per cent and occasionally below 50 per cent in drought years. Details of lambs marked and the lambing percentage in each statistical division in 1969 and 1970 are given in the next table.

Lambing, Statistical Divisions, South Australia

Statistical Division	Lambs Marked		Lambing Percentage (a)	
	1969	1970	1969	1970
			'000	
Adelaide	82	75	88.73	86.61
Central	753	753	82.50	80.89
Kangaroo Island	253	249	74.48	72.90
Mount Lofty Ranges	727	699	88.47	85.18
Murray	961	922	83.91	79.15
South East	2,184	2,117	86.89	85.89
Eyre	821	820	78.82	75.36
Northern	772	706	83.51	77.51
Far North	640	416	79.33	56.14
Total	7,193	6,757	83.66	79.04

(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 East Division occurs somewhat later, with some 75 per cent of the wool-clip being obtained in the period October to November. In the northern pastoral areas (Far North Division) there are two main seasons, March-April and July-August.

The next table gives details of sheep and lambs shorn, wool-clip and average fleeceweight in South Australia for the years 1966-67 to 1970-71.

Sheep and Lambs Shorn: Wool-clip and Average Fleeceweight, South Australia

Classification	1966-67	1967-68	1968-69	1969-70	1970-71
	NUMBER SHORN ('000)				
Sheep	16,073	15,705	15,087	16,924	17,556
Lambs	3,962	3,896	3,865	4,990	4,409
Total	20,035	19,601	18,952	21,914	21,965
	WOOL-CLIP ('000 lb)				
Sheep	194,626	182,756	192,220	222,624	209,513
Lambs	15,467	13,165	15,175	20,487	16,963
Crutchings	10,279	9,662	10,112	11,421	10,829
Total	220,372	205,583	217,507	254,531	237,305
	AVERAGE FLEECEWEIGHT (a) (lb)				
Sheep	12.75	12.25	13.41	13.83	12.55
Sheep and lambs	11.00	10.49	11.48	11.62	10.80

(a) Includes crutchings.

The total wool-clip, including crutchings, exceeded 200 million lb for the first time in 1964-65. More than 90 per cent of the total wool is obtained from adult sheep.

The average fleeceweight in South Australia is well over 12 lb per head for adult sheep, with a record 13.83 lb per head being achieved in 1969-70. This is significantly higher than the yield obtained in other States, and is primarily because of the larger size of the South Australian Merino, its broader wool quality and longer thicker-stapled fleece.

A breakdown of the State figures for 1970-71 by statistical divisions is given in the next table. This shows the high average fleeceweight obtained in the northern pastoral areas.

The relatively light average fleece obtained in the South East Division is explained partly by the lower proportion of Merino sheep in the area (at 31 March 1971 only 72 per cent of total sheep in the South East Division were Merinos, compared with a total State figure of over 80 per cent), 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
1970-71

Statistical Division	Number Shorn			Wool-clip			Average Fleeceweight (a)	
	Sheep	Lambs	Total	Sheep	Lambs	Total (a)	Sheep	Sheep and Lambs
	'000			'000 lb			lb	
Adelaide	353	20	373	3,142	76	3,304	9.14	8.85
Central	1,684	335	2,019	20,622	1,263	23,042	12.93	11.42
Kangaroo Island ..	795	200	996	8,643	737	9,799	11.39	9.84
Mount Lofty Ranges	1,604	394	1,998	19,418	1,474	21,902	12.74	10.96
Murray	2,012	548	2,560	24,991	2,126	28,534	13.13	11.14
South East	5,153	1,515	6,668	61,162	6,004	70,207	12.46	10.53
Eyre	2,520	546	3,065	29,664	1,721	32,944	12.39	10.75
Northern	1,794	525	2,319	21,973	2,028	25,154	12.89	10.85
Far North	1,642	325	1,966	19,898	1,533	22,418	12.72	11.40
Total	17,556	4,409	21,965	209,513	16,963	237,305	12.55	10.80

(a) Includes crutchings.

WOOL INDUSTRY

Organisation of the Australian Wool Industry

In 1961 the Commonwealth Government appointed an independent committee to inquire into the marketing and promotion of Australian wool and related matters. The Committee presented its report to the Government in 1962 and the most important recommendation was that wool promotion, research and testing should be brought under the control of a single body, which should also act as an advisory authority on wool marketing.

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 was inaugurated on 1 May

1963, being made up of eleven members, namely 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. Levies had been imposed on shorn wool produced in Australia since 1936 for research and promotion purposes.

From 1 July 1964 a new levy, which included the amount to be allocated to research, was fixed at a maximum rate of 2 per cent of the gross value of shorn wool sold. For 1964-65 the rate for the combined levy was 1.875 per cent, from 1965-66 to 1968-69 it was 2 per cent and from 1 August 1970 this rate was reduced to 1 per cent. Following an amendment to the Wool Industry Act in 1967, the Government contributed towards wool research and promotion, on a dollar for dollar basis matching the woolgrowers' contribution by levy, to a maximum of \$14 million in any one year during the three financial years 1967-68 to 1969-70.

The *Wool Industry Act* 1962-1971 provides Government support not exceeding \$81 million during the financial years 1970-71 to 1972-73.

The Australian Wool Board is required to inquire into, and from time to time report to the Australian Wool Industry Conference upon methods of marketing and related matters; however, the Board has no executive powers over marketing. In July 1964 the Board made recommendations to the Conference, for the introduction of a Reserve Price Plan for wool, which were put to woolgrowers in a referendum in December 1965. However the plan was rejected.

In October 1967 the Board presented another report on wool marketing to the Australian Wool Industry Conference. The report included proposals for the establishment of an authority to enforce standards of clip preparation, to administer the elimination of one, two and three bale lots, to conduct a price averaging plan for these wools and others voluntarily submitted and to conduct, in conjunction with wool selling brokers, a system of supply management involving chiefly wools in the price averaging plan.

A recommendation that these proposals, with some amendments, be implemented by a non-statutory Australian Wool Marketing Corporation was accepted by the Australian Wool Industry Conference in November 1968. The proposals were then submitted to the Commonwealth Government with a request for financial assistance. The Government's offer was accepted by Conference in November 1969 and arrangements were commenced to bring the Wool Marketing Corporation into operation. The Price Averaging Plan Wool Marketing Scheme administered by the Corporation came into operation on 1 July 1970.

The Corporation continued to function as an operational unit until 6 November 1970 when the Corporation's powers and functions were taken over by the Australian Wool Commission, a statutory authority set up by the Government following proposals from the Australian Wool Industry Conference and the subsequent report of a special Advisory Committee of the Australian Wool Board. The Commission began bidding and operating its flexible reserve price at wool auctions on 16 November 1970.

Production of Wool

With the average cut a 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 twenty 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 carcasses of dead sheep.

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 was produced, achieved by an increase in the numbers shorn and an exceptionally high average fleece of 10.87lb. The rising trend has since continued with current production now approximately 260 million lb.

Before 1946-47 the annual wool value had not exceeded \$14 million and was relatively stable. The marked changes in the value of wool produced since then have been mostly because of 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. Gross value of production in that year exceeded \$132 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 \$114 million. In 1963-64 increased wool production and somewhat higher prices than in the past few years resulted in gross value of production of \$113 million. Since then wool prices have fallen but wool production has continued to exceed 200 million lb each year.

Wool Production and Value, South Australia

Season	Production				Value of Wool Production
	Shorn Wool	Fell-mongered and Dead Wool	Wool Exported on Skins	Total	
	'000 lb	'000 lb	'000 lb	'000 lb	\$'000
1961-62	192,205	1,670	13,109	206,984	85,801
1962-63	189,854	952	16,538	207,344	92,514
1963-64	194,787	15,713		210,500	113,409
1964-65	200,059	15,677		215,736	94,328
1965-66	212,745	16,888		229,633	103,635
1966-67	220,372	17,122		237,493	104,588
1967-68	205,583	17,084		222,667	79,925
1968-69	222,566	15,554		238,120	95,054
1969-70	254,996	20,009		275,004	91,224
1970-71	234,250	21,817		256,067	65,086

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 longwool 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 0.1 per cent of wool sold in the 1969-70 season was 64/70s and finer; the corresponding New South Wales figure was 9.9 per cent.

Quality Analysis of Greasy Wool Sold at Auction in South Australia

Predominating Quality of Bale	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69	1969-70
	Per cent						
64/70s and finer	0.2	0.3	0.1	0.1	0.1	0.1	0.1
64s	1.0	1.1	0.7	0.5	0.6	0.3	0.4
64/60s	5.5	5.3	4.9	3.5	4.1	2.1	2.0
60/64s	15.8	15.1	16.2	13.5	16.7	10.7	10.5
60s	42.1	41.4	43.3	41.0	41.7	37.4	37.3
58s	24.6	25.2	23.9	28.8	24.9	33.0	33.5
56s	6.9	7.6	7.4	8.8	8.1	11.5	11.6
50s	1.6	2.0	1.9	2.1	2.1	2.7	2.7
Below 50s	0.3	0.4	0.3	0.4	0.4	0.5	0.5
Oddments	2.0	1.6	1.3	1.3	1.3	1.7	1.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

The quality distribution of wool has remained relatively constant with over 80 per cent classified between 58s and 60/64s quality.

The incidence of vegetable matter reduces the yield of all wool types. If the extent of vegetable fault is greater than 14 per cent of the wool's greasy weight the wool has to be treated by the carbonising process. In most seasons just over 75 per cent of South Australian wool is free of, or contains only light burr and seed; almost 15 per cent contains medium or heavy burr and seed and some 10 per cent is carbonising 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	Carbonising Wool	Combing Oddments	Total
	Percentage of Total Number of Bales						
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
1964-65 ..	27.8	45.1	12.5	3.2	9.8	1.6	100.0
1965-66 ..	26.8	43.3	14.2	3.8	10.6	1.3	100.0
1966-67 ..	31.5	44.8	11.0	2.4	9.0	1.3	100.0
1967-68 ..	28.9	45.9	12.0	2.8	9.1	1.3	100.0
1968-69 ..	35.8	46.2	8.3	1.3	6.8	1.6	100.0
1969-70 ..	28.6	45.3	11.8	2.6	10.3	1.4	100.0

Wool Marketing

Approximately 9 per cent of wool grown in South Australia is sold outside the auction system. Of the South Australian wool passing through the auction system approximately 85 per cent is sold at the Adelaide Sales with the remainder, predominantly 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 eight 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 less than half their original size and banded, to economise on shipping space.

Adelaide is the sole wool selling centre in South Australia, handling over half a 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 shown in the following table.

PRODUCTION

Adelaide Wool Sales

Season	Wool Sold (Scoured and Greasy)		Amount Realised	Average Price Per Lb (Greasy)	In Store at End of Season
	Bales	Weight			
	Number	'000 lb	\$'000	Cents	Bales
1950-51 ..	383,630	117,032	125,956	107.63	6,304
1963-64 ..	569,845	182,560	98,983	54.22	41,033
1964-65 ..	570,976	179,066	79,045	44.14	52,853
1965-66 ..	591,641	187,129	87,402	46.71	40,197
1966-67 ..	571,337	181,819	82,220	45.22	56,076
1967-68 ..	573,490	182,192	68,486	37.59	39,517
1968-69 ..	575,532	186,138	77,478	41.62	73,998
1969-70 ..	742,575	237,504	80,823	34.03	27,042
1970-71 ..	613,305	195,950	53,106	27.10	24,670

Wool Prices

Prices paid for wool sold in South Australia tend to be on average less than prices realised 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. In 1970-71 the average price for wool sold at auctions in Australia was 29.34 cents per lb greasy, compared with 27.10 cents per lb in South Australia.

Details of average prices of greasy Merino and Crossbred wool of various grades over the last few seasons are given below.

Average Wool Prices, Adelaide Sales

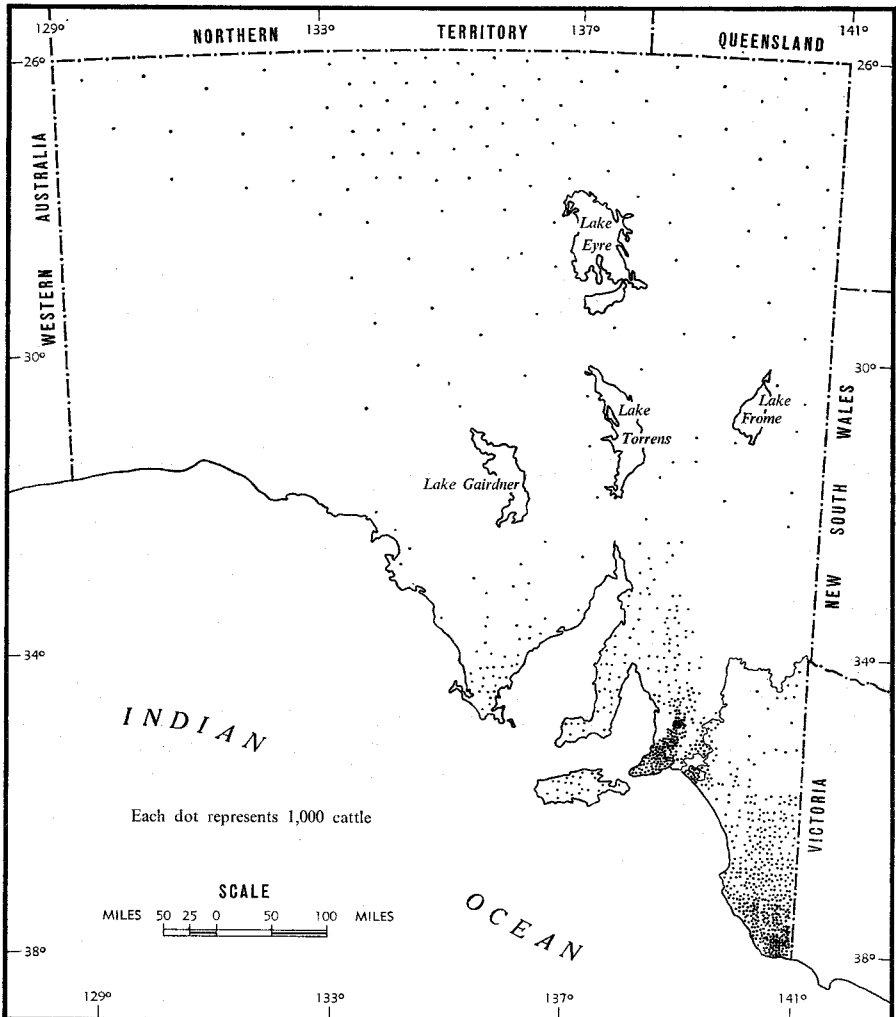
Description	1964-65	1965-66	1966-67	1967-68	1968-69	1969-70	1970-71
	Cents per lb						
Greasy Merino:							
Superior	65	76	71	72	72	59	46
Good	57	67	65	59	59	53	42
Average	51	58	56	50	50	44	34
Wasty and inferior ...	41	47	46	39	41	34	29
Super lambs	67	62	57	56	58	51	37
Good lambs	45	47	42	42	45	37	28
Average lambs	31	34	29	25	30	24	14
Inferior lambs	24	26	23	19	23	18	8
Greasy Crossbred:							
Super Comebacks ...	59	68	64	60	57	53	42
Fine Crossbred	57	67	60	55	53	48	40
Medium Crossbred ..	52	63	53	43	43	37	36

Average prices realised for greasy wool at Adelaide sales were below 6 cents per lb in the depression years of the early 1930s and then fluctuated between about 8 and 12 cents. Between 1945-46 and 1949-50 the price rose sharply to 48 cents and more than doubled to nearly 108 cents 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 27 cents and the highest 54 cents.

CATTLE

In comparison with other States, cattle grazing is not a major industry in South Australia. Of the cattle in Australia at 31 March 1971 only about 5 per cent of those used mainly for meat production and just over 5 per cent of those for milk production were in South Australia. At 31 March 1971 the total number of cattle in South Australia was 1,196,000.

SOUTH AUSTRALIA
CATTLE DISTRIBUTION
At 31 March 1970.



**Cattle Numbers: Statistical Divisions, South Australia
31 March 1971**

Classification	Statistical Division						Total (a)	
	Central	Mount Lofty Ranges	Murray	South East	Eyre	Northern		Far North
Associated with milk production:	'000							
Bulls (b)	0.5	1.9	0.8	1.3	0.1	0.3	—	5.0
Cows	5.8	63.7	25.4	30.4	1.2	3.5	—	138.3
Heifers:								
Springing	0.8	8.0	2.2	7.0	0.2	0.4	—	19.6
Other	1.1	13.9	4.6	4.5	0.3	0.6	—	26.8
Calves under one year	2.0	16.1	6.0	8.8	0.6	1.2	—	36.6
House cows	0.7	0.8	0.9	1.3	1.2	0.7	0.1	6.2
Total	10.8	104.4	39.8	53.3	3.6	6.7	0.2	232.6
Associated with meat production:								
Bulls (b)	1.3	2.4	1.3	9.6	1.4	1.0	2.2	20.1
Cows and heifers Calves under one year	25.7	51.9	29.7	271.5	36.7	20.3	65.2	525.2
Other cattle	15.7	32.3	21.4	152.2	22.4	11.7	27.2	296.9
Total	6.8	14.7	5.4	57.5	4.3	5.5	23.9	121.7
Total	49.5	101.3	57.8	490.9	64.7	38.5	118.5	963.8
Total cattle	60.4	205.6	97.6	544.2	68.3	45.2	118.7	1,196.4

(a) Includes Adelaide and Kangaroo Island Divisions.

(b) Used or intended for service.

Cattle for Meat Production

Numbers of cattle associated with meat production have increased in the last twenty years in South Australia. At 31 March 1964, 424,000 cattle associated with meat production were recorded (this figure is not strictly comparable with earlier figures because of a change of classification adopted in 1964), by 31 March 1968 this number had risen to 464,000 and at 31 March 1971 there were 964,000 cattle for meat production. In 1971 about 51 per cent of these cattle were in South East Division, 12 per cent in Far North Division, 11 per cent in Mount Lofty Ranges 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 near Adelaide, where a number of studs are located, several breeds are well represented.

The northern pastoral region is traditionally the breeding area for cattle for meat production (carrying 50 per cent or more of these cattle before 1957) but 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 cattle in southern parts of the State, since cattle do not crop the grasses as closely as sheep and therefore are less likely to damage newly sown pastures.

Cattle for Milk Production

From March 1964 to March 1968 the total number of cattle associated with milk production declined by 39,000 to 231,115 and the total number in subsequent years has been of the same order. Distribution within the State is 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 areas carry herds used mainly for milk production. 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 area or for cheese making.

Commercial dairying activities are to be found mainly within an eighty 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 breeds used mainly for milk production 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 eighty 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 an abundant water supply. The farms are flood irrigated through sluice gates in the levees and distributing channels and surplus water is led into a drainage system and pumped back into the river. The area has a very high carrying capacity of predominantly Friesian cattle. A significant proportion of the produce is sold as whole milk in the Adelaide market while the remainder is used for cheese, butter and casein production.

The Lakes District owes much to the barrages across the mouth of the Murray which have helped to maintain the waters of Lake Alexandrina and Lake Albert in a reasonably fresh state. These have greatly contributed to the improvement of the productivity of this area and have 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 cattle for milk production are principally Jersey breed and enjoy a high reputation for productive ability.

Outside the eighty mile radius, the most important dairying area is the Lower South East, where the high rainfall and 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 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.

PRODUCTION

The annual average yields per cow shown in the table below are obtained by dividing the total production of whole milk for the year ended June by the mean of the number of cows in milk and dry and the house cows at 31 March of that year and of the preceding year. They are, in effect, based on the approximate number of cows which were in milk during any part of the year. The average shown is therefore less than that for cows which were yielding during the greater part of the year but it may be accepted as sufficiently reliable to show the general trend. The average milk production per cow in South Australia for 10 years ending 1970-71 was 635 gallons whereas the Australian average for the same period was 501 gallons.

Average Milk Production Per Cow, South Australia and Australia
Year Ended 30 June

Area	5 Year Average		1968	1969	1970	1971	10 Year Average 1962-71
	1957-61	1967-71					
	Gallons						
South Australia ..	523	670	590	708	724	705 <i>p</i>	635 <i>p</i>
Australia.....	406	539	497	522	583	574 <i>p</i>	501 <i>p</i>

p preliminary

In the past there has been a steady increase in average milk production per cow but from the early 1960s the average has increased rapidly. This increased production has been achieved through a more scientific approach to management of herds for milk production including the keeping of detailed herd records, selective breeding and culling, supplementary pasture, hay and silage diet with highly nutritious prepared feedstuff and the use of modern veterinary supplies and services. The continuing trend towards fewer but larger dairy farms reflects the pressures on the industry to achieve greater efficiency.

At March 1966 there were 10,046 holdings with cattle used or intended to be used for milk production, but by March 1969 the number had fallen to 7,159.

DAIRY PRODUCE

Milk

Total milk production in any one year is not known precisely. However, as details are known of two major components of total milk utilisation in South Australia, namely 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 1961-62 and later seasons.

Production and Utilisation of Milk, South Australia

Year	Total Milk Produced	Milk Used for					
		Butter		Factory Cheese (a)	Home Consumption		Other Purposes
		On Farm	In Factory		Milk Board Area	Outside Milk Board Area	
'000 gallons							
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
1964-65	102,330	458	33,435	37,857	18,991	9,805	1,784
1965-66	98,398	432	30,921	35,659	19,558	9,927	1,899
1966-67	98,727	396	29,458	37,710	19,462	9,780	1,921
1967-68	88,822	360	23,694	32,948	19,826	10,140	1,854
1968-69	102,808	324	28,331	42,445	19,831	10,036	1,842
1969-70	106,236	288	33,722	39,646	20,703	9,934	1,944
1970-71 <i>p</i>	103,592	252	28,929	41,453	21,004	10,017	1,938

(a) Factory production accounts for virtually all cheese produced.

p preliminary

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 for sale.

Butter and Cheese

The quantities of butter and cheese produced during the last ten years are shown in the following table.

Butter and Cheese Production, South Australia

Year	Butter (a)	Cheese (b)	Year	Butter (a)	Cheese (b)
		'000 lb			'000 lb
1961-62	16,861	32,835	1966-67	15,245	38,598
1962-63	16,608	33,967	1967-68	12,271	32,773
1963-64	16,791	34,236	1968-69	14,633	42,221
1964-65	17,392	38,836	1969-70	17,379	39,437
1965-66	16,326	36,281	1970-71 <i>p</i>	14,911	41,234

(a) Includes factory and farm production.

(b) Factory production only.

p preliminary

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 specialising in pigs.

Although there have been substantial fluctuations in the pig population from year to year induced by the exceptional variability of prices, in the long-term the numbers have remained stable. The total number exceeded 200,000 for the first time in 1966 and has continued to exceed that number in subsequent years. Of the record number of 389,000 pigs at 31 March 1971, approximately 50 per cent were in Central and Murray Divisions.

The principal breeds in South Australia are Large White, Berkshire, Landrace and Tamworth.

The following table shows the number of pigs on rural holdings at 31 March for the last five years.

Pig Numbers, South Australia

At 31 March	Boars	Breeding Sows	All other	Total
1967.....	3,869	28,610	189,855	222,334
1968.....	4,118	32,336	205,865	242,319
1969.....	4,632	38,615	244,772	288,019
1970.....	5,137	45,174	300,437	350,748
1971.....	5,521	49,560	334,336	389,417

In the next two tables, pig herds at 31 March 1969, in size groups, are classified according to the size of the holding and the size of the herd of cattle for milk production on the holding. Of the 29,137 holdings of all types 5,596 carried pigs, while of the 7,159 holdings with milk cattle, 2,562 carried pigs.

**Rural Holdings Classified According to Area of Holding and Size of Pig Herd
South Australia, 1968-69**

Area of Holding (acres)	Size of Pig Herd (numbers)					Holdings with Pigs	Total Number of Holdings
	1-9	10-19	20-49	50-99	100 and Over		
1- 19.....	124	46	87	59	44	360	5,385
20- 49.....	104	60	79	55	55	353	3,652
50- 99.....	81	39	84	40	56	300	2,298
100- 199.....	58	39	69	56	45	267	2,030
200- 399.....	79	49	97	55	61	341	2,049
400- 699.....	132	95	197	128	72	624	2,502
700-1,399.....	305	195	419	278	179	1,376	4,300
1,400-4,999.....	375	258	483	314	179	1,609	5,328
5,000 and over ...	99	58	105	69	35	366	1,593
All holdings .	1,357	839	1,620	1,054	726	5,596	29,137

Rural Holdings Classified According to Size of Milk Cattle Herd and Size of Pig Herd: South Australia, 1968-69^(a)

Size of Milk Cattle (a) Herd (numbers)	Size of Pig Herd (numbers)					Holdings with Pigs	Holdings with Dairy Cattle
	1-9	10-19	20-49	50-99	100 and Over		
1- 4	215	109	171	103	66	664	1,767
5- 9	156	104	172	77	38	547	1,094
10-19	122	115	198	126	75	636	1,166
20-49	53	66	135	119	68	441	1,486
50-99	43	18	43	47	53	204	1,164
100 and over	18	3	11	14	24	70	482
Total ..	607	415	730	486	324	2,562	7,159

(a) Herds comprising dairy-breed bulls used (or intended) for service, dairy-breed bull calves intended for service and/or cows, heifers, and heifer calves used (or intended) for the production of milk or cream for sale.

MEAT PRODUCTION AND MARKETING

South Australia is a relatively small meat producer, providing only about 8 per cent of total Australian production. 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. The following table shows the number of livestock slaughtered for human consumption (including exports) and the production of meat during the last ten 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			
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 ..	275	3,100	241	37,268	55,392	12,656	105,316
1965-66 ..	277	3,474	298	36,513	60,738	15,223	112,474
1966-67 ..	265	3,358	316	38,754	62,476	15,947	117,177
1967-68 ..	245	4,019	310	33,074	68,730	15,787	117,591
1968-69 ..	220	2,977	317	35,617	56,824	15,939	108,380
1969-70 ..	249	4,232	386	40,059	78,172	19,765	137,996
1970-71 ..	264	5,101	435	42,807	90,471	22,181	155,459

Average market prices of some of the principal classes of livestock are set out in the next table. Generally prices fluctuate considerably from year to year, but for the beef lines a definite upward trend is evident over the past five years.

Livestock, Average Prices at Adelaide Market

Class of Stock	1967	1968	1969	1970	1971
Dollars					
Fat cattle:					
Bullocks and steers;					
Prime, medium ..	152.02	154.06	150.77	156.26	155.00
Good.....	134.49	132.89	135.67	140.44	135.80
Cows;					
Prime, medium ..	128.29	121.10	125.29	123.24	131.10
Good.....	109.95	103.04	109.51	108.75	113.21
Calves;					
Prime vealers ...	46.16	57.19	56.83	57.57	56.75
Good.....	27.30	38.04	44.64	40.95	40.55
Fat sheep:					
Merino wether;					
Prime	8.76	8.07	8.00	6.20	4.28
Medium	7.64	7.00	6.93	5.18	3.15
Lambs;					
Prime, medium ..	8.51	7.30	7.12	6.71	5.66
Good.....	7.40	6.59	6.24	5.84	4.31
Pigs:					
Choppers	75.68	79.14	63.38	58.16	69.68
Baconers	44.40	39.39	38.07	34.24	39.76
Porkers	23.28	23.74	21.00	20.42	23.67

The Australian Meat Board, which was reconstituted under the *Meat Industry Act 1964-1969*, 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 Slaughter Levy Act 1964-1971*. The levy is payable on the slaughter of all cattle (over 200 lb dressed weight), sheep and lambs for human consumption. The Act provides three elements in the levy for each class of livestock—an amount to finance meat research, an amount to finance the operations of the Australian Meat Board and, from 1 January 1972 until 31 December 1974, an amount to finance service and investigation activities relating to meat processing. The first two elements are paid by producers while the third element is paid by meat processors.

In February 1964 the Governments of Australia and the United States concluded an agreement for the regulation of beef, veal and mutton exports from Australia to the United States with the object of promoting the orderly development of the trade in these classes of meat between the two countries. From year to year quotas on imports of meat may be imposed depending on the estimated level of imports into the United States.

OTHER RURAL INDUSTRIES

Poultry Farming

Poultry farming is a specialised and distinct industry and it is from this source that the bulk of commercial production is obtained. The industry can be divided into two categories; the production of eggs, and the raising of poultry for meat. Chickens raised for meat, known as 'broilers', account for over 90 per cent of total poultry slaughtered.

Poultry Industry, South Australia^(a)

At 31 March

Particulars	1966-67	1967-68	1968-69	1969-70	1970-71
			'000		
Hens and pullets	1,631	1,733	1,629	1,680	1,848
Other fowls and chickens.....	1,103	1,357	1,456	1,690	1,885
Ducks	83	79	83	83	75
Turkeys.....	78	62	65	69	73
Geese	18	18	18	17	(b)
			'000 dozen		
Egg production (b)	13,176	15,813	15,692	16,653	19,154

(a) Excludes poultry kept in backyards.

(b) Not collected.

(c) Recorded by the South Australian Egg Board.

Egg Industry

The South Australian Egg Board, operating under the Marketing of Eggs Act, 1941-1966, controls the marketing of eggs in this State. The Board determines the price at which it purchases eggs from producers, fixes the wholesale selling price in South Australia, makes available supplies to the local market through its grading agents and arranges with the Australian Egg Board for the export of eggs surplus to local requirements.

A Commonwealth stabilisation scheme, embodying three Commonwealth Acts has been in operation since 1 July 1965. The *Poultry Industry Levy Act* 1965-1966 provides for the imposition of a levy, the maximum being \$1.00 annually per hen, on hens not less than six months old kept for commercial purposes. Exemptions from payment are granted on the first twenty hens in each flock and on 'broiler breed hens'. In determining the rate of the hen levy, the Minister of Primary Industry is required to take into consideration any recommendations by the Council of Egg Marketing Authorities of Australia (CEMAA) which consists of all members of State egg marketing boards and is precluded from prescribing a rate in excess of such recommendations. The money obtained from the levy is used to meet trading losses on surplus eggs and sales to overseas markets.

Under the *Poultry Industry Levy Collection Act* 1965-1966 the South Australian Egg Board is responsible for the collection of the levy on behalf of the Commonwealth Government. The *Poultry Industry Assistance Act* 1965-1966 establishes a Poultry Industry Trust Fund for the receipt of the amount of the levy and other moneys. The Act provides for the payment from the Fund to this State, by way of financial assistance of such amounts as the Minister of Primary Industry may determine upon the recommendation of the CEMAA.

The trend in the egg industry in South Australia is towards a reduction in the total number of poultry farms, but an increase in average flock size. Housing of birds for commercial purposes is largely planned on the intensive principle, with deep litter pens or single and multiple bird cage units. Laying stock consists mainly of a specially produced crossbred between the White Leghorn and Australorp breeds.

Feed is the single most important cost to this industry, and its correct use is vital for efficient production. Feeding is based on cereal grains and the by-products bran and pollard. Meat and bone meats are a major source of protein supplement coupled with other essential vitamins, proteins and minerals.

The main areas of commercial production are centred on the outskirts of the Adelaide metropolitan area, around Gawler and Murray Bridge, with other large pockets of production within a 50 mile radius of Adelaide.

The annual average egg production controlled by the South Australian Egg Board was 10.6 million dozen in the five years ended 1960-61, 10.1 million dozen over the next five years and 15.4 million dozen in the five years ended 1970-71. 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.

Broiler Industry

The broiler industry in South Australia has grown rapidly during the past ten years, annual production increasing from about half a million birds in 1959 to nearly eight million birds at the present time.

Broilers are specially bred meat strain birds of either sex, that are slaughtered between eight and ten weeks of age at a live weight of approximately 3 lb. This rapid growth and efficient conversion of feed to meat has been achieved by extensive breeding programmes; the use of specially prepared high protein and energy value poultry feeds; growth promotion and disease control drugs; and by the development of enclosed, factory-like broiler houses, with controlled temperature, ventilation and light, conducive to fast growth.

A shed that is popular with broiler growers in this State, is a litter unit 40ft wide and 100 to 200ft long. Birds are stocked day old at the rate of 0.8 sq ft a bird and mostly in groups of 5,000 (for sheds 40ft by 100ft).

The broiler industry is a complex organisation requiring close co-operation between all links in the chain of production. Breeders, multipliers, hatcheries, growers, and poultry processors must combine to ensure efficient and streamlined production. This co-operation has produced a stable and efficient industry, bringing chicken meat to the consumer at a price comparing favourably with other meats.

Growers are usually under contract to large broiler processing organisations receiving a price per bird at marketing or a price per lb live weight. Price per lb live weight is the most popular method; under this method the grower provides the shed, equipment and labour and the processor provides the chicken, cost of brooding and feed. Usually the processor has a field serviceman who looks after his interests and ensures that growers are correctly rearing and caring for the stock.

The main production centres are located within a fifty mile radius of Adelaide near the processing works and main consumption outlets. Special concentrations of growers are at Murray Bridge, in the Adelaide Hills, and Gawler.

Nearly all South Australia's production is consumed locally, with some broilers being imported from Victoria and New South Wales.

A monthly collection of statistics on chicken hatchings and poultry slaughterings was commenced in South Australia in July 1966, the tables below show

the number of eggs set, chicks hatched and poultry slaughtered for the last five years.

**Eggs Set and Chicks Hatched in Commercial Hatcheries
South Australia**

Year	Eggs Set (a)		Chicks Hatched (b) and Intended to be Raised for—				
	Meat Strains	Egg Strains	Chicken Meat		Egg Production	Breeding (d)	
			Meat Strains— Unsexed	Egg Strains— Cockerels (c)	Egg Strains— Pullets (e)	Egg Strains	
						Pullets	Cockerels
			'000				
1966-67 ..	6,215	5,352	4,383	230	1,925	89	13
1967-68 ..	7,407	5,060	5,218	134	1,904	51	4
1968-69 ..	6,546	5,049	5,053	180	1,854	32	7
1969-70 ..	8,090	5,971	6,173	373	2,136	41	6
1970-71 ..	11,891	5,885	9,100	300	2,125	52	5

(a) Including eggs which failed to hatch.

(b) Excluding chicks destroyed.

(c) Egg strain chicks sold as 'unsexed' have been allocated equally between chicks for chicken meat and chicks for egg production. The number so reported was 153,000 in 1966-67; 103,000 in 1967-68; 98,000 in 1968-69; 108,000 in 1969-70; and 69,000 in 1970-71.

(d) Details of meat strain chicks for breeding purposes are not available for publication.

**Poultry Slaughtered for Human Consumption
South Australia^(a)**

Period	Chickens (Broilers, Fryers, or Roasters)	Hens and Stags	Ducks and Drakes	Turkeys	Total
	NUMBER SLAUGHTERED ('000)				
1966-67	3,682	192	59	28	3,962
1967-68	4,278	285	35	15	4,613
1968-69	4,415	282	35	21	4,753
1969-70	5,597	287	46	34	5,964
1970-71	7,894	341	50	23	8,308
	LIVE WEIGHT OF POULTRY SLAUGHTERED ('000 lb)				
1966-67	12,011	984	336	397	13,727
1967-68	14,341	1,440	196	205	16,182
1968-69	14,551	1,474	190	281	16,496
1969-70	18,748	1,457	281	434	20,919
1970-71	27,214	1,680	326	304	29,524
	DRESSED WEIGHT OF POULTRY SLAUGHTERED ('000 lb) (b)				
1966-67	9,167	667	235	295	10,363
1967-68	10,962	964	138	155	12,219
1968-69	10,937	987	130	215	12,269
1969-70	13,879	996	187	340	15,403
1970-71	19,838	1,163	222	229	21,452

(a) Excludes geese slaughtered.

(b) Dressed weight of whole birds, pieces and giblets as reported by producers.

Beekeeping

Beekeeping in South Australia is a small industry—in 1970-71 there were 805 keepers with five or more hives. 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.

Beekeeping, South Australia^(a)

Season	Beekeepers	Hives		Honey Produced	Yield of Honey per Productive Hive	Beeswax Produced
		Productive	Un-productive			
	No.	No.	No.	'000 lb	Lb	'000 lb
1966-67	784	57,311	15,511	6,588	115	93
1967-68	812	60,763	12,006	6,844	113	105
1968-69	768	54,838	15,046	5,770	105	92
1969-70	798	67,677	11,284	10,638	157	157
1970-71	805	67,267	13,583	7,032	105	102

(a) Excludes particulars for producers having less than five hives.

VALUE OF RURAL PRODUCTION

The value of rural production may be expressed in terms of gross value, local value and net value. Gross value is the value placed on recorded production at the wholesale prices realised in principal markets. Local value equals the gross value of production less marketing costs, and net value of production equals local value less the value of materials used in the process of production.

Details for the last five years of gross value of rural production are given in the following table.

Gross Value of Rural Production, South Australia

Class of Production	1966-67	1967-68	1968-69	1969-70	1970-71 <i>p</i>
	\$'000				
Agricultural	184,090	127,288	221,097	186,766	166,737
Pastoral	169,226	129,504	136,070	148,939	123,419
Dairying	40,303	37,163	39,016	40,834	43,590
Other rural	11,246	12,267	12,659	11,984	13,015
Total	404,864	306,222	408,842	388,523	346,760

p preliminary

Earlier information on the gross value of rural production is given in the Statistical Summary page 622.

9.2 MINING, FORESTRY AND FISHERIES

MINING

South Australia has a well developed and growing mineral industry and, although 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—exceeding \$110 million in 1970.

MINING ADMINISTRATION

The Mining Act, 1971 which repeals the existing legislation in the Mining Act, 1930-1962 was assented to on 9 December 1971 but had not been proclaimed at time of publication. The Act regulates and controls mining operations. It amends the Petroleum Act, 1940-1969 and the Crown Lands Act, 1929-1969. Under the new Act all minerals will be reserved to the Crown.

The Mines and Works Inspection Act, 1920-1970 regulates in respect to 'the state and conditions of the mine, machinery, ventilation, and all other things relating to the safety, health and well-being of the employees and general public'.

The Petroleum Act, 1940-1971 and the Petroleum (Submerged Lands) Act, 1967-1969 provide for the control of petroleum exploration and the production, conservation and distribution of petroleum by pipeline.

The Underground Waters Preservation Act, 1959-1970, provides for the control of water boring and of groundwater usage in 'defined areas', and for the licensing of drillers.

The administration of these Acts is the responsibility of the Minister and Director of Mines. The principal functions of the Department of Mines are:

- (i) The administration of mining and petroleum legislation including the granting of mineral leases and collection of royalties and fees;
- (ii) Geological and geophysical investigations to ascertain the extent and nature of the State's mineral resources;
- (iii) Drilling to test mineral deposits, petroleum reserves and underground water supplies;
- (iv) Development of sub-surface water supplies for farming, pastoral, irrigation and mining purposes;
- (v) Control of development of underground water in certain defined areas;
- (vi) The testing and treatment of minerals, generally in arrangement with the Australian Mineral Development Laboratories.
- (vii) Control of mining and rehabilitation.

MINERAL INDUSTRY STATISTICS

Mining industry data (such as employment, costs, value of output, etc.) has been obtained annually since 1952 from the Mining and Quarrying Census carried out in collaboration with the Department of Mines. The Censuses were taken from establishments employing on the average four or more persons during the period worked by the mine. For smaller mines employing less than four persons particulars were compiled from data made available by the Department of Mines. Statistics compiled from these Censuses have been published by the Commonwealth Statistician in *Non-rural Primary Industries* bulletins and other Bureau publications.

MINING INDUSTRY STATISTICS, 1968-1969

In 1968 and earlier years, the Annual Mining and Quarrying Census related to years ended 31 December. However, commencing with 1968-69, the Mining Census was changed to a year ended 30 June to conform with the period covered by other economic censuses in Australia.

This latest census differs from previous censuses and therefore the statistics obtained from it are not strictly comparable with statistics of the mining industry which have been published for previous years.

For the year ended June 1969, the Mining Census (including quarrying) was conducted for the first time on an integrated basis with Censuses of Manufacturing, Electricity and Gas, Retail Trade and Selected Services, and Wholesale Trade.

Briefly, the integration of these economic Censuses was designed to increase substantially the usefulness and comparability of economic statistics collected and published by the Bureau, and to form a basis for the sample surveys which supply current economic statistics from quarter to quarter, particularly those which provide data for the quarterly national income and expenditure estimates.

The economic censuses of Mining, Manufacturing and Retail Trade previously conducted in Australia were originally designed and subsequently developed primarily to provide statistics for particular industries on a basis which would best suit the requirements of users interested in statistics of those industries. More recently there has been a growth of interest in statistics describing activity in the economy as a whole—reflected, for example, in the development of employment and earnings statistics, surveys of capital expenditure and stocks and the whole field of national accounts statistics. For such purposes statistics derived from economic censuses in the past have had serious limitations despite the fact that they covered a broad area of the whole economy. Because of the special-purpose nature of each of the censuses, there were no common definitions of data, there was no common system of reporting units, and, as a standard industrial classification was not used for these censuses, industry boundaries were not defined in ways which would avoid overlapping or gaps occurring between the industrial sectors covered. For these reasons, direct aggregation and comparison of statistics from different censuses were not possible.

The integration of these economic censuses meant that for the first time they were being collected on the basis of a common framework of reporting units and data concepts and in accordance with a standard industrial classification. As a result, the statistics for the industries covered by the censuses are now provided with no overlapping or gaps in scope, and in such a way that aggregates for certain important economic data such as value added, employment, salaries and wages, fixed capital expenditure and stocks can be obtained on a consistent basis for all sectors of the economy covered by the censuses.

For the integration of the various censuses it was necessary to undertake three major developments:

- (a) the census units for which the statistics were to be collected (mines, factories, shops etc.) had to be defined and identified in consistent ways and recorded in a central register, together with identifying data about the businesses owning and operating them;
- (b) a standard industrial classification had to be adopted so that the census units could be classified in consistent ways and to enable the boundaries of the economic censuses to be determined without gaps or overlapping between them;

- (c) in order to bring the items of data to a consistent basis of definition in all censuses, it was necessary to revise all the forms used in previous censuses.

The standardisation of census units in the integration of economic censuses means that the basic census unit (the establishment), in general, now covers all the operations carried on under the one ownership at a single physical location. The mining establishment is thus one predominantly engaged in mining, but the data supplied for it now cover (with a few exceptions) all activities at the location. Previously, the mining establishment covered only mining activities, including the dressing or beneficiation of ores or other minerals. It now covers, in addition, subject to certain exceptions mentioned below:

- (a) any activities connected with the selling and distribution of the minerals produced, and
(b) any non-mining activities (e.g. manufacturing, construction).

The exceptions in general relate to locations where the subsidiary activities (in terms of gross value) exceed one million dollars, which are treated for statistical purposes as two or more establishments corresponding to the various kinds of activity carried on.

The establishment statistics (other than the number of establishments) also include data relating to separately located administrative offices and ancillary units serving the establishment, and forming part of the business (enterprise) which owns and operates the establishment. These units, such as head offices and storage premises, were formerly excluded from the mining census.

The application of the definition of standardised census units, as set out above, has resulted in the exclusion of a number of units covered by mining censuses in the past. Previous censuses covered, broadly, all mining carried out at locations held under mining leases, and quarrying activities, irrespective of whether mining or quarrying was the predominant activity at the location. However, from 1968-69, if mining (or quarrying) is not the predominant activity the establishment is not classified to mining and is not covered by the mining census. For example, where mining at an establishment is subsidiary to an activity covered by one of the other integrated censuses, such as clay mining at a brick manufacturing establishment, data on the mining operations are included in the manufacturing census as a part of the whole activities of that establishment.

In addition to those mining operations excluded by the application of the definition of the census unit, itinerant and part-time miners have now been omitted because of their limited scale of operations and consequent difficulties in collecting census returns for them. Previously, data in respect of this category of mining were estimated and included in the Mining Census results.

The Australian Standard Industrial Classification (ASIC), described in the publication *Australian Standard Industrial Classification (Preliminary Edition)*, 1969, Vol. 1, published by the Commonwealth Statistician, defines the industries in the economy for statistical purposes, thus permitting the scope of the different economic censuses to be specified without any gaps or overlapping between them. It also sets out standard rules for identifying the statistical units (e.g. establishments) and for coding them to the industries of the classification. This classification is broadly convertible to the International Standard Industrial Classification adopted by the United Nations Statistical Commission. The adoption of the ASIC has resulted in changes in scope between the 1968-69 economic censuses and the individual economic censuses conducted in previous years. However, in the case of the mining census, which covers the whole of

the mining division of the ASIC except for mineral exploration and other services to mining, the main change from previous censuses is the inclusion of briquetting establishments and natural gas absorption or purifying plants.

The third step in integrating the censuses, whereby the items of data on the census forms were standardised for all census sectors, has meant changes in the content of the statistics. For example, the value of 'turnover' is now collected instead of the value of output at the mine, and purchases and selected expenses are collected as well as the value of specified materials, fuels, etc., used. However, the underlying concept of 'value added' is similar to the former concept 'value of production', even though its method of derivation is different. Value added, the basic measure of the establishment's contribution to total production, is now calculated as turnover less purchases and transfers in (from other establishments of the enterprise), plus increase (or less decrease) in stocks. In the past the corresponding item, value of production, was obtained by deducting the value of materials, fuels, etc. used from the value of output at the mine. Figures for 1968-69 appearing below are preliminary. Hence, 'sales, transfers out and other operating revenue' appears instead of 'turnover', as two components of turnover have been omitted. These are 'capital work done for own use' and 'bounties and subsidies on production'.

Even though the concept of value added is similar to value of production, direct comparison of 1968-69 and 1968 figures will not be possible because of the change in census units already mentioned, which has resulted in the value added for the whole establishment's activities being reported (not merely the value added for the mining activity), and in the omission of value added by mining activities in establishments classified outside the mining division. Comparison is also affected, of course, by the changes in the scope of the mining census due to the adoption of ASIC, and by the rectification of certain deficiencies in coverage (and of data reported) in the censuses for earlier years. A further factor is that a different valuation, estimated on the basis of commercial prices, has been placed on minerals produced by enterprises for their own consumption in Australia.

As mentioned above, the value of 'turnover' (including the value of sales and transfers out) is now collected in the mining census in lieu of the value of output at the mine published for 1968 and earlier years. It should be noted, however, that statistics of the value of output at the mine of mineral production continue to be compiled for all establishments, including those classified outside the mining division.

The change in the census period from year ended 31 December to 30 June means that the 1968-69 census figures overlap the 1968 census results in regard to the period July to December 1968. However, it is not possible to distinguish the precise extent of this overlap because of the innovations in regard to census units and industrial classification mentioned previously.

The statistics in the tables below are preliminary and subject to revision. While the industry classification of mining establishments, and the adjustment to a consistent basis of the value of transfers between establishments of the same enterprise, have been substantially completed, both are subject to final confirmation. For these reasons, only key items of data are presented for broad industry groups.

Number of Establishments

The following table shows the number of establishments which operated during the year 1968-69. These relate to mining establishments as such and do not include the numbers of separately located administrative offices and ancillary units.

Employment

The statistics of the number of persons employed relate to working proprietors at the end of June 1969 and employees on the payroll of the last pay period in June 1969, including those working at separately located administrative offices and ancillary units in the State. Note that persons employed in South Australia (and their wages and salaries) relate to those employed at establishments, administrative offices or ancillary units located in this State, even though the administrative offices or ancillary units may have served establishments located in another State.

Wages and Salaries

The wages and salaries of all employees of the establishment, include those working at separately located administrative offices and ancillary units in the State. Drawings of working proprietors are not included.

Mining Establishments: Number Operating, Persons Employed, Wages and Salaries during 1968-69, by Industry Sub-division, South Australia

Industry Sub-division	ASIC Code (a)	Number of Establishments Operating during 1968-69	Persons Employed (b)			Wages and Salaries
			Males	Females	Total	
						\$ million
Metallic minerals	11	6	} 377	74	951	3.9
Coal	12	1				
Crude petroleum including natural gas	13	1				
Construction materials	14	97					652	25	677	2.0
Other non-metallic minerals	15	61	365	16	381	1.3
Total mining, excluding services to mining		166	1,894	115	2,009	7.1

(a) Australian Standard Industrial Classification.

(b) At 30 June, 1969; includes working proprietors.

Sales, Transfers Out and Other Operating Revenue

The following table shows sales of minerals and other goods whether produced by the establishment or not, plus transfers out of minerals and other goods to other establishments of the same enterprise, plus all other operating revenue from outside the enterprise, such as commission, repair and service revenue. This excludes rents, leasing revenue, interest, royalties, and receipts from the sale of fixed tangible assets.

Purchases, Transfers In and Selected Expenses

These figures include purchases of electricity, fuels, stores and other materials, plus transfers in of goods from other establishments of the same enterprise, plus charges for processing and other commission work and payments to mining contractors, repair and maintenance expenses, outward freight and cartage, motor vehicle running expenses and sales commission payments.

Stocks

Statistics on the value of stocks at 30 June 1968 and 1969, are shown. Figures include all the stocks of materials, fuels, etc., and mine products and work-in-progress of the establishment whether located at the establishment or elsewhere.

Value Added

The following table shows value added, calculated as sales, transfers out and other operating revenue, plus increase (or less decrease) in the value of stocks, less purchases, transfers in and selected expenses.

**Mining Establishments: Sales, Stocks, Purchases etc., and Value Added
during 1968-69, by Industry Sub-division, South Australia**

Industry Sub-division	ASIC Code (a)	Sales, Transfers out and Other Operating Revenue	Stocks at 30 June		Purchases, Transfers in and Selected Expenses	Value Added
			1968	1969		
		\$m			\$m	\$m
Metallic minerals	11	} 57.8	0.9	1.7	17.2	41.3
Coal	12					
Crude petroleum including natural gas ..	13					
Construction materials	14					
Other non-metallic minerals	15					
Total mining, excluding services to mining		79.8	3.1	3.6	26.3	54.1

(a) Australian Standard Industrial Classification.

MINERAL COMMODITY STATISTICS

Mineral commodity statistics published in previous issues of this Year Book have been those recorded by the Director of Mines. The quantity and value of production of the major minerals for the years 1968 to 1970 are listed in the following table.

**Mining and Quarrying Production, South Australia
(As Recorded by the Director of Mines)**

Mineral	Unit of Quantity	Quantity			Value		
		1968	1969	1970	1968	1969	1970
					\$'000		
Metallic:							
Copper	'000 tons	5,478	6,931	7,584	15	151	1,464
Iron ore	'000 tons	88	64	273	48,382	61,159	66,701
Pyrite concentrate ..	'000 tons	..	..	..	1,230	891	867
Other .....	..	..	..	..	57	263	23
Non-metallic:							
Barite	'000 tons	33	36	41	358	419	490
Clays	'000 tons	588	683	659	870	1,008	974
Coal	'000 tons	2,078	2,210	1,827	3,053	3,265	3,097
Dolomite	'000 tons	299	275	304	529	506	572
Gypsum	'000 tons	631	717	657	1,559	1,779	1,612
Limestone	'000 tons	1,558	1,773	1,824	2,347	2,675	2,794
Opal (a) .....	..	..	..	..	4,015	7,327	7,700
Salt	'000 tons	611	563	544	2,443	2,254	2,174
Talc, soapstone	'000 tons	10	12	14	182	187	263
Other .....	..	..	..	..	149	188	126
Construction material quarrying	'000 tons	11,352	16,057	15,006	12,224	16,605	15,524
Natural gas	millions of cu. ft.	..	..	22,186	..	..	6,250(b)
Total .....	..	..	..	..	77,413	98,677	110,631

(a) Estimated in 1970.

(b) Value at city gate.

.. not applicable

Details of mining of individual minerals are given below. Reference should also be made to Part 1.3 which contains particulars of the location of mineral resources. The map on page 22 shows a number of localities referred to in this section.

Iron Ore

The only proved 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 concentrations of high grade ore.

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 maintained by the Broken Hill Pty Co. Ltd—in 1970 production was more than 7.5 million tons. The bulk of the ore is shipped to Newcastle and Port Kembla, but a proportion is exported in pellet form and some is used for the production of iron in the Whyalla blast furnaces. The molten iron is transferred from the blast furnaces to the basic oxygen steel plant, where ingot steel is produced for use in the Whyalla rolling mills.

Reserves of high grade iron ore are estimated at about 170 million tons. The grade of ore at 62 per cent iron is high by world standards. In view of the known limitation of high grade ore, the Broken Hill Proprietary 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.

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.

Barite is still used in the paint and other industries, but the main use is in drilling mud for oil exploration where the grade does not have to be so high. Production of barite totalled 41,100 tons in 1970.

The company operating the Oraparinna Mine in the Flinders Ranges has been the major Australian producer of barite for some years.

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 fifty years to provide the bulk of Australasian requirements for the plaster industry and for portland cement manufacture. Production exceeded 650,000 tons in 1970.

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. The new rail link, constructed between the deposit and the bulk loading installations at the port of Thevenard, has reduced rail distance from 63 to 34 miles, and

the port has been deepened to accommodate larger ships of up to 20,000 tons capacity. The value of overseas exports of gypsum from South Australia during 1970-71 amounted to \$839,000.

Salt

The semi-arid climate and high evaporation rate along much of South Australia's coastline, together with the high salinity of the gulf waters, create very favourable conditions for the production of salt by solar evaporation. In the early days 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. The Broken Hill Proprietary Company which has been producing 60,000 tons of salt a year near Whyalla is now expanding its capacity.

At present South Australia produces over 500,000 tons annually, and provides approximately two-thirds of Australia's salt requirements. The industry in South Australia is capable of expansion, but the future export market appears to have been largely captured by salt development in Western Australia, where ports for very large ships are available.

The value of overseas exports of salt from South Australia amounted to \$443,000 in 1970-71.

Opal

The value of raw opal production exceeded \$7 million in 1970. In terms of value it ranked second only to iron ore as the most important mineral produced in South Australia during 1970. Overseas exports of opal from South Australia during 1970-71 were valued at \$2,916,000.

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 distance from Port Augusta to Andamooka and Coober Pedy are 200 and 400 miles respectively.

Mining at both centres is relatively shallow, rarely exceeding 90 feet. The extent of the opal fields is not known as there has been little 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 a large body of iron pyrite but until 1950 this deposit was of little economic significance. However, a world shortage of sulphur, upon which the fertiliser industry is dependent for sulphuric acid, made it necessary to utilise local sources at that time.

Limited exploration of the deposit was made by private enterprise, and extended by the Department of Mines. This resulted in the proving, over some two miles in length, of 14 million tons of mineable ore containing 10 per cent 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 at the annual rate of 330,000 tons of ore yielding 82,000 tons of concentrate, containing 33,000 tons of sulphur. The concentrate is processed and the product subsequently used in fertiliser manufacture at Port Adelaide.

Company operations at Brukunga have extended the known ore reserves to 24 million tons over a length of about two miles, extending both north and south of the present quarry workings. Reserves of pyritic ore now remaining in the deposit total 19 million tons. However, excess production of sulphur from Canadian and other natural gas fields has led to a slump in sulphur prices and the company is encountering very strong competition.

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 14,219 tons were mined in 1970. 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 present development of the field commenced with Department of Mines drilling 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 52 million tons of coal available by open cut methods and a further 370 million tons of underground reserves.

Coal production in 1970 was over 1.8 million tons. Almost the entire production is railed to Port Augusta for use in power generation.

Natural Gas

The natural gas production in 1970 was 22,186 million cubic feet valued at city gate at \$6.25 million.

Limestone and Dolomite

The combined tonnage of limestone and dolomite extracted each year is in excess of 2 million 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 from Coffin Bay for the metallurgical industry, and limestone at Angaston and Klein Point for the cement industry. Approximately half a million tons of lime sand is produced each year from the very large deposits at Coffin Bay, and railed to Port Lincoln for trans-shipment to the Whyalla blast furnaces, the smelters at Port Pirie, and interstate.

Limestone Production, South Australia
(Excluding Limestone Used as Building Stone, Road Materials, etc.)

Classification	1966	1967	1968	1969	1970
	'000 tons				
Flux.....	647.1	788.1	697.3	737.5	847.1
Cement	538.8	527.9	559.1	720.9	626.8
Chemical	244.5	255.2	287.1	297.9	331.3
Other.....	24.2	19.6	14.1	16.9	18.6
Total	1,454.6	1,590.8	1,557.5	1,773.2	1,823.8

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 Australia. The clay brick industry is concentrated near Adelaide.

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.

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.

Details of clay production for the years 1966 to 1970 are given in the following table.

Clay Production, South Australia

Classification	1966	1967	1968	1969	1970
	'000 tons				
Brick clay and shale	450.9	419.3	477.3	557.1	566.3
Cement clay (shale)	35.2	34.2	35.7	38.6	34.2
Fire clay	24.0	21.5	37.8	44.8	24.9
Kaolin and ball clay	7.6	8.5	8.0	9.8	17.8
Pottery clay	34.4	29.0	33.7	32.5	15.6
Total	552.1	512.5	592.5	682.8	658.8

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. Production was 15 million tons in 1970 compared with 2.2 million tons in 1947.

A variety of building stones is quarried including Mount Lofty sandstone, a white stone which hardens in the atmosphere; Basket Range sandstone, a light coloured stone of pleasing appearance, and Mount Gambier limestone, a bryozoal 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 main sources of slate in South Australia are at Mintaro and Willunga. Both areas supply paving slate and a large quantity of Mintaro slate is dressed and polished and there has been a strong demand for Mintaro slate for use in billiard tables.

Building Stone, South Australia

Type of Stone	1966	1967	1968	1969	1970
	'000 tons				
Granite	4.4	4.8	4.6	5.4	4.5
Gravel.....	—	—	—	—	0.1
Limestone.....	11.2	16.4	16.4	25.7	27.0
Marble	2.2	2.9	1.5	2.8	3.1
Quartz.....	—	—	—	0.2	0.9
Sandstone	8.4	12.1	11.8	11.1	11.6
Slate	4.4	10.5	7.2	2.9	3.5
Total	30.6	46.7	41.5	48.1	50.7

Production of other construction materials is shown in the following table. The importance of limestone (predominately 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	1966	1967	1968	1969	1970
	'000 tons				
Limestone.....	5,615	5,640	4,344	5,874	4,726
Quartzite.....	3,454	3,208	3,217	3,792	3,171
Sand	1,586	1,756	2,077	2,884	2,585
Other materials	2,593	2,658	1,673	3,459	4,473
Total	13,248	13,262	11,311	16,009	14,955

MINERAL DEVELOPMENTS

Recently significant new natural gas accumulations were discovered in the Big Lake, Della, Merrimelia, Packsaddle and Strzelecki structures and important oil and gas discoveries have been made at Tirrawarra and Fly Lake. These discoveries have made it possible to consider the supply of natural gas from the Cooper Basin area of north-eastern South Australia and south-western Queensland to the potentially large Sydney, Newcastle and Wollongong markets. The discovery of oil at Tirrawarra may also make it possible in the near future to build a liquids line from the area to the coast, which could transport both oil and natural gas liquids.

All household gas appliances in Adelaide have now been converted and are using natural gas from the Gidgealpa area. In 1971 an average of about 88 million cubic feet of gas a day was being supplied to the Adelaide area compared with an average of 61 million for 1970. About 70 per cent of this was used at the Torrens Island power station in generating electricity.

Exploration for copper, uranium and other minerals has greatly increased in recent years. At the end of 1971 the number of current Special Mining Leases granted for mineral exploration work was 313.

In 1970, \$5.77 million was spent on exploration on these leases and a further \$4 million is being spent each year by oil exploration companies in their search in South Australia. In addition to this the South Australian Department of Mines

is spending another \$2 million in geological and other investigations, drilling and mineral research work to help the growth of the mineral industry.

Several encouraging finds of copper have been reported, especially in the Flinders Ranges near Copley and at Parabarana, while east of the Flinders, deposits of sedimentary uranium have been discovered in the Lake Frome area. Reserves of this easy-to-leach sedimentary uranium so far have been estimated to be 11.2 million pounds of uranium oxide in the Beverley deposit with a grade of about 5 lb a short ton and about 8.8 million pounds at the 37A prospect with a 3 lb a ton grade. Recent drilling in the Yarramba area, north of Mingary, has discovered mineralisation of the same type.

South Australia's output of copper has increased with the opening up of a number of copper mines. Mount Gunson has been producing over 200 tons of copper each month in high grade concentrates since May 1970 but the mine and plant was put on a care and maintenance basis in December 1971 chiefly as a consequence of falling copper prices. The old Burra mine has been re-opened and plant erected, and ore is being treated in the new ammonia leaching plant at the mine. Open-cut operations have commenced at Kanmantoo and the treatment and service buildings are operative.

The old Wallaroo dumps are being treated at Kadina and small copper treatment plants are operating at the old Prince Alfred mine near Carrieton in the Flinders.

Mineral production for 1970 showed a 12 per cent increase on the previous year, with the total value of the minerals produced exceeding \$110 million. The value of the iron ore produced increased by 17 per cent and reached \$66 million while the value of the opal from the Coober Pedy and Andamooka fields continued at more than \$7 million.

The decision to establish the Australian Mineral Foundation on land contributed by the State Government at Glenside, an Adelaide suburb, is another important development for the mineral industry. Already the Australian Mineral Development Laboratories, a national contract research establishment, is in this area and the Mines Department and a mineral branch of the CSIRO are to move to the same area. A gift of \$1 million to the Mineral Foundation has ensured that a substantial building will be erected for the Foundation.

The following table shows details of private mineral exploration, other than petroleum, in South Australia for 1968-69 and 1969-70.

Private Mineral Exploration (Other than Petroleum), South Australia^(a)

Particulars	Unit	On Current Producing Leases		On Other Areas		Total Private Exploration	
		1968-69	1969-70	1968-69	1969-70	1968-69	1969-70
Footage:							
Drilled.....	'000ft	30	45	214	545	244	591
Other.....	'000ft	—	—	—	—	—	—
Man weeks worked (b)....	'000	0.5	0.9	8.7	10.0	9.2	10.9
Expenditure:							
Drilling	\$'000	144	276	816	1,427	960	1,703
Other.....	\$'000	164	305	1,837	3,752	2,001	4,057
Total	\$'000	308	581	2,653	5,179	2,961	5,760

(a) Excludes exploration for water and all developmental work.

(b) Excludes work carried out by contractors.

Details of private petroleum exploration and development for South Australia are shown in the following table for the years 1965 to 1969.

Private Petroleum Exploration and Development, South Australia

Particulars	Unit	1965	1966	1967	1968	1969
Wells drilled (a).....	number	8	13	15	15	14
Footage drilled	'000ft	49.5	57.2	105.0	99.5	64.4
Expenditure:						
Private sources	\$'000	4,705	4,059	6,257	3,261	4,311
Government subsidy (b)	\$'000	949	769	1,058	1,407	609
Total	\$'000	5,654	4,828	7,315	4,668	4,920

(a) Number of wells reaching total depth during year.

(b) Payments under the *Petroleum Search Subsidy Act 1959-1964*.

FORESTRY

There are an estimated 15.2 million acres of land classified as forested in South Australia, and much of this is of low grade or little current economic value. Some 2.2 million acres carries forest or woodland, a decreasing part of which is still exploited for minor quantities of timber and fencing or firewood materials. Many of the forested or wooded areas are of considerable value for soil conservation, watershed protection, shelter, shade, conservation of indigenous plants and animals, and natural scenery.

Certain areas have been set aside as State forest reserves, the area thus reserved at 30 June 1971 being 301,477 acres. In addition the Woods and Forests Department is responsible for 4,000 acres of planted forests on reservoir lands. Although the total area reserved has shown little fluctuation since 1929 the area under plantation has been consistently increasing.

A more detailed history of forestry development in South Australia was included on pages 432-4 of the *South Australian Year Book 1970*.

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 are a source of some firewood. Some areas of forest reserves not planted with conifers are maintained in natural hardwoods but it is unlikely that further hardwood plantations will be established except in small trial areas.

Plantations

Exotic softwoods accounted for approximately 98 per cent of the planted forest area at 30 June 1970.

As can be seen from the accompanying tables the majority of the planted forest is in the lower South East. The 25 inch rainfall line roughly divides the South East in two; the lower South East with an annual rainfall in excess of 25 inches has proved ideal for forestry activity, while the upper South East is not suitable for commercial forestry.

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 1970 and Net Area of Plantations at 31 March 1971

Location	Planted during 1970			Plantations at 31 March 1971		
	Softwoods		Hard-woods	Softwoods		Hard-woods
	<i>Pinus Radiata</i>	Other Pinus		<i>Pinus Radiata</i>	Other Pinus	
Acres						
State forests:						
South East:						
Penola	823	238	—	29,434	4,727	165
Mount Burr	907	180	—	23,260	1,421	169
Mount Gambier	482	33	—	18,138	1,900	18
Myora	547	—	—	13,153	530	—
Caroline	930	294	—	13,044	1,416	—
Tantanoola.....	415	80	—	17,164	2,157	15
Comaum.....	107	72	—	6,606	757	16
Other.....	597	—	—	3,704	270	3
Total South East ..	4,808	897	—	124,503	13,178	386
Central;						
Mount Crawford.....	599	6	—	8,605	764	483
Kuitpo	—	—	—	5,047	1,038	353
Reservoir areas	229	107	—	2,249	278	4
Other.....	297	—	—	4,280	619	150
Total Central ...	1,125	113	—	20,181	2,699	990
Northern.....	324	7	—	6,474	257	642
Murray Lands	—	—	—	—	15	482
Western	12	2	—	107	37	851
Total State forests..	6,269	1,019	—	151,265	16,186	3,351
Private forests:						
South East (a)	<i>n.a.</i>	<i>n.a.</i>		36,346		—
Other.....	<i>n.a.</i>	<i>n.a.</i>		4,000		285
Total private forests	1,118	<i>n.a.</i>		40,346		285
Total forests.....	8,406	<i>n.a.</i>		207,797		3,636

(a) Small plantations on farming properties have been included in 'Other'.
n.a. not available

The 1,019 acres of 'Other' softwoods planted in State forests during 1970 were mostly *Pinus pinaster* which is used on sites unsuitable for commercial growth of *Pinus radiata*. In all, some twenty-five 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 31 March

Location	1967	1968	1969	1970	1971
State forests:					
South East;	Acres				
Penola	30,868	31,550	32,630	33,428	34,326
Mount Burr	31,338	32,490	33,742	24,122	24,850
Mount Gambier	19,232	19,260	19,383	19,474	20,057
Myora	11,428	12,282	12,746	13,279	13,683
Caroline	10,425	11,632	12,005	13,339	14,460
Tantanoola.....	6,654	7,120	7,541	18,937	19,337
Comaum.....	5,992	6,421	6,846	7,232	7,379
Other.....	2,609	2,760	3,055	3,424	3,977
Total South East ..	118,546	123,515	127,950	133,235	138,069
Central;					
Mount Crawford.....	8,215	8,544	9,008	9,407	9,852
Kuitpo	6,372	6,397	6,403	6,438	6,438
Reservoir areas	1,876	2,140	2,222	2,403	2,531
Other.....	4,330	4,395	4,536	4,793	5,048
Total Central	20,793	21,476	22,170	23,041	23,869
Northern	6,771	6,981	7,201	7,220	7,373
Murray Lands	135	135	135	135	135
Western	958	968	968	1,343	1,357
Total State forests..	147,203	153,075	158,424	164,974	170,803
Private forests:					
South East (a)	34,995	37,194	37,629	} 39,969	39,447
Other.....	3,651	3,941	3,941		
Total private forests	38,646	41,135	41,570	39,969	39,447
Total forests...	185,849	194,210	199,994	204,943	210,250

(a) Small plantations on farming properties have been included in 'Other'.

Seedlings raised in nurseries are planted out at densities of 700-900 trees to the acre. A series of thinnings, starting when the trees are about 60 feet high, reduces density to 100-150 trees to the acre by about age thirty. These thinnings are carried out on a commercial basis and make the major contribution to present timber and pulpwood output. The final felling age is aimed at forty to fifty years although for management purposes some earlier felling has been made in the past. Trees of the same age may vary in height; some trees reach 60 feet after ten years of growth while others will not reach this height until twenty years of growth.

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.

PRODUCTION

In earlier years when large areas of plantations were being established expenditure by the Department 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 \$31,337,000 at 30 June 1971 of which \$17,232,000 was timber and land at net cost. During 1970-71 working account receipts from the forestry operations of the Department were \$11,054,000 as against payments of \$10,397,000.

Private Forests

Private forests accounted for approximately 20 per cent of the planted area at 31 March 1971. Three private companies operating pine plantations in the South East control 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 forest logs used during the years from 1965-66 to 1969-70.

Forest Log Usage, South Australia

Year	Softwoods		Hardwoods	
	Quantity	Value (a)	Quantity	Value (a)
	'000 sup ft (b)	\$	'000 sup ft (b)	\$
1965-66	320,981	5,898,746	5,849	128,825
1966-67	334,111	5,852,789	5,039	114,222
1967-68	312,593	5,303,640	5,147	117,696
1968-69	328,241	n.a.	5,418	n.a.
1969-70	p351,997	n.a.	p6,480	n.a.

(a) Value on mill skids.

(b) Full round measure.

n.a. not available

p preliminary

Log production is met from final fellings and thinning operations, and planned forest management ensures that the amount of timber cut each year does not exceed new growth. As planting during the ten years before 1925 was relatively small final fellings in recent years have been limited, and thinning operations currently provide over 80 per cent of log production.

With the increasing area of forest reaching the stage of regular and repeated thinning at intervals of about seven years, log production is rising steadily towards the full annual yield which can be cut indefinitely.

Other forest products include firewood, yacca gum and wattle bark.

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 some 600 persons in milling activities.

The townships of Mount Burr (population 586 at 30 June 1971) and Nangwarry (801) are maintained by the Department.

**State Forestry Employees, South Australia
At 30 June**

Classification	1967	1968	1969	1970	1971
Professional staff:					
Foresters.....	32	38	37	37	44
Other.....	35	37	39	40	41
Non-professional field staff	9	12	30	28	30
Clerical staff.....	114	112	110	112	115
Labour (silvicultural forest works, etc.)	254	313	263	258	285
Total	444	512	479	475	515

The extraction of timber from State forests is carried out by contractors. At 30 June 1971, 386 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 Commonwealth Scientific and Industrial Research Organization, the Waite Agricultural Research Institute, the University of Adelaide and the Department of Forestry of the Australian National University.

Research activities aimed at an expansion of forestry production include the development of fertilisers, both to stimulate growth and to bring into production land previously considered unsuitable, and the improvement of planting stock through selective breeding. Preventative research is concerned with the extremely important question of soil deterioration and with combating various diseases and pests. Permanent sample plots are maintained in departmental forests for 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 are suitable for planting in various climatic and soil conditions.

FOREST PROTECTION

The hot dry summer conditions in the State 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 before replanting to counteract the bark beetle which is only a problem on felled areas, 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 prawn, net and handline fisheries; in the open off-shore waters tuna, lobster, abalone and shark are sought; and inland in the River Murray a small quantity of fresh water fish is caught each year.

ADMINISTRATION

Exploitation of the State's fish resources is controlled by two Acts, the South Australian Fisheries Act, 1971 (which repealed the Fisheries Act, 1917-1969) and the Commonwealth *Fisheries Act* 1952-1970. Under the State Act, which is administered by the Fisheries and Fauna Conservation Department, provision is made for the licensing of fishermen, the registration of boats and gear, and the maintenance and improvement of port and harbour facilities. Control of fishing activity is maintained by licence limitations, the establishment of size limits, closed areas and closed seasons, the regulation of amount and type of gear, and the prohibition of the use of explosives or noxious substances.

Together with other changes to the existing legislation the South Australian Fisheries Act, 1971 provided for two classes of fishing licences. A person is not granted a class A fishing licence unless he satisfies the Director that he intends to carry on the business of fishing for profit as his principal business. A person is not granted a class B fishing licence unless he satisfies the Director that he intends to carry on the business of fishing for profit regularly as a seasonal or part-time business. In addition for both licences he has to satisfy the Director that he has the equipment, experience and resources sufficient to enable him to carry on the business of fishing efficiently and profitably.

The Commonwealth Fisheries Act which complements State legislation and provides for management of resources in extra-territorial waters now extends Australia's territorial fishing limit from three miles to twelve miles; this provision came into force on 30 January 1968. For the purpose of determining the twelve mile limit off the South Australian coast straight base lines have been drawn across the entrances to Spencer Gulf and Gulf St Vincent. This action has been taken in accordance with the International Convention of the Territorial Sea and the Contiguous Zone, to which Australia is a party.

FISHERMEN AND BOATS

Vessels exceeding 60 feet are engaged primarily in tuna fishing and prawn trawling while the majority of vessels in the 25 feet to 60 feet range are used for crayfishing and longlining for shark. Abalone divers generally operate from

small aluminium boats between 15 feet and 20 feet in length. The remainder are engaged mainly in handline and net fisheries. Boats and equipment were valued at \$11,255,000 in 1971-72. The numbers of persons and boats engaged in commercial fishing activities are shown in the following table.

Fishing: Persons and Equipment Engaged, South Australia

Particulars	1967-68	1968-69	1969-70	1970-71	1971-72
Persons engaged (a)	13,052	13,250	11,468	11,476	n.a.
Boats engaged:					
Under 20 feet	1,701	1,953	1,851	1,171	1,488
20 feet and under 30	432	481	472	345	388
30 feet and under 40	120	126	139	138	153
40 feet and under 50	68	84	78	82	81
50 feet and under 60	18	27	30	29	31
60 feet and under 70	8	7	11	12	10
70 feet and over	13	13	10	7	11
Total	2,360	2,691	2,591	1,784	2,162

(a) Includes full-time and part-time licensed fishermen.

n.a. not available

The decrease in the number of boats registered in 1970-71 followed the introduction of the 'Survey and Equipment of Fishing Vessels Regulations, 1969' requiring the owner of a fishing vessel to have it surveyed at least once every two years. However, in 1971-72 many fishermen who hoped to obtain 'A' or 'B' class fishing licences under the new Fisheries Act, 1971 re-registered their boats to show that they owned the necessary equipment as required under the new Act.

PRODUCTION

Fish

Tuna, shark, whiting, garfish 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 large quantities of whiting and garfish are netted.

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. Shark are taken by long line and, more recently, by mesh netting.

Australian salmon provides useful off-season fishing for a number of tuna fishermen with the best catches being taken in Spencer Gulf and around Kangaroo Island. Most of these 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 mulloway and snapper are highly regarded as table fish. Mulloway are netted in the River Murray Mouth area and snapper are taken by hand and long line in most areas of the State, and by netting in shallower parts of the gulfs and West Coast bays.

Approximately 210 part-time commercial fishermen using drum nets, gill nets and set lines are engaged in fishing on the River Murray and Lakes area. Murray cod and callop are the mainstay of this fishery. This is the only commercial source of fresh water fish in the State because of the general lack of permanent streams and lakes. 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 in the following table.

Fish: Production by Species, South Australia
Estimated Live Weight

Species	1966-67	1967-68	1968-69	1969-70	1970-71
	'000 lb				
Marine:					
Australian salmon	2,370	2,382	1,755	3,096	2,290
Bream (black)	35	94	131	38	8
Garfish	1,015	809	950	958	572
Mullet	545	526	506	364	135
Mulloway	359	325	167	92	89
Ruff	835	524	416	494	177
Shark	3,770	3,266	4,245	4,700	4,649
Short finned pike (a)	290	322	354	348	200
Snapper	936	855	793	1,065	784
Tuna	7,521	6,560	7,204	3,909	5,422
Whiting (spotted)	1,680	1,809	1,904	2,126	1,838
Other marine species	580	618	523	760	1,675
Total	19,937	18,092	18,948	17,950	17,839
Freshwater:					
Golden perch (callop)	300	120	172	180	198
Murray cod	90	50	33	105	43
Bony bream	<i>n.a.</i>	<i>n.a.</i>	564	344	663
Tench	<i>n.a.</i>	<i>n.a.</i>	115	109	284
Catfish	<i>n.a.</i>	<i>n.a.</i>	47	40	52
Other freshwater species	<i>n.a.</i>	<i>n.a.</i>	86	85	129
Total	(b) 390	(b) 170	1,017	863	1,369
Total fish production ...	(b) 20,327	(b) 18,262	19,965	18,813	19,208

(a) Previously known as snook.

(b) Freshwater species include golden perch and murray cod only.

n.a. not available

Production in 1960-61 was valued at \$1,610,000 and by 1968-69 had reached \$3,013,000. In 1969-70 it fell to \$2,874,000 with a further fall in 1970-71 to \$2,473,000, the gross values of the major species being:

	\$
Spotted whiting	960,000
Tuna	325,000
Shark	497,000
Garfish	126,000
Snapper	164,000
Australian Salmon	160,000
All other	241,000
	2,473,000

Crustaceans

Southern rock lobster are taken by pots 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. Since 1964-65 the value of southern rock lobster production has exceeded the value of scale fish species.

After experimental trawling in 1967 a prawn fishing industry was established in Spencer and St. Vincent Gulfs. Further stocks of prawns were later discovered in the waters of the Great Australian Bight near Streaky and Venus Bays. In the 1970-71 season approximately 2,675,000 lb of prawns valued at \$1,551,000 were landed.

Rock Lobster Production, South Australia^(a)

Particulars	1966-67	1967-68	1968-69	1969-70	1970-71
Estimated gross weight ('000 lb)	6,249	5,264	4,926	4,578	4,920
Value (\$'000)	3,249	3,369	3,448	3,204	4,478

(a) Previously known as crayfish.

Molluscs

Abalone are found in greatest numbers at depths of 40 to 90 feet on the extensive limestone bottom off the shores of western Eyre Peninsula. Smaller numbers are taken in Spencer Gulf, around Kangaroo Island and on the south-east coast. As yet there is no domestic market for this mollusc. Overseas exports of abalone from South Australia during 1970-71 were valued at \$875,000.

All divers must hold a professional fisherman's licence as well as a special abalone permit issued by the Department of Fisheries and Fauna Conservation.

Abalone Production, South Australia

Particulars	1966-67	1967-68	1968-69	1969-70	1970-71
Gross (in shell) weight ('000 lb)	630	4,051	3,519	2,383	2,426
Value (\$'000)	63	581	422	405	653

Squid and cuttlefish are taken in the general net fisheries and mainly sold for bait, although some are sold for human consumption.

In September 1969 with the encouragement of the Department of Fisheries and Fauna Conservation several private consortiums introduced the Japanese oyster from Tasmania into three South Australian estuaries, Coffin Bay, American River inlet and at Coobowie. The introduction was experimental and designed to discover whether the species may become acclimatised to the South Australian marine environment. If the experiments are successful, commercial enterprise in oyster farming will be encouraged.

MARKETING AND PROCESSING

Marketing and processing arrangements vary according to the species. Tuna are landed at Port Lincoln and then canned for local consumption or frozen for export. Large catches of salmon are generally landed and canned at Port Lincoln, a deep sea port. Southern rock lobster are tailed and frozen for export at most of the main ports, but some are cooked for local consumption. Some prawns are cooked and sold locally but most are frozen and exported. Abalone is either canned or frozen for export. 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.

All of the main landing ports have chilling or freezing facilities and many have processing plants. 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 being the Yorke Peninsula Fishermen's Co-operative based at Moonta. In addition to collecting, processing and distributing fish from the outports, SAFCOL also operates the Adelaide fish market. This is an auction market which handles fish for both members and non-members.

RESEARCH

The realisation that research is essential for effective fisheries management has promoted several research programmes. Tuna, crayfish, salmon and shark resources are being 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 shark, rock lobster, prawn and abalone research programmes. All programmes are directed towards providing a scientific basis for the management of the fisheries concerned.

The decision in 1966 of the Commonwealth and the States to establish a joint Fisheries Research and Development Fund gave impetus to already expanding research programmes. The Fishing Industry Research Account was established under the Commonwealth *Fishing Industry Research Act 1969* which authorises an appropriation from Commonwealth revenue equal to amounts collected from the fishing industry by the State Fisheries Authorities and expended by the States for the development and management of fisheries.

9.3 MANUFACTURING

DEVELOPMENT

Early factory production was orientated to local needs: thus brick kilns, flour mills, tanneries, distilleries and a candle and soap works were among factories recorded in the 1840s. 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 stripper 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 from 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 the largest country centre in South Australia.

There had been customs tariffs from very early days, but it was not until the 1880s that they reached a level offering protection to secondary industries. Further stimulus was provided in 1901 when the establishment of the Commonwealth provided for free trade between States and the erection of a common tariff barrier. After the 1914-18 War manufacturing industry again expanded with the assistance of still higher tariffs.

Despite certain industrial growth, South Australia in the 1930s was still basically a primary producing State; it is over the last thirty years that a rapid growth in the relative contribution of secondary industry to total production has taken place. Development in the 1930s 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 industrialisation process during the 1940s; it is since the 1939-45 War, however, that the most impressive development has taken place especially in the motor vehicle, electrical goods and household appliance industries.

In the following table various measures of industrial development have been recorded for the period since 1920.

Factory Development, South Australia

Period	Factories	Persons Employed (a)	Motive Power (b)	Value of Land, Buildings, Plant and Machinery	Value of Production
	No.	No.	'000 hp	\$'000	\$'000
Five-year average:					
1920-21 to 1924-25	1,578	33,382	84	11,415	9,789
1925-26 to 1929-30	1,823	37,617	150	35,816	25,344
1930-31 to 1934-35	1,710	27,409	185	35,206	16,308
1935-36 to 1939-40	2,025	42,337	266	36,680	26,338
1940-41 to 1944-45	2,172	64,778	359	66,218	50,210
1945-46 to 1949-50	2,788	72,302	467	83,876	76,564
1950-51 to 1954-55	3,410	84,490	638	144,164	180,598
1955-56 to 1959-60	4,211	94,045	904	282,584	273,508
1960-61 to 1964-65	5,608	106,262	1,371	512,841	398,608
Year:					
1963-64	5,826	110,813	1,456	560,908	427,356
1964-65	5,887	116,183	1,599	645,469	498,588
1965-66	6,065	118,343	1,653	699,989	527,477
1966-67	6,222	118,220	1,863	762,310	563,764
1967-68	6,255	121,417	1,886	813,610	631,104

(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.

FACTORY STATISTICS BEFORE 1968-69

A description of the content of, and definitions used for, factory statistics before 1968-69 was included on pages 445-7 of the *South Australian Year Book* 1970.

MANUFACTURING INDUSTRY STATISTICS

Manufacturing Census, 1968-69

For the year ended June 1969, the Censuses of Manufacturing and Electricity and Gas were conducted for the first time on an integrated basis with Censuses of Mining, Retail Trade and Selected Services, and Wholesale Trade. The electricity and gas industries, which were previously included in the Annual Factory Census, were the subject of separate censuses in 1968-69. The integration of these economic censuses was designed to increase substantially the usefulness and comparability of economic statistics collected and published by the Bureau and to form a basis for the sample surveys which supply current economic statistics from quarter to quarter, particularly those which provide data for the quarterly national income and expenditure estimates.

The economic censuses of Manufacturing, Mining and Retail Trade previously conducted in Australia were originally designed and subsequently developed primarily to provide statistics for particular industries on a basis which would best suit the requirements of users interested in statistics of those industries. More recently there has been a growth of interest in statistics describing activity in the economy as a whole—reflected, for example, in the development of employment and earnings statistics, surveys of capital expenditure and stocks and the whole field of national accounts statistics. For such purposes statistics derived from economic censuses in the past have had serious limitations despite the fact that they covered a broad area of the whole economy. Because of the

special-purpose nature of each of the censuses, there were no common definitions of data, there was no common system of reporting units, and, as a standard industrial classification was not used for these censuses, industry boundaries were not defined in ways which would avoid overlapping or gaps occurring between the industrial sectors covered. For these reasons, direct aggregation and comparison of statistics from different censuses were not possible.

The integration of these economic censuses meant that for the first time they were being collected on the basis of a common framework of reporting units and data concepts and in accordance with a standard industrial classification. As a result, the statistics for the industries covered by the censuses are now provided with no overlapping or gaps in scope, and in such a way that aggregates for certain important economic data such as value added, employment, wages and salaries, fixed capital expenditure and stocks can be obtained on a consistent basis for all sectors of the economy covered by the censuses.

For the integration of the various censuses it was necessary to undertake three major developments:

- (a) the census units for which the statistics were to be collected (factories, mines, shops etc.) had to be defined and identified in consistent ways and recorded in a central register, together with identifying data about the businesses owning and operating them;
- (b) a standard industrial classification had to be adopted so that the census units could be classified in consistent ways and to enable the boundaries of the various economic censuses to be determined without gaps or overlapping between them;
- (c) in order to bring the items of data to a consistent basis of definition in all censuses, it was necessary to revise all the forms used in previous censuses.

The standardisation of census units in the integration of economic censuses means that the basic census unit (the establishment), in general, now covers all the operations carried on under the one ownership at a single physical location. The manufacturing establishment is thus one predominantly engaged in manufacturing but the data supplied for it now covers (with a few exceptions) all activities at the location. Previously, the manufacturing establishment covered only a specified manufacturing activity primary to one class of industry. It now covers, in addition, subject to certain exceptions mentioned below:

- (a) any other manufacturing activity (*i.e.* production of goods primary to another class of industry);
- (b) any selling and distribution activities connected with the products manufactured;
- (c) any non-manufacturing activity (*e.g.* merchandising of goods not manufactured by the establishment; extraction of raw materials for use by the establishment).

The exceptions in general relate to locations where the subsidiary activities (in terms of gross value) exceed \$1 million, which are treated for statistical purposes as two or more establishments corresponding to the various kinds of activity carried on.

The establishment statistics (other than 'number of establishments') also include data relating to separately located administrative offices and ancillary units serving the establishment and forming part of the business enterprise which owns and operates the establishment. These units were formerly excluded from the manufacturing census. They are units such as head offices, storage premises and

manufacturers' sales branches or sales offices (except those of the kind which distribute to customers from stocks held by such branches or offices which are treated as establishments in the wholesale census).

The Australian Standard Industrial Classification (ASIC), described in the publication *Australian Standard Industrial Classification (Preliminary Edition) 1969 Vol. 1*, defines the industries in the economy for statistical purposes thus permitting the scope of the different economic censuses to be specified without gaps or overlapping between them. It also sets out standard rules for identifying the statistical units (e.g. establishments) and for coding them to the industries of the classification. This classification is broadly convertible to the International Standard Industrial Classification adopted by the United Nations Statistical Commission. The adoption of the ASIC has resulted in changes in scope between the 1968-69 economic censuses and the individual economic censuses conducted in previous years. The main changes in scope in the manufacturing census, apart from providing for a separate census for electricity and gas, are as follows:

- (a) Establishments mainly engaged in the following activities, previously included in manufacturing census, are excluded in 1968-69: motor vehicle repairs but not engine reconditioning; repair and servicing of agricultural machinery; dry-cleaning, laundering and clothes dyeing services; watch, clock and jewellery repairing; boot and shoe repairing; tyre retreading and repairing; custom dressmaking and tailoring (including clothing repair and alterations); installing and repairing of blinds and awnings, making up and installing of curtains; and repair of domestic appliances. Establishments mainly engaged in these activities are included in the 1968-69 Census of Retail Trade and Selected Services or the Census of Wholesale Trade.
- (b) Establishments mainly engaged in the following activities, previously excluded in most States from manufacturing censuses, are included in 1968-69: slaughtering; milk treatment; and publishing.

Manufacturing Establishments: Employment and Wages and Salaries by Industry Sub-division, South Australia, 1968-69 (Preliminary)

Industry Sub-division	Number of Establishments Operating During 1968-69	Persons Employed (a)			Wages and Salaries
		Males	Females	Total	
	No.	No.	No.	No.	\$m
Food, beverages and tobacco	557	11,183	4,330	15,513	42.2
Textiles, clothing and footwear	165	2,596	4,338	6,934	14.7
Wood, wood products and furniture ..	558	6,744	1,062	7,806	19.3
Paper and paper products, printing ..	253	5,035	1,797	6,832	20.2
Chemical, petroleum and coal products	101	2,939	613	3,552	12.8
Non-metallic mineral products	224	3,987	396	4,383	14.3
Basic metal products	35	8,749	433	9,182	35.1
Transport equipment	149	24,424	1,499	25,923	74.9
Fabricated metal products, other machinery and equipment	974	26,603	7,332	33,935	99.7
Miscellaneous manufacturing	208	2,809	1,450	4,259	11.4
Total manufacturing.....	3,224	95,069	23,250	118,319	344.6

(a) Employees on the payroll of the last pay period in June, 1969. Includes working proprietors.

An indication of the effect of the above changes arising from the adoption of the new industrial classification, can be gained from the following comparison. In the 1967-68 manufacturing census there were approximately 6,200 manufacturing establishments (excluding electricity and gas establishments) in South Australia. Of these, approximately 3,200 would have been included in the 1967-68 census if ASIC had been used. This decrease of 3,000 in the number of manufacturing establishments is because of the exclusion from the manufacturing census of the establishments referred to in the preceding paragraph.

The third step in integrating the censuses, whereby the items of data on the census forms were standardised for all census sectors, has meant changes in the content of the statistics. For example, the value of 'turnover' is now collected instead of the value of output at the factory, and purchases and selected expenses are collected as well as the value of specified materials, fuels, etc., used. However the underlying concept of 'value added', is similar to the former concept 'value of production', even though its method of derivation is different. Value added, the basic measure of the establishment's contribution to total production, is now calculated as turnover⁽¹⁾ less purchases and transfers in (from other establishments of the enterprise), plus increase (or less decrease) in stocks. In the past the corresponding item, value of production, was obtained by deducting the value of materials, fuels, etc., used from the value of output at the factory. A detailed comparison of the method of derivation is shown in the following table.

Value of Production 1967-68	Value Added 1968-69
Selling value at works, exclusive of all delivery costs or charges, of goods manufactured, treated or worked up during the year, including by-products, <i>plus</i> Value of other work done, . . . such as repairing and making up for customers, etc.	Sales, and transfers out (to other establishments of the enterprise), of goods manufactured by the establishment, <i>plus</i> Sales and transfers out of goods not manufactured by the establishment, <i>plus</i> Bounties and subsidies on production(a), <i>plus</i> All other operating income, <i>plus</i> Capital work done for own use, or for rental or lease (a)
<i>Equals:</i> Value of output	<i>Equals:</i> Value of turnover
<i>Less:</i> Value of materials used Power, fuel and light used Water used Lubricating oils used Repairs, etc. Containers used	<i>Plus:</i> Value of stocks at 30 June 1969 <i>Less:</i> Value of stocks at 30 June 1968 <i>Less:</i> Purchases and transfers in of materials, electricity, fuels, containers etc. Purchases and transfers in of goods for resale Charges for commission and subcontract work Repair and maintenance expenses Outward freight and cartage, motor vehicle running expenses, sales commission payments
<i>Equals:</i> Value of production	<i>Equals:</i> Value added

(a) Omitted from 1968-69 statistics which are preliminary and subject to revision.

Even though the concept of value added is similar to value of production, direct comparison of 1968-69 and 1967-68 figures will not be possible because of the change in census units already mentioned which has resulted in the value

(1) In this chapter 'sales, transfers out and other operating revenue' appears instead of 'turnover', as two components of turnover have been omitted from the preliminary statistics which are shown for 1968-69. These are 'capital work done for own use' and 'bounties and subsidies on production'.

added for the whole establishment being reported, not merely the value added for the manufacturing process. Comparison is also affected, of course, by the change in the scope of the manufacturing census because of the adoption of ASIC.

Manufacturing Establishments: Summary of Operations by Industry Sub-division, South Australia, 1968-69 (Preliminary)

Industry Sub-division	Number of Establishments Operating during 1968-69	Sales, Transfers out and Other Operating Revenue	Stocks at 30 June		Purchases, Transfers in and Selected Expenses	Value Added (a)
			1968	1969		
	No.		\$ million			
Food, beverages and tobacco	557	295.7	45.4	51.3	207.1	94.5
Textiles, clothing and footwear	165	55.6	11.5	11.3	31.1	24.3
Wood, wood products and furniture ..	558	83.3	13.2	14.0	49.4	34.7
Paper and paper products, printing ..	253	78.9	9.5	9.6	37.7	41.3
Chemical, petroleum and coal products	101	69.1	12.2	12.5	46.2	23.2
Non-metallic mineral products	224	62.9	8.7	8.9	33.0	30.1
Basic metal products	35	208.5	45.6	51.2	155.7	58.4
Transport equipment	149	359.2	58.9	69.4	217.8	151.9
Fabricated metal products, other machinery and equipment	974	356.3	67.0	72.6	200.2	161.7
Miscellaneous manufacturing	208	44.2	6.2	7.4	25.5	19.9
Total manufacturing	3,224	1,613.7	278.3	308.2	1,003.8	639.8

(a) Value of sales, transfers out, and other operating revenue plus stocks at 30 June 1969 less purchases, transfers in and selected expenses and stocks at 30 June 1968.

Manufacturing Establishments: Summary of Operations, South Australia and Australia, 1968-69 (Preliminary)

Item	Unit	South Australia	Australia
Number of establishments operating during 1968-69	No.	3,224	38,834
Persons employed (a)	No.	118,319	1,320,167
Wages and salaries	\$m	344.6	3,996.9
Sales, transfers out and other operating revenue	\$m	1,613.7	19,349.7
Stocks at 30 June:			
1968	\$m	278.3	3,204.6
1969	\$m	308.2	3,447.4
Purchases, transfers in and selected expenses	\$m	1,003.8	12,003.2
Value added (b)	\$m	639.8	7,589.0

(a) Employees on the payroll of the last pay period in June 1969; includes working proprietors.

(b) Value of sales, transfers out and other operating revenue plus stocks at 30 June 1969 less purchases, transfers in and selected expenses and stocks at 30 June 1968.

For a more detailed description of the Integrated Economic Censuses reference should be made to *South Australian Year Book* 1971, pages 446-57.

THE STRUCTURE AND LOCATION OF SECONDARY INDUSTRY

Post-war industrialisation 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 near Adelaide. 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 in or near Adelaide.

Generally industrial plants outside the Adelaide Statistical Division 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 fertiliser 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 produce factories and fish processing plants.

In the following tables details are given for factories in the principal manufacturing industries in South Australia by statistical divisions. Figures have been rounded to permit publication which would otherwise have been prevented by confidentiality considerations.

Manufacturing Industries: Timber, Furniture and Paper Products, South Australia, 1967-68

Statistical Division	Factories	Persons Employed	Salaries and Wages Paid	Costs of Production		Value of Output
				Materials	Other	
	Number			\$'000		
Adelaide	660	10,200	24,134	44,795	2,023	91,591
Central	20	60	92	57	9	245
Kangaroo Island	—	—	—	—	—	—
Mount Lofty Ranges .	40	220	428	483	46	1,275
Murray	30	200	450	1,137	26	1,995
South East	70	2,580	7,074	11,737	4,522	32,995
Eyre	10	70	174	243	14	593
Northern	30	200	445	676	38	1,514
Far North	—	—	—	—	—	—
Total State ...	850	13,530	32,798	59,128	6,678	130,208

PRODUCTION

Manufacturing Industries: Food and Drink, South Australia, 1967-68

Statistical Division (a)	Factories	Persons Employed	Salaries and Wages Paid	Costs of Production		Value of Output
				Materials	Other	
	Number		\$'000			
Adelaide	350	7,080	17,241	59,548	15,182	113,167
Central	30	180	340	714	313	1,867
Mount Lofty Ranges .	110	2,000	4,803	20,622	4,302	38,087
Murray	90	1,830	4,276	15,163	5,486	29,842
South East	50	510	1,189	7,188	527	10,445
Eyre	30	350	721	2,827	542	5,078
Northern	40	300	630	1,784	358	3,882
Total State ...	700	12,260	29,242	107,923	26,722	202,549

(a) No details are available for Kangaroo Island and Far North Divisions.

Manufacturing Industries: Textiles and Clothing, South Australia, 1967-68

Statistical Division (a)	Factories	Persons Employed	Salaries and Wages Paid	Costs of Production		Value of Output
				Materials	Other	
	Number		\$'000			
Adelaide	460	7,050	13,509	18,428	1,890	43,433
Central	10	30	33	8	11	82
Mount Lofty Ranges .	30	510	976	1,453	233	3,483
Murray	20	60	68	29	18	192
South East	20	140	190	580	41	1,027
Eyre	10	40	46	12	13	126
Northern	30	140	161	189	37	633
Total State ...	580	7,990	15,008	20,704	2,246	49,021

(a) No details are available for Kangaroo Island and Far North Divisions.

Manufacturing Industries: Non-Metallic, Mineral and Chemical Products
South Australia, 1967-68

Statistical Division (a)	Factories	Persons Employed	Salaries and Wages Paid	Costs of Production		Value of Output
				Materials	Other	
	Number		\$'000			
Adelaide	300	6,750	20,408	71,390	15,546	150,115
Central	10	160	447	2,096	268	3,352
Mount Lofty Ranges .	20	300	816	621	1,207	4,465
Murray	10	30	80	143	23	303
South East	20	70	162	339	36	817
Eyre	10	140	407	2,984	329	4,391
Northern	20	80	187	954	110	1,689
Total State ...	380	7,520	22,511	78,556	17,521	165,179

(a) No details are available for Kangaroo Island and Far North Divisions.

**Manufacturing Industries: Basic and Fabricated Metal Products, South Australia
1967-68**

Statistical Division	Factories	Persons Employed	Salaries and Wages Paid	Costs of Production		Value of Output
				Materials	Other	
	Number			\$'000		
Adelaide	2,240	60,150	172,972	335,260	21,984	652,058
Central	150	520	873	1,184	55	2,720
Kangaroo Island	10	40	74	89	3	224
Mount Lofty Ranges .	180	710	1,294	1,794	102	4,169
Murray	180	1,380	2,938	5,687	370	10,839
South East	180	790	1,581	2,364	114	5,425
Eyre	130	540	1,044	1,233	66	3,086
Northern	200	8,430	28,544	82,272	25,620	159,110
Far North	10	90	219	221	10	557
Total State ...	3,290	72,640	209,537	430,103	48,325	838,189

**Manufacturing Industries: Total, All Products, South Australia
1967-68**

Statistical Division	Factories	Persons Employed	Salaries and Wages Paid	Costs of Production		Value of Output
				Materials	Other	
	Number			\$'000		
Adelaide	4,370	96,650	262,350	556,253	59,550	1,106,545
Central	230	960	1,794	4,066	656	8,300
Kangaroo Island	20	50	91	123	11	306
Mount Lofty Ranges .	380	3,850	8,660	25,771	5,974	52,940
Murray	330	3,520	7,834	22,206	5,930	43,336
South East	360	4,120	10,270	22,578	5,259	51,389
Eyre	190	1,140	2,398	7,314	968	13,325
Northern	330	9,180	30,043	86,323	26,187	167,531
Far North	20	120	272	300	19	748
Total State ...	6,220	119,590	323,713	724,935	104,554	1,444,419

PART 10

COMMERCE

10.1 INTERNAL TRADE

Extensive statistics of retail trade have been collected and published over many years. The first full census of wholesale trade, however, was conducted as part of the integrated economic censuses of 1968-69, outlined briefly below. For a detailed description of these censuses, reference should be made to the *South Australian Year Book* 1971 pages 446-57.

ECONOMIC CENSUSES, 1968-69

For the year ended 30 June 1969 the censuses of wholesale trade, and of retail trade and selected services, were conducted for the first time on an integrated basis with censuses of Mining, Manufacturing and Electricity and Gas Production and Distribution. The integration of these economic censuses was designed to increase substantially the usefulness and comparability of the kinds of statistics already being collected and published by the Bureau and to form a basis for the sample surveys which supply current economic statistics from quarter to quarter, particularly those which provide data for the quarterly national income and expenditure estimates.

The integration of these economic censuses meant that for the first time they were being collected on the basis of a common framework of reporting units and data concepts and in accordance with a standard industrial classification. As a result, the statistics for the industries covered by the censuses are now provided with no overlapping or gaps in scope, and in such a way that aggregates for certain important and economic data such as value added, employment, salaries and wages, fixed capital expenditure and stocks can be obtained on a consistent basis for all sectors of the economy covered by the censuses.

The standardisation of census units in the integration of economic censuses means that the basic census unit (the establishment) in general now covers all the operations carried on under the one ownership at a single physical location.

The retail establishment is thus one predominantly engaged in retailing, and the wholesale establishment one predominantly engaged in wholesaling, but the data supplied for them now cover, with a few exceptions, all activities at the location.

Establishment statistics, other than the number of establishments, also include data relating to separately located administrative offices and ancillary units serving the establishment and forming part of the business (enterprise) which owns and operates the establishment. These units, such as head offices, storage premises, transport depots and motor vehicle repair and maintenance workshops, were formerly excluded from censuses.

Figures in the summary tables shown in this section were obtained from the 1968-69 censuses and are preliminary only and subject to revision. Further and more detailed statistics from the 1968-69 censuses, including details for commodities and for smaller areas, will be published progressively.

WHOLESALE TRADE

The term wholesale trade is used in the wholesale census in the broad sense to include the resale (by agents or principals) of new or used goods to retailers or other wholesalers or to institutional (including government), professional or other business users (including farmers and builders). The more important types of business engaged in wholesale trade are wholesale merchants, who take title to the goods they sell; manufacturers sales branches; commission agents, including import and export agents and purchasing agents; petroleum products distributors; and co-operative and marketing boards engaged in marketing farm products.

Each establishment in the integrated censuses is identified in terms of a particular location and all sales, employment etc., are recorded for that location regardless of the size of the sales territory covered, *i.e.* the location of customers. For this reason, all of the sales etc., of the wholesale establishments located in the State of Victoria, for example, are credited to Victoria even though the sales territories may extend over several States.

In the tables which follow, wholesale establishments have been classified by type of operation according to the nature of the functions performed. The basis of this classification is the description of 'type of operation' reported by businesses for each individual wholesale establishment.

Wholesale Establishments: Summary of Operations by Type of Operation, South Australia, 1968-69 (Preliminary)

Type of Operation	Number of Establishments Operating During 1968-69	Sales on own Account, Transfers out and Other Operating Revenue	Stocks at 30 June		Purchases, Transfers in and Selected Expenses	Value Added (a)
			1968	1969		
	No.		\$ million			
Primary produce dealers or agents . . .	395	157.2	9.8	13.4	131.5	29.3
Wholesale merchants:						
Import and/or export merchants . . .	194	76.4	11.8	12.9	65.0	12.5
Other wholesale merchants	1,633	578.0	74.5	77.5	482.6	98.3
Manufacturers' sales branches holding stocks	257	182.0	20.0	22.5	154.6	29.9
Commission agents or brokers	414	20.8	1.4	1.5	12.2	8.8
Petroleum distributors	189	172.4	12.8	11.5	128.0	43.1
Repairers and lessors of machinery and equipment	81	8.9	0.6	0.7	4.9	4.1
Total wholesale trade	3,163	1,957	130.9	140.0	978.9	226.0

(a) Sales on own account, transfers out and other operating revenue plus increase (or less decrease) in the value of stocks, less purchases, transfers in and selected expenses.

Wholesale Establishments: Employment and Wages and Salaries, by Type of Operation, South Australia, 1968-69 (Preliminary)

Type of Operation	Number of Establishments Operating During 1968-69	Persons Employed (a)			Wages and Salaries
		Males	Females	Total	
		Number			\$m
Primary produce dealers or agents	395	3,871	1,425	5,296	14.6
Wholesale merchants:					
Import and/or export merchants	194	1,195	560	1,755	4.9
Other wholesale merchants	1,633	12,761	4,739	17,500	44.9
Manufacturers' sales branches holding stocks	257	2,549	945	3,494	10.4
Commission agents or brokers	414	1,102	593	1,695	3.6
Petroleum distributors	189	1,665	289	1,954	6.8
Repairers and lessors of machinery and equipment	81	350	88	438	1.1
Total wholesale trade	3,163	23,493	8,639	32,132	86.3

(a) At end of June 1969; includes working proprietors.

Wholesale Establishments: South Australia and Australia, 1968-69 (Preliminary)

Particulars	South Australia	Australia
	Number	
Establishments operating during 1968-69	3,163	34,244
Persons employed (a)	32,132	347,930
	\$ million	
Wages and salaries	86.3	1,008.4
Sales on own account, transfers out and other operating revenue	1,195.7	14,964.1
Stocks at 30 June:		
1968	130.9	1,671.3
1969	140.0	1,831.9
Purchases, transfers in and selected expenses	978.9	12,411.2
Value added (b)	226.0	2,713.6

(a) At end of June 1969; includes working proprietors.

(b) Sales on own account, transfers out and other operating revenue plus increase (or less decrease) in the value of stocks, less purchases, transfers in and selected expenses.

Another 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	1966-67	1967-68	1968-69	1969-70	1970-71
Gross taxable sales:	\$'000				
At a tax rate of:					
2½ per cent	47,234	52,564	56,261	60,572	65,424
12½ per cent	114,300	120,124	16,110	—	—
15 per cent	—	—	116,646	145,890	154,440
25 per cent	62,120	69,657	74,141	90,867	15,780
27½ per cent	—	—	—	—	75,437
Exempt sales	557,775	603,292	675,205	694,597	768,205
Total sales	781,429	845,637	938,364	991,928	1,079,284

RETAIL TRADE

The definition of 'retail trade' adopted in the 1968-69 Retail Census is the same as the definition used in previous retail censuses, *i.e.* the resale of new and used goods to final consumers for personal and household consumption. The basis on which previous censuses of retail establishments were conducted is described on pages 453-6.

Previous censuses of retail establishments included a number of activities that were also covered by the annual manufacturing census: principally motor vehicle repairs, dry cleaning, shoe repairs and tyre retreading. Takings from these activities were reported in the retail trade census but not included in 'retail sales'. The following activities were also included in previous retail censuses if they were carried on in establishments which had retail sales of more than \$1,000: custom dressmaking and custom tailoring, clothing repair and alterations, making up and repair of blinds, awnings and curtains, repairs of domestic appliances, panel beating and crash repairs, watch and clock repairs, jewellery repairs, and baking of cakes in cake shops. These activities were also covered by the annual manufacturing census.

With the adoption of the new establishment concept in the 1968-69 economic censuses, no establishment was required to supply returns in more than one census and all establishments mainly engaged in the above activities are now included in the retail trade census only.

Censuses of retail trade in Australia have traditionally included certain types of service establishments in their scope, in addition to retail establishments more narrowly defined. Some of the service establishments so included make retail sales in appreciable volume as well as providing important services for which the statistics can be conveniently collected in the framework of the retail census.

The census of retail trade for 1968-69 included the following types of service establishments in its scope in addition to establishments classified to Retail Trade: motion picture theatres; cafes and restaurants; licensed hotels, motels and wine saloons; licensed clubs; laundry and dry cleaning services; and hairdressing and beauty salons. Of these service industries, cafes and restaurants, licensed hotels, motels and wine saloons and hairdressing and beauty salons had been included in previous censuses as retail establishments, while the remainder were included in the supplementary collections made from establishments not described as retail establishments.

Some changes in the scope of the retail census have been made for reasons connected with the introduction of a standard industrial classification; for example, bread vending and milk vending by independent vendors mainly engaged in retailing bread or milk by home delivery service are included for the first time.

Because of the changes which have occurred in the definition of census units, the scope of the census and the items of data collected, it is not possible to make direct comparisons between the figures obtained from the 1968-69 Retail Census and those obtained from previous retail censuses or from the monthly and quarterly retail surveys based on previous retail censuses.

**Retail Establishments: Employment and Wages and Salaries, by Industry Group,
South Australia, 1968-69 (Preliminary)**

Industry Group	Number of Establishments Operating During 1968-69	Persons Employed (a)			Wages and Salaries
		Males	Females	Total	
	No.	No.	No.	No.	\$m
Department, variety and general stores	90	3,475	7,037	10,512	19.2
Food stores	5,353	9,390	12,730	22,120	22.7
Bread and milk vendors.....	592	962	371	1,333	0.2
Clothing, fabric and furniture stores..	1,604	2,846	4,159	7,005	10.6
Household appliance and hardware stores.....	797	2,522	1,404	3,926	8.1
Motor vehicle dealers, petrol and tyre retailers	2,778	13,377	3,175	16,552	32.6
Other retailers	1,800	3,207	3,625	6,832	8.8
Total retail establishments...	13,014	35,779	32,501	68,280	102.1
Motion picture theatres	114	673	544	1,217	1.4
Restaurants and licensed hotels	951	5,528	6,090	11,618	18.9
Licensed clubs	52	413	229	642	1.1
Laundries and dry cleaners	163	571	1,176	1,747	3.4
Hairdressing and beauty salon	902	516	2,084	2,600	2.3
Total selected service establishments	2,182	7,701	10,123	17,824	27.2
Total retail and selected service establishments	15,196	43,480	42,624	86,104	129.3

(a) At end of June 1969; includes working proprietors and unpaid helpers working at least 15 hours during the week.

**Retail Establishments: Summary of Operations by Industry Group, South
Australia, 1968-69 (Preliminary)**

Industry Group	Number of Establishments Operating During 1968-69	Sales and Other Operating Revenue	Stocks at 30 June		Purchases, Transfers in and Selected Expenses	Value Added (a)
			1968	1969		
	No.		\$ million			
Department, variety and general stores	90	135.2	18.0	20.1	101.6	35.7
Food stores	5,353	299.4	16.6	18.3	243.2	57.9
Bread and milk vendors	592	13.9	(c)	(c)	11.1	2.8
Clothing, fabrics and furniture stores	1,604	88.5	18.1	18.9	63.9	25.4
Household appliance and hardware stores	797	64.1	10.1	11.0	44.3	20.7
Motor vehicle dealers, petrol and tyre retailers	2,778	365.3	32.7	35.9	290.1	78.4
Other retailers	1,800	71.9	11.7	12.4	48.6	24.0
Total retail establishments	13,014	1,038.3	107.1	116.6	802.8	245.0
Motion picture theatres	114	5.7	0.1	0.1	2.6	3.1
Restaurants and licensed hotels	951	105.3	3.4	3.6	64.3	41.2
Licensed clubs	52	4.0	0.2	0.2	2.1	1.9
Laundries and dry cleaners	163	7.6	0.2	0.2	1.4	6.2
Hairdressing and beauty salons	902	6.9	0.2	0.3	1.6	5.4
Total selected service establishments	2,182	129.6	4.1	4.4	72.0	57.9
Total retail and selected service establishments	15,196	1,168.0	111.2	121.0	874.9	302.9

(a) Sales and other operating revenue plus increase (or less decrease) in the value of stocks, less purchase transfers in and selected expenses.

**Retail Establishments and Selected Service Establishments: South Australia
and Australia, 1968-69 (Preliminary)**

Particulars	South Australia	Australia
	Number	
Establishments operating during 1968-69	15,196	164,078
Persons employed (a)	86,104	937,319
	\$ million	
Wages and salaries	129.3	1,522.9
Sales and other operating revenue	1,168.0	13,953.6
Stocks at 30 June:		
1968	111.2	1,220.1
1969	121.0	1,328.1
Purchases, transfers in and selected expenses	874.9	10,343.0
Value added (b)	302.9	3,718.6

(a) At end of June 1969; includes working proprietors and unpaid helpers working at least 15 hours during the week.

(b) Sales, and other operating revenue plus increase (or less decrease) in the value of stocks, less purchases, transfers in and selected expenses.

Censuses of Retail Establishments

In general terms, censuses of retail activity held before 1968-69 covered the retail trading of establishments which normally sold goods by retail to the general public from fixed premises such as shops, rooms, kiosks and yards. Retail

trading of wholesalers and manufacturers who sell regularly by retail to the general public was also included. Sales by itinerant vendors, sales from casual stalls and booths, and sales by establishments with total retail sales of less than \$1,000 in census years were excluded. Censuses of Retail Establishments on this basis were conducted throughout Australia in respect of the years ended 30 June 1948, 1949, 1953, 1957 and 1962.

The design of the censuses was such that particulars reported indicated the value of retail sales, to the final consumer, of new and secondhand goods generally used for household and personal purposes. For this reason reported sales of building materials, farm and industrial machinery and equipment, earthmoving equipment, etc. were excluded. For the same reason, and also because of difficulties in obtaining reliable and complete reporting, retailers were requested to report separately sales of builders hardware and supplies, business machines and equipment, grain, feed, fertilisers and agricultural supplies, and tractors and these were excluded from the 1961-62 Census. Retail sales of motor vehicles, parts, etc. were 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 1956-57 and 1961-62 Censuses are shown in the following table.

**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 at 30 June	
	1956-57	1961-62	1956-57	1961-62	1957	1962
	No.	No.	\$'000	\$'000	\$'000	\$'000
Food stores:						
Grocers	2,088	2,011	76,580	97,664	10,882	11,982
Butchers	915	1,034	29,134	33,622	348	370
Fruiterers	620	613	12,630	14,342	328	334
Bakers	404	392	11,076	12,678	348	388
Confectioners and milk bars	770	1,059	16,112	25,322	838	1,248
Cafes	104	117	930	984	84	74
Fishmongers and poulterers	125	177	1,960	2,740	46	54
Other food stores	206	252	4,478	6,294	172	260
Hotels, tobacconists etc.:						
Hotels, wine saloons, etc.	641	650	41,686	49,598	1,672	2,194
Tobacconists	106	70	2,648	1,622	256	184
Tobacconists and hairdressers	281	319	2,242	1,618	218	176
Department stores, clothiers, drapers etc.:						
Department stores	9	12	48,924	69,048	8,858	10,490
Clothiers and drapers	1,060	988	45,974	45,484	11,072	10,982
Footwear stores	187	209	6,454	7,678	2,096	2,588
Hardware, electrical goods, furniture stores etc.:						
Domestic hardware stores	305	274	4,218	5,276	1,266	1,310
Electrical goods, and musical instrument stores	344	402	13,242	24,418	2,740	4,848
Furniture and floor coverings stores ..	194	184	15,896	14,946	3,578	3,650
Other goods stores:						
Chemists	403	466	10,634	18,326	1,924	3,056
Newsagents and booksellers	208	237	5,584	7,026	968	1,302
Sports goods stores	43	64	1,244	1,614	354	454
Watchmakers and jewellers	149	138	3,222	2,954	1,552	1,442
Cycle stores	67	51	922	852	292	340
Florists and nurserymen	93	85	864	1,036	50	50
Other types of business	264	290	4,808	5,132	1,028	1,480
Motor vehicle dealers, garages etc.:						
New motor vehicle dealers, garages and service stations	1,232	1,405	97,030	110,846	10,354	11,422
Used motor vehicle dealers	157	154	24,146	25,826	2,640	3,260
Motor parts and tyre dealers	85	159	4,374	7,762	730	1,468
Total	11,060	11,812	487,012	594,708	64,694	75,406

The next table shows, for the 1956-57 and 1961-62 Censuses, the number of establishments selling goods in each of thirty 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 the individual establishments.

**Retail Establishments and Sales by Commodity Groups, South Australia
Censuses 1956-57 and 1961-62**

Commodity Group	Establishments		Retail Sales of Goods			
			Total		Per Head of Population	
	1956-57	1961-62	1956-57	1961-62	1956-57	1961-62
	No.	No.	\$'000	\$'000	\$	\$
Foodstuffs:						
Groceries	3,168	3,480	55,296	71,012	63.80	72.50
Butchers meat	1,006	1,439	29,064	35,198	33.80	35.90
Fresh fruit and vegetables	1,721	2,050	12,812	14,868	14.80	15.20
Bread, cakes and pastry	2,188	2,696	13,294	16,308	15.40	16.60
Confectionery, icecream, softdrinks	3,554	4,172	16,198	20,976	18.80	21.40
Other types of food	1,945	2,491	8,486	12,810	10.00	13.10
Beer, tobacco etc.:						
Beer, wine and spirits	747	740	39,772	47,280	46.20	48.30
Tobacco and cigarettes	5,003	6,046	17,386	21,558	20.20	22.00
Clothing, drapery etc.:						
Clothing:						
Mens and boys	1,115	1,125	21,366	24,182	24.60	24.70
Womens, girls and infants	1,231	1,206	36,434	39,674	41.80	40.50
Drapery, piecegoods, blankets, etc. ..	928	1,048	13,214	16,792	15.80	17.20
Footwear:						
Mens and boys	835	831	4,148	5,048	4.80	5.20
Womens, girls and infants	761	783	6,968	8,940	8.00	9.10
Hardware (a), electrical goods etc.:						
Domestic hardware	1,478	1,587	11,006	12,298	12.80	12.60
Radios and radiograms	594	487	3,902	3,352	4.60	3.40
Television and accessories (b)		400		7,658		7.80
Musical instruments, records, etc.	266	236	1,990	2,032	2.40	2.10
Domestic refrigerators	539	428	5,288	6,360	6.20	6.50
Other electrical goods	943	945	7,532	11,016	8.80	11.20
Furniture and floor coverings:						
Furniture	421	407	12,612	13,900	14.60	14.20
Floor coverings	351	360	6,200	6,724	7.20	6.90
Other goods:						
Chemists goods (c)	1,334	1,832	13,052	22,614	15.20	23.10
Newspapers, books and stationery	1,543	1,805	8,680	10,642	10.00	10.90
Sporting requisites, travelgoods	571	656	2,442	3,146	2.80	3.20
Jewellery, watches, clocks, etc.	616	668	4,720	4,904	5.40	5.00
Other goods (not specified above)	888	1,064	10,406	12,272	12.40	12.50
Total (excluding motor vehicles etc.)..	(e)	(e)	362,268	451,564	420.40	461.10
Motor vehicles etc. (d):						
Motor vehicles (incl. motor cycles);						
New	305	470	50,518	53,538	58.60	54.70
Used	600	611	36,642	41,436	42.60	42.30
Motor parts, accessories, etc.	1,291	1,531	15,448	17,732	18.00	18.10
Petrol, oil etc.	1,488	1,715	22,136	30,438	25.60	31.10
Total motor vehicles	(e)	(e)	124,744	143,144	144.80	146.20
Grand Total	11,060	11,812	487,012	594,708	565.20	607.30

(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, earthmoving equipment etc.

(e) Not appropriate; some establishments make sales in more than one commodity group.

In 1956-57, the value of retail sales per head of population in South Australia was almost the same as the Australian average of \$566, but in 1961-62 the figure for this State (\$607) had fallen well below the corresponding Australian figure of \$644.

Estimates from the Survey of Retail Establishments indicate that by 1964-65 sales per head of population in South Australia had recovered to about the Australian level but had subsequently fallen again, the figures in 1970-71 being \$949 and \$1,012 respectively.

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 per cent of all retail sales in Australia.

The following table shows the value of retail sales of goods in South Australia in broad commodity groups in each of the years 1966-67 to 1970-71.

The value of sales of the food and groceries group as a proportion of total sales has declined each year since 1966-67 when food and groceries represented 28.5 per cent of total sales, to 26.6 per cent in 1970-71. During the same period the percentage of total sales attributable to the motor vehicle group has increased from 25.5 per cent to 27.2 per cent in 1969-70 but decreased to 26.6 per cent during 1970-71.

Value of Retail Sales: Commodity Groups, South Australia^(a)

Commodity Group	Value of Retail Sales of Goods				
	1966-67	1967-68	1968-69	1969-70	1970-71
	\$ million				
Groceries	99.1	106.4	115.6	121.9	127.3
Butchers meat	51.7	50.2	52.9	56.2	59.6
Other food	89.3	94.7	96.9	103.4	107.3
Total food and groceries	240.1	251.3	265.4	281.5	294.2
Beer, wine and spirits	63.5	71.7	77.6	84.5	92.6
Clothing, drapery, etc.	108.4	113.2	118.5	124.5	132.2
Footwear	18.0	18.9	20.1	21.4	22.6
Hardware, china, etc.	16.1	16.6	18.5	20.0	23.1
Electrical goods	38.9	42.4	44.8	47.7	52.1
Furniture and floor coverings ...	30.5	31.5	34.8	40.8	43.5
Chemist goods (b)	34.0	36.1	39.1	41.7	45.4
Other goods (c)	77.6	81.9	87.7	98.8	106.6
Total excluding motor vehicles, etc.	627.1	663.6	706.5	760.9	812.3
Motor vehicles, parts, petrol, etc.	214.7	242.0	260.9	284.1	295.1
Total	841.8	905.6	967.4	1,045.0	1,107.4

(a) Builders hardware and supplies, basic building materials, farm and business machines, earthmoving equipment and grain, feed and fertilisers are excluded.

(b) Includes toiletries, cosmetics and dispensing.

(c) Includes tobacco, cigarettes, jewellery, sporting goods, etc.

10.2 OVERSEAS TRADE

LEGISLATION AFFECTING OVERSEAS 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 1 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, and the Customs Tariff (Dumping and Subsidies) 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 and the Customs Tariff (Dumping and Subsidies) Act provides protection for Australian industry against various forms of unfair trading.

The Customs Tariff

The first Commonwealth Customs Tariff was introduced by Resolution on 8 October 1901 from which date uniform duties for each State came into effect throughout Australia. The tariff has since been extensively amended—the last major amendment was in 1965 when the tariff was re-issued in Brussels Nomenclature form.

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 particular imports from certain countries of the Commonwealth. 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 which applies to goods other than those to which the Preferential Tariff applies.

The Preferential Tariff rates of duty apply to goods which are 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 members of the Commonwealth of Nations and most United Kingdom dependencies (dependent territories, protectorates and protected states). In addition the Preferential Tariff applies to selected products from certain declared 'less developed' countries.

Primage Duties

In addition to the duties imposed by the Customs Tariff, *ad valorem* primage duties at rates of 5 or 10 per cent are charged on some goods according to the type and origin of the goods. Goods, which are the produce or manufacture of New

Zealand, Norfolk Island, Fiji, Cocos Islands, Christmas Island or the Territory of Papua and New Guinea, are exempt from primage duty.

Support Duties

The Customs Tariff provides for the imposition of support duties on certain goods, mainly chemicals, where the landed cost of the goods is less than the support value that has been determined by the Tariff Board. The landed cost of goods consists of the free on board price of the goods, any charges or costs incurred in transporting the goods to Australia, including insurance and any duties of Customs, other than the support duty, payable on the goods. The difference between the support value and the landed cost is known as the Support Value Differential (SVD). Support duty is charged at the rate of 90 per cent of the SVD.

By-laws

Under Customs by-laws, goods may be admitted free of duty or at rates of duty lower than those normally applicable. A prerequisite for by-law admission is that suitably equivalent goods are not reasonably available from Australian production.

There are provisions under the by-law system for remitting duty in certain circumstances on imported goods which are to be incorporated in goods for export.

Anti-dumping Legislation

The *Customs Tariff (Dumping and Subsidies) Act 1961-1965* provides protection for Australian industry against various forms of unfair trading. This Act authorises the imposition of a dumping duty when goods are sold to Australia at a price which is less than the normal value of the goods, or a countervailing duty on subsidised goods, where the dumping or subsidy causes or threatens material injury to an Australian industry.

Special duties may be collected also if dumped or subsidised goods are imported to the detriment of the trade of a third country in the Australian market.

Import Controls

A system of import licensing was introduced in 1939 as a war-time measure. In the post-war years these controls were gradually relaxed but were re-imposed in 1952. In 1962 most of these restraints were lifted but some goods remain under control for reasons associated with the protection of certain Australian industries.

The Customs (Prohibited Imports) Regulations list those commodities the import of which is prohibited absolutely, or restricted, on social grounds. Other items are prohibited, or restricted, on health grounds (human, animal or plant) by the *Quarantine Act 1908-1969* and the *Therapeutic Goods Act 1966*.

Export Controls

Under Section 112 of the Customs Act the export of goods from Australia may be prohibited absolutely, prohibited to a specified place, or prohibited unless prescribed conditions or restrictions are observed.

The *Banking Act 1959-1967* 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 OVERSEAS TRADE

Tariff Board

The *Tariff Board Act* 1921-1971 provides for the appointment of a Tariff Board, consisting of eight members, 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 on 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 import of any goods, by charging unnecessarily high prices or acting in restraint of trade.

In addition, the Minister may refer 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 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* 1961-1965.

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 thirty 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 by the Tariff Board of the final report on the goods concerned.

ENCOURAGEMENT OF OVERSEAS 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 Trade Correspondents. These correspondents who are appointed in countries where there is no Trade Commission, are engaged on a part-time basis and operate under the general direction of the Trade Commissioner in whose area they are located.

The Trade Commissioner Service is administered by the Commonwealth Department of Trade and Industry and is responsible for overseas commercial

intelligence. Particular facilities offered to Australian exporters and export organisations include market surveys, advice on selling and advertising methods, arranging introductions with buyers and agents, providing reports on the standing of overseas firms, assisting business visitors and organising trade missions, trade displays and other publicity and promotion media.

In some countries Trade Commissioners participate in inter-governmental negotiations on economic and commercial matters. A Trade Commissioner may also be called upon to act as the Australian Government representative in those countries where there is no Australian diplomatic or consular mission.

Export Payments Insurance

The *Export Payments Insurance Corporation Act 1956-1971* established the Corporation with the objective of protecting Australian exporters against risks of loss arising from non-payment of their overseas 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 such as war or cancellation of a valid import licence. In 1965 the scope of the Corporation was widened to include the ability to insure Australian investments in overseas countries against, broadly, three types of 'political' risks: expropriation; inability to transfer currencies; and damage as the result of war or insurrection.

Export Incentives

The Commonwealth Government provides taxation concessions as financial incentives to export. A special income tax allowance for export market development expenditure is designed to encourage firms to incur promotion expenditure in advance of export sales and to assist exporters and potential exporters to expand sales in the existing markets and to enter new overseas markets. Rebates of pay-roll tax are also granted to employers whose export sales of goods or property rights have increased above their average annual level in a base period.

South Australian Trade Representatives

Early in 1971 the South Australian Premier announced the appointment of two roving trading officers to represent South Australia overseas: one officer is to service the United Kingdom, Europe and North America and the other is to service South-East Asia.

Agencies were also opened in four Asian cities—Tokyo, Hong Kong, Singapore and Djakarta—to investigate trade opportunities in these areas.

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. Some details of these agreements are included in various issues of the *Official Year Book of the Commonwealth of Australia*.

The General Agreement on Tariffs and Trade (GATT), of which Australia is an original member, is an international trade agreement which has been in operation since 1 January 1948. The objectives of the GATT include the expansion of world trade and the raising of living standards throughout the

world. The essential features of the GATT 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.

Six series of tariff negotiations have been conducted. As a result of the first five Australia obtained tariff concessions on almost all the principal products of which it is an actual or potential exporter to the individual countries concerned. The sixth series of tariff negotiations, the Kennedy Round, based on a plan for linear tariff cuts on all classes of products, including agricultural and primary products with a minimum of exceptions, and on a reduction of non-tariff barriers to trade, began in May 1964 and concluded in May 1967. Agreement was reached on higher minimum world price for wheat (see International Grains Agreement page 376) and on the gradual reduction in tariff duties on many other commodities.

METHOD OF RECORDING IMPORTS AND EXPORTS

Overseas trade statistics are compiled from documents obtained under the *Customs Act 1901-1971*. Statistics for South Australia apply to the imports into and exports from Australia which are documented (entered or cleared) at Customs recording points in South Australia.

Imports do not provide a record of the overseas 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 some products of other States documented in South Australia, but exclude products of South Australia documented in other States. Commodities transported by sea, air or parcels post are included.

Since the introduction of container shipping early in 1969 containerised goods may be documented as South Australian exports or imports even though loaded or unloaded at ports in other States, particularly Melbourne: the interstate movement of the goods is predominantly by rail.

All values in overseas trade statistics are determined on a 'free on board (f.o.b.) port of shipment' basis. This means that all charges, in particular the cost of freight and insurance, incurred after the goods have been exported from the port of shipment are excluded. Only transport and service charges incurred before export are included in the determination of trade values.

The procedure adopted to value exports and imports is as follows:

Exports:

- (a) Goods sold to overseas buyers before export are valued at the Australian f.o.b. port of shipment equivalent of the actual price at which the goods were sold;
- (b) Goods shipped on consignment are valued at the Australian f.o.b. port of shipment equivalent of the price paid for similar goods of Australian origin in the principal markets of the country to which they are despatched for sale.

Imports:

The recorded value of goods imported is the amount on which duty is payable or would be payable if the duty were *ad valorem*. Value for duty is the f.o.b. port of shipment equivalent of either:

- (a) the actual price paid or to be paid by the Australian importer plus any special deduction (transactions value); or
- (b) the 'current domestic value' of the goods, whichever is the higher.

'Current domestic value' is defined as 'the amount for which the seller of the goods to the purchaser in Australia is selling or would be prepared to sell for cash, at the date of export of those goods, the same quantity of identically similar goods to any and every purchaser in the country of export for consumption in that country'.

Inclusions and Exclusions

Export tabulations do not include the value of stores loaded on aircraft and ships (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 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'.

OVERSEAS TRADE OF SOUTH AUSTRALIA**IMPORTS**

The total value of overseas imports into South Australia during 1970-71, \$198.4 million, was \$2.9 million below the level of 1969-70. Increases in the imports of manufactures of metal, non-metallic mineral manufactures and iron and steel were largely offset by a decrease in imports of transport equipment.

The United Kingdom was the most important source of imports for the first time since 1962-63 with a value of \$49.8 million in 1970-71, being \$6.5 million higher than in 1969-70. The level of imports from the United States of America, the second major source of imports, fell from \$43.3 million in 1969-70 to \$34.3 million in 1970-71. Japan remained the third major supplier with a record \$28.6 million, an increase of \$7.0 million over the 1969-70 figure.

The United Kingdom supplied over half of the total value of imports into South Australia in 1953-54 but now accounts for only 25.1 per cent. On the other hand, the United States of America increased its proportion from 8.9 per cent in 1953-54 to 32.7 per cent in 1967-68, but this has steadily declined to 17.3 per cent in 1970-71.

Overseas Imports to South Australia, Principal Commodity Groups

Commodity Group	1966-67	1967-68	1968-69	1969-70	1970-71
			\$'000		
Food and live animals	5,130	5,001	5,122	5,261	5,836
Beverages and tobacco	618	737	775	710	1,023
Crude materials, inedible:					
Crude rubber	1,292	1,166	1,230	1,411	1,341
Wood, timber and cork	5,031	5,991	6,208	7,389	7,053
Textile fibres and waste	1,500	2,026	941	670	603
Crude fertilisers, crude minerals	5,763	7,093	6,762	6,681	5,257
Other	1,987	3,397	1,985	2,517	2,167
Mineral fuels, lubricants	26,844	24,438	23,330	21,294	20,956
Animal and vegetable oils and fats	596	566	556	488	313
Chemicals:					
Chemical elements and com- pounds	2,935	2,366	2,413	2,831	3,293
Plastics and artificial resins ...	1,954	2,109	2,542	2,851	2,849
Other	4,388	4,520	4,287	4,096	4,794
Manufactured goods:					
Paper and paperboard manu- factures	4,109	5,022	4,486	4,787	5,223
Yarn, fabrics and made-up articles	11,217	9,744	9,470	10,910	9,508
Non-metallic mineral manu- factures, n.e.s.	4,162	4,815	5,172	5,808	6,946
Iron and steel	4,278	5,635	12,436	5,153	6,742
Non-ferrous metals	1,316	1,247	1,305	1,586	1,855
Manufactures of metal, n.e.s. .	5,919	3,576	4,169	3,686	7,908
Other	2,834	3,758	4,110	3,619	4,308
Machinery and transport equip- ment:					
Machinery, other than electric ..	42,926	44,634	49,770	37,728	36,742
Electrical machinery and appliances	16,610	14,697	16,328	15,578	15,604
Transport equipment	26,739	43,427	50,214	34,473	29,507
Miscellaneous manufactured articles	9,410	10,306	10,660	13,233	13,117
Commodities and transactions not classified to kind	9,210	9,347	7,686	8,462	5,413
Total	196,771	215,619	231,956	201,223	198,358

Overseas Imports to South Australia, Principal Countries

Country of Origin	1966-67	1967-68	1968-69	1969-70	1970-71
			\$'000		
Canada	9,769	17,887	21,698	14,818	11,737
France	3,944	3,789	2,002	2,208	2,560
Germany, Federal Republic of	7,364	7,743	8,404	10,047	9,229
India	2,949	2,349	1,910	1,913	1,865
Italy	2,958	3,116	4,082	3,576	3,147
Japan	15,140	15,439	25,945	21,667	28,643
Malaysia	1,758	2,061	1,685	2,749	1,977
Netherlands	4,680	4,861	6,042	5,396	5,707
New Zealand	1,946	2,930	2,749	3,683	3,194
Pakistan	3,121	2,106	2,243	2,807	1,891
Saudi Arabia	23,802	21,430	21,490	19,032	17,886
Sweden	2,885	2,171	1,915	2,346	2,558
United Kingdom	42,577	37,293	45,973	43,252	49,789
United States of America	54,542	70,521	63,435	43,266	34,348
Other	19,336	21,923	22,383	24,461	23,227
Total	196,771	215,619	231,956	201,223	198,358

The following table shows, by commodity groups, the imports from principal countries during the year 1970-71. In comparison with 1969-70, imports from Japan of iron and steel increased by \$1 million to \$3.8 million and manufactures of metal, mainly machine tools increased by \$3.3 million to \$4.2 million. Imports of transport equipment from the United States of America, mainly aircraft, fell by \$11 million to \$8.1 million, while similar imports from Japan and the United Kingdom rose by \$1.9 million and \$4.3 million respectively. Imports of machinery, other than electric, from Canada decreased by \$2.6 million.

**Overseas Imports to South Australia from Principal Countries
Commodity Groups, 1970-71**

Commodity Group	Canada	Germany, Federal Republic of	Japan	United Kingdom	U.S.A.	Other	Total
	\$'000						
Food and live animals:							
Fish and fish preparations	84	72	678	787	52	654	2,327
Coffee, tea, cocoa, spices	—	8	81	22	8	765	883
Other	67	38	33	441	434	1,612	2,626
Beverages and tobacco	—	31	—	524	—	468	1,023
Crude materials, inedible:							
Crude rubber	42	22	127	72	516	563	1,341
Wood, timber and cork	3,416	16	—	1	1,407	2,212	7,053
Textile fibres and waste	12	—	77	1	268	245	603
Crude fertilisers and crude minerals ..	730	1	151	26	730	3,619	5,257
Other	442	5	4	70	293	1,353	2,167
Mineral fuels, lubricants	10	19	—	84	308	(a)20,535	20,956
Animal and vegetable oils and fats....	18	2	2	16	24	250	313
Chemicals:							
Chemical elements and compounds ..	128	452	431	560	978	745	3,293
Plastic materials and artificial resins ..	59	411	400	779	634	566	2,849
Other	71	491	150	1,817	1,105	1,162	4,794
Manufactured goods:							
Rubber manufactures	32	120	448	1,110	466	570	2,747
Paper, paper board and manufactures ..	1,671	217	343	468	194	2,331	5,223
Textile yarn, fabrics, made-up articles	89	175	1,812	1,587	508	5,337	9,508
Non-metallic mineral manufactures, n.e.s.	58	551	1,037	1,720	668	2,913	6,946
Iron and steel	269	97	3,799	1,028	677	872	6,742
Non-ferrous metals	814	45	44	450	219	283	1,855
Manufactures of metal, n.e.s.	38	363	4,250	1,973	496	788	7,908
Other	22	50	142	188	51	1,111	1,562
Machinery and transport equipment:							
Machinery, other than electric	2,950	2,295	3,241	12,121	11,055	5,081	36,742
Electrical machinery and appliances ..	203	1,383	2,977	4,741	2,107	4,193	15,604
Transport equipment	68	1,273	6,001	12,523	8,136	1,506	29,507
Miscellaneous manufactured articles ..	127	818	1,838	5,573	1,708	3,053	13,117
Commodities and transactions not classified to kind	317	276	580	1,109	1,305	1,826	5,413
Total	11,737	9,229	28,643	49,789	34,348	64,612	198,358

(a) Mainly from Saudi Arabia (\$17,885,811). — nil or less than \$500

EXPORTS

The total value of overseas exports from South Australia during 1970-71 was \$393.7 million, \$23.3 million below the record level of \$417.0 million in 1969-70. Considerable increases in wheat and barley exports were more than offset by decreases in exports of wool, metalliferous ores and metal scrap and non-ferrous metals. In the tables which follow overseas exports from South Australia are given by principal commodities and by principal commodity groups respectively.

Overseas Exports from South Australia, Principal Commodities

Commodity	1966-67	1967-68	1968-69	1969-70	1970-71
QUANTITY					
Beef, lamb and mutton ('000 lb)	27,095	36,902	18,106	57,788	75,396
Wheat ('000 bushels)	33,574	19,373	16,779	41,262	59,399
Barley ('000 bushels)	11,357	1,760	12,842	19,612	23,776
Fruit; preserved and pulped ('000 lb)	49,029	75,538	30,542	28,952	23,933
Wool:					
Greasy ('000 lb)	173,563	160,531	170,011	184,485	177,870
Other ('000 lb)	12,881	13,750	11,064	12,619	12,645
Ores and Concentrates:					
Iron (tons)	135,056	242,067	1,049,015	1,386,840	1,357,422
Copper (tons)	27,280	36,467	33,635	23,461	31,053
Lead (tons)	79,180	85,602	81,617	87,667	57,622
Zinc (tons)	193,498	220,636	216,127	282,265	213,892
Lead and lead alloys, unworked ('000 cwt)	3,060	3,062	2,373	3,303	2,476
VALUE (\$'000)					
Beef, lamb and mutton	7,528	8,543	5,111	14,743	17,013
Wheat	52,082	28,876	24,126	55,944	79,445
Barley	13,056	2,321	11,683	16,133	23,670
Fruit; preserved and pulped	5,725	9,293	3,955	3,609	2,909
Wool:					
Greasy	88,110	68,374	76,511	73,121	55,520
Other	9,904	8,633	8,236	8,675	7,308
Ores and concentrates:					
Iron	1,185	2,105	11,784	16,397	14,629
Copper	7,058	8,573	8,368	7,053	8,226
Lead	14,362	15,871	15,153	15,510	10,241
Zinc	13,405	15,897	15,414	20,239	14,324
Lead and lead alloys, unworked	33,213	31,430	25,839	44,961	29,876

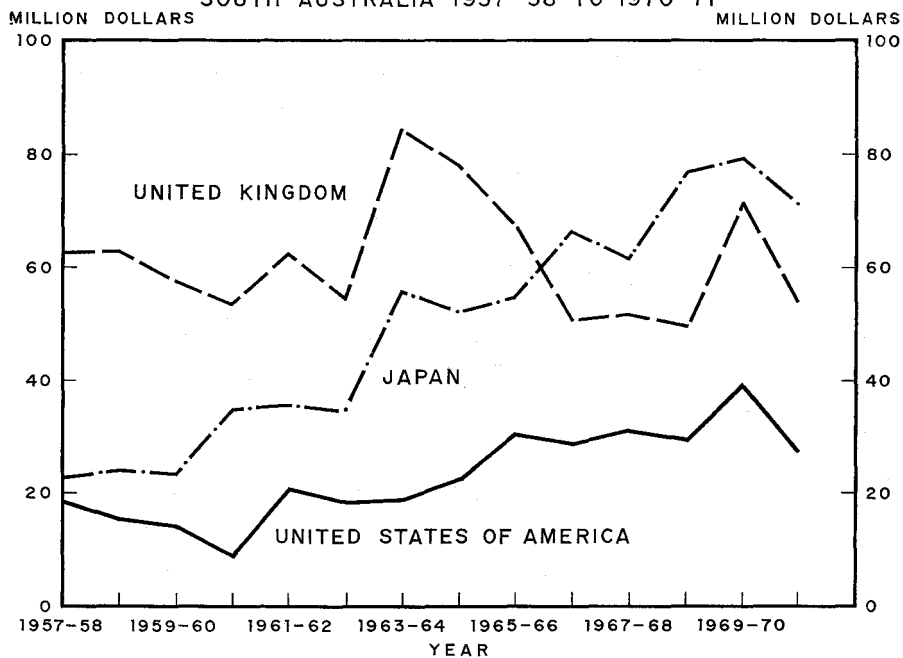
Overseas Exports from South Australia, Principal Commodity Groups

Commodity Group	1966-67	1967-68	1968-69	1969-70	1970-71
\$'000					
Food and live animals:					
Meat and meat preparations	8,275	9,223	5,544	16,538	18,746
Dairy products and eggs	4,396	4,396	3,769	6,275	5,642
Cereal grains and cereal preparations	69,987	34,243	39,824	76,551	108,605
Fruit and vegetables	12,733	14,761	8,465	8,498	7,752
Other	3,313	3,198	4,414	7,552	8,008
Beverages and tobacco	3,168	2,784	2,777	2,318	2,539
Crude materials, inedible (except fuels):					
Hides and skins	8,616	6,573	6,435	8,337	6,638
Textile fibres and their waste	98,061	77,045	84,787	81,826	62,863
Metalliferous ores and metal scrap	41,229	50,089	58,184	69,804	57,499
Other	2,534	2,544	3,090	3,592	4,302
Mineral fuels, lubricants	1,335	1,374	465	1,468	1,283
Animal and vegetable oils and fats	1,382	984	888	2,080	2,664
Chemicals	390	480	335	588	800
Manufactured goods:					
Iron and steel	11,476	10,925	14,564	24,819	12,005
Non-ferrous metals	37,100	41,760	39,133	58,357	43,600
Manufactures of metals, n.e.s.	2,872	2,226	2,071	3,691	2,439
Other	605	642	2,110	4,535	4,254
Machinery and transport equipment	15,275	16,337	20,824	34,748	38,628
Miscellaneous manufactured articles	903	983	1,610	2,307	2,466
Commodities and transactions not classified to kind	1,520	2,200	1,644	3,147	3,004
Total	325,170	282,767	300,934	417,030	393,737

Exports of manufactured goods are increasing both in absolute terms and as a proportion of total exports but the bulk of exports is still of goods normally classified as primary products. In 1970-71 the 'Food and live animals' group accounted for \$148.8 million, or 37.8 per cent of exports (including wheat \$79.4 million, 20.2 per cent) and 'Crude materials, inedible' for \$131.3 million, or 33.3

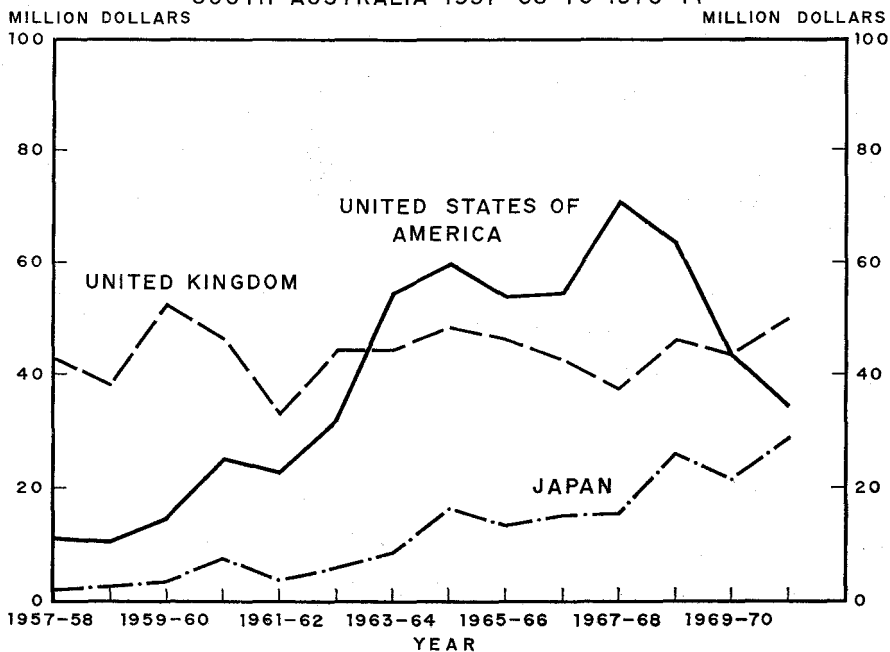
OVERSEAS EXPORTS THREE PRINCIPAL COUNTRIES

SOUTH AUSTRALIA 1957-58 TO 1970-71



OVERSEAS IMPORTS THREE PRINCIPAL COUNTRIES

SOUTH AUSTRALIA 1957-58 TO 1970-71



per cent (including wool \$62.8 million, 16.0 per cent). Exports to principal countries during the year 1970-71 classified by commodity groups are shown below.

**Overseas Exports from South Australia to Principal Countries
Commodity Groups, 1970-71**

Commodity Group	Germany Federal Republic of	Japan	New Zealand	South Africa	United Kingdom	U.S.A.	Other	Total
	\$'000							
Food and live animals:								
Meat and meat preparations	1	1,554	—	—	5,740	7,043	4,408	18,746
Dairy products and eggs . . .	—	2,268	—	—	1,753	—	1,621	5,642
Fish and fish preparations . . .	9	509	1	159	296	1,947	1,222	4,144
Cereal grains and cereal preparations	3,984	6,381	2,253	1,049	3,407	342	(a)91,188	108,605
Fruit and vegetables	534	246	1,065	43	2,553	370	2,941	7,752
Other	8	146	51	—	290	17	3,351	3,864
Beverages and tobacco	1	8	177	3	631	21	1,698	2,539
Crude materials, inedible:								
Hides, skins and fur skins . .	242	171	11	29	207	200	5,777	6,638
Textile fibres and their waste	4,184	19,999	162	12	4,101	1,043	(b)33,362	62,863
Metalliferous ores and metal scrap	1,321	33,315	131	—	14,738	1,756	6,239	57,499
Other	147	800	799	236	185	358	1,777	4,302
Mineral fuels and lubricants . .	—	112	178	—	—	—	992	1,283
Animal and vegetable oils and fats	2	7	—	948	82	4	1,621	2,664
Chemicals	4	5	66	2	293	164	266	800
Manufactured goods classified chiefly by material:								
Iron and steel	—	949	2,423	410	40	14	8,169	12,005
Non-ferrous metal manu- factures	—	3,883	3,575	183	14,528	9,423	12,009	43,600
Other	195	570	465	331	356	1,226	3,550	6,693
Machinery and transport equipment:								
Machinery, other than electric	5	5	610	534	139	93	2,266	3,651
Electrical machinery and appliances	5	17	296	464	2,742	704	3,357	7,584
Transport equipment	51	22	9,686	12,747	1,081	34	3,772	27,393
Miscellaneous manufactured articles	90	117	215	154	472	367	1,051	2,466
Commodities and transactions not classified to kind	327	78	108	1,116	319	33	1,024	3,004
Total	11,112	71,162	22,272	18,420	53,955	25,158	191,658	393,737

(a) Mainly to Iraq (\$15,693,582); China (mainland) (\$14,055,900) and United Arab Republic (\$12,292,477).

(b) Mainly to U.S.S.R. (\$8,324,157); France (\$4,806,531) and Belgium-Luxembourg (\$3,475,345).

— nil or less than \$500

The following table shows the value of exports to principal countries during each of the years 1966-67 to 1970-71. Japan replaced United Kingdom as South Australia's principal export market in 1966-67 and has retained that position.

In 1970-71 Japan took goods valued at \$71.2 million, 18.1 per cent of total exports, compared with \$79.3 million, (19.0 per cent) in 1969-70. The general downward trend in exports to United Kingdom, broken in 1969-70 when exports increased to \$71.0 million (17.0 per cent of total exports), appears to have resumed in 1970-71 with exports to that country falling by \$17.1 million to \$54.0 million (13.7 per cent). During 1970-71 the United States of America retained its position as third largest market for South Australian goods, taking \$25.2 million (6.4 per cent) of exports.

Overseas Exports from South Australia, Principal Countries

Country of Consignment	1966-67	1967-68	1968-69	1969-70	1970-71
	\$'000				
Belgium-Luxembourg	13,307	9,368	6,257	7,443	8,917
Canada	4,571	5,417	3,899	5,122	4,686
China (mainland)	11,895	6,242	7,660	35,035	14,056
China, Republic of (Taiwan)	1,460	1,175	2,899	5,742	9,708
France	12,696	10,015	12,060	12,522	10,184
Germany, Federal Republic of	7,813	8,974	10,233	11,584	11,112
Hong Kong	1,759	2,065	2,752	5,762	8,162
India	10,526	12,116	8,934	13,340	9,124
Italy	13,387	7,115	8,040	9,445	4,719
Japan	66,430	61,684	76,785	79,312	71,162
Netherlands	3,776	2,694	4,100	5,261	6,752
New Zealand	15,299	14,268	13,682	23,263	22,272
Philippines	3,988	2,680	4,910	11,337	6,950
South Africa	9,034	4,359	8,219	12,604	18,420
United Kingdom	50,278	51,450	49,529	71,015	53,955
United States of America	28,776	31,180	29,425	39,253	25,158
U.S.S.R.	3,595	3,443	6,039	9,831	10,722
Other	66,580	48,522	45,511	59,161	97,680 (a)
Total	325,170	282,767	300,934	417,030	393,737

(a) Mainly to Iraq (\$15,787,141) and United Arab Republic (\$12,385,347).

Exports of Wool

In 1960-61 Japan replaced the United Kingdom as the principal market for wool exported from South Australia and in 1970-71, 31.8 per cent of wool exports went to Japan. The U.S.S.R. became the second largest market in 1969-70 and retained that position in 1970-71 taking 13.2 per cent of wool exported.

Overseas Exports of Wool from South Australia

Country of Consignment	1966-67	1967-68	1968-69	1969-70	1970-71
	\$'000				
Belgium-Luxembourg	5,491	3,511	3,970	4,730	3,475
France	6,839	5,329	7,319	6,194	4,807
Germany, Federal Republic of ..	5,286	5,645	5,536	5,759	4,184
India	3,635	1,906	3,797	3,641	2,569
Italy	5,219	4,685	4,154	4,767	3,000
Japan	34,157	23,556	25,075	21,678	19,999
Poland	2,818	2,391	2,293	1,445	732
United Kingdom	10,123	8,031	5,631	6,457	4,101
U.S.A.	7,364	7,284	6,947	3,682	1,043
U.S.S.R.	3,592	3,442	6,025	9,417	8,324
Other	13,489	11,228	14,000	14,028	10,593
Total	98,013	77,008	84,747	81,797	62,828

Exports of Wheat

The total amount of wheat exported from South Australia fluctuates considerably from year to year, depending to a large extent on the success of the harvest. The value of wheat exported in 1970-71 increased to \$79.4 million, the highest on record and \$23.5 million higher than in 1969-70. The relative importance of countries of consignment also fluctuates. For several years China (mainland) has been the principal market, taking 62.6 per cent of total wheat exports in 1969-70, but in 1970-71 it took only 17.7 per cent. Iraq and the United Arab Republic were prominent buyers of Australian wheat in 1970-71 and together accounted for just over one-third of total wheat exports.

Overseas Exports of Wheat from South Australia

Country of Consignment	1966-67	1967-68	1968-69	1969-70	1970-71
	\$'000				
Ceylon	—	—	1,229	2,233	2,792
China (mainland)	11,308	6,212	7,657	35,027	14,056
India	564	4,698	—	2,684	1,322
Iraq	2,514	—	—	2,762	15,694
Korea, North	668	658	2,833	—	—
Lebanon	4,359	1,463	—	—	—
Malaysia	1,571	3,934	1,351	402	172
Norway	4,664	3,041	2,979	—	1,625
Pakistan	2,227	—	—	1,265	3,166
Saudi Arabia	2,577	3,704	1,798	2,747	2,869
South Yemen, Republic of	2,459	499	1,105	2,630	1,357
United Arab Republic	621	—	—	—	12,292
Yemen	674	233	637	1,199	2,761
Other	17,876	4,434	4,537	4,995	21,339
Total	52,082	28,876	24,126	55,944	79,445

— nil or less than \$500

TRADE AT PRINCIPAL PORTS

The following table shows the value of imports and exports at the principal ports during each of the years 1966-67 to 1970-71.

Value of Overseas Trade: Principal Ports, South Australia

Port	1966-67	1967-68	1968-69	1969-70	1970-71
	IMPORTS (\$'000)				
Thevenard	2	—	—	—	—
Port Adelaide (a)	164,301	186,543	204,094	175,433	171,192
Port Augusta	1	—	—	—	—
Port Lincoln	1,740	2,432	1,776	1,455	607
Port Pirie	713	1,157	418	159	991
Port Stanvac	24,600	23,594	22,162	19,055	19,113
Walleroo	1,119	791	488	827	460
Whyalla	4,295	1,102	3,018	4,294	5,995
Total	196,771	215,619	231,956	201,223	198,358
	EXPORTS (\$'000)				
Ardrossan	9,069	524	(b)	5,635	10,420
Thevenard	7,706	7,055	4,606	6,758	8,630
Edithburgh	117	44	7	75	24
Port Adelaide (a)	185,908	164,752	173,896	223,142	215,066
Port Augusta	9,596	2,544	(c)	7,444	8,377
Port Lincoln	24,566	12,658	12,274	23,076	29,096
Port Pirie	66,882	77,414	72,612	98,066	76,471
Port Stanvac	1,251	1,192	224	437	383
Walleroo	8,323	4,161	11,670	14,313	(d) 20,880
Whyalla	11,752	12,423	25,644	38,085	24,390
Total	325,170	282,767	300,934	417,030	393,737

(a) Includes 'Parcels Post, Adelaide'; 'Adelaide City (including Adelaide Airport)' and Stenhouse Bay.

(b) Included with Wallaroo.

(c) Included with Port Pirie.

(d) Includes Port Giles.

— nil or less than \$500

Over 86 per cent of imports are unloaded at Port Adelaide but the proportion of exports loaded there is much lower and in 1970-71 was approximately 55 per cent. Exports from Port Pirie principally comprise pig-lead, 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. Some details of vessels entered and cleared at various South Australian ports are given on pages 511-3.

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 the years 1968-69, 1969-70 and 1970-71.

Customs and Excise: Net Revenue, South Australia

Customs Tariff and Excise Tariff Item	1968-69	1969-70	1970-71
		\$'000	
CUSTOMS			
Live animals; animal products	68	80	75
Vegetable products	71	66	35
Animal and vegetable oils and fats	96	96	44
Prepared foodstuffs; beverages, vinegar; tobacco:			
Spiritous and alcoholic preparations	1,535	1,822	1,972
Tobacco, cigarettes, etc.	927	963	984
Other	159	236	256
Automotive spirit and other mineral products	737	1,433	583
Chemicals and products thereof	293	331	362
Plastics, resins, rubber and manufactures thereof	818	1,034	1,200
Hides, skins, leather and articles thereof	83	117	118
Wood and wicker	978	1,167	1,111
Paper-making material; paper and paper manufactures ..	331	434	445
Textiles	1,109	1,133	1,192
Footwear, sunshades, whips, artificial flowers, etc.	208	291	257
Earthenware, cement, china, etc.	570	674	676
Pearls, precious stones and metals, imitation jewellery, coin, etc.	29	38	46
Base metals and articles thereof	1,392	1,223	1,867
Electrical and mechanical machines and machinery	4,557	4,535	5,124
Transport equipment and parts thereof	3,723	3,785	4,798
Optical, surgical and scientific instruments, etc.	542	482	563
Arms and ammunition and parts thereof	47	48	21
Miscellaneous manufactured articles	407	490	435
Works of art, antiques, etc.	—	1	1
Other customs revenue	362	271	202
Primage	253	259	279
Total net customs and primage duties	19,298	21,006	22,646
EXCISE			
Petroleum products	26,015	26,947	33,674
Spirits	4,127	4,724	4,536
Tobacco, cigars and cigarettes	17,519	21,114	23,839
Grape wine for commercial purposes (a)	—	—	3,092
Other	25,784	27,187	28,369
Total net excise duties	73,445	79,972	93,510
Total net customs, primage and excise revenue	92,743	100,978	116,156

(a) Operative from 19 August 1970 — nil or less than \$500

10.3 PRICES

MEASUREMENTS OF PRICE MOVEMENTS

The prices of a wide range of commodities and services are recorded at regular intervals by the Commonwealth Statistician for the purpose of compiling various price indexes or for publication of series showing actual price levels.

Price indexes aim to measure the degree of change in price levels, or more specifically the proportionate change in the aggregate price, of specified quantities and qualities of a specified list of items. These indexes measure changes through time and it is traditional for presentation purposes to select a certain year, known as the base year, to equate the average aggregate price (of the list of items) in that year to 100 or some other suitable number, and to adjust other years on a proportionate basis.

When index numbers for different places are compared (*e.g.* Consumer Price Index, Capital Cities) the only legitimate comparison is the relative change *i.e.* that prices increased or decreased more in one place than another: even when a common base year is used the actual levels of prices, equated to 100 in each case, may differ substantially from place to place; in addition, selected items, qualities or weights (see below) may differ from place to place.

In constructing a price index it is necessary to limit attention to a selected list of items because it would clearly be impossible to determine at regular intervals the price of all items entering into a given field of expenditure (*e.g.* household expenditure in the case of the Consumer Price Index). The list of items selected must be as representative as possible of the field to be covered and consist of items for which price variations can be ascertained accurately at regular intervals. Each item must be assigned a relative importance (weight) in approximate proportion to actual expenditures on that item within the total field of expenditure being considered. Particular care must be taken to detect, assess, and make allowance for changes in quality of selected items.

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 an 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 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 were more representative of expenditure at that time.

RETAIL PRICE INDEXES

A brief historical review of early price indexes was included on page 494 of the *South Australian Year Book* 1970. Details of movements in the 'C' Series Index from 1901 to 1959 are shown in the Statistical Summary on page 616.

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 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 six indexes, with significant changes in composition or weighting introduced at the June Quarter 1952, June Quarter 1956, March Quarter 1960, December Quarter 1963 and December Quarter 1968. The principal changes involved were:

- (a) the introduction of private motoring (1952), of television (1960), of furniture (1963), and of services by dentists, doctors, hospitals and health insurance funds (1968),
- (b) alterations in the proportions of houses under various modes of occupancy (1952, 1956, 1963 and 1968), and
- (c) changes in the weights of fuel and fares (1952, 1956, 1963 and 1968) and of private motoring (1956 and 1963).

From the December Quarter 1968 the Index has been recalculated using weights based on the pattern of consumption in the years 1962-63 to 1966-67 with 1966-67 as the base year.

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 in the next table.

Consumer Price Index, Adelaide^(a)

Year	Food	Clothing and Drapery	Housing	Household Supplies	Miscellaneous	All Groups
1961-62	87.7	94.1	85.9	99.7	85.5	89.5
1962-63	86.6	94.6	86.7	99.2	85.3	89.1
1963-64	88.8	95.5	88.7	97.5	85.8	90.2
1964-65	93.9	96.9	92.1	98.0	90.9	93.9
1965-66	97.1	97.8	95.7	99.2	95.7	97.0
1966-67	100.0	100.0	100.0	100.0	100.0	100.0
1967-68	104.7	102.2	102.1	100.3	102.6	102.9
1968-69	106.4	104.5	104.7	101.1	107.0	105.3
1969-70	107.1	108.1	109.3	102.0	112.0	108.2
1970-71	109.5	112.6	115.9	105.4	118.1	112.5

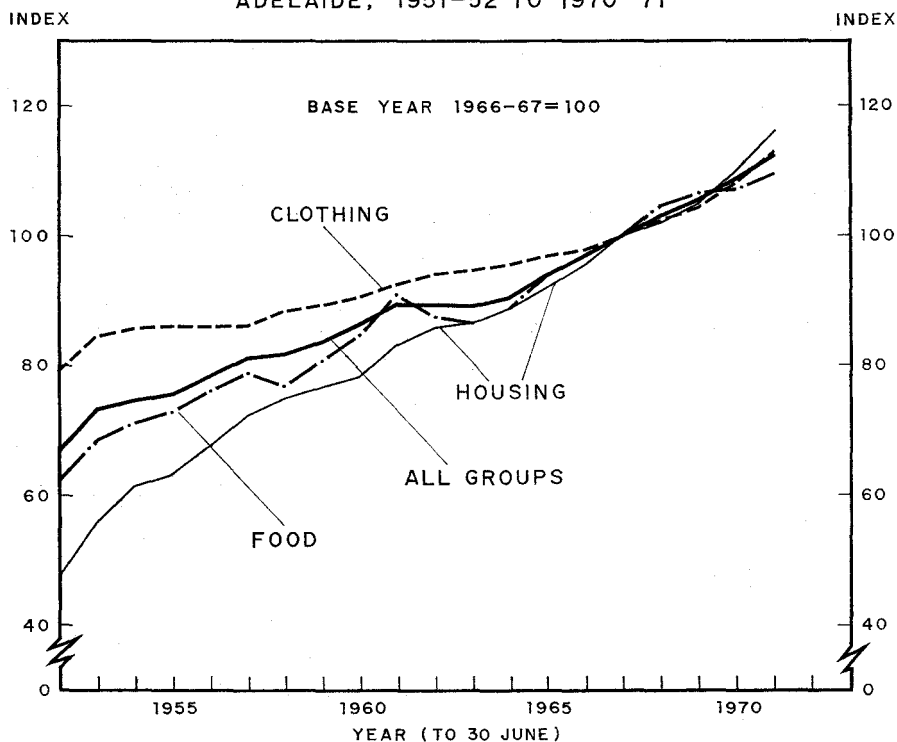
(a) Base year 1966-67 = 100.0

The 'All Groups' index for Adelaide is shown in the following table with that for each of the other capital cities. It is emphasised that these numbers reflect changes in prices within each individual city, but they do *not* measure differences in the level of prices between cities, and the Consumer Price Index should *not* be regarded as a 'cost of living' index.

Consumer Price Index, Adelaide and Other Capital Cities^(a)

Year	Sydney	Mel- bourne	Brisbane	Adelaide	Perth	Hobart	Six State Capital Cities	Canberra
1961-62 ..	89.9	89.8	88.4	89.5	88.2	90.7	89.6	91.6
1962-63 ..	90.4	89.7	88.7	89.1	88.7	90.7	89.8	91.8
1963-64 ..	91.4	90.4	89.6	90.2	89.8	91.7	90.6	92.5
1964-65 ..	94.5	94.0	93.0	93.9	92.6	94.6	94.0	95.3
1965-66 ..	97.7	97.5	97.5	97.0	96.1	98.0	97.4	98.1
1966-67 ..	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1967-68 ..	103.2	103.7	103.3	102.9	102.9	104.6	103.3	102.6
1968-69 ..	106.2	106.2	105.5	105.3	105.5	106.1	106.0	104.4
1969-70 ..	110.6	108.7	108.4	108.2	109.4	108.5	109.4	107.4
1970-71 ..	116.8	113.1	114.2	112.5	114.1	112.6	114.6	113.0

(a) Base year 1966-67 = 100.0

CONSUMER PRICE INDEX
ADELAIDE, 1951-52 TO 1970-71

OTHER PRICE INDEXES

The Commonwealth Statistician prepares and publishes the following indexes on an Australian basis but details are not available for individual States:

- Price of Agricultural Production,
- Price of Dairy, Poultry and Bee Production,
- Price of Pastoral Production,

Farm Production: Prices at Principal Markets, Australia,
Export Price Index,
Wholesale Price Index of Electrical Installation Materials.

In addition the Reserve Bank of Australia maintains an Import Price Index.

For the four 'production' fields listed above, and for imports and exports, both quantum and price indexes are available. Substantially a quantum index is derived by valuing the relevant components at constant prices, *i.e.* at average prices applicable to the base year or period of years.

For some time there has been increasing demand for price indexes relating to materials used and articles produced by important defined areas or sectors of the economy. Two of these have now been prepared and issued; they are the Price Index of Materials Used in House Building and the Price Index of Material Used in Building other than House Building; together they replace the Building Materials Group of the Wholesale Price (Basic Materials and Foodstuffs) Index.

Price Index of Materials used in House Building

This Index measures changes in prices of selected representative materials used in the construction of houses and is complementary to the Wholesale Price Index of Materials used in Building other than House Building which was introduced in 1969.

It is a fixed weights index, the composition of which is in accordance with the usage of materials in actual houses which were selected as representative for the purpose. The index does not purport to represent buildings of any kind other than houses.

**Price Index of Materials used in House Building: Composition and
Weighting Pattern, Adelaide
Base year: 1966-67**

Group	Percentage Contribution of Group to All Groups Index %
1. Concrete mix, cement and sand	8.13
2. Cement products	6.98
3. Clay bricks, tiles, etc.	14.85
4. Timber, board and joinery	35.52
5. Steel products	6.67
6. Other metal products	7.24
7. Plumbing fixtures, etc.	3.42
8. Electrical installation materials	1.37
9. Installed appliances	4.20
10. Plaster and plaster products	4.19
11. Miscellaneous materials	7.43

In the interests of uniformity and ease of use the reference base of the Index is the year 1966-67 = 100.0, the same as that used for the Wholesale Price Index of Materials used in Building other than House Building. However, because of the later time at which the weighting source data were collected, the weighting base approximates more closely the year 1968-69. Each State capital city has a unique weighting pattern which reflects the difference in the estimated relative importance of given items as between cities. The weighting pattern for each capital city is applied to local price measures in calculating indexes for that city. The weighting pattern used in the Index and applicable to Adelaide is shown in the table on page 474.

The price series used relate to specified standards of each commodity and are obtained from suppliers of materials used in house building. The Index includes fifty items in eleven groups combined in an 'All Groups' index, the selection of materials included being based on local usage. Some items carry the weight of similar items not directly priced and all items are described in terms of fixed specifications with the aim of recording price changes for representative materials of constant quality. Prices are collected at or as near as possible to the mid-point of the month to which the index refers. Figures are published to one decimal place to avoid distortions which would occur in rounding the index numbers to the nearest whole number.

Shown below, for separate groups of items and all groups combined, are the index numbers for Adelaide and the weighted average index numbers for the six State capital cities.

Wholesale Price Index of Materials used in House Building
(Base of each Index: 1966-67 = 100.0)^(a)

Group	Adelaide			Weighted Average Six State Capital Cities		
	1968-69	1969-70	1970-71	1968-69	1969-70	1970-71
Concrete, etc.	105.3	108.2	110.0	103.8	107.1	113.4
Cement products	106.0	109.5	120.3	107.0	112.6	121.8
Clay bricks, tiles, etc.	109.0	113.5	121.1	107.8	112.4	118.0
Timber, board, etc.	110.3	116.9	119.9	108.6	113.5	118.5
Steel products	106.2	111.0	116.4	104.8	110.0	115.0
Other metal products	102.5	109.7	111.8	106.3	111.8	112.4
Plumbing fixtures, etc.	101.4	109.6	117.5	102.0	108.7	113.6
Electrical installation materials	106.0	117.3	114.7	105.2	115.8	115.0
Installed appliances	99.7	103.8	105.9	99.7	102.2	103.8
Plaster and plaster products .	100.4	101.2	104.8	103.0	105.1	109.4
Miscellaneous materials	105.6	112.1	113.8	104.5	107.4	111.0
All Groups	107.0	112.4	116.7	106.3	110.9	115.7

(a) Movements shown by index numbers before July 1970 include movements of imputed price series.

The 'All Groups' index for Adelaide is shown in the following table with that for each of the other State capitals. It is emphasised that these numbers reflect price changes within each individual city and that they do not measure differences in the level of prices between cities.

Wholesale Price Index of Materials used in House Building

All Groups, State Capital Cities

(Base of each Index: 1966-67 = 100.0)^(a)

Period	Sydney	Mel- bourne	Brisbane	Adelaide	Perth	Hobart	Weighted Average Six State Capital Cities
Year:							
1966-67	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1967-68	103.4	101.3	103.4	102.1	104.0	101.8	102.7
1968-69	109.3	103.6	105.6	107.0	105.9	104.1	106.3
1969-70	115.2	107.2	109.4	112.4	110.3	107.7	110.9
1970-71	119.8	112.3	115.2	116.7	113.9	114.3	115.7

(a) Movements shown by index numbers before July 1970 include movements of imputed price series.

Price Index of Materials Used in Building Other than House Building

This Index measures changes in prices of selected materials used in the construction of buildings other than houses and low-rise flats. It is a fixed-weights index, the composition of which is in accordance with the materials usage in building projects selected as representative for the purpose: such usage was derived from reported values of each material used in selected representative buildings constructed in or about 1966-67. The building types directly represented include high-rise flats (generally those exceeding three storeys), offices, factories, health buildings, education buildings and other commercial premises. The Index includes seventy-two items combined in eleven groups in an 'All Groups' index. The weighting pattern used in the index is shown below. In calculating indexes for each State capital city a single weighting pattern for the whole of Australia is applied to price measures obtained, with a few minor exceptions, in each relevant city.

Price Index of Materials Used in Building Other than House Building

Composition and Weighting Pattern

Base Year: 1966-67

Group	Percentage Contribution of Group to All Groups Index
	%
1. Concrete mix, cement, sand, etc.	10.41
2. Cement products	3.64
3. Bricks, stone, etc.	5.28
4. Timber, board and joinery	11.90
5. Steel and iron products	30.58
6. Aluminium products	6.01
7. Other metal products	2.59
8. Plumbing fixtures	1.19
9. Miscellaneous materials	7.09
10. Electrical installation materials	8.61
11. Mechanical services components	12.70

The price series used relate to specified standards of each commodity and are obtained in all State capital cities from representative suppliers of materials used in building. Prices are collected at or as near as possible to the mid-point of the month to which the index refers. Items are described in terms of fixed specifications with the aim of recording price changes for representative materials of constant quality. Figures are published to one decimal place to avoid distortions which would occur in rounding the index numbers to the nearest whole number. Shown below, for separate groups of items and all groups combined, are the index numbers for Adelaide and the weighted average index numbers for the six State capital cities.

Wholesale Price Index of Materials Used in Building Other than House Building
(Base of each Index: 1966-67 = 100.0)

Group	Adelaide			Weighted Average Six State Capital Cities (a)		
	1968-69	1969-70	1970-71	1968-69	1969-70	1970-71
Concrete, etc.	105.3	107.9	109.7	103.5	106.9	113.0
Cement products	107.6	112.5	118.8	106.8	111.7	118.0
Bricks, stone, etc.	108.7	113.5	121.3	108.2	112.6	118.6
Timber, joinery, etc.	105.1	108.9	114.8	107.2	111.2	117.0
Steel and iron products	105.3	108.2	112.6	106.1	110.1	115.8
Aluminium products	99.2	100.2	107.2	103.9	107.4	113.0
Other metal products	105.2	126.8	122.5	106.8	126.3	121.4
Plumbing fixtures	103.5	112.3	121.4	103.3	113.7	121.3
Miscellaneous materials	103.1	106.9	111.4	103.2	105.8	110.3
Electrical installation materials.....	102.1	112.2	110.9	102.1	112.2	110.9
Mechanical services components ...	107.7	111.7	118.9	107.7	111.8	119.0
All Groups	105.0	109.4	113.9	105.6	110.5	115.5

(a) See previous table for weighting pattern.

The 'All Groups' index for Adelaide is shown in the following table with that for each of the other State capital cities. It is emphasised that these numbers reflect price changes within each individual city, but they do not measure differences in the level of prices between cities.

Wholesale Price Index of Materials Used in Building Other than House Building
All Groups, State Capital Cities
(Base of each Index: 1966-67 = 100.0)^(a)

Period	Sydney	Mel-bourne	Brisbane	Adelaide	Perth	Hobart	Weighted Average Six State Capital Cities
Year:							
1966-67	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1967-68	102.6	101.7	102.2	101.8	102.0	102.3	102.2
1968-69	106.5	105.0	105.1	105.0	104.7	105.1	105.6
1969-70	111.7	109.8	110.3	109.4	108.9	109.7	110.5
1970-71	116.4	115.1	116.4	113.9	113.3	115.0	115.5

(a) Movements shown by index numbers before July 1968 include movements of imputed price series.

COMMODITY PRICES

Retail Prices of Food

The next two tables show, respectively, the average retail prices of selected food items in Adelaide during recent years and the prices of those items in the various Australian capital cities in December 1971.

Items included are those which are considered identical or sufficiently comparable from place to place to warrant publication of comparative prices: even so, in the second table meat prices are averages for a quarter, not prices at a point of time, because of variations in the quality of meat.

Average Retail Prices of Selected Food Items
Adelaide

Item	Unit	1967	1968	1969	1970	1971
		Cents				
Groceries:						
Bread (a)	2 lb	16.9	17.2	19.0	19.0	20.4
Self-raising flour	2 lb	15.5	16.4	17.2	18.8	16.9
Tea	$\frac{1}{2}$ lb	31.1	30.9	29.5	28.4	30.1
Sugar	1 lb	9.9	10.6	10.5	10.5	10.1
Rice	1 lb	12.9	13.7	13.9	14.2	14.8
Jam (b)	$1\frac{1}{2}$ lb	30.2	31.4	33.9	34.3	36.1
Peaches, canned	29oz	27.7	28.0	28.6	30.1	30.4
Potatoes	7 lb	40.5	49.9	27.3	38.1	42.7
Onions, brown	1 lb	7.1	11.5	9.0	10.4	12.1
Dairy products:						
Butter, factory	1 lb	49.3	49.9	52.0	52.6	53.6
Cheese, processed	$\frac{1}{2}$ lb	24.6	24.7	24.1	23.5	24.0
Eggs, large	doz	62.8	62.6	66.6	62.0	60.2
Bacon, rashers	$\frac{1}{2}$ lb	46.8	48.1	45.9	46.2	48.4
Milk; fresh, bottled (a)	quart	18.1	19.0	19.8	20.0	20.7
Meat:						
Beef:						
Rib (without bone)	1 lb	57.8	60.5	58.8	60.6	63.3
Rump steak	1 lb	94.1	101.9	102.0	104.4	109.7
Sausages	1 lb	25.5	26.6	27.5	28.2	28.9
Corned silverside	1 lb	60.6	63.1	63.3	65.6	68.4
Lamb:						
Leg	1 lb	45.6	44.3	45.0	45.0	44.6
Forequarter	1 lb	28.3	26.8	43.1	41.9	39.4
Loin chops	1 lb	54.9	53.2	51.3	51.0	49.5
Mutton:						
Leg	1 lb	33.4	33.2	32.6	31.2	29.9
Forequarter	1 lb	19.7	19.4	26.8	25.8	24.8
Loin chops	1 lb	32.9	33.2	33.0	29.6	28.5
Pork:						
Leg	1 lb	63.9	67.1	65.7	65.3	70.2
Chops	1 lb	64.6	67.4	66.1	65.1	70.6

(a) Delivered.

(b) Plum jam up to and including 1969, thereafter apricot jam.

**Average Retail Prices of Selected Food Items, Australian Capital Cities
December 1971**

Item	Unit	Sydney	Mel- bourne	Brisbane	Adelaide	Perth	Hobart	Canberra
Cents								
Groceries:								
Bread (a)	2 lb	22.0	23.0	20.0	21.0	22.0	24.0	23.0
Self-raising flour	2 lb	22.8	22.7	20.1	17.5	20.9	23.9	23.6
Tea	$\frac{1}{2}$ lb	32.5	33.2	32.6	32.5	32.4	32.6	33.5
Sugar	4 lb	42.6	41.2	41.8	41.1	40.0	43.8	44.6
Rice	1 lb	15.1	15.3	15.1	14.9	15.7	15.4	16.0
Jam, apricot	1 $\frac{1}{2}$ lb	34.0	35.8	37.3	37.0	39.2	37.9	35.7
Peaches, canned	29 oz	33.5	32.1	36.3	30.8	35.6	34.1	34.3
Potatoes	7 lb	48.6	49.4	35.7	38.3	53.1	44.0	53.0
Onions, brown	1 lb	14.6	16.1	14.2	14.3	12.1	17.2	15.5
Dairy Products:								
Butter, factory	1 lb	58.0	55.9	56.2	55.5	55.6	58.0	58.0
Cheese, processed	$\frac{1}{2}$ lb	24.9	24.4	28.0	26.0	27.4	24.9	25.0
Eggs, large	doz (b)	62.0	59.6	58.2	57.5	66.4	58.6	62.0
Bacon, rashers	$\frac{1}{2}$ lb	49.1	55.9	53.6	51.0	46.1	51.1	48.4
Milk; fresh, bottled (a)	quart	25.0	21.0	24.0	22.0	22.0	22.0	24.0
Meat (c):								
Beef:								
Rib (d)	1 lb	61.9	69.1	62.3	62.7	56.5	58.6	59.9
Rump steak	1 lb	120.1	120.4	102.8	111.4	119.2	101.7	119.8
Sausages	1 lb	30.0	31.3	34.3	28.2	26.1	30.2	32.7
Corned silverside	1 lb	62.6	70.8	67.5	68.9	66.0	66.3	69.2
Lamb;								
Leg	1 lb	46.4	42.0	52.1	43.0	46.9	51.9	49.7
Forequarter	1 lb	35.7	33.9	47.9	36.7	36.8	44.0	42.1
Loin chops	1 lb	47.3	46.2	52.9	46.4	42.6	52.4	55.8
Mutton;								
Leg	1 lb	33.1	27.6	37.9	29.4	31.6	27.9	37.4
Forequarter	1 lb	28.0	24.5	36.0	24.6	22.1	21.6	28.0
Loin chops	1 lb	27.8	32.2	37.3	27.7	26.9	26.4	30.7
Pork;								
Leg	1 lb	70.4	66.1	72.0	71.5	67.2	68.4	69.3
Chops	1 lb	68.6	68.2	73.0	71.7	68.4	69.0	68.9

(a) Delivered. (b) Adelaide, dozen 'large'; Hobart, dozen of '2oz'; elsewhere '24oz' dozen.

(c) Average for quarter ended December 1971. (d) Without bone.

Other Commodity Prices

South Australian prices of agricultural products are shown in the table on page 391, and separate details of wheat, barley, wool, and livestock are given under the appropriate headings in Part 9.1.

PRICE CONTROL

Following the outbreak of the 1939-45 War 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 administrative structure was established 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.

Under the provisions of the Prices Act, 1948-1971 the State Prices Branch determines prices for 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 have provided for the continuation of price control: an amendment in November 1971 covers the period to 31 December 1972.

RENT CONTROL

Extensive rent control was introduced in South Australia at the beginning of the 1939-45 War, with the passing by the State Government of the Increase in Rent (War Restrictions) Act which pegged rents at the level prevailing at 1 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, upon application by either the landlord or tenant, or in certain cases on its own initiative. An appeal against such a 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 Trust, of which twenty-nine were varied by a Local Court.

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 for a term in excess of three years exists, may apply to a Local Court to determine whether the rent is excessive.

Sub-Standard Housing

To regulate the rents for sub-standard housing the Housing Improvement Act, 1940-1971 vests in the South Australian Housing Trust power to declare a house sub-standard, and fix a maximum rent on it for such time as the declaration remains in force.

Before formally declaring a property to be sub-standard, the Trust first notifies the owner of its intention. Upon notification of the Trust's intention the owner is given a period of at least two months during which time improvements may be made to the property. If, at the expiration of the time period, it is subsequently found that the property has not been satisfactorily improved, then it is customary for the Trust to control the rent appropriate to the standard of accommodation provided.

PART 11

TRANSPORT AND COMMUNICATION

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 in the following table.

Distances Between Adelaide and Other Capital Cities

Method of Travel	Canberra	Sydney	Melbourne	Brisbane	Perth	Hobart	Darwin
				Miles			
Road (a) .	753	890	464	1,518	1,704	..	1,984
Rail	1,006	1,028	483	1,641	1,649	..	..
Sea (b) . . . .	..	965	515	1,480	(c)1,378	772	(d)3,180
Air	614	743	410	1,222	1,377	797	1,719

(a) In some cases shorter but less popular routes are available.

(b) Distance in nautical miles. (c) Fremantle. (d) *Via* Fremantle.

TRAVEL TO WORK AND TO SCHOOL

A sample survey was conducted in May 1970 to measure the use of various forms of transport in travelling to work and to schools, universities and other educational institutions. Brief summaries of the information collected in that survey are given on pages 279-81 (travel to work) and 194-5 (travel to school etc.). More details are available in the bulletin *Journey to Work and Journey to School* (reference 17.4) published by the Commonwealth Statistician.

TRANSPORT CO-ORDINATION**TRANSPORT CONTROL BOARD**

The Transport Control Board, constituted under the Road and Railway Transport Act, 1930-1971, is mainly concerned with the rationalisation of passenger transport services and in particular the co-ordination of road and railway passenger services.

Subject to the approval of the Parliamentary Standing Committee on Public Works the Board may order the closing of a railway line provided that alternative transport will be available.

The Board has power to declare roads outside a radius of 10 miles from the General Post Office, Adelaide to be controlled routes. A licence must be obtained from the Board before a vehicle can carry passengers for hire on a controlled route and the Board is obliged to grant sufficient licences to ensure an adequate passenger motor service on every controlled route which is within 50 miles of the GPO and which is at any point more than 3 miles from a railway line.

Licences issued by the Board specify the route or routes over which the licensee is permitted to operate vehicles; licences have a currency of five years but numerous special permits are issued for periods up to twelve months.

At 30 June 1971 current licences totalled 58. Special annual permits included 102 charter coach, 192 hire car and 115 miscellaneous passenger permits while special permits for short periods issued during the year covered 4,056 passenger vehicles. The Board also registers persons and firms who book passengers on behalf of a licensee; at 30 June 1971, there were 104 such agents.

ROYAL COMMISSION

In May 1966 a royal commission on State transport services was appointed to enquire into, report upon and make recommendations on all aspects of the transportation in South Australia of passengers and goods by railway, road, sea and air.

A brief summary of the Commission's report, which was submitted to the Government in January 1968, was included on pages 504-5 of the *South Australian Year Book* 1970. Among the recommendations of the Commission which have been adopted are the licensing of a road passenger service between Adelaide and Whyalla, and the substitution of road transport for some country rail passenger services.

RAILWAYS

In Part 8.4, railways in South Australia were discussed under the headings of ownership and control, and standardisation of railway gauges. It was mentioned that both the State and Commonwealth Governments operate railways in this State and that there are two privately-owned railways, from Iron Knob and Iron Baron to Whyalla, and from Coffin Bay to Port Lincoln; this section deals with the operation of the South Australian Railways as a means of transport within and to and from the State. In the *Official 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. Details are not available on the operations of the private railways.

SOUTH AUSTRALIAN RAILWAYS

FINANCIAL SUMMARY

Capital indebtedness (see definition on page 559) of the South Australian Railways at 30 June 1971 totalled \$152,750,000. Operations for 1970-71 resulted in a deficit of \$16,124,000 and after taking into account contributions from Consolidated Revenue totalling \$14,500,000, there was a deficit of \$1,624,000. The following summary shows details of capital indebtedness, working expenses, and revenue for the five years to 1970-71.

South Australian Railways: Capital Indebtedness, Working Expenses and Revenue

Particulars	1966-67	1967-68	1968-69	1969-70	1970-71
	\$'000				
Capital indebtedness	132,072	137,022	142,643	151,156	152,750
Working expenses	34,160	34,818	36,393	39,293	43,002
Revenue	30,417	28,244	30,522	33,566	34,635
Deficit on operating ...	3,744	6,574	5,871	5,721	8,367
Debt charges	5,835	6,160	6,446	7,053	7,757
Total deficit for year....	9,579	12,734	12,317	12,774	16,124
Less contributions from Consolidated Revenue	8,000	10,000	11,000	14,674	14,500
Net surplus (+) or deficit (-) ..	-1,579	-2,734	-1,317	+1,900	-1,624

Sources of Revenue

For the five year period ending 30 June 1971 approximately 77 per cent of railways operational revenue was derived from carriage of freight and about 12 per cent from passenger traffic. During 1970-71 the approximate percentages were 78 and 11 respectively. Sources of revenue and the amounts received for the years 1966-67 to 1970-71 are shown in the table below.

South Australian Railways, Sources of Revenue

Source	1966-67	1967-68	1968-69	1969-70	1970-71
	\$'000				
Country passengers	1,800	1,758	1,625	1,688	1,837
Suburban passengers	1,915	1,912	1,968	2,002	2,055
Parcels, mails, etc.....	1,025	984	977	920	912
General merchandise and miscell- aneous freight	11,004	11,023	12,212	12,931	13,691
Wool	194	149	155	172	138
Wheat	2,987	1,623	2,415	3,817	4,134
Barley and other grains	857	467	795	1,025	909
Livestock	673	708	834	1,122	1,016
Minerals	7,503	7,097	7,102	7,372	7,221
Rents and miscellaneous	1,415	1,452	1,384	1,395	1,467
Refreshment services and book- stalls	1,044	1,072	1,055	1,122	1,255
Total	30,417	28,244	30,522	33,566	34,635

Revenue from road motor services, amounting to \$235,066 in 1970-71, is included in the above table with revenue from passengers, parcels, mails, etc. and miscellaneous freight.

Working Expenses

The cost of operating the South Australian Railways during 1970-71 was \$43,002,000 plus debt charges which amounted to \$7,757,000. The working expenses include the cost of administration, maintenance of permanent way, rollingstock maintenance and operation costs, salaries and wages of station staff, guards and conductors. A comparison of working expenses for the last five years is given in the following table.

South Australian Railways, Working Expenses

Expenses	1966-67	1967-68	1968-69	1969-70	1970-71
	\$'000				
Administration:					
Salaries, wages, expenses, etc.	1,090	1,137	1,194	1,298	1,495
Pay roll tax	513	525	563	598	673
Superannuation Act—pensions	1,207	1,239	1,311	1,292	1,408
Way and works:					
Maintenance and superintendence of permanent way, etc.	7,358	7,736	8,149	9,387	9,637
Rollingstock:					
General superintendence	253	254	265	299	326
Maintenance of rollingstock	5,903	5,917	6,227	6,298	6,796
Motive power, lubrication, etc.	4,923	4,803	4,918	5,352	5,815
Transportation and traffic:					
General superintendence, station staff, guards, etc.	9,441	9,591	10,027	10,790	12,334
Miscellaneous:					
Refreshment services, road motors, etc.	1,260	1,301	1,319	1,365	1,599
Stores:					
Salaries, wages, expenses	627	679	711	746	854
Depreciation (a)	1,585	1,635	1,708	1,867	2,063
Total	34,160	34,818	36,393	39,293	43,002

(a) Additional depreciation is included in 'Maintenance of rollingstock' and other accounts to cover depreciation of workshop machinery. The amount for 1970-71 was \$110,880.

The average number of persons employed in operations and maintenance during 1970-71 was 7,853. In addition an average of 1,142 persons were employed on special work including standardisation programmes.

Debt Charges

These charges to the South Australian Railways have increased over the five-year period 1966-67 to 1970-71 because of additional loan funds made available for capital purposes, further advances provided under Railways Standardisation and Railway Equipment Agreements, and higher interest rates. Net funds provided from State Loan Fund were \$135,277,000 at 30 June 1971 as against \$127,519,000 at 30 June 1967.

The net amount on which the State was liable for interest and repayment under the Railways Standardisation Agreement at 30 June 1971 was \$12,504,000 compared with \$8,019,000 at 30 June 1967. The total expenditure on standardisation to 30 June 1971 was \$62,958,000, of which \$61,057,000 was

provided by the Commonwealth (30 per cent repayable by the State), and \$1,901,000 was contributed from the Consolidated Revenue of the State. Outstanding liability of the State to the Commonwealth under the Railway Equipment Agreement at 30 June 1971 amounted to \$664,000.

Debt charges for 1970-71 were:	\$
Interest on Loan Funds provided for capital purposes (other than stores) including exchange on overseas debt	6,583,856
Interest on Loan Funds invested in stores	237,809
Interest under Railways Standardisation and Railway Equipment Agreements	920,467
Interest on Railways of Australia rollingstock	14,887
	7,757,019

RAILWAY OPERATIONS

Train Mileage and Track Open

The average length of track open for traffic during 1970-71 was 2,439 miles. The last lines closed were the Eudunda-Morgan (35 miles) and the Sandergrove-Milang (8 miles) in 1969-70, and the Wanbi-Yinkanie (31 miles) in 1970-71, while the last line opened was a 2 mile spur line to Tonsley Park in 1966-67. Train miles run during 1970-71 totalled 6,343,937.

The following table shows revenue and working expenses for the five years to 1970-71.

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	Per cent	'000 miles	\$	\$
1966-67	30,417	34,160	112	6,584	4.62	5.19
1967-68	28,244	34,818	123	6,418	4.40	5.43
1968-69	30,522	36,393	119	6,176	4.94	5.89
1969-70	33,566	39,287	117	6,192	5.42	6.34
1970-71	34,635	43,002	124	6,344	5.46	6.78

Train mileage was 6.8 million 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 in recent years it has been at a lower level. In general both revenue and working expenses per train mile have increased in recent years with working expenses per train mile showing the more rapid increase.

Locomotives and Rollingstock

Significant steps in the development of traction in the South Australian Railways have been the introduction, particularly in the early 1920s, of more powerful steam locomotives; the introduction of petrol-driven railcars from 1924 and their conversion to diesel operation from 1937; the change from steam to main-line diesel electric locomotives commencing in 1951; and the introduction of improved diesel railcars from 1955.

The extent of the change from steam to diesel electric locomotives and from petrol to diesel railcars since 1955 is revealed in the following table.

South Australian Railways, Locomotives and Rollingstock
(At 30 June in selected years)

Particulars	1955	1960	1965	1970	1971
	Number				
Locomotives:					
Steam	365	225	151	4	5
Diesel electric;					
Main line	} 12	30	41	54	55
Shunting and transfer...		12	21	46	46
General purpose		10	35	45	45
Total	377	277	248	149	151
Rail cars:					
Power;					
Diesel	—	118	134	124	126
Petrol	53	4	—	—	—
Non-power;					
Control equipped	—	7	7	7	7
Trailer	28	52	58	40	40
Coaches	485	353	243	170	116
Interstate coaches	54	61	71	65	108
Goods and livestock wagons.....	8,895	8,000	7,962	7,694	7,425
Service wagons and vans	478	467	526	622	617

The South Australian Railways use a great variety of specialised rollingstock most of which is built at its Islington Workshops.

Consumption of locomotive and rail car fuels during the years ended 30 June 1955, 1960, 1965, 1970 and 1971 was as follows:

South Australian Railways, Locomotive Fuel Consumption
(At 30 June in selected years)

Fuel	1955	1960	1965	1970	1971
	Tons				
Steam locomotives:					
Coal	199,868	78,861	20,411	1,904	113
Heavy oil	85,310	29,044	4,287	2,887	4
Diesel locomotives:					
Diesel oil	4,949	12,079	20,640	26,127	26,555
Rail cars:					
Petrol	630	253	—	—	—
Diesel oil	814	8,175	8,528	8,311	8,562

Passenger Traffic

The number of passengers carried in 1942-43 was nearly 31 million persons, a substantial increase on the 17.6 million in 1939-40. Following a decline in the immediate post-war period, the number in 1949-50 settled at about the pre-war

level, but since 1959-60, reflecting mainly the trend in suburban passenger traffic, has declined to less than fifteen million. Country passenger traffic has been generally declining since 1944-45.

**South Australian Railways, Passenger Journeys and Passenger Train Mileages
1966-67 to 1970-71**

Year	No. of Passengers Carried		Passenger Train Mileage		Average Miles Each Passenger Carried		Average Earnings per Passenger Mile	
	Country (a)	Suburban	Country (a)	Suburban	Country (a)	Suburban	Country (a)	Suburban
	'000	'000	'000	'000	No.	No.	Cents	Cents
1966-67	824	14,608	1,922	2,028	116.86	8.32	1.87	1.58
1967-68	795	14,447	1,913	2,026	112.71	8.15	1.96	1.62
1968-69	664	13,760	1,550	2,012	127.50	8.14	1.92	1.76
1969-70	549	13,441	1,198	2,090	157.55	8.09	1.95	1.84
1970-71	553	13,393	1,267	2,098	165.84	7.92	2.09	1.74

(a) 'Country' passengers carried includes all interstate passengers.

Interstate passenger and freight services are operated in conjunction with interstate railways including the Commonwealth Railways—the Victorian Railways to Melbourne, Commonwealth and Western Australian Railways to Perth, the New South Wales Railways to Sydney and Brisbane, and the Commonwealth Railways to Alice Springs. Sleeping accommodation and first and second class travel are available for interstate journeys. Interstate passengers carried on South Australian Railways are included under 'country' in the preceding table.

From 1 August 1971 all inter-system passenger fares were increased for the first time since 1967. Suburban passenger fares were increased from 1 February 1969, the average level of increases being 13 per cent compared with 15 per cent for the previous increases on 1 October 1966. From 1 April 1971 suburban rail fares were adjusted to closely align with bus fares for comparable distances: single fares were not greatly affected—in fact the single fare increases applied to less than half of suburban stations and, in eight instances, single fares were reduced. However, all return fares were increased to double the price of single fares.

The table below shows adult single railway fares, in force from 1 August 1971, between Adelaide and selected cities.

Passenger Railway Fares, Adelaide to Selected Australian Cities

Adelaide to	Adult, Single Fare (a)	
	Economy Class	First Class
	\$	\$
Brisbane	33.10	43.80
Broken Hill	6.40	8.10
Canberra	20.70	27.40
Melbourne	11.60	16.10
Perth (b)	55.00	74.30
Sydney	20.70	27.40

(a) All fares include booking fee.

(b) Fares include reserved seats, sleeping berths (where provided) and meals.

Freight Traffic

The railways by-law rate structure was determined by the need to develop the country and this led to the practice of charging what the traffic would bear—charges were higher for expensive commodities than for cheap ones. This type of rate helped to subsidise those people who lived in sparsely populated areas which were served 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. To meet increased competition from road transport in recent years it has been necessary to introduce special freight rates on some lines.

General increases in intrastate freight rates were announced early in 1971: the two previous increases occurred in 1960 and 1966. The present rates, operative from 1 April 1971, constitute a maximum increase of 10 per cent for hauls of more than 100 miles, with proportionate increases for shorter distances: the increases do not apply to all commodities.

From 1 July 1968 a uniform classification of rates and conditions for the movement of inter-system goods traffic was adopted by the Commonwealth Railways authority and all State Railway authorities. However, some traffic on inter-system lines has been excluded from the application of the uniform rates; such exclusions affecting South Australia relate to traffic between railway stations within South Australia; between South Australian Railway stations and Central Australia Railway stations, Trans-Australian Railway stations and Broken Hill: in these cases a combination of local, special or district and inter-system mileage rates applies. The rates from July 1968 are generally lower than those previously applicable.

The table below shows the freight tonnages carried by the South Australian Railways for the years 1966-67 to 1970-71.

South Australian Railways, Freight Carried

Freight	1966-67	1967-68	1968-69	1969-70	1970-71
	'000 tons				
Wool	23	18	21	28	22
Wheat	735	415	563	949	1,059
Barley	191	78	178	256	219
Livestock	87	92	119	172	159
Minerals	1,487	1,446	1,532	1,675	1,624
General merchandise	2,385	2,352	2,624	2,842	2,941
Total	4,909	4,401	5,037	5,922	6,025
	'000				
Goods and livestock train mileage	2,634	2,479	2,614	2,904	2,979
	Cents				
Average earnings per ton-mile ...	3.14	3.09	2.92	2.79	2.75

The tonnages of freight carried during 1970-71 were an all-time record, exceeding the previous record in 1969-70 by 1.7 per cent. The most significant increases were in the movement of salt, pyrites and goods packed in containers.

The introduction of specialised containers and rail trucks to carry them has enabled a greater range of goods to be moved. Special facilities such as forklifts, gantry cranes and straddle trucks are used for handling containers.

There has been a substantial increase in the movement of overseas shipping cargo containers largely between Port Adelaide and Melbourne, Berri and Melbourne, and Port Adelaide and Berri. Additional sidings were constructed to serve the two container terminals at Port Adelaide.

The opening to freight traffic of the Port Pirie-Broken Hill standard gauge line resulted in more than a nine-fold increase in tonnages moving through Broken Hill to and from New South Wales and beyond.

Accident Casualties

The table below shows casualties, other than railway employees, as recorded by the South Australian Railways for the years 1966-67 to 1970-71.

South Australian Railways, Accident Casualties

Persons	1966-67	1967-68	1968-69	1969-70	1970-71
Killed	26	12	12	30	14
Injured	52	61	109	112	111

RATIONALISATION OF RAILWAY SERVICES

On 7 May 1968 the Minister of Transport announced the Government's decision to carry out a programme of rationalisation of rail services. A number of existing passenger services were to be cancelled and, in some areas, replaced by either private or departmentally sponsored road passenger services. Subject to inquiry by the Transport Control Board and the Parliamentary Standing Committee on Public Works, some country rail lines were to be closed.

A departmentally sponsored bus service is one for which tenders are called by the South Australian Railways Commissioner and contracts let to private operators who undertake to provide services at times, fares and parcel rates specified by the South Australian Railways. Tickets can be purchased at railway stations or from the bus operator at unattended sidings. The operator is paid on a mileage basis.

The Port Lincoln-Ceduna rail passenger service was cancelled on 1 September 1968 and a private bus service commenced on this route on 27 August 1968. At present there is no rail passenger service on Eyre Peninsula.

At 1 March 1970 other rail passenger services cancelled and replaced by privately operated bus services were those between Adelaide and Eudunda, Kapunda, Angaston, Truro and Moonta; and between Moonta and Kadina.

The early morning and late afternoon services between Adelaide, Bowmans and Balaklava have been cancelled, being no longer used north of Long Plains for their original purpose of transporting workers and school children to and from Adelaide. Departmentally sponsored bus services were instituted running from Long Plains and Virginia to Salisbury where they connect with the Adelaide

suburban rail car service. Passengers from Bowmans and Balaklava do not now have an early morning service but at other times may travel on the longer distance trains from Port Pirie and Gladstone respectively.

The Moonta-Brinkworth, Port Pirie-Peterborough and Peterborough-Quorn rail passenger services have been cancelled and not replaced by any departmentally sponsored alternative service. The departmentally sponsored bus service introduced to replace the Gladstone-Wilmington rail passenger service was extended to Quorn when the Peterborough-Quorn rail passenger service was cancelled. The line between Sandergrove and Milang was closed to all traffic in June 1970 without substitution of any specific alternative service, while the passenger service between Adelaide and Victor Harbor has been retained.

At 1 February 1972, of the freight and livestock traffic lines recommended for closure, the Hallett Cove-Willunga, the Sandergrove-Milang, the Eudunda-Morgan, and the Wanbi-Yinkanie lines had been closed: the Mount Barker Junction-Victor Harbor line had been retained.

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, 1935-1971. Exclusive powers are given to the Trust to:

- (1) operate electric tramway systems within a radius of 10 miles from the GPO;
- (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 was extended to include the local government areas of Elizabeth and Salisbury and parts of Munno Para and Tea Tree 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. Control is vested in a Board of five members all of whom are appointed by the Governor. Under the Act the State Treasurer is empowered to make grants to the Trust to enable it to meet the expenses incurred in the exercise of its functions.

Historical Survey

A brief historical summary of tramways and omnibus services was included on pages 512-4 of the *South Australian Year Book 1970* under the headings 'Historical Survey' and 'Route Miles, Mileage Run and Passengers Carried'.

Main developments during the last twenty years have been the replacement of trams with diesel buses (with the exception of Glenelg tram service which runs mainly on enclosed land), the abandonment of electricity generation in favour of purchasing electric power from the Electricity Trust, and erection of new workshops and new parking and servicing depots.

Income and Expenditure

A table showing capital indebtedness, income and working expenses etc. for the last five years is given in Part 12.4 Public Finance—Semi-Government Authorities. Selected details for the five years to 1970-71 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 Deficit
\$'000						
1966-67..	6,071	199	20	5,947	474	131
1967-68..	6,009	215	20	5,879	431	65
1968-69..	6,233	239	—	6,104	409	41
1969-70..	6,448	249	—	6,293	410	6
1970-71..	6,640	241	480	6,986	356	-20

At 30 June 1971 loan indebtedness amounted to \$6,331,000; these loans are secured by debentures issued to the Treasurer of South Australia.

Working Expenses

Working expenses of the Trust were \$1,244,000 in 1940-41 and had nearly doubled by 1946-47 when they were \$2,402,000. In 1970-71 working expenses reached a record high level of \$6,986,000. Details for the last five years are given below.

Municipal Tramways Trust, Working Expenses

Working Expense	1966-67	1967-68	1968-69	1969-70	1970-71
\$'000					
Traffic operations	3,325	3,281	3,431	3,479	3,954
Maintenance	1,002	1,019	1,065	1,074	1,159
Power for traffic	34	30	30	30	30
Fuel and oil for traffic	256	251	244	248	301
Highways contribution.....	90	86	86	86	87
Depreciation	524	476	429	401	378
Other expenses	716	736	820	976	1,077
Total	5,947	5,879	6,104	6,293	6,986
Cents					
Working expenses per traffic mile	52.90	55.10	57.16	59.04	64.69

The average number of persons employed by the Trust during 1970-71 was 1,286 (168 salaried and 1,118 wages staff): salaries and wages paid amounted to \$5,091,000 or over 73 per cent of total working expenses.

Route Miles, Mileage Run, Passengers Carried and Fares

The following two tables show the details of route miles, mileage run and passengers carried for the years 1966-67 to 1970-71. The route miles have slightly increased and mileages run have generally decreased over the years shown. The details for electric trams refer to the Adelaide-Glenelg service, the only remaining tram service in this State. Since 1944-45 there has been a steady decline in the number of passengers carried.

Municipal Tramways Trust, Route Miles and Traffic Mileage

Year	Route Miles at End of Year			Mileage Run During Year		
	Electric Trams	Motor Omnibuses	Total	Electric Trams	Motor Omnibuses	Total
					'000	
1966-67	7	142	149	471	10,772	11,243
1967-68	7	150	157	419	10,247	10,666
1968-69	7	151	158	416	10,262	10,678
1969-70	7	163	171	419	10,239	10,658
1970-71	7	163	171	416	10,384	10,800

Municipal Tramways Trust, Passengers, Traffic Miles and Revenue

Year	Passengers Carried	Traffic Revenue	Traffic Mileage	Average Fare	Traffic Revenue per Traffic Mile
	'000	\$'000	'000	Cents	Cents
1966-67 ..	49,735	6,071	11,243	12.01	55.77
1967-68 ..	47,813	6,009	10,666	12.34	58.36
1968-69 ..	45,393	6,233	10,678	13.50	60.61
1969-70 ..	43,345	6,448	10,658	14.63	62.83
1970-71 ..	41,259	6,640	10,800	15.82	63.72

The table below shows passenger fares, effective from 28 February 1971, for travel over various distances measured in sections—in most cases a section is a distance of approximately one mile.

Municipal Tramways Trust, Passenger Fares

Distance Measured in Sections	Adult Cash Fare	Child Cash Fare	Pensioner Cash Fare	Scholar Monthly Concession Ticket
		Cents		\$
1	10	5	5	1.50
2	15	5	5	1.50
3	20	10	10	3.00
4-7	25	10	10	3.00
8-9	30	15	10	4.50
10 or more	30	15	15	4.50

Rollingstock

The change from electric traction to diesel operation is reflected in the following table which shows details of rollingstock in selected years.

Municipal Tramways Trust, Rollingstock and Seating Capacity
At 30 June (a)

Particulars	1950	1955	1960	1965	1970	1971
Rollingstock:						
Electric trams ...	279	178	30	30	26	26
Motor omnibuses	81	140	364	353	344	376
Trolley buses ...	61	91	56	—	—	—
Total vehicles	421	409	450	383	370	402
Seating capacity:						
Electric trams ...	14,280	10,147	1,908	1,908	1,664	1,664
Motor omnibuses	3,998	5,268	14,428	14,112	14,234	16,186
Trolley buses ...	2,984	4,184	2,006	—	—	—
Total seating	21,262	19,599	18,342	16,020	15,898	17,850

(a) 31 January in 1950.

Under a three year programme, to be completed early in 1973 and costing \$5.2 million, the Trust is replacing its fleet of buses with vehicles designed for one-man operation. The new vehicles have rear mounted engines, lower step height and in some cases a two-way radio contact with the depot.

Accident Casualties

The following casualties resulted from accidents which occurred during the last five years.

Municipal Tramways Trust, Accident Casualties

Year	Passengers		Employees		Total (including other)	
	Killed	Injured	Killed	Injured	Killed	Injured
1966-67	—	121	—	118	1	260
1967-68	—	120	—	85	2	229
1968-69	—	105	—	89	—	214
1969-70	—	107	—	83	3	210
1970-71	—	109	—	71	1	200

PRIVATE MOTOR OMNIBUS SERVICES

Metropolitan Services

Since 1941 route mileage of private motor omnibuses licensed by the Municipal Tramways Trust has increased by more than five times from 46.40 miles in 1941 to 252.55 miles in 1970-71, while the number of passengers carried has increased by more than six times from 2.3 million to 14.9 million. A large

part of the increase in the number of passengers carried occurred in the ten years from 1941 (2.3 million) to 1951 (10.7 million).

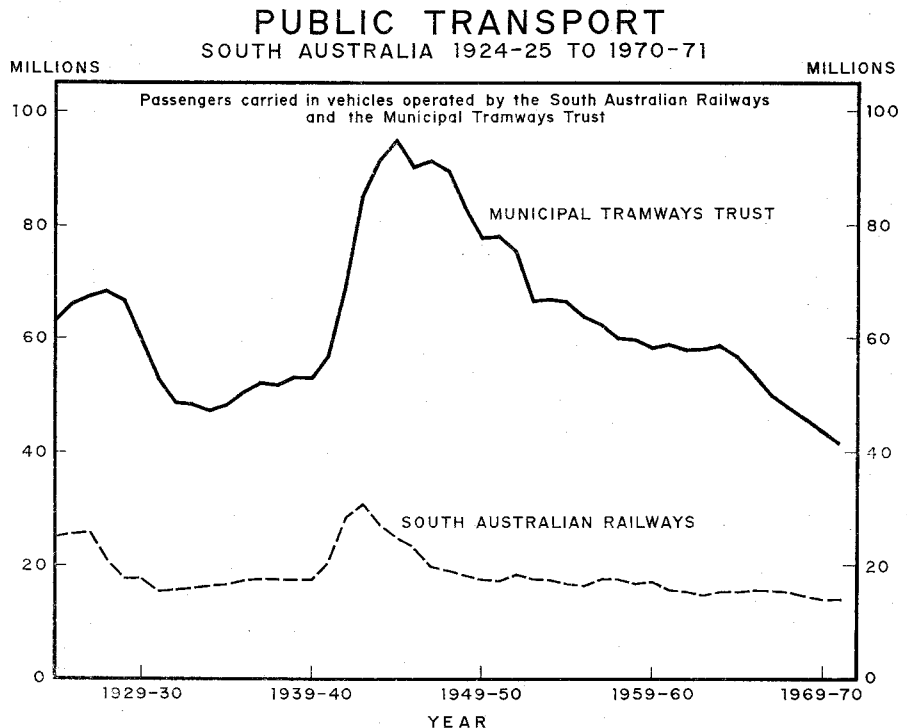
The Municipal Tramways Trust grants licences to private bus operators to carry passengers within the prescribed area which includes the Cities of Elizabeth and Salisbury and parts of the local government areas of Munno Para and Tea Tree Gully.

Private Motor Omnibuses, Metropolitan Services

Year	Route Mileage	Mileage Run	Passengers Carried	Rolling Stock	Traffic Receipts (Gross)
	Miles	'000 miles	'000	No.	\$'000
1966-67 ..	249	5,963	14,956	224	1,971
1967-68 ..	251	6,215	15,458	225	2,083
1968-69 ..	254	5,963	15,024	230	2,123
1969-70 ..	251	6,757	15,171	244	2,355
1970-71 ..	253	6,673	14,856	253	2,523

Interstate and Country Services

Regular interstate bus services and special tours operate to all States. There are co-ordinated passenger rail and bus services on a number of additional routes.



TAXI-CABS

The Metropolitan Taxi-Cab Act, 1956-1965, administered by the Metropolitan Taxi-Cab Board, is the governing legislation providing for the control of taxi-cabs within a 10 mile radius of the GPO, Adelaide and the District Council of Stirling and the Cities of Tea Tree Gully, Elizabeth and Salisbury. The Board is responsible for the granting of licences or permits to operate taxi-cabs, the allotment of vehicles to stands and the charging of permit fees.

Taxi-cabs at present licensed for the Salisbury and Elizabeth areas must remain 'pegged' to the stands within the municipal boundaries of those areas, but after dropping a passenger outside of those areas the driver must head back in the direction of Salisbury and Elizabeth and if available for hire must accept a hail and proceed to any required destination within a 25 mile radius of the Adelaide GPO.

Regulations under the Act provide for the examination of taxi-cabs: the roadworthiness of all taxi-cabs is examined by the Police Department each year and the Board's inspectors check and test all meters. It is compulsory for taxis to be fitted with meters which record progressively the cost of each journey at rates prescribed from time to time. At March 1972 the rates were 24 cents for 'flag fall' and 22 cents a mile. The area in which these metered charges apply is determined by the Board and is known as the 'metered zone'. Outside of this zone but within an area of 25 miles radius from the GPO Adelaide, a 50 per cent loading, equal to 11 cents a mile, is charged. For journeys which extend beyond the 25 mile radius contract rates not to exceed 15 cents per outward and return mile are charged.

Licences issued at 30 June 1971 include taxi-cabs, white plates (*i.e.* restricted) 250, green plates 548; hire cars 39; and funeral cars 11. Drivers' licences current totalled 2,960. In February 1970 Executive Council approved increases for taxi and private hire vehicles licence fees from \$32 and \$19 respectively to \$33 and \$25, and in February 1971 taxi licence fees were again increased, by \$5 to \$38.

Revenue received during 1970-71 was \$30,324 from taxi licences, \$1,090 from hire car licences and \$10,018 from drivers' licences. Total revenue from all sources was \$64,399, and expenditure was \$59,062.

In areas not under the control of the Metropolitan Taxi-Cab Board, taxi licences are issued by local government authorities under the provisions of the Local Government Act.

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.

The present legislation for the control of road traffic in South Australia is set out in the Road Traffic Act, 1961-1971 and the Motor Vehicles Act, 1959-1971.

Registration of Motor Vehicles

Under the provisions of the Motor Vehicles Act, 1959-1971 all motor vehicles, unless specifically exempted, must be registered with the Registrar of Motor Vehicles before being driven on any public road.

The Motor Vehicles Act defines a motor vehicle as:

- (a) a vehicle, tractor or mobile machine 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.

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 25 miles from the GPO Adelaide.

Registration fees vary according to the power-weight (PW) of the vehicle; this is calculated by adding the weight of the vehicle in hundredweights to its rated horsepower. Fees for trailers are based on unladen weight and vehicles fitted with solid rubber or metal tyres are subject to higher rates.

Annual registration fees for motor vehicles were increased during 1971. For motor bicycles the fees vary between \$4 for a vehicle weighing less than one hundredweight to \$8 for a motor bicycle having a side car attached. For commercial vehicles the range of fees is from \$6 for a vehicle not exceeding 10 PW and with tare weight 35 cwt or less to \$67.60 plus \$7.80 for each 5 PW or portion thereof exceeding 75 PW, for vehicles exceeding 75 PW. For private vehicles a minimum annual fee of \$7 applies for vehicles that do not exceed 10 PW and for vehicles in excess of 75 PW a maximum fee of \$47.90 plus \$4.70 for each 5 PW or portion thereof the PW of the vehicle exceeds 75. Registration fees for trailers (with pneumatic tyres) range from \$6 for trailers of unladen weight not exceeding one ton to \$12 for trailers of unladen weight exceeding 2 tons.

Motor vehicles used for certain purposes are registered without fee, *e.g.* vehicles owned by the Fire Brigades Board and other firefighting organisations, ambulances (for the use of which no charge is made), council vehicles used solely or mainly for the collection and transport of household refuse, etc. Registration at reduced rates is allowed for primary producers' commercial vehicles and tractors, prospectors' vehicles, and for vehicles used wholly or mainly in outer areas. Reduced rates are available to incapacitated ex-servicemen also, and to some persons in receipt of Commonwealth pensions. Vehicles used solely for interstate trade can be registered for \$2 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.

From January 1967 all new vehicles have been registered within an alpha-numeric series, each number plate bearing up to three letters and numbers consisting generally of three digits. Old series registrations, indicated in most cases by numbers of up to six digits, are being converted gradually to the new series as vehicles are re-registered following lapse of registration or change of ownership. At 30 June 1971 approximately two-thirds of the total number of vehicles on the South Australian register carried the new alpha-numeric plates. The change to alpha-numeric registrations is being undertaken throughout Australia with different alphabetic series allocated to each State: those for South Australia comprise alphabetic series with initial letters R, S and T.

Third party bodily injury insurance as a prerequisite to registration of a motor vehicle is discussed on page 500.

Motor Vehicles on Register

The following table shows the number of motor vehicles on the register at 31 December from 1967 to 1971.

**Motor Vehicles on Register, South Australia^(a)
At 31 December**

Type of Vehicle	1967	1968	1969	1970	1971
Cars (b).....	276,415	287,389	304,247	319,788	334,526
Station wagons	47,536	51,138	55,231	58,311	60,679
Utilities	38,013	37,478	37,692	37,567	37,226
Panel vans	11,503	11,837	11,970	12,191	12,513
Trucks (c)	34,764	35,129	36,465	36,990	37,374
Motor cycles and scooters	12,509	12,993	13,468	14,851	17,489
Buses	2,030	2,115	2,363	2,608	2,998
Total on Register	422,770	438,079	461,436	482,306	502,805
Population per vehicle	2.65	2.58	2.49	2.43	2.36
Tractors, plant, equipment, etc. (d)	6,579	6,776	6,973	7,170	7,216
Trailers and caravans	82,499	85,074	89,019	93,065	97,623
Traders plates	2,849	2,897	2,958	2,914	2,858

(a) Includes Commonwealth owned vehicles except defence services vehicles. (b) Includes ambulances and hearses. (c) Includes truck type vehicles such as tankers and concrete agitators. (d) Self-propelled vehicles only. Non-self-propelled plant and equipment are included with trailers and caravans.

New Motor Vehicle Registrations

New motor vehicle registrations during the calendar years 1967 to 1971 are shown in the following table.

New Motor Vehicle Registrations, South Australia^(a)

Type of Vehicle	1967	1968	1969	1970	1971
Cars.....	25,339	29,424	33,620	34,311	33,563
Station wagons	4,811	4,598	4,847	4,309	4,134
Utilities	2,866	2,831	3,263	2,912	2,410
Panel vans	949	999	1,044	1,248	1,409
Trucks (b).....	1,975	2,257	2,528	2,342	2,074
Motor cycles and scooters	1,595	1,940	2,225	2,994	4,474
Buses	137	187	244	280	337
Ambulances and hearses	46	43	53	45	52
Total	37,718	42,279	47,824	48,441	48,453

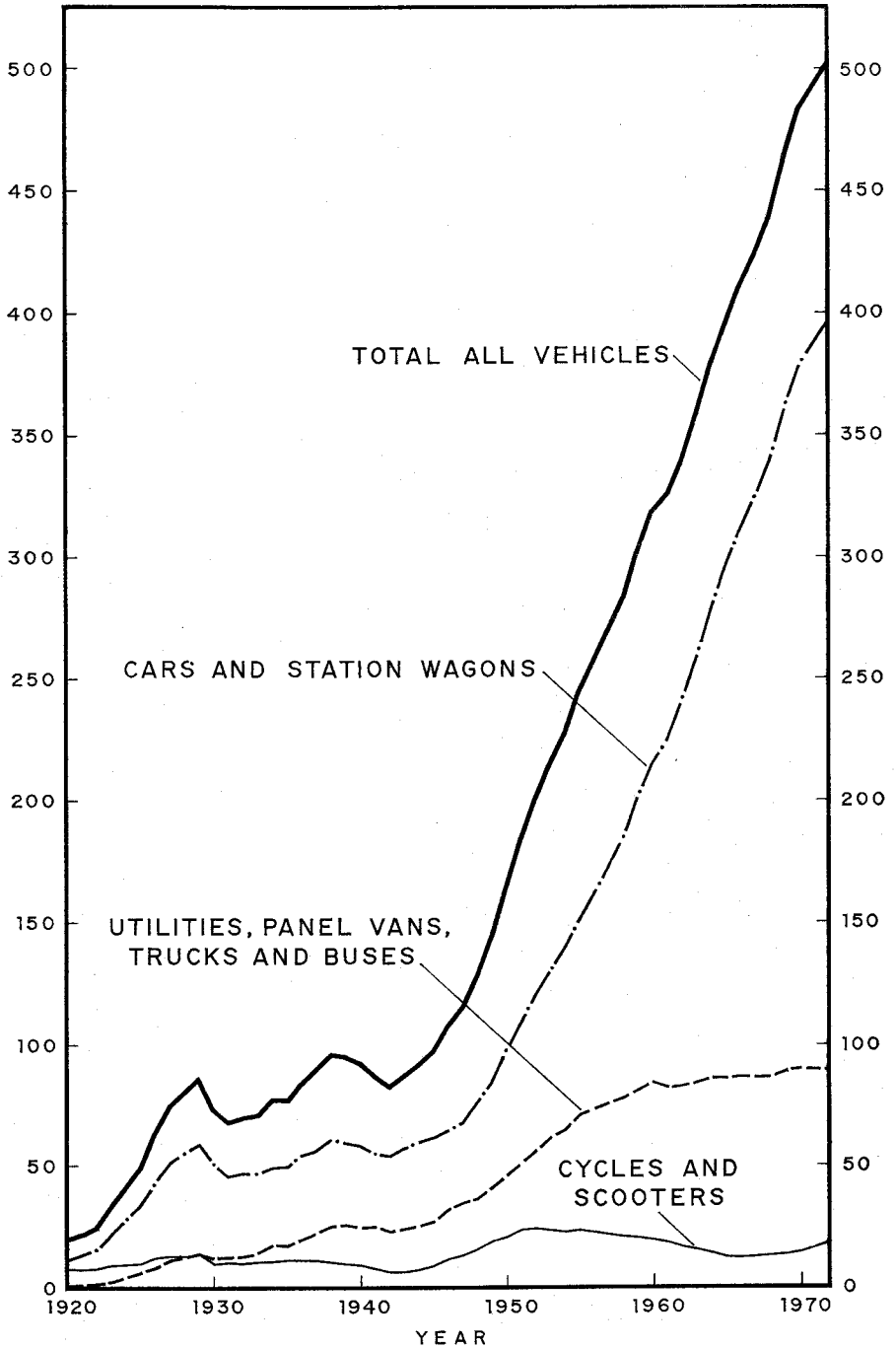
(a) Excludes road tractors and trailers; includes Commonwealth owned vehicles except defence services vehicles. (b) Includes other truck types.

MOTOR VEHICLES ON REGISTER

SOUTH AUSTRALIA 1920 TO 1971

THOUSANDS

THOUSANDS



In the following table new motor vehicle registrations are classified by horsepower (RAC).

New Motor Vehicle Registrations: Classified by Horsepower (RAC)
South Australia^(a)

Type of Vehicle and Horsepower	1967	1968	1969	1970	1971
Cars:					
Under 10	134	188	175	217	221
10-14	4,839	4,271	4,643	4,375	4,786
15-19	6,096	9,030	9,886	9,609	7,662
20-24	537	650	977	1,745	2,768
25-29	5,714	4,838	5,836	5,230	3,687
30-34	6,546	5,556	8,936	10,354	10,375
35 and over	1,472	4,891	3,098	2,657	3,733
Not stated	1	—	—	—	—
Rotary	—	—	69	124	331
Total	25,339	29,424	33,620	34,311	33,563
Station Wagons:					
Under 20	254	480	700	561	504
20-29	2,157	1,552	1,571	1,176	941
30-39	2,253	2,296	2,356	2,336	2,376
40 and over	147	270	220	236	313
Total	4,811	4,598	4,847	4,309	4,134
Utilities:					
Under 20	198	361	445	261	291
20-29	1,851	1,488	1,600	1,446	923
30-39	815	950	1,146	1,117	1,111
40 and over	1	32	72	88	85
Not stated	1	—	—	—	—
Total	2,866	2,831	3,263	2,912	2,410
Trucks (b):					
Under 20	203	236	286	363	289
20-29	441	485	542	391	315
30-39	900	949	1,055	940	853
40-49	227	386	376	331	360
50 and over	204	201	269	317	257
Total	1,975	2,257	2,528	2,342	2,074

(a) Includes Commonwealth owned vehicles except defence services vehicles.

(b) Includes other truck types.

Drivers' Licences

Under the relevant section of the Motor Vehicles Act two classes of drivers' licences are issued:

Class A: to drive motor vehicles of any kind;

Class B: to drive motor vehicles of any kind which do not exceed three tons (some of these are endorsed for the driving of motor cycles only).

The Act provides that 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 a written examination on the rules of the road. The permit is for a period not

exceeding three months during which time the holder 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.

Provision is also made 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 the test. Persons who will reach the age of 70 years during the currency of their next licence are tested before that licence is issued; a Class B licence is issued to persons passing this test unless they have been tested in a vehicle exceeding three tons. Optical tests also are imposed at age 75 years.

From 1 January 1971 the fee for class A or Class B licence was increased from \$2 to \$3; the fee for a learner's permit remained unaltered at \$1. Licences and permits are not issued to persons under sixteen years of age.

In 1961, licences for motor driving instructors were introduced and are compulsory where instruction is given for reward. The licence fee is \$20 for a period of three years.

Drivers' and riders' licences current at 31 December 1971 totalled 550,745. The number in force first exceeded 100,000 in 1931, totalled 215,157 by 1951, 315,044 by 1957, and had risen to 447,985 at December 1965.

Revenue from Registrations and Licences

Revenue from registration fees and drivers' and riders' licence fees totalled \$15,627,000 in 1970-71. 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 Motor Vehicles Departments, the balance is paid into the Highways Fund.

Third Party Insurance

Under the Motor Vehicles Act, 1959-1971 every motor vehicle driven on a public road, unless specifically exempted, must be covered by an insurance policy which insures the owner of the motor vehicle to which the policy relates, and any other person who at any time drives the vehicle whether with or without the consent of the owner, in respect of all liability for negligence that may be incurred by the 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.

Insurance must be affected with an insurance company approved by the Minister of Roads and Transport. Insurance companies wishing to transact this type of business make application for approval and if this is granted they are obliged to accept the business from anyone requesting it: should an approved insurer wish to discontinue the writing of such business permission of the Minister must be obtained.

An amendment to the Motor Vehicles Act in December 1971 provided for a simplified method of obtaining the necessary third party bodily injury insurance. A vehicle owner no longer directly approaches an insurance company for an insurance certificate and policy. Instead, an applicant inserts the name of an insurer, selected from a list of approved insurers, on the registration or renewal application form and pays to the Motor Vehicles Department one amount to

cover third party insurance, registration and other relevant fees: after deduction of a nominal collection fee the premiums are paid by the Registrar of Motor Vehicles to the insurance companies. The amendment to the Act specifies a common insurance policy, a copy of which is sent by the Registrar to each vehicle owner.

Liabilities of insurers, set out in the Motor Vehicles Act, 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 Minister of Roads and Transport and recover by action against a 'nominal defendant' named by the Minister of Roads and Transport. Payment by the nominal defendant is out of money contributed by all approved insurers under a scheme administered by the Minister of Roads and Transport.

The Minister of Roads and Transport appoints 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.

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.

A committee appointed by the Governor on the recommendation of the Minister of Roads and Transport having all the powers of a royal commission periodically inquires into and reports on what are considered to be fair maximum premium rates for third party insurance and the approved rates are generally adopted by the insurance companies.

In March 1971, premiums for private and business cars in the metropolitan area were increased, for the first time since February 1967, by \$1.00 to \$28.50: premiums in the country remained unchanged at \$25.00. Premiums for primary producers' trucks were reduced by \$1.00 to \$8.00. There were no changes to premiums for taxis, \$140.00 in the metropolitan area and \$50.00 in the country, or for goods-carrying vehicles in the metropolitan area, \$32.00.

During 1970-71, third party insurance premiums received amounted to \$13,209,000 and claims paid were \$8,503,000.

Census of Motor Vehicles

A census of motor vehicles on the register at 31 December 1962 was completed in Australia during 1963 from particulars of motor vehicle registrations. An earlier census was conducted at 31 December 1955.

Tables on the 1962 Census containing various classifications of vehicles are given in the bulletin *Census of Motor Vehicles*, 31 December 1962, Bulletin No. 4—South Australia, published by the Commonwealth Statistician. A summary table was included on page 514 of the *South Australian Year Book* 1969.

A further census of motor vehicles was conducted at 30 September 1971 but results are not yet available.

Motor 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 these results were obtained from a small sample they 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 per cent; a possible explanation is a tendency, particularly among car owners, to overstate average mileage per gallon.

Motor Vehicle Usage, South Australia, 1963^(a)

Type of vehicle	Average Annual Mileage per Vehicle	Average Fuel Consumption (b)	Business Mileage as a Proportion of Total Mileage
	Miles	MPG	Per cent
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 text 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.

Road Traffic Board

The Road Traffic Board of South Australia is a body, set up in 1960 under the provisions of the Road Traffic Act, 1961-1971, with the following functions:

- (1) make recommendations to the Minister on roads and traffic generally, on the use of traffic control devices and other measures in relation to road safety;
- (2) promote uniformity in the design and use of traffic control devices;
- (3) conduct research and collect statistics relating to road traffic accidents and other traffic problems;

- (4) disseminate information and advice on road safety and traffic laws and regulations;
- (5) investigate and report on proposals for alterations of and additions to traffic laws and regulations.

Road Safety

Some recent moves towards greater road safety were detailed on pages 507-8 of the *South Australian Year Book 1971*. These related to required safety features of vehicles and fitting of seat belts; the proposed establishment of a Road Safety Instruction Centre; the findings of a Committee of Enquiry into Road Safety; and a points demerit scheme for drivers convicted of specified offences.

During 1971 work began on construction of the Road Safety Instruction Centre at the 207 acre site at Marion. One of the aims of the Centre will be to teach motor vehicle drivers how to handle their vehicles under a variety of conditions including emergencies, such as skids or blowouts, with the ultimate goal of decreasing the number of accidents caused by lack of driving skills.

The Centre, which will also contain the headquarters of the South Australian Road Safety Council, is expected to be completed late in 1972.

The points demerit scheme has been in operation since 29 April 1971. By the beginning of April 1972, 31,200 drivers had points recorded against them; warning notices have been sent to 4,150 drivers who had accumulated six or more demerit points; and suspension of licences had been imposed on one hundred and seven drivers with twelve or more demerit points.

Road Traffic Accidents

Statistics of road traffic accidents are compiled from reports made to members of the South Australian Police Department by persons involved in such accidents. Section 43 of the Road Traffic Act sets out the obligations of the driver of a vehicle involved in an accident—he must stop his vehicle at once, render any assistance of which he is capable to anyone injured in the accident, state his name and address if requested to any person having reasonable grounds for such request, and report the accident to the Police as soon as possible, or at least within twenty-four hours of the accident. However, it is a defence against a charge relating to non-reporting of an accident if a defendant can prove either that he did not know that an accident occurred or that the only damage or injury resulting from the accident was to property and that a fair estimate of the damage did not exceed \$50.

For the purpose of these statistics, a road traffic accident is defined as an accident which occurs because of the presence of a vehicle on a road (or other public thoroughfare, e.g. public car park, beach) and which involves property damage exceeding \$50 or casualty; a casualty occurring if the accident resulted in:

- (1) the death of any person within a period of thirty days of the accident,
or
- (2) bodily injury to any person to an extent requiring surgical or medical treatment.

With the introduction of a more comprehensive accident report form on 1 October 1967, statistics have become available as a result of a joint effort by the South Australian Police Department, the Road Traffic Board of South Australia and the Bureau of Census and Statistics. Before this date, the South Australian Police Department was the sole authority preparing statistics of road traffic accidents.

Statistics of injuries, accidents involving casualties and total accidents compiled since the introduction of the revised reporting form are not strictly comparable with earlier figures. Therefore, the apparent differences between 1967 and 1968 in total accidents, casualty accidents and injuries shown in the following tables should not be interpreted as real changes.

The next table shows summary details of road traffic accidents for the years 1967 to 1971.

During 1971 the total number of recorded road traffic accidents increased by more than 6 per cent (from 30,464 in 1970 to 32,400 in 1971). The number of accidents which resulted in casualties decreased very slightly from 7,424 in 1970 to 7,386 in 1971.

Road Traffic Accidents, South Australia

Year	Total Accidents Recorded	Accidents Involving Casualties	Persons Killed	Persons Injured	Rate per 100,000 Motor 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
1967.....	25,627	7,242	253	9,955	6,184	61	2,402	2,309	23	897
1968.....	25,768	6,421	275	8,902	6,020	64	2,080	2,296	25	793
1969.....	27,503	6,895	251	9,961	6,114	56	2,214	2,414	22	874
1970.....	30,464	7,424	349	10,484	6,457	74	2,222	2,631	30	905
1971.....	32,400	7,386	292	10,132	6,592	59	2,062	2,757	25	862

(a) 'Motor vehicles on register' is the mean number for each year; includes Commonwealth owned vehicles except defence services vehicles; excludes road tractors and trailers.

— Indicates break in continuity of series; see text above.

In the following table, the types of road users killed and injured are shown according to age groups for 1971.

Drivers (including motor cyclists) under twenty-one years of age, representing only 12 per cent of licence holders at 30 June 1971, accounted for 20 per cent of drivers involved in accidents, 28 per cent of drivers killed and 31 per cent of drivers injured during 1971. For drivers aged twenty-one to twenty-four years also, involvements (14 per cent), deaths (16 per cent) and injuries (17 per cent) were somewhat higher than their representation in the driving population (12 per cent).

Pedestrians sixty years and over accounted for 24 per cent of pedestrians involved and injured and 44 per cent of pedestrians killed.

Likelihood of sustaining serious injury when involved in an accident is nine times higher for motor cycle riders than for drivers of motor vehicles: 63 per cent of motor cycle riders involved in accidents received medical or hospital treatment compared with 7 per cent of drivers of other vehicles.

**Road Traffic Accidents: Age Groups of Casualties, South Australia
1971**

Age Group of Casualty (years)	Drivers of Motor Vehicles	Motor Cyclists	Pedal Cyclists	Passengers	Pedestrians	All Other	Total
PERSONS KILLED							
Under 5	—	—	—	6	4	—	10
5 — 16	3	2	7	19	8	—	39
17 — 20	20	9	1	29	4	—	63
21 — 29	26	2	—	18	6	—	52
30 — 39	19	—	—	6	5	—	30
40 — 49	14	1	—	8	5	—	28
50 — 59	9	—	1	6	11	—	27
60 and over	18	—	—	11	14	—	43
Total	109	14	9	103	57	—	292
PERSONS INJURED							
Under 5	—	—	—	200	97	—	297
5 — 16	114	92	342	798	240	2	1,588
17 — 20	865	465	24	850	51	—	2,255
21 — 29	1,128	188	24	492	50	1	1,883
30 — 39	604	64	25	195	50	—	938
40 — 49	492	30	41	202	68	1	834
50 — 59	327	22	37	173	54	—	613
60 and over	239	13	27	177	114	—	570
Not stated	222	56	26	775	75	—	1,154
Total	3,991	930	546	3,862	799	4	10,132

The following table shows casualties by type of road user for each of the last five years. In each of these years more motor vehicle drivers were killed or injured than any other type of road user.

Road Traffic Accidents, Casualties, South Australia

Year	Drivers of Motor Vehicles	Motor Cyclists	Pedal Cyclists	Passengers	Pedestrians	All Other	Total
PERSONS KILLED							
1967.....	96	8	14	86	49	—	253
1968.....	104	8	19	84	59	1	275
1969.....	108	6	16	66	55	—	251
1970.....	144	12	10	128	55	—	349
1971.....	109	14	9	103	57	—	292
PERSONS INJURED							
1967.....	3,943	660	730	3,765	853	4	9,955
1968.....	3,560	630	517	3,376	810	9	8,902
1969.....	3,990	728	530	3,905	804	4	9,961
1970.....	4,315	812	513	4,017	827	—	10,484
1971.....	3,991	930	546	3,862	799	4	10,132

— Indicates break in continuity of series; see text on page 504.

The following table shows details of features of the roadways on which the accidents occurred. During 1971 there were 16,521 accidents at intersections (51 per cent of accidents reported) and nearly one-half of the total number of injuries occurred at intersections. However, of the 292 road deaths, 43 per cent were on straight roads compared with only 28 per cent at intersections: a further 21 per cent of deaths occurred on bends or curves.

**Road Traffic Accidents: Features of Roadways on which Accidents Occurred,
South Australia, 1971**

Features of Roadway	Total Accidents Reported	Accidents Involving Casualties	Persons Killed	Persons Injured
Intersections:				
Controlled	4,745	833	11	1,158
Uncontrolled	11,776	2,740	72	3,793
Other than intersections:				
Straight road	11,787	2,675	127	3,442
Bend or curve	2,192	765	60	1,173
Railway level crossing;				
Controlled	75	17	7	33
Uncontrolled	91	30	6	45
Other location	1,734	326	9	488
Total	32,400	7,386	292	10,132

The following table shows the nature of accidents which occurred in 1971.

Road Traffic Accidents: Nature, South Australia, 1971

Nature of Accidents	Total Accidents Reported	Accidents Involving Casualties	Persons Killed	Persons Injured
Collisions between vehicles (a):				
Head on	674	295	52	537
Rear end	8,089	1,037	7	1,347
Right angles	10,474	2,400	56	3,483
Other	3,883	490	10	629
Vehicles:				
Overturning or leaving road (b)	1,714	851	51	1,281
Colliding with;				
Fixed object	3,323	1,077	47	1,544
Parked vehicle	2,923	303	8	383
Pedestrian	812	808	54	789
Other	382	48	—	59
Passenger accidents	49	48	5	49
Other	77	29	2	31
Total	32,400	7,386	292	10,132

(a) 'Vehicles' includes motor vehicles, motor cycles, pedal cycles, trains, trams, etc.

(b) Vehicles leaving road and then colliding are shown in the four categories below.

Collisions between vehicles accounted for 71 per cent of all accidents and 43 per cent of deaths, while vehicles overturning or leaving the road and vehicles colliding with pedestrians accounted for 5 per cent and 3 per cent of all accidents respectively, and 17 per cent and 18 per cent of deaths.

Details of road traffic accidents for 1971 according to time and day of occurrence are shown in the next table. More accidents occurred on Fridays (6,063 accidents) and Saturdays (5,936) than on other days of the week.

Combining all days of the week, more accidents occurred between 4 p.m. and 6 p.m. than during any other two-hour period. That time-slot showed also the greatest number of accidents for any single day of the week (Fridays, 1,393) and the greatest number of deaths (Saturdays, 17).

More deaths resulted from accidents occurring on Saturdays (72) than on any other day of the week.

Road Traffic Accidents: Day of Week and Time of Occurrence, South Australia 1971

Time of Occurrence	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Total
TOTAL ACCIDENTS								
After: Until:								
Midnight 2 a.m.	70	75	55	84	206	402	703	1,595
2 a.m. 4 a.m.	31	25	15	19	61	102	186	439
4 a.m. 6 a.m.	28	15	25	21	41	34	43	207
6 a.m. 8 a.m.	357	340	340	328	391	144	73	1,973
8 a.m. 10 a.m.	468	499	491	502	489	515	132	3,096
10 a.m. 12 noon	413	330	308	387	416	796	337	2,987
12 noon 2 p.m.	447	310	393	415	426	575	387	2,953
2 p.m. 4 p.m.	514	448	425	479	644	568	559	3,637
4 p.m. 6 p.m.	1,055	1,005	976	1,076	1,383	864	731	7,090
6 p.m. 8 p.m.	405	389	454	554	893	844	419	3,958
8 p.m. 10 p.m.	215	216	234	306	525	481	214	2,191
10 p.m. Midnight	197	162	231	311	588	611	174	2,274
Total	4,200	3,814	3,947	4,482	6,063	5,936	3,958	32,400
PERSONS KILLED								
After: Until:								
Midnight 2 a.m.	—	4	1	6	2	9	5	27
2 a.m. 4 a.m.	2	1	—	—	—	4	4	11
4 a.m. 6 a.m.	—	—	1	—	3	3	1	8
6 a.m. 8 a.m.	2	1	—	4	3	1	2	13
8 a.m. 10 a.m.	2	1	2	4	3	2	1	15
10 a.m. 12 noon	2	1	—	—	3	4	2	12
12 noon 2 p.m.	3	2	3	2	3	6	3	22
2 p.m. 4 p.m.	4	3	1	3	1	1	10	23
4 p.m. 6 p.m.	4	3	4	5	3	17	6	42
6 p.m. 8 p.m.	6	3	7	7	9	10	2	44
8 p.m. 10 p.m.	1	1	2	10	8	8	10	40
10 p.m. Midnight	6	—	3	7	11	7	1	35
Total	32	20	24	48	49	72	47	292
PERSONS INJURED								
After: Until:								
Midnight 2 a.m.	32	38	22	53	86	173	307	711
2 a.m. 4 a.m.	14	10	4	6	26	38	107	205
4 a.m. 6 a.m.	15	5	4	9	11	15	23	82
6 a.m. 8 a.m.	110	83	91	93	119	66	38	600
8 a.m. 10 a.m.	102	117	99	113	126	107	36	700
10 a.m. 12 noon	99	74	66	88	90	200	129	746
12 noon 2 p.m.	137	55	89	103	120	174	127	805
2 p.m. 4 p.m.	144	109	113	140	169	224	221	1,120
4 p.m. 6 p.m.	280	223	252	266	322	270	306	1,919
6 p.m. 8 p.m.	167	120	154	192	237	332	190	1,392
8 p.m. 10 p.m.	73	102	91	119	206	225	102	918
10 p.m. Midnight	66	69	111	131	215	254	88	934
Total	1,239	1,005	1,096	1,313	1,727	2,078	1,674	10,132

Although more than two-thirds of all accidents occurred between 6 a.m. and 6 p.m. the severity of accidents, judged on the basis of death and injury rates, was considerably greater during the 'night' hours, as can be seen from the following table. Both deaths and injuries, expressed as a proportion of accidents occurring, were significantly higher during each two-hour 'night' period than for any two-hour period between 6 a.m. and 6 p.m.

**Accidents and Casualties: Time of Day, Fatality and Injury Rates
South Australia, 1971**

Time of Occurrence		Accidents Occurring	Persons Killed	Persons Injured	Persons Killed Per 100 Accidents Occurring	Persons Injured Per 100 Accidents Occurring
After:	Until:					
Midnight	2 a.m.	1,595	27	711	1.7	45
2 a.m.	4 a.m.	439	11	205	2.5	47
4 a.m.	6 a.m.	207	8	82	3.9	40
6 a.m.	8 a.m.	1,973	13	600	0.7	30
8 a.m.	10 a.m.	3,096	15	700	0.5	23
10 a.m.	12 noon	2,987	12	746	0.4	25
12 noon	2 p.m.	2,953	22	805	0.7	27
2 p.m.	4 p.m.	3,637	23	1,120	0.6	31
4 p.m.	6 p.m.	7,090	42	1,919	0.6	27
6 p.m.	8 p.m.	3,958	44	1,392	1.1	35
8 p.m.	10 p.m.	2,191	40	918	1.8	42
10 p.m.	Midnight	2,274	35	934	1.5	41
Total		32,400	292	10,132	0.9	31

Details concerning use of non-use of seat belts which were obtained for 33,925 drivers involved in accidents in 1971, are shown in the following table. Of the 22,884 drivers known to have had seat belts fitted to their vehicles, 10,970 (48 per cent) were wearing them at the time of the accident.

The proportion of drivers killed while not wearing seat belts (67 out of 22,953 or 0.29 per cent) was nearly three times greater than for those who were wearing seat belts (12 out of 10,970 or 0.11 per cent).

Information concerning the use or non-use of seat belts was recorded for 37 passengers killed while occupying the left hand front seat of a vehicle: 32 of these were not wearing seat belts.

**Road Traffic Accidents: Seat Belt Usage of Motor Vehicle Drivers and Passengers,
South Australia, 1971**

Seat Belt Details	Drivers (a)			Passengers (b)	
	Killed	Injured	Not Injured	Killed	Injured
Seat belts fitted:					
Worn	12	538	10,420	5	221
Not worn	27	854	11,032	21	409
Seat belts not fitted	40	877	10,123	11	393
Information not available	30	1,707	19,714	18	1,170
Total	109	3,976	51,289	55	2,193

(a) Any person occupying the driver's seat in a parked vehicle is excluded.

(b) Refers to passengers in front seat, left side. Excludes front seat occupants of parked vehicles.

The table below shows the age group and sex of persons holding drivers licences and permits at 30 June 1971 and involvements in accidents during 1971 of drivers and riders within the same classifications. In this table figures for involvements relate to accidents occurring in South Australia whereas licence and permit holders are those holding licences etc. issued in South Australia, and the licences on issue at 30 June are only an approximation of the average for the year.

It should be noted in particular that these figures do not measure exposure to risk: for example they take no account of miles driven, times of day into which driving may be concentrated or traffic conditions during those times.

The following additional limitations should be observed when interpreting the figures:

- (i) All figures include permit holders; the accident involvement of permit holders, who are permitted to drive a vehicle only when accompanied by a fully licensed driver, appears, from an examination of the relevant data, to be significantly lower than that of fully licensed drivers. At 30 June 1971 there were 11,723 permit holders; of these 3,919 or approximately one-third were aged 16 years and 8,078 or just over two-thirds of the total were aged 20 years or less: thus if permit holders and their involvements in accidents were excluded from the following table, it could be expected that the involvement rates in the lower age groups would be higher than those shown.
- (ii) The number of involvements with ages not stated is high; and their age distribution, if known, might be different from that of known cases.

Road Traffic Accidents: Age and Sex of Licensed Drivers and of Drivers and Riders Involved in Accidents, South Australia^(a)
1971

Age (years)	Licensed Drivers, Riders and Permit Holders at 30 June 1971		Accident Involvement of Drivers and Riders (b)		Accident Involvement Rate per 100 Licensed Drivers and Riders	
	Males	Females	Males	Females	Males	Females
Under 20	33,419	18,267	7,871	1,236	23.6	6.8
20-24	49,805	32,068	9,437	1,776	19.0	5.5
25-29	39,949	27,726	5,294	1,143	13.3	4.1
30-34	33,825	22,499	3,872	893	11.5	4.0
35-39	31,349	19,148	3,333	807	10.6	4.2
40-44	35,157	20,208	3,487	762	9.9	3.8
45-49	34,118	18,988	3,230	660	9.5	3.5
50-54	28,123	14,662	2,489	526	8.9	3.6
55-59	24,924	11,849	2,042	396	8.2	3.3
60-64	18,308	7,810	1,450	223	7.9	2.9
65-69	12,070	4,275	750	125	6.2	2.9
70-74	6,543	1,942	424	89	6.5	4.6
75-79	3,235	781	211	43	6.5	5.5
80 and over	1,451	219	107	22	7.4	10.1
Not stated	—	—	6,401	1,118	—	—
Total	352,276	200,442	50,398	9,819	14.3	4.9

(a) Includes both license riders and permit holders.

(b) Drivers and riders involved in more than one accident during the year are included once for each accident.

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* 1912-1970 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* 1911-1971, the *Seamen's War Pensions and Allowances Act* 1940-1971, the *Australian Coastal Shipping Commission Act* 1966-1969, the *Australian Coastal Shipping Agreement Act* 1956, and the *Stevedoring Industry Act*, 1956-1971.

Shipping in South Australia is controlled by the Commonwealth *Navigation Act* 1912-1970 and, where this does not apply, by the Harbors Act, 1936-1971 and the Marine Act, 1936-1970. Both of these State Acts are administered by the Department of Marine and Harbors.

Registration of Ships

Registration of ships 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 less than 15 net tons engaged in river or coastal trade or for larger vessels 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. An annual review of the register is carried out but some vessels, whose present ownership or use cannot be traced, are retained on the register in the absence of any positive justification for their removal.

The following table shows the number of vessels on the South Australian Register at 31 December 1971.

**Shipping, Vessels on South Australian Register
At 31 December 1971**

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
Under 50	52	3,062	953	76	1,483	1,150	1	14	14
50-99	18	2,041	1,288	9	1,124	742	—	—	—
100-199	2	456	377	2	679	309	1	179	179
200-499	1	350	234	—	—	—	—	—	—
500-999	2	4,237	1,543	—	—	—	—	—	—
1,000-2,999	—	—	—	—	—	—	—	—	—
3,000 and over ...	3	21,961	13,253	—	—	—	—	—	—
Total ...	78	32,107	17,648	87	3,286	2,201	2	193	193

Four different measures of tonnage (gross, net, displacement, or deadweight) may be applied to a vessel. Gross tonnage is the total enclosed cubic capacity of the ship on a basis of 100 cubic feet per ton; net tonnage is the cubic capacity available for cargo in terms of 100 cubic feet per ton; displacement tonnage is the weight of water displaced by a ship; deadweight tonnage is the total weight in tons of fuel, water, stores and cargo that a ship can carry. Passenger ships are commonly rated by the gross tonnage, cargo ships by their net tonnage, warships by their displacement tonnage, and oil tankers by their deadweight tonnage.

Shipping Arrivals at South Australian Ports

Shipping figures are based on returns rendered to the Collector of Customs by shipping companies, or their agents, in respect of trading vessels exceeding 200 net tons: each arrival at and departure from a South Australian port is recorded.

In previous issues of the *South Australian Year Book* the column headings in tables (intrastate, interstate, overseas) referred to the division of trade on which the vessels were engaged at the relevant time and did not constitute a classification of the vessels. In this issue the column headings indicate the classification of vessels themselves into coastal (intrastate and interstate) and overseas vessels regardless of the division of trade on which the vessels were engaged at any particular time.

The following two tables show arrivals of coastal and overseas vessels at individual Customs ports and at all ports in South Australia respectively.

Shipping: Vessels Entered at Customs Ports, South Australia

Port	Coastal				Overseas		Total	
	Intrastate		Interstate		Number	Net Tonnage	Number	Net Tonnage
	Number	Net Tonnage	Number	Net Tonnage				
	'000	'000	'000	'000	'000	'000	'000	
1969-70								
Ardrossan	54	111	20	48	19	110	93	269
Ballast Head	21	26	16	41	1	2	38	69
Edithburgh	—	—	—	—	5	9	5	9
Port Adelaide (a) ..	318	293	250	641	804	4,291	1,372	5,226
Port Augusta	—	—	—	—	13	34	13	34
Port Lincoln	179	245	31	116	84	506	294	867
Port Pirie	24	81	65	212	149	715	238	1,008
Port Stanvac	21	97	22	178	58	1,678	101	1,954
Rapid Bay	18	66	22	74	1	2	41	142
Stenhouse Bay	19	26	19	31	16	27	54	85
Thevenard	12	32	15	36	47	180	74	248
Wallaroo	1	2	3	3	38	271	42	276
Whyalla	38	155	232	2,151	87	853	357	3,159
1970-71								
Ardrossan	57	133	26	70	25	153	108	357
Ballast Head	24	33	12	28	—	—	36	61
Edithburgh	—	—	—	—	26	166	26	166
Port Adelaide (a) ..	275	275	221	611	708	3,732	1,204	4,617
Port Augusta	—	—	—	—	12	32	12	32
Port Lincoln	92	210	18	87	80	483	190	781
Port Pirie	27	115	46	159	140	730	213	1,005
Port Stanvac	25	152	41	449	43	1,154	109	1,755
Rapid Bay	28	101	13	55	—	—	41	156
Stenhouse Bay	17	24	17	24	13	22	47	70
Thevenard	13	32	16	27	62	217	91	275
Wallaroo	—	—	2	3	38	243	40	245
Whyalla	39	163	199	2,484	51	373	289	3,021

(a) Inner and outer harbour.

Shipping, Vessels Entered at South Australian Ports

Year	Coastal				Overseas		Total	
	Intrastate		Interstate		Number	Net Tonnage	Number	Net Tonnage
	Number	Net Tonnage	Number	Net Tonnage				
		'000		'000		'000		'000
1967-68	927	1,450	830	3,277	1,239	7,415	2,996	12,141
1968-69	984	1,451	775	3,284	1,271	8,009	3,030	12,745
1969-70	1,015	1,372	695	3,532	1,322	8,680	3,032	13,585
1970-71	857	1,446	612	3,998	1,198	7,306	2,667	12,749

One of the principal factors underlying the decrease in numbers of ships engaged in trade between ports in South Australia has been the development at major ports, since the early 1950s, of bulk handling facilities for grain. The general trend has been toward the use of fewer ships of greater net tonnage.

The next table shows arrivals of vessels exceeding 200 net tons at selected customs ports only, according to country of registration of the vessels.

Shipping: Country of Registration, Vessels Entered at Selected Customs Ports
South Australia

Customs Port	Country of Registration	Vessels		Net Tonnage	
		1969-70	1970-71	1969-70	1970-71
Port Adelaide .	Australia	571	495	969,984	882,142
	Germany, Federal Republic	40	43	198,339	193,939
	Greece	41	37	275,104	240,711
	India	22	27	101,200	131,881
	Italy	32	22	326,416	231,578
	Japan	41	24	168,621	84,991
	Liberia	46	34	260,385	231,796
	Netherlands	56	28	267,360	124,808
	New Zealand	47	38	89,445	70,309
	Norway	57	30	347,143	318,703
	Sweden	73	88	312,630	359,134
	United Kingdom	225	197	1,372,812	1,176,890
Other countries	121	121	536,386	570,046	
Total		1,372	1,204	5,226,025	4,616,928
Ardrossan	Australia	74	83	159,271	203,157
	Other countries	19	25	109,972	153,410
	Total	93	108	269,243	356,567
Port Lincoln ..	Australia	210	110	360,576	297,805
	Greece	17	17	110,692	110,487
	Liberia	6	14	44,600	102,211
	Netherlands	4	14	19,810	92,741
	Norway	14	3	101,051	25,659
	United Kingdom	21	10	142,823	55,595
	Other countries	22	22	87,364	96,591
	Total	294	190	866,916	781,089
Port Pirie	Australia	89	72	292,570	267,237
	Greece	11	18	65,795	102,512
	India	12	15	57,862	72,805
	Japan	16	10	72,738	54,304
	New Zealand	16	11	31,308	20,452
	United Kingdom	44	48	242,006	275,442
	Other countries	50	39	245,642	211,896
Total	238	213	1,007,921	1,004,648	

**Shipping: Country of Registration, Vessels Entered at Selected Customs Ports
South Australia (continued)**

Customs Port	Country of Registration	Vessels		Net Tonnage	
		1969-70	1970-71	1969-70	1970-71
Port Stanvac ..	Australia	49	66	324,513	600,763
	Liberia	22	9	700,863	316,743
	United Kingdom	14	12	439,415	321,916
	Other countries	16	22	488,774	515,626
	Total	101	109	1,953,565	1,755,048
Whyalla	Australia	270	219	2,285,178	2,272,997
	Japan	12	16	96,020	148,814
	United Kingdom	19	23	346,636	401,349
	Other countries	56	31	431,413	197,465
	Total	357	289	3,159,247	3,020,625

Cargo Handled at Major Ports

The South Australian Department of Marine and Harbors records details of cargo handled at major ports in this State and the following table shows details for each of the last five years.

Cargo Handled: Major Ports, South Australia

Port	1966-67	1967-68	1968-69	1969-70	1970-71
	'000 tons				
Ardrossan	483	363	539	488	594
Ballast Head	79	108	133	154	159
Kingscote	157	153	137	146	131
Klein Point	346	325	359	463	396
Port Adelaide	3,637	3,692	3,671	3,695	3,287
Port Augusta	49	43	43	45	47
Port Giles	—	—	—	—	139
Port Lincoln	879	588	630	871	752
Port Pirie	1,132	1,098	1,134	1,416	1,397
Port Stanvac	3,062	2,860	2,684	2,682	2,912
Proper Bay	216	388	470	489	450
Rapid Bay	514	318	259	288	294
Stenhouse Bay	215	198	206	177	166
Thevenard	391	408	408	477	535
Wallaroo	228	148	164	351	361
Whyalla	5,079	5,954	6,899	8,347	8,224
Other ports	85	81	42	41	38
Total	16,553	16,725	17,778	20,130	19,882

Overseas Shipping Cargo

Overseas shipping cargo statistics are compiled from returns submitted by shipping companies, or their representatives, to Customs Houses at each port in South Australia. A return is required for each movement of a vessel into and out of a port except for naval vessels, yachts and other craft used for pleasure, foreign fishing vessels that neither load nor discharge cargo and vessels not exceeding 200 net tons. Cargo is recorded on returns in terms of either units of weight or units of measurement (a ton measurement is a unit of 40 cubic feet) depending on the basis on which freight is charged. The statistics show separate figures for cargo recorded in tons weight and cargo recorded in tons measurement. The aggregates for weight and measure cargo are not added to a figure for total

cargo because they are unlike quantities, and comparisons of total cargo between ports, trade routes or periods of time could be affected by variations in the cargo mix and in the basis on which freight is charged. The following figures show, for the years 1969-70 and 1970-71, particulars of cargo loaded in South Australia for discharge overseas, and of cargo discharged in South Australia from overseas, classified according to major trade areas.

Shipping: Cargo Loaded in South Australia, Trade Area of Destination

Cargo Loaded for Ports in—	1969-70		1970-71	
	Tons Weight	Tons Measure	Tons Weight	Tons Measure
North America and Hawaiian Islands:				
Northern Area;				
U.S.A.	117,251	3,068	78,487	1,293
Canada	6,918	3,883	5,301	3,248
Central America	13,124	21	51	5
Bermuda and Carribbean Area ..	1,409	425	107	33
South America	14	—	142,366	—
Europe (excluding U.S.S.R.):				
Northwestern, Central and Baltic;				
United Kingdom	533,899	7,005	333,921	523
Other	67,167	14,791	234,466	7,670
Southern Area	69,270	18,277	11,598	3,283
U.S.S.R. (in Europe and Asia)	8,931	—	14,995	1,307
Africa	95,908	24,062	456,522	14,903
Asia (excluding U.S.S.R.)	3,444,391	43,607	3,352,585	35,991
Papua and New Guinea, New Zealand and Pacific Islands	223,304	50,140	287,918	42,441
Indian Ocean Islands and Antarctica	—	15	—	10
Total cargo loaded..	4,581,586	165,294	4,918,317	110,707

Shipping: Cargo Discharged in South Australia, Trade Area of Origin

Cargo Discharged from Ports in—	1969-70		1970-71	
	Tons Weight	Tons Measure	Tons Weight	Tons Measure
North America and Hawaiian Islands:				
Northern Area;				
U.S.A.	52,717	27,483	36,810	35,944
Canada	29,782	62,874	44,484	60,268
Central America	4,308	1	—	—
Bermuda and Caribbean Area ...	14	3	—	—
South America	—	19	800	—
Europe (excluding U.S.S.R.):				
Northwestern, Central and Baltic;				
United Kingdom	7,912	32,681	8,064	31,066
Other	21,478	32,649	16,297	27,583
Southern Area	3,587	11,568	2,308	10,515
U.S.S.R. (in Europe and Asia)	—	—	—	—
Africa	3,413	6,091	2,355	4,084
Asia (excluding U.S.S.R.)	1,997,595	91,019	2,007,260	74,409
Papua and New Guinea, New Zealand and Pacific Islands	305,240	7,080	198,592	7,050
Indian Ocean Islands and Antarctica	142,626	21	82,389	—
Total cargo discharged....	2,568,672	271,489	2,399,359	250,919

Passenger Movement by Sea

Statistics of passengers disembarking, embarking and passing through Australian ports are compiled according to type of passenger—namely overseas, direct transit, interstate or cruise. 'Overseas' passengers are defined as persons travelling to or from overseas destinations and who embark or disembark in Australia; 'direct transit' as persons on vessels calling at Australian ports and who have embarked at an overseas port for an overseas destination; 'interstate' as persons travelling by sea from one Australian State to another, or travelling from and to the same port or a port in the same State *via* other States; and 'cruise' as persons on an overseas journey which begins and ends in Australia, does not exceed thirty days, is confined to specific ports in the South-West Pacific area and has been classified as a cruise to enable certain documentation requirements to be waived. Information about passengers is obtained from ships' manifests, passenger cards completed by passengers, and the Departments of Shipping and Transport and Customs and Excise. The following table shows numbers and types of passengers who disembarked, embarked and passed through South Australian ports during the five years 1966 to 1970.

Shipping: Passenger Movement by Sea, South Australian Ports^(a)

Year	Type of Passenger					
	Overseas			Total (including Other ^(b))		
	Disembarked	Embarked	Passed Through	Disembarked	Embarked	Passed Through
1966.....	9,055	8,318	53,731	11,715	10,038	66,127
1967.....	6,048	7,442	41,979	7,996	8,714	53,018
1968.....	6,004	6,955	42,601	7,881	8,153	50,888
1969.....	5,799	7,075	45,901	8,047	8,515	54,677
1970.....	6,232	5,617	42,379	7,875	6,804	49,990

(a) Almost exclusively Port Adelaide.

(b) Interstate, direct transit and cruise passengers.

Distances to Overseas Ports

Distances in nautical miles from Port Adelaide to principal overseas ports are shown in the following table. Distances by sea from Port Adelaide to the ports of other Australian capital cities are given on page 481.

Distances from Port Adelaide to Principal Overseas Ports

Port Adelaide to:	Nautical Miles	Port Adelaide to:	Nautical Miles
<i>Africa;</i>		<i>New Zealand;</i>	
Cape Town	5,603	Auckland	2,035
<i>Asia;</i>		Wellington	1,880
Colombo	4,310	<i>North America;</i>	
Djakarta	3,047	Baltimore (b)	10,291
Hong Kong	4,782	Montreal (b)	11,538
Singapore	3,515	New York (b)	10,367
Yokohama	5,281	Panama	8,307
<i>Europe (a);</i>		San Francisco	7,372
Liverpool	11,679	Vancouver	7,752
London	11,720	<i>South America;</i>	
Marseilles	11,417	Buenos Aires (c)	7,769
Naples	11,697	Rio de Janeiro (c)	8,586
		Valparaiso	6,670

(a) *Via* Cape Town. Distances *via* Suez Canal are: London, 10,712 miles; Liverpool, 10,677 miles; Marseilles, 9,011 miles; and Naples, 8,607 miles. (b) *Via* Panama. (c) *Via* Cape Horn.

CIVIL AVIATION

Control of Civil Aviation

In Australia, civil aviation is subject to the Commonwealth *Air Navigation Act* 1920-1971 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 the 1939-45 War 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* 1945-1970 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 rationalise 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 the *Official Year Book of the Commonwealth of Australia* No. 48, and for references to international organisations see Year Book No. 37.

Aircraft on Register

The total number of aircraft listed at 30 June 1971 on the Australian register, which includes aircraft based in the Territory of Papua and New Guinea, was 3,794, an increase from 3,729 registered at June 1970. The following table shows figures for registered aircraft based in the South Australia-Northern Territory Region, classified by type of operation.

Aircraft Based in South Australia-Northern Territory Region
Type of Operation

Type of Operation	At 30 June				
	1967	1968	1969	1970	1971
Private	124	136	139	151	163
Charter	86	93	103	119	124
Regular public transport (a)	20	25	18	14	14
Other (b)	72	86	84	92	93
Total	302	340	344	376	394

(a) Excludes major airlines servicing interstate routes.

(b) Includes agricultural work, ambulance, survey and pilot training functions.

General Air Services

Adelaide has no direct links by air with overseas: these are provided through Sydney, Melbourne and Perth. However, it is on the scheduled flights of regular interstate services from Sydney, Melbourne, Perth and Darwin. The table below shows adult passenger single air fares, in force at 1 February 1972, between Adelaide and selected Australian cities.

Passenger Air Fares, Adelaide to Selected Australian Cities

Between Adelaide and:	Adult, Single Fare (a)	
	Economy Class	First Class
	\$	\$
Alice Springs	53.80	65.40
Brisbane (b)	81.40	94.70
Broken Hill	—	21.10
Canberra (b)	49.60	58.30
Darwin	114.00	137.60
Hobart (c)	51.00	59.80
Melbourne	25.50	29.90
Perth	77.00	95.50
Sydney	52.80	59.60

(a) Fares at reduced rates are applicable to children under 15 years of age, to students and to groups of fifteen persons or more travelling together.

(b) Via Melbourne or Sydney. (c) Via Melbourne.

Adelaide is also the terminus for intrastate services. Regular connections to Ceduna, Cleve, Kingscote, Leigh Creek, Minnipa, Mount Gambier, Oodnadatta, Port Lincoln and Whyalla are provided by major airlines either as local flights or as scheduled stops on interstate flights. Bus ('air coach') services, provided by the airlines, connect many of these places with nearby towns. Since 1966-67, when the Commonwealth Government approved introduction of commuter services in country areas, there has been a significant increase in regular air services between country towns and areas which were either not served by the major airlines or had no direct air service with Adelaide or the nearest major provincial city. Such services usually utilise single or twin engined aircraft and operate to fixed and published time-tables.

The first commuter service in Australia, between Adelaide and opal fields at Coober Pedy, commenced during 1966-67. Later, such services were introduced

between Woomera, Port Augusta, Port Pirie and Adelaide, and between Adelaide and Penneshaw. In December 1970, a similar service was introduced between Adelaide, Wudinna and Streaky Bay and late in 1971 between Adelaide and Andamooka.

Passengers and Freight Carried

The number of passengers carried on civil airlines in South Australia has more than doubled on both interstate and intrastate services during the last ten years while tonnage of freight has increased by more than 50 per cent. Details of movements at principal airports for the last five years are shown in the following table. A full list of Government and licensed aerodromes in South Australia appears on page 333.

Principal Airports, South Australia
Passengers, Freight and Aircraft Movements

Airport	1966-67	1967-68	1968-69	1969-70	1970-71
PASSENGERS (a)					
Adelaide (b) (c)	779,020	863,652	937,016	1,022,085	1,023,536
Kingscote	44,764	44,316	45,993	50,878	51,135
Port Lincoln	42,643	40,423	40,514	43,816	42,429
Woomera	33,028	32,459	29,269	25,701	21,476
Whyalla	27,710	32,295	29,210	28,392	30,204
Mount Gambier	19,085	19,315	18,800	20,479	22,086
FREIGHT—SHORT TONS (d)					
Adelaide (b) (c)	12,134	14,476	15,449	16,673	15,882
Kingscote	220	188	185	185	160
Port Lincoln	366	180	166	180	147
Woomera	385	374	375	317	257
Whyalla	211	209	143	126	132
Mount Gambier	106	97	97	102	105
AIRCRAFT MOVEMENTS (e)					
Adelaide (c)	19,815	19,478	20,502	22,081	21,918
Kingscote	1,533	1,396	1,424	1,495	1,584
Port Lincoln	1,791	1,592	1,467	1,493	1,432
Woomera	1,122	1,103	1,028	907	726
Whyalla	1,162	1,184	1,197	1,133	1,139
Mount Gambier	1,248	1,244	1,238	1,243	1,247

(a) Total of embarkations and disembarkations. (b) Figures of passengers and freight movements are overstated to the extent of through traffic transferring between flights. (c) Includes Salisbury.
(d) Total of freight loaded and unloaded. (e) Total of arrivals and departures.

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. Early in 1968 the Flying Doctor Service took over the aerial services of the Bush Church Aid Society (S.A. Branch). These services, previously operated from Ceduna, are now maintained from Port Augusta.

Civil Aviation Accidents

In South Australia, during the ten year period from 1961-62 to 1970-71, there were twenty-seven civil aviation accidents involving casualties and these resulted in the death of thirty-seven persons and injury to sixteen. These figures exclude parachutists killed in contact with earth after an uninterrupted fall.

Six of the accidents occurred in gliding, twelve in private flying, three in aerial agriculture, four in training and two in charter operations. Thirty-one of the deaths occurred in private flying, three in gliding and one in each of aerial agriculture, training and charter work. There was no accident involving casualties in regular public transport operations.

11.2 COMMUNICATION

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 and ships at sea; 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.

POSTAL, TELEGRAPH AND TELEPHONE SERVICES

The postal, telegraph and telephone services in Australia are under the control of the Postmaster-General pursuant to the provisions of the *Post and Telegraph Act 1901-1971*. The Director-General of Posts and Telegraphs controls the Commonwealth Department under the Postmaster-General, while the principal officer in each State is the Director of Posts and Telegraphs.

A detailed history of Posts, Telegraph and Telephones was included on pages 469-70 of the *South Australian Year Book 1967*.

As a result of Federation all the former colonial post and telegraph services were taken over by the Commonwealth on 1 March 1901.

In 1901 there were 713 post offices operating in South Australia and Northern Territory, with 1,831 telephone services connected. At 30 June 1971 there were 861 post offices and 251,330 telephone services in operation.

Details of post offices in operation and the number of persons employed in postal services in South Australia for the years 1966-67 to 1970-71 are given in the following tables. All tables in this section include details for the Northern Territory as separate figures are not available.

Post Offices: Number
South Australia and Northern Territory

Particulars	1966-67	1967-68	1968-69	1969-70	1970-71
Post Offices:					
Official	174	173	177	177	175
Non-official	747	738	720	711	686
Telephone Offices	103	95	86	84	83
Total	1,024	1,006	983	972	944

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. Telephone offices provide facilities for making trunk line and local telephone calls and for lodging telegrams but do not transact any other postal services.

Post Offices: Employment
South Australia and Northern Territory^(a)

Persons Employed	1966-67	1967-68	1968-69	1969-70	1970-71
Direct employees:					
Permanent officers	7,335	7,861	8,147	8,326	8,582
Temporary and exempt employees	2,525	2,243	2,087	2,159	2,013
Total	9,860	10,104	10,234	10,485	10,595
Other:					
Non-official and semi-official postmasters	748	739	721	709	688
Persons exclusive of postmasters employed at non-official offices	201	212	205	205	214
Telephone office keepers	99	94	86	83	83
Mail contractors	336	330	311	309	257
Total	1,384	1,375	1,323	1,306	1,242
Total all employees.	11,244	11,479	11,557	11,791	11,837

(a) 'Direct Employees' are full-time or part-time staff directly under the control of the Postmaster-General's Department while 'Other' employees include staff engaged, either full-time or part-time, under contract or in return for payment appropriate to work performed.

Receipts and Payments

The Post Office maintains a system of financial and management accounts, known as its commercial accounts, which are quite distinct from the cash accounts maintained to meet Treasury requirements. The cash accounts record actual receipts and payments and take no account of outstanding liabilities or of amounts due but not received at the end of the financial year.

Until the end of financial year 1967-68 the cash accounts were used to record the cash receipts which were paid into the Commonwealth Public Account and the cash payments made from funds appropriated by the Commonwealth Parliament for Post Office purposes; each issue of the *South Australian Year Book* before 1970 contained details covering several years.

Changed financial arrangements were introduced from 1 July 1968 following an amendment of the Post and Telegraph Act. The cash accounts now contain details of cash receipts paid into, and cash payments made from, the Post Office Trust Account; and details shown below for 1968-69 to 1970-71 are not comparable, either in total content or in dissection to various categories, with figures for earlier years.

Post Office Trust Account: Cash Receipts
South Australia and Northern Territory

Year	Postal	Telephone	Telegraph	Proceeds of Sales	Recoverable Works	International Services	Total
				\$'000			
1968-69	13,211	34,523	1,606	444	4,391	149	54,323
1969-70	13,885	38,465	1,918	560	3,922	143	58,892
1970-71	15,847	43,333	1,988	675	4,815	68	66,727

Capital expenditures are included below with all other cash payments. Separate details of capital expenditures, for either Post Office purposes or other authorities, are not available.

Post Office Trust Account: Cash Payments
South Australia and Northern Territory

Year	Salaries and Wages	Material	Carriage of Mail by Contractors	Buildings, Sites and Properties	Accommodation Services	Other Administrative Expenses	Total
				\$'000			
1968-69	34,445	16,241	1,255	2,415	1,775	3,337	59,469
1969-70	38,766	15,003	1,261	2,960	2,289	3,515	63,793
1970-71	44,671	18,981	1,340	5,593	2,423	3,766	76,774

Postal Articles Handled

Articles handled by the Postmaster-General's Department in South Australia and Northern Territory during the years 1966-67 to 1970-71 are shown in the following table.

Postal Articles Handled, South Australia and Northern Territory

Year	Letters and Postcards (a)	Newspapers Packets (a)	Parcels (b)	Registered Articles	All Articles
Posted for delivery:					
Within Australia;			'000		
1966-67	169,756	18,245	1,404	788	190,193
1967-68	168,072	17,739	1,533	766	188,110
1968-69	178,428	17,680	1,501	752	198,361
1969-70	187,570	17,422	1,540	746	207,278
1970-71	194,852	17,123	1,770	754	214,499
Beyond Australia;					
1966-67	8,270	1,302	62	62	9,696
1967-68	8,603	1,587	64	62	10,316
1968-69	8,930	1,214	65	62	10,271
1969-70	9,408	1,079	64	68	10,619
1970-71	9,675	1,063	84	85	10,908
Received from beyond Australia:					
1966-67	5,912	4,873	114	32	10,931
1967-68	5,671	4,530	114	31	10,346
1968-69	5,807	3,412	119	35	9,373
1969-70	7,165	2,255	126	35	9,581
1970-71	5,871	2,202	104	35	8,211

(a) Includes Certified and Special Delivery mail.

(b) Includes registered parcels.

Money Orders and Postal Orders

The number of money orders issued in Australia in 1944-45 was approximately 3.5 million, whereas in 1970-71, 7.4 million were issued. On the other hand, the number of postal orders issued declined from 22.7 million in 1944-45 to approximately 16.7 million in 1970-71.

In South Australia the value of money orders and postal orders paid in 1944-45 amounted to \$2,995,000 and \$1,072,000 respectively; in 1970-71 the corresponding values were \$14,106,000 and \$5,917,000. Total commission charged on money orders issued in 1970-71 amounted to \$281,000. The fee on postal orders issued in 1970-71 amounted to \$172,000.

Money Orders Issued and Paid South Australia and Northern Territory

Year	Money Order Offices	For Payment Within Australia (a)				For Payment Beyond Australia			
		Number Issued (a)	Value (a)	Number Paid (a)	Value (a)	Number Issued	Value	Number Paid	Value
	Number	'000	\$'000	'000	\$'000	'000	\$'000	'000	\$'000
1966-67..	549	(a) 1,219	(a) 37,314	(a) 1,145	(a) 36,531	74	462	23	414
1967-68..	551	(a) 1,110	(a) 32,506	(a) 1,048	(a) 31,866	64	471	22	363
1968-69..	550	907	20,008	861	19,404	60	513	22	380
1969-70..	551	857	16,819	818	16,056	60	547	23	413
1970-71..	547	665	14,651	600	13,654	57	612	23	453

(a) Includes official money orders used in bringing to account telephone account collections and War Service Homes repayments. This practice was discontinued toward the end of 1967-68.

Postal Orders Issued and Paid^(a) South Australia and Northern Territory

Year	Postal Order Offices	Postal Orders Issued		Postal Orders Paid	
		Number	Value	Number	Value
	Number	'000	\$'000	'000	\$'000
1966-67	910	2,935	3,438	970	1,528
1967-68	901	1,755	3,358	1,176	2,260
1968-69	878	1,914	4,055	1,371	3,140
1969-70	884	1,971	4,617	1,483	3,682
1970-71	877	2,432	7,248	1,808	5,917

(a) Postal notes replaced by postal orders on 1 June 1966.

Telegraph System

Australia's telegraph service, known as TRESS (Teleprinter Reperforator 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 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 subscribers anywhere in Australia and in a number of overseas countries. At 30 June 1971 there were 870 subscribers in South Australia.

The number of telegrams dispatched and received, and some information on the operations of TELEX during the years 1966-67 to 1970-71 are shown below.

Telegraph Services
South Australia and Northern Territory

Year	Telegrams			Teleprinter Exchange	
	Dispatched within Australia	Dispatched beyond Australia	Received from beyond Australia	Subscribers	Number of Calls (a)
	'000	'000	'000	Number	'000
1966-67	2,091	110	94	328	767
1967-68	2,117	117	(b)	437	1,107
1968-69	2,141	125	(b)	551	1,242
1969-70	2,143	139	(b)	707	1,455
1970-71	1,990	149	(b)	870	1,790

(a) Includes official Post Office traffic. New statistical sampling equipment introduced in 1970 has enabled a more accurate assessment of the number of automatic calls and the figures for previous years have been appropriately adjusted.

(b) Statistics of incoming traffic are no longer available.

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 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. At 30 June 1971 there were 2,053 trunk line channels and 336 country automatic telephone exchanges in the State. There are 56 automatic exchanges in the Adelaide Telephone District. From 1 October 1971 the normal charges for selected telephone services are as follows:

Installation charge for a new telephone service is \$50. Annual rental charge in Adelaide Metropolitan Area is \$55, or in the case of pensioners \$36.66, paid half-yearly in advance: corresponding rental charges in country centres with population of 10,000 and over are \$37 and \$24.66; and in those with population of less than 10,000, \$27 and \$18.00 respectively.

Private calls between subscribers within a single telephone zone, and between subscribers in adjoining zones, are charged at a 'local call' rate of 4.75 cents per call. The corresponding charge for calls from public telephones is 5 cents. Trunk call rates, which vary according to duration and distances, are charged for calls between non-adjoining telephone zones: lower rates are charged for calls between 6 p.m. and 9 a.m.

In July 1970 an east-west microwave radio system costing \$10 million and linking Port Pirie with Northam in Western Australia was opened. The new system has a capacity of hundreds of channels and was designed to cope with the expected increase in east-west telephone traffic over the next five years. It brought Western Australia into the national subscriber trunk dialling (STD) network and the Australia wide television relay system. At December 1971, STD facilities were available to approximately 156,000 subscribers in the Adelaide Telephone District and about 14,000 country subscribers for two-way contact with selected exchanges in New South Wales, Victoria, Queensland, Western Australia and Tasmania. In addition either one-way or two-way direct dialling between a number of other country exchanges and Adelaide was available to approximately 14,000 country subscribers.

Because approximately 59 per cent of trunk calls originate in country areas, directed either to the capital city or to other country exchanges, great benefit will accrue when all country exchanges are linked with the STD system. However, many years will elapse before the majority of exchanges can be connected because of the amount of work and complex equipment involved.

Telephone Services South Australia and Northern Territory

At 30 June	Telephone Exchanges	Telephone Services						Trunk Line Channels in Service
		Ordinary Exchange	Duplex	Party Line	Private Branch Exchange	Public Telephones	Total	
1967.....	738	179,271	694	1,452	19,091	2,683	203,191	4,502
1968.....	731	187,634	334	1,382	20,718	2,774	212,842	5,258
1969.....	721	198,177	16	1,278	21,828	2,875	224,174	5,852
1970.....	711	211,906	2	1,249	23,350	2,945	239,452	6,293
1971.....	706	218,113	2	1,172	29,075	2,968	251,330	(a) 2,053

(a) Excludes trunk junctions.

Metropolitan services are all operated through automatic exchanges, whereas at 30 June 1971, 66,356 country services were automatic and 23,495 services were manually connected. Metropolitan services totalled approximately 161,000 and of these 107,000 were residence services. In the country, business phone services accounted for the large share (about 56 per cent) of services.

RADIO AND TELEVISION SERVICES

Under the Broadcasting and Television Act radio and television receivers must be licensed. A person who owns both a radio and a television receiver at the one address is issued with a combined receiving licence while a person owning only one type of receiver is issued with a radio listeners' licence or a television viewers' licence.

The number of radio listeners' licences, television viewers' licences and combined receiving licences in force at 30 June 1967 to 1971 and revenue from these licences during the years 1966-67 to 1970-71 are given in the following table.

**Broadcast Listeners' and Television Viewers' Licences
South Australia and Northern Territory**

Item	Unit	1966-67	1967-68	1968-69	1969-70	1970-71
Listeners' Licences ^(a)	Number ^(b)	74,076	74,200	72,882	69,598	69,101
Viewers' Licences ^(a)	Number ^(b)	50,511	52,744	55,425	59,438	61,868
Combined Licences.	Number ^(b)	203,993	215,851	224,995	232,921	241,384
Revenue ^(a)	\$'000	4,101	4,219	4,930	5,238	5,586

^(a) Includes hirers' and short-term hirers' licences. ^(b) At 30 June.

Details of radio and television stations licensed in South Australia are shown in the following table.

**Radio and Television Stations, South Australia
At 30 June^(a)**

Radio Communication Stations	1967	1968	1969	1970	1971
Broadcasting:					
National	8	8	8	8	9
Commercial	8	8	8	8	8
Television:					
National	3	3	3	3	4
Commercial	4	5	5	5	5
Transmitting and receiving:					
Fixed;					
Aeronautical	5	5	5	5	5
Outpost	169	156	160	164	173
Other	67	81	115	142	174
Land;					
Aeronautical	15	21	21	25	28
Base stations for mobile services	618	693	812	902	1,027
Coast	22	21	21	21	21
Special experimental	53	61	63	67	62
Mobile	8,121	9,229	10,119	11,195	12,508
Amateur	702	734	740	752	752
Receiving only:					
Fixed	—	—	3	9	14
Total stations	9,795	11,025	12,083	13,306	14,790

^(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 organisations as the Royal Flying Doctor Service.

Further information on radio and television services is contained in Part 6.4 Culture and Recreation.

OVERSEAS TELECOMMUNICATIONS SERVICES

The Overseas Telecommunications Commission (Australia) is the authority responsible for the establishment, maintenance, operation and development of Australia's overseas public telegraph, phototelegraph and telex services by cable and by radio, and the provision, maintenance and development of cable and

radio facilities for the conduct of Australia's overseas telephone services and of the facilities for services with ships at sea. Some of these services are provided in conjunction with the Postmaster-General's Department.

Recent developments have included the establishment of earth stations in Australia to operate in conjunction with a communications satellite system. Earth stations at Carnarvon in Western Australia and at Moree in New South Wales operate through communications satellite INTELSAT II which was launched in January 1967.

In February 1970 Australia's third earth station near Ceduna was opened. This station faces westward to INTELSAT III which is located over the Indian Ocean and can carry all types of communications traffic: subject to establishment of earth stations in relevant countries it provides facilities for direct links with Europe, Africa, India, most of South-East Asia, and the western part of Japan. The first direct broadcast *via* this satellite was received in Australia from the United Kingdom on 20 February 1970.

Details of the overseas telecommunications services and traffic are published in various issues of the *Official Year Book of the Commonwealth of Australia*, e.g. No. 57, 1971, pages 370-2.

THE OVERLAND TELEGRAPH LINE

The Overland Telegraph Line was the first telegraphic link to span Australia from coast to coast, stretching from Port Augusta in South Australia to Port Darwin in the Northern Territory, a distance of approximately 1,800 miles. The Port Darwin end of the line was linked up with a submarine cable to Bangjuwangi in Java and thus, for the first time, telegraphic communication with the Asian and European networks was established.

Early Exploration

Before the Overland Telegraph line was in operation, the only means of communication between Europe and Australia was the monthly mail service which was operated by the Peninsula and Oriental Steam Navigation Company and heavily subsidised by the colonial governments. The slow means of communication had proved to be a handicap to the development of the young Australian colonies and this, coupled with the successful completion of the United States of America Overland Telegraph Line in 1861, provided the incentive for Australians to undertake a similar project.

As early as 1859 the Governor of South Australia, Sir Richard MacDonnell, had suggested a cable terminus at Cambridge Gulf in the north of Western Australia to connect with a landline through Central Australia from Adelaide. Alternative sites included the North West Cape in Western Australia and the Queensland coast. However, before the successful expeditions of John McDouall Stuart, it was generally believed that it was impossible to cross the Central Australian desert.

A number of explorers had attempted to find overland routes across Australia from the southern and eastern coasts. In South Australia the expeditions of Eyre (1840), Sturt (1844-46), Horrocks (1846), and of Goyder, Babbage, Freeling, Hack, Warburton and McDouall Stuart in the 1850's had reached the salt lake district but had not penetrated as far as the centre of the continent. In the far north the expeditions of Leichhardt (1844-45) and A. C. Gregory (1855-56) had established overland routes from Moreton Bay in Queensland but they, also, had not penetrated the centre.



Australian Post Office

The camp at Port Darwin with the supply schooner 'Gulnare' at anchor—1870.

Members of Patterson's party at Southport on 6 September 1871 preparing to move south to continue work on Darwent and Dalwood's line. The 'Gulnare', in the background, was wrecked a few weeks later.

Australian Post Office



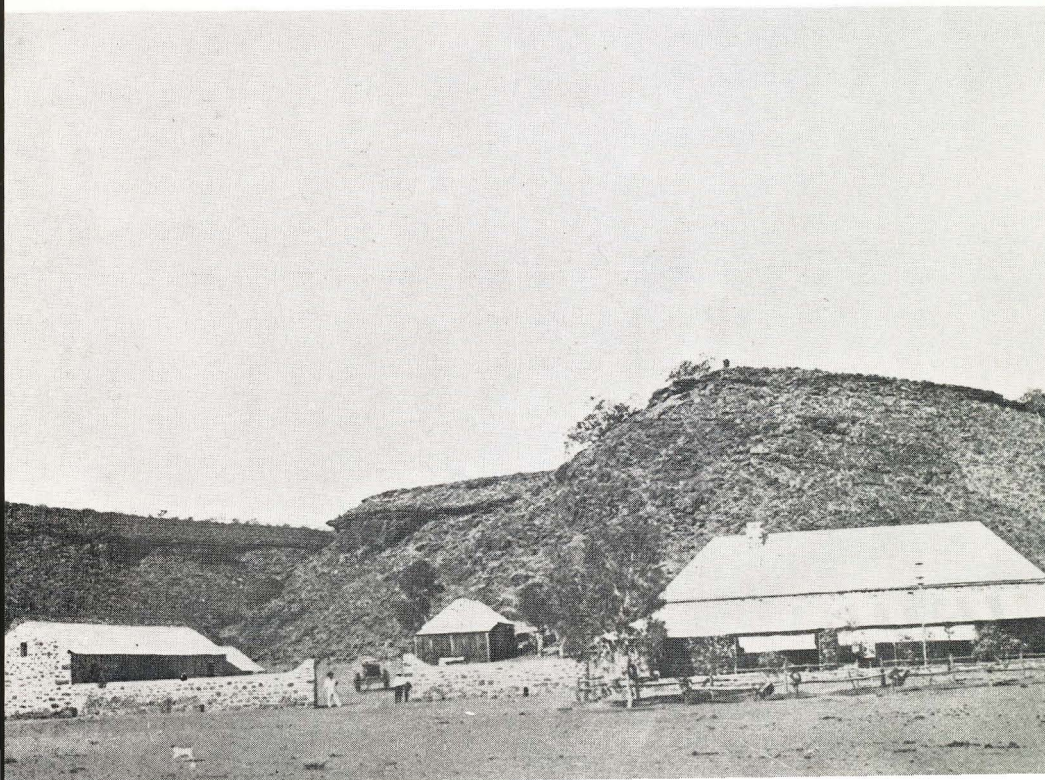


Australian Post Office

The first, but temporary, telegraph station at Darwin.

The repeater station at Barrow Creek. This and the other ten repeater stations were manned by a stationmaster, an assistant operator and four linemen and were provisioned for twelve months.

Australian Post Office





Australian Post Office
At Roper River in 1872—left to right, J. A. Little, R. Patterson, Charles Todd and J. Mitchell.

The Chief Telegraph Office, Adelaide in 1872. Charles Todd is shown standing in the foreground in the light-coloured suit.

Australian Post Office





The landing of the submarine cable from Java at Darwin in 1871.

Australian Post Office

A small construction party camp.

Australian Post Office



In the period from 1859 to 1862 John McDouall Stuart led a series of horse-back expeditions which opened up a corridor through Central Australia from the southern to the northern coast, thus disproving the myths of an inland sea or an impassable desert. Stuart's expeditions had shown that there was a practicable route for an overland telegraph and his findings were supported by the expeditions of Burke and Wills (1860-61) and McKinley.

Following these expeditions the Northern Territory was transferred to the jurisdiction of South Australia by Royal Letters Patent dated 6 July 1863. As a result the South Australian Government attempted to establish settlements at the mouth of the Adelaide River during the period 1864 to 1867 and at Port Darwin in 1869.

Negotiation and Agreement

The British-Australian Telegraph Company was formed to lay the submarine cables to link Australia with the rest of the world *via* Java. Both the South Australian and Queensland Governments negotiated with the company to build the landline to connect with the submarine cable. The South Australian proposals were accepted because it was considered that the settlement at Port Darwin (originally called Palmerston) was the nearest practical point in Australia for bringing the cable ashore and had significant cost advantages to the cable company over the proposal for a cable-terminus station at either Burketown or Normanton as proposed by the Queensland Government.

South Australia's incentive to build an overland telegraph line from Port Augusta to Port Darwin was twofold; it would be able to earn revenue on all cable messages from the Australian colonies as they would have to be routed *via* Adelaide and the Overland Telegraph Line would provide direct communication between South Australia and its sub-colony in the north.

On 18 June 1870 the South Australian Parliament passed the Port Augusta and Port Darwin Telegraph Act, 1870 which authorised the South Australian Government to borrow up to £120,000 (\$240,000) to finance the construction of the Overland Telegraph Line. At the same time the South Australian Government entered into a contract with the British-Australian Telegraph Company to open land communications with Port Darwin by telegraph by 1 January, 1872. The contract allowed only eighteen months to complete this vast undertaking with severe penalty clauses for non-fulfilment of the contract within the specified time.

Construction

The construction work was put under the general supervision of Charles Todd who had been Superintendent of Telegraphs since 1854 and became Postmaster-General of South Australia in 1870. Todd divided the work into three sections, southern, central and northern, on which work was commenced simultaneously.

The southern section extended from Port Augusta northwards to latitude 27 degrees south, a distance of 510 miles, through semi-arid but settled pastoral country. This section was let to a private contractor, E. M. Bagot, at the contract rate of £41 (\$82) a mile and was completed without mishap in fifteen months.

The central section which was expected to be the most difficult ran from the Macumba River (near Charlotte Waters) through to Tennant Creek, a distance of 621 miles. The construction was undertaken by five government parties led by the surveyors E. W. Harvey, R. R. Knuckey, G. McMinn, W. W. Mills and A. T. Woods. Supplies had to be carried from Port Augusta.

The only information concerning this part of the route before the commencement of the construction was that contained in Stuart's journals. An exploring party under the command of John Ross was dispatched in advance of the construction parties but much of the initial exploration was carried out progressively by the surveyors in charge of the parties as the work proceeded. Important factors that had to be considered were the presence of timber suitable for shaping telegraph poles; the availability of water; and the suitability of the terrain for transportation, while allowing holes for poles to be easily dug 4 feet deep.

The central section was completed within the specified time in spite of the extreme difficulties experienced through lack of water and suitable timber, and the great distances over which materials and stores had to be hauled. Communication opened right through to Tennant Creek, 1131 miles north of Port Augusta, on 29 December 1871.

The northern section of the line proved to be the most difficult to construct. Problems arose from a failure to anticipate the effect of the wet season on transport and supplies and the necessity to bring supplies by sea to Port Darwin and later to Roper River.

Initially the contract for the construction of the northern section was let out to a firm of private contractors, Darwent and Dalwood, and a work force of eighty men with bullocks, wagons, supplies and line materials was shipped from Adelaide to Port Darwin. The contract was divided into four sub-sections with contract rates varying from £39 (\$78) a mile to £92 (\$184) a mile.

Construction gangs commenced work as soon as they arrived at Port Darwin and the first pole was erected on 15 September 1870. At first, work proceeded rapidly, 89 miles of line being erected in 54 days and although the wet season began in December the line had reached the Katherine River, 202 miles south of Port Darwin, by the end of January 1871. However, work came to a standstill at the King River when heavy rains cut off the working parties from their base camp. William McMinn, the Government Overseer of Works, who had been appointed to see that Darwent and Dalwood fulfilled the terms of the contract, declared the contract null and void on 3 May 1871. This action was probably unwise as it was near the end of the wet season and the contractors would have been able to overcome their supply and transport difficulties within a short period.

McMinn returned to Adelaide to report on the situation and, bearing in mind the penalty provisions for non-completion, the South Australian Government hastily equipped a new expedition to complete the work. The party under the charge of R. C. Patterson consisted of 200 men, 170 horses, 500 bullocks and large quantities of supplies. The party was conveyed to Port Darwin in six chartered vessels, arriving there in August 1871 but the wet season set in before work could recommence on the telegraph line south of Katherine.

The British-Australian Telegraph Company completed the cable link with Java on 16 November 1871, but with the northern section of the line not completed messages from overseas could only be relayed as far as Port Darwin. Cost was no longer considered by the South Australian Government and Charles Todd arrived at the Roper River at the end of January 1872 together with additional men, transport animals and supplies to expedite the completion of the line. Even though Todd arranged for the ships to carry supplies some 200 miles inland *via* the Roper River, work could not be resumed until April because of the severe flooding that had occurred.

By early June the line had reached Daly Waters, 370 miles from Port Darwin, leaving a gap of 262 miles to be completed between Daly Waters and Tennant Creek. While this final link was being completed, a pony express was established to carry messages between the two construction points and the first cablegrams were transmitted by this method on 23 June 1872. However, the line went 'dead' on the next day when there was a cable breakage in deep water near Java. This saved the South Australian Government from having to pay penalties for breaching the contract which had required that the overland line should be in use by 1 January 1872. The submarine cable was restored in October 1872.

Work continued on the landline and on 22 August 1872 the two ends were connected near Frew Pond, 30 miles north-west of Newcastle Waters, in the Northern Territory and subsequently public banquets were held in Sydney, Adelaide and London to celebrate the completion of the Overland Telegraph Line.

The total length of the Overland Telegraph Line, measured from Adelaide to Port Darwin was 1,973 miles. Eleven repeater stations located at Beltana, Strangway Springs, The Peake, Charlotte Waters, Alice Springs, Barrow Creek, Tennant Creek, Powell Creek, Daly Waters, Katherine and Yam Creek were established between Port Augusta and Port Darwin. A Station Master, an Assistant Operator and four linemen were posted to each station which was provisioned for twelve months with twelve horses, a team of bullocks and additional bullocks to provide fresh meat.

Although originally estimated at £120,000 (\$240,000) the construction cost increased to £338,000 (\$676,000) and its final cost after repoling and improvements to the repeater stations amounted to £480,000 (\$960,000). The entire cost of construction was borne by the South Australian Government.

Operation

During the first ten years of operation the annual revenue received from the Overland Telegraph Line was only £12,000 (\$24,000). This was less than the amount required for interest on borrowed money, maintenance and working expenses. However it is likely that the indirect benefits accruing to South Australia and the other colonies more than compensated for this loss.

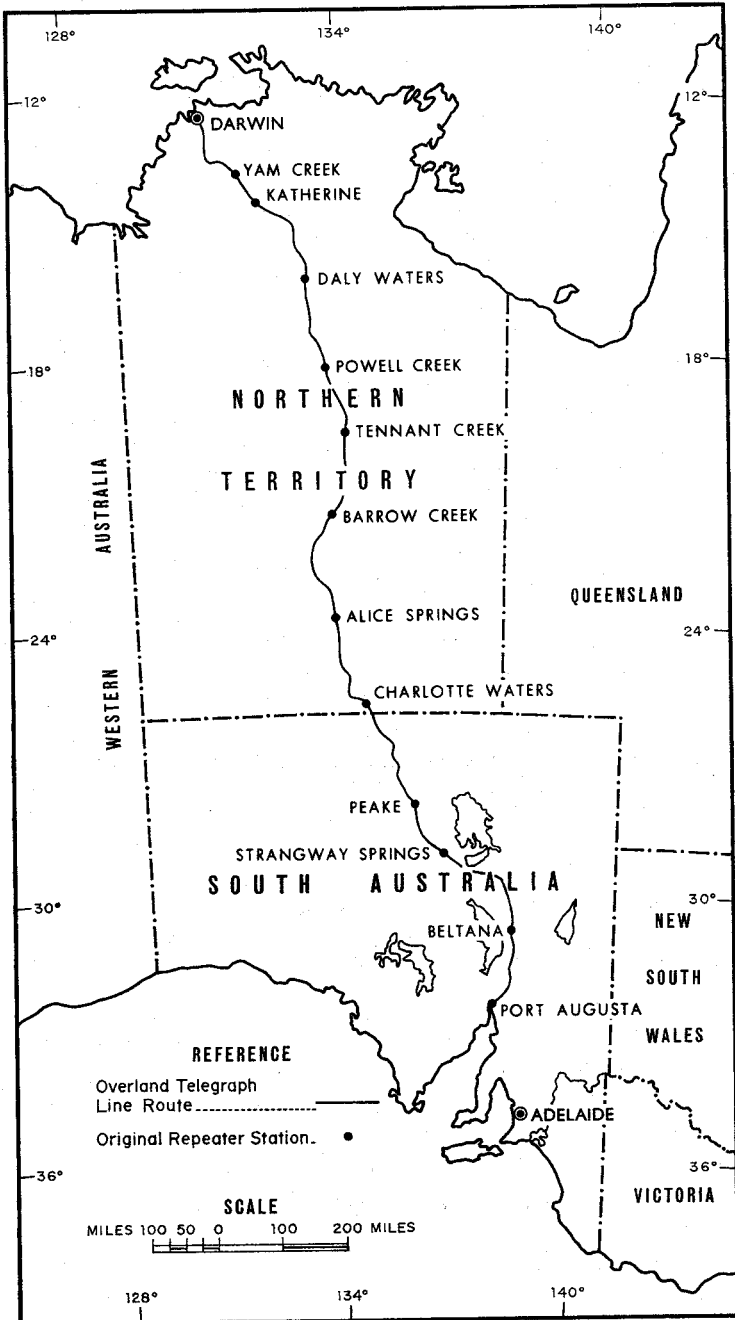
The original Overland Telegraph Line consisted of a single galvanised-iron wire and for more than twenty-five years it carried the morse code messages which made up the overseas telegraphic business of Australia. During the early period many interruptions to the circuit were caused by Aborigines who broke insulators in order to use the fragments for spear tips. They also used the binding wires to make fish hooks and the footplates from iron poles to make small axes. This problem was alleviated to some extent by presenting cheap axes and fish hooks to the natives.

The same poles were used in 1899 when the increasing traffic necessitated the erection of a second line. Copper wire was used this time and as a result a relatively high-speed duplex circuit was provided.

The Overland Telegraph Line was operated by the South Australian Government until 1901 when federation of the Australian colonies vested the responsibility for posts and telegraphs in the Commonwealth Government.

By 1938 the channels had become congested with the ever-increasing telegraph traffic and with the threat of war, it became necessary for the number of channels to be increased to provide high grade telephone and telegraph communication between northern and southern Australia. The line was altered with

THE OVERLAND TELEGRAPH LINE



the addition of poles and wires together with some new repeater buildings to improve communications. It was important for the work of construction to be carried out as speedily as possible and many time saving devices were used.

During the war years the line was further upgraded by Australian Army personnel under the supervision of Australian Post Office engineers.

A map showing the original route of the Overland Telegraph Line appears on page 530.

PUBLIC FINANCE

12.1 STRUCTURE OF PUBLIC FINANCE

The collection of public revenue and the expenditure of public money in South Australia are the responsibility of four groups of authorities; (i) Commonwealth Government; (ii) State Government; (iii) Semi-government; and (iv) Local government.

The power to raise revenue from taxation is vested in the various governments and authorities by Acts of Parliament. Other revenue comes from the proceeds of the sale of goods and services to the public and to other governments and authorities. 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 levels of government: 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.

Authorisation for expenditure by Commonwealth and State 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 established. The Local Government Act, 1934-1971 contains sections relating to local government expenditure. The following sections of this part provide some details of the financial transactions of the government sector in South Australia. Special attention is given to transactions within the State Government budget, transactions of a number of semi-government authorities, and transactions of all local government authorities. In addition, details of some Commonwealth Government expenditures are included.

Commonwealth Government Transactions

Reference is made to the revenue and expenditure of the Commonwealth Government only to the extent that it affects the finances of the State Government. As indicated in more detail below, not all of the transactions listed relate

directly to the State budget; many of the items are negotiated wholly through State Trust Funds. The transactions which are included represent only a small proportion of total expenditure by the Commonwealth Government within South Australia. A more detailed analysis of Commonwealth Government finance may be obtained from the *Official Year Book of the Commonwealth of Australia*.

State Government Accounts

Statistics relating to the State Government Budget are derived from accounts prepared by the Treasurer each year and included in the Report of the Auditor-General of South Australia. These accounts, which are on a cash basis, cover the Consolidated Revenue Account which in general terms is the current account of the Government, and the Loan Fund through which is handled the receipt and disbursement of some special purpose Commonwealth grants and all money raised by public borrowing.

State Government budget receipts include (in addition to loan raisings) taxation, proceeds of sale of goods and services by trading undertakings, some of the grants made by the Commonwealth Government, fees, rents, recoups and other sundry items. State Government disbursements are made for capital works, for provision of services (such as health, education and water supply), for general administrative expenses, and for interest and redemption payments.

The State Government Budget excludes many transactions negotiated through State Government Deposit and Suspense Accounts (including working accounts) and Trust Funds. The volume of such transactions is considerable. For example, road works financed through Road Maintenance Act charges and by Commonwealth Aid Roads grants are handled through working accounts, as are the operating costs and revenue of the Woods and Forests Department.

Some idea of the framework of the various funds may be obtained from the following table showing sources and disposal of funds in which the balances of Trust Funds and of Deposit and Suspense Accounts appear as specific lines.

Government of South Australia, Sources and Disposal of Funds at 30 June 1971

Sources and Nature of Funds	\$'000	\$'000	\$'000
Public Debt:			
Securities Current at 1 July 1970.....		1,210,489	
New Loans Raised during 1970-71		220,002	
		1,430,491	
<i>Less:</i> Securities Redeemed and Converted.....		174,154	
Public Debt at 30 June 1971			1,256,337
Other Interest Bearing Indebtedness:			
Trust Fund Balances			15,853
Liabilities to Commonwealth;			
Railway Standardisation and Equipment Agreements...			17,452
Housing Agreements			262,437
Softwood Forestry Agreement			1,175
Natural Gas Pipeline Agreement.....			13,250
Other			(a)
Non-Interest Bearing Indebtedness:			
Trust Fund Balances			3,603
Departmental Balances and Other Funds:			
Deposit and Suspense Accounts		21,884	
<i>Less:</i> Departmental Advances	278		
Payments in Suspense	24		
		302	
			21,582
			1,591,689

**Government of South Australia, Sources and Disposal of Funds
at 30 June 1971 (continued)**

Disposal of Funds	\$'000	\$'000	\$'000
Loan Account:			
Total of Loan Works at 1 July 1970		1,197,457	
Payments during 1970-71 (b)		110,944	
		1,308,401	
Less: Repayments	24,682		
Securities Cancelled	14,773		
Other Credits (c)	53,420		
		92,875	
Loan Works Account Balances at 30 June 1971			1,215,526
Other Loan Expenditure (d)			26,000
Consolidated Revenue Account:			
Deficit at 1 July 1970		4,579	
Receipts for Year	386,859		
Payments for Year	386,838		
Surplus for Year		21	
Deficit at 30 June 1971			4,558
Railway Standardisation and Equipment:			
Improvements and Advances			17,452
Housing Agreements:			
Advances to S.A. Housing Trust		147,505	
Advances to Home Builders Fund		114,933	
		262,437	
Forestry Agreement:			
Advances to Forestry Board			1,175
Natural Gas Pipeline Agreement:			
Advances to Natural Gas Pipelines Authority			13,250
Cash at Bank			51,292
			1,591,689

(a) Less than \$500. (b) Includes \$277,685 nominal increase in Loan Account.

(c) Amount of debt to be taken over by Commonwealth (\$26,000,000) and Capital Works Grant, in lieu of loan raising (\$27,420,000).

(d) Not represented by Assets: debt to be taken over by Commonwealth.

Semi-Government Accounts

Most of the details included are based on the Auditor-General's annual reports prepared for a number of semi-government business undertakings, including those engaged in banking. Information is given from both revenue statements and balance sheets.

Local Government Accounts

Details included for Local Government Authorities to 1967-68 are based on cash statements of receipts and payments: from 1968-69 onward the details are based on annual statements prepared on an income and expenditure (accrual) basis in accordance with the 'Local Government Accounting Regulations, 1967'. Details of loan raisings are based on returns furnished separately.

Consolidated State, Local and Semi-Government Accounts

Any analysis of financial transactions of the Government sector would be incomplete without a comprehensive consolidation of all levels and funds of Government. No such data had been released until 1970 when the Common-

wealth Statistician published the *Public Authority Finance* bulletin showing net receipts and outlays of the Commonwealth and each State separately and of the Commonwealth combined with all States. The figures are net and consolidated: net figures are those for which expenditures within a given classification have been reduced to the extent of any relevant receipt (and *vice versa*); and consolidated figures are those for which inter-authority, inter-level and inter-fund transactions are eliminated on consolidation of those authorities, levels and funds.

The tables which follow show figures on a consolidated net basis for State, local, and major semi-government authorities in South Australia for the five years to 1968-69. The figures should be regarded as interim only and could be subject to alteration as the analysis is extended and refined.

State, Local and Semi-Government Authorities, South Australia
Receipts

Receipts	1964-65	1965-66	1966-67	1967-68	1968-69
	\$ million				
Current Receipts:					
Taxation	56.5	60.8	69.1	75.8	83.3
Fines	1.2	1.3	1.6	2.1	2.5
Business undertakings; Gross operating surplus (a) ..	43.1	46.3	48.1	45.5	51.2
Rent, royalties and dividends ..	2.3	2.3	2.7	2.5	3.0
Interest	6.7	7.1	7.6	8.3	9.3
Grants from Commonwealth Government	85.1	94.0	102.7	114.9	127.3
Total current receipts	194.9	211.8	231.8	249.1	276.6
Capital receipts:					
Net borrowing;					
Government securities,					
Australia	51.3	54.7	60.9	76.1	72.3
Overseas	-2.2	-3.7	-4.3	-16.6	-3.4
Local and semi-government securities	14.0	14.7	16.9	20.1	34.8
Net receipts of private trust funds	0.1	0.3	0.2	0.4	-0.3
Net advances from Common- wealth Government	19.4	21.7	20.3	21.7	26.9
Other funds available (incl. errors and omissions) (b):	5.9	5.6	2.0	4.3	0.3
Grants from Commonwealth Government	22.1	24.7	26.1	29.1	32.0
Total capital receipts	110.6	118.0	122.1	135.1	162.7
Reduction in:					
Cash and bank balances (c)	1.7	12.2	0.8	-16.8	-17.2
Security holdings	0.8	0.8	7.2	-0.9	0.9
Total receipts	308.0	342.8	361.9	366.5	423.0

(a) Before providing for interest and depreciation.

(b) Consists mainly of movements in debtors, creditors, reserves and provisions (other than for depreciation) of public business undertakings.

(c) Includes balances held by government authorities in government banks.

State, Local and Semi-Government Authorities, South Australia
Outlay

Outlay	1964-65	1965-66	1966-67	1967-68	1968-69
	\$ million				
Current outlay:					
Purchase of goods and services and grants to organisations..	98.1	109.4	120.9	131.8	145.0
Interest	49.5	53.8	58.8	64.5	70.7
Cash benefits to persons.....	0.9	1.0	1.0	1.1	1.4
Subsidies.....	0.1	0.1	0.1	0.5	0.4
Grants towards private capital expenditure	1.4	1.4	2.3	1.8	1.8
Total current outlay	150.0	165.7	183.1	199.7	219.3
Capital outlay:					
Gross capital formation (a)	139.5	157.0	160.6	149.9	189.6
Net advances to other sectors..	18.5	20.1	18.2	17.0	14.1
Total capital outlay	158.0	177.1	178.8	166.9	203.7
Total outlay	308.0	342.8	361.9	366.6	423.0

(a) Expenditure on fixed assets and increase in stocks.

12.2 COMMONWEALTH-STATE FINANCIAL RELATIONS

Since Federation the Commonwealth has made payments of various descriptions to the States. Before the 1939-45 War Commonwealth payments were mainly of a marginal character and were confined, for the most part, to special grants to assist the financially weaker States and to certain specific purpose grants relating to such matters as Commonwealth assistance for roads and contributions under the Financial Agreement.

Since the 1939-45 War there has been a marked increase in the amount and variety of Commonwealth assistance to the States. This has reflected, among other things, increases in the range and variety of government activities which have accompanied economic and social developments in this period of rapid growth of the Australian economy; greater participation by the Commonwealth in matters which were previously considered to be the sole responsibility of the States; and the effects of the introduction and continuation of uniform income tax and of other changes on the basic allocation of financial resources between the Commonwealth and the States.

There are various ways of classifying Commonwealth payments to the States. They may be classified as 'capital' as opposed to 'current' transactions; to general purpose grants compared with payments for purposes specified by the Commonwealth; or in accordance with the constitutional authority under which the payments are made. Many of the recently introduced grants have been for purposes specified by the Commonwealth and instituted under Section 96 of the Constitution.

THE COMMONWEALTH OF AUSTRALIA CONSTITUTION ACT

Before Federation in 1901, each State exercised the right to raise its own revenue by various forms of taxation, customs and excise duties (including interstate customs), fees for services, licence fees, and other means.

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 \$2.50 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.

Commonwealth subsidy paid to South Australia under section 87 of the Constitution was \$1,685,016 for 1909-10; under the *Surplus Revenue Act* 1910 the subsidy was \$1,029,244 for 1910-11.

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 12 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 assumption by the Commonwealth of State obligations to bondholders in respect of existing State debts and agreement by the Commonwealth to contribute one-third of sinking fund payments for liquidation of those debts;
- (ii) the payment by the Commonwealth to the States of an annual fixed amount of \$15,169,824 (an amount equal to the *per capita* payments for 1926-27) as a contribution toward interest on State debts;
- (iii) the provision of sinking funds to repay debts existing and subsequently incurred, the Commonwealth and States to contribute equally toward the latter;
- (iv) the establishment of an Australian Loan Council to control future loan raisings.

SPECIAL GRANTS

The Constitution provides, in section 96, for the granting of special financial assistance to the States. Before 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. From 1933 to 30 June 1959 applications were lodged by each of the three States already mentioned. South Australia ceased to be a claimant State from 1 July 1959; and at the Premiers' Conference in June 1968, following a request from Western Australia, it was agreed that (subject to certain considerations) claims by Western Australia would cease after payments in respect of 1967-68 leaving Tasmania as the only claimant State during 1968-69 and 1969-70. However, following the Premiers' Conference in June 1970 the Government of South Australia decided to again submit a claim. The Commission approved an advance grant of \$5 million in respect of 1970-71: this was supplemented by a completion grant of \$2 million upon review of the full financial results for the year. The advance grant approved for 1971-72 is \$7 million.

FINANCIAL ASSISTANCE GRANTS

Financial assistance grants, formerly called tax reimbursement grants, make up the bulk of the assistance provided for general revenue purposes and are determined annually on the basis of an agreed formula.

In 1942 uniform taxation of incomes throughout Australia was introduced by the Commonwealth Government to implement its financial policy for meeting the exigencies of war finance. The Commonwealth became the sole authority levying taxes upon incomes from 1 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.

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 were described as 'financial assistance' grants. The Act incorporated an arrangement designed to eliminate the need for supplementary grants by providing for adjustment of grants each year according to variations in population and increases (if any) in average wage per person employed; the latter included what became known as a 'betterment' factor. This legislation was superseded by the *States Grants Act 1965* which retained the basic framework of the 1959 Act but

increased the 'betterment' factor by making it 1.2 per cent of the total grant otherwise determined for each year and also made the 'betterment' factor independent of wage movements: this Act also provided for an increase in the first year grant to Victoria, and a cumulative increase in the basic grant to Queensland.

The 1965 Act provided for consultation between the Commonwealth and the States concerning review of the legislation in relation to years subsequent to 1969-70 or earlier years in the event of substantial change in the financial relationships between the Commonwealth and a State or States.

Such consultations have occurred and special arrangements were made for 1968-69 under the *States Grants (Special Financial Assistance) Act 1969*. The *States Grants (Special Financial Assistance) Act 1970* provided for the payment in 1969-70 of \$16 million of which \$12 million was to be shared between the States in proportions applicable under the provisions of the *States Grants Act 1965-1968*; \$1.5 million was to be paid to Tasmania and \$2.5 million in total was to be shared among the States, South Australia's allocation being \$350,000: these arrangements resulted substantially from a special Premiers' Conference in February 1970. At that Conference in dealing with arrangements to apply from 1 July 1970, the Commonwealth opposed any resumption by the States of powers to impose income tax but offered in principle to improve the position of the States in four ways:

- (1) by increasing the basic figure used in the formula to determine the level of Financial Assistance Grants;
- (2) by increasing the rate of growth in the amounts granted to the States;
- (3) by assuming responsibility for some part of State debts; and
- (4) by making grants, in lieu of State borrowings, for some part of future works programmes to reduce the rate of growth in State indebtedness.

Following the June 1970 Premiers' Conference the Commonwealth gave effect to this offer by passing the *States Grants Act 1970*, *States Grants (Debt Charges Assistance) Act 1970* and the *States Grants (Capital Assistance) Act 1970*, details of which appear below.

The *States Grants Act 1970* provides for the continuation of formula grants with special cumulative assistance to Queensland for a further five years and an additional \$40 million in 1970-71 to be shared between the States in proportion to their new 1970-71 grants: it also provides for additional assistance of \$10 million to be paid to Tasmania and this \$10 million together with the \$40 million mentioned above is to be included in the base for calculation of 1971-72 formula grants and so on. From 1971-72 the 'betterment' factor is to be increased from 1.2 per cent to 1.8 per cent. Other payments authorised by this Act and not included in the base for determining formula grants are \$2 per head of population to be made to N.S.W. and Vic. for each of the five years 1970-71 to 1974-75 and a grant of \$12.5 million to W.A. in 1970-71, decreasing by \$3 million in each year to 1974-75.

At a special Premiers' Conference held in April 1971, the Commonwealth agreed to provide the States with extra financial assistance totalling \$43 million to be applied towards reducing the States' accumulating deficits. Under the *States Grants Act 1971* this money was shared between the States in proportion to their shares of the 1970-71 Financial Assistance Grants.

The *States Grants Act (No. 2) 1971* gave effect to an agreement made at the June 1971 Premiers' Conference that the Commonwealth would transfer to the

States as soon as possible the right and responsibility to levy payroll tax and that there would be an appropriate adjustment to the financial assistance grants. The reduction in the financial assistance grants in 1971-72 (and in the 'base' figure for future years' calculations) is less than the amount of payroll tax foregone by the Commonwealth and made available to the States. The main factors in this lesser reduction in the grants are a sum of \$22.4 million in recognition of the States' serious budgetary problems, and a sum of about \$8 million to permit the States to relieve local government (other than business undertakings) of the impost of payroll tax. As part of the overall arrangements the Commonwealth agreed to make a further contribution of \$40 million towards the States' problems in 1971-72, but this amount will not be written into the base for escalation in future years in accordance with the formula under the legislation. In recognition of the fact that payroll tax may be expected to grow at an annual rate a little below the rate of growth of grants under the formula, the Commonwealth, in calculating the 1972-73 grants, increased further the 1971-72 base by \$3 million for the six States combined: it also increased the base by an estimate of receipts duty which the States would have received had such been payable under the States' legislation which was invalidated by the High Court or under Commonwealth legislation rejected by the Senate. For details see the document *Commonwealth Payments to or for the States*.

Following the June 1971 Premiers' Conference it was reported that the Premiers had agreed to increase the rate of payroll tax from 2.5 per cent to 3.5 per cent as soon as authority for the tax could be transferred to the States.

The *States Grants (Debt Charges Assistance) Act 1970* provides for the Commonwealth to take over responsibility for charges on \$200 million of existing State debt at the beginning of each of the five years commencing 1970-71. Formal transfer of such debt from the States to the Commonwealth will occur in June 1975.

Capital assistance in the form of a grant, in lieu of loan raisings, is authorised by the *States Grants (Capital Assistance) Act 1970* which provides for a grant to the States of \$200 million in 1970-71, increasing in future years in proportion to the increase in the Loan Council works and housing programme. South Australia's share of this grant, proportionate to its share of the works and housing programme, was approximately \$27.4 million in 1970-71. This assistance was continued in 1971-72 under the 1971 Act, South Australia's share being approximately \$28.8 million.

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 many specific purposes, some details of which are given below.

Grants for road works have been made since 1923, and from 1931 to 1958 were based on a percentage, varied from time to time, of Commonwealth petrol taxation. A new scheme of Commonwealth assistance to the States for roads was established by the *Commonwealth Aid Roads Act 1959*. The Commonwealth undertook to provide \$500 million for distribution, according to stated criteria, to the States during the five years to 30 June 1964. The *Commonwealth Aids Roads Act 1964* stipulated a sum of \$750 million for distribution to the

States during the five years from 1 July 1964. For the five years commencing 1 July 1969 the relevant sum is \$1,252 million. The criteria for distribution to the States, and South Australia's share of these grants, are mentioned in references and text in Part 8.3 Roads.

Under successive Commonwealth-State Housing Agreements between 1 July 1956 and 30 June 1971, housing advances were made by the Commonwealth to the States at concessional rates of interest. A new arrangement applicable from 1 July 1971 provides that the interest concession will be replaced by annual grants payable over a period of thirty years. This is intended to assist the States in continuing the provision of housing for lower income groups and is supplemented during the first five years by additional grants toward the cost of reduced rents charged to needy families occupying South Australian Housing Trust homes.

Up to 30 June 1971 the Commonwealth had provided \$48,071,000 under the *Railway Standardization (South Australia) Agreement Act 1949*. The Commonwealth had also provided \$2,635,000 under the *Railway Equipment Agreement (South Australia) Act 1961* for the purchase of locomotives and wagons for the carriage of ore from Broken Hill to Port Pirie. Over a period of fifty years the State must repay 30 per cent of the amount provided by the Commonwealth under these two agreements.

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.

Under the *States Grants (Mental Health Institutions) Act 1964* the States are entitled to receive assistance amounting to one-third of the total expenditure incurred by them, with Commonwealth approval, in building and equipping mental health institutions. The *States Grants (Mental Health Institutions) Act 1970* extended to 1973 the period for which this assistance would be provided.

Payments to the States for recurrent expenditure of universities commenced in 1951-52. Grants for capital works and equipment for universities were introduced in 1958. Capital and current grants for the three years 1967 to 1969 totalled \$182,500,000. The *States Grants (Universities) Act (No. 2) 1970* provided for grants of up to \$239,600,000 to the States for universities (including halls of residence and teaching hospitals) during the three calendar years 1970 to 1972: this amount was progressively increased to \$249,074,000 by the *States Grants (Universities) Act 1971* and the *States Grants (Universities) Act (No. 2) 1971*.

In 1964 the Commonwealth authorised payments to assist in the investigation and measurement of river and underground water resources.

From 1964 the Commonwealth has legislated for grants designed to assist education and research in the States. Grants introduced during the first three years related to science laboratories in State and private secondary schools, training of persons for employment in trade and technical occupations, education in non-university tertiary institutions (colleges of advanced education), and approved research projects. The range of institutions eligible for assistance through these grants was extended in 1967 to include teachers colleges, and in 1968 pre-school teachers colleges and secondary school libraries. The *State Grants (Independent Schools) Act 1969* extended this assistance further by providing for the payment of *per capita* grants (in respect of recurrent expenditure) to independent schools.

In 1969 the Commonwealth introduced additional grants to the States for dwellings for aged pensioners, home care, nursing homes, and paramedical services.

The *South Australian Grant (Tailem Bend to Keith Pipeline) Act 1969* provided for financial assistance of up to \$6 million in connection with the construction of a pipeline from Tailem Bend to Keith and certain associated works.

The *States Grants (Aboriginal Advancement) Act 1970* provided for continuation of grants commenced in 1968-69 relating to the welfare and advancement of Aborigines and included specific provisions for financial assistance for the housing of Aborigines. Grants in 1971-72 are provided under the *States Grants (Aboriginal Advancement) Act 1971*.

The *State Grants (Receipt Duties) Act 1970* provided for the payment to the States of amounts of duty received under the *States Receipt Duties (Administration) Act 1970* and allied legislation. This Act was introduced in response to an undertaking by the Commonwealth that it would legislate to impose a tax to replace the States' receipts duty legislation invalidated by a High Court ruling; it applied only to the period from 18 November 1969 to 30 September 1970 from which time receipts duty ceased to be payable under either State or Commonwealth legislation. The Commonwealth has since made grants to the States to compensate them for the loss of receipts duty which they would have received for the remainder of 1970-71 and has incorporated an estimate of the amount the States would have received from this duty during the whole of 1970-71 in the base used to calculate Financial Assistance Grants for 1971-72 and ensuing years.

The *South Australian Grant (Fruit Canneries) Act 1971* provides for a grant of approximately \$1.3 million to enable the South Australian Government to make loans to two fruit canneries.

From time to time the Commonwealth makes 'Natural Disaster' payments to various States: in 1968 grants to South Australia were authorised to reimburse expenditure on alleviation of the effects of drought and to compensate for loss of revenue resulting from drought.

The *States Grants (Rural Reconstruction) Act 1971* provides for the payment of \$100 million (\$12 million to South Australia) over a period of approximately four years to provide assistance under three headings, namely debt reconstruction, farm build-up and rehabilitation. Some details of the scheme are given on pages 98-9.

In December 1971 the Commonwealth announced grants, to be spent on activities which create employment in rural areas, totalling approximately \$36 million to be paid to the States at a monthly rate of approximately \$2.25 million for the next eighteen months. The original plan, subject to later review, provided that for the first seven months South Australia would receive \$945,000 but this was increased in February 1972 when the monthly rate of payment to each State was doubled.

For more complete historical and current information on Commonwealth financial assistance to the States reference should be made to the most recent issue of the bulletin *Commonwealth Payments to or for the States* presented to the Parliament of the Commonwealth of Australia.

Figures in the following table are those which have been published in various issues of that bulletin and show the general pattern of Commonwealth payments to or for the State of South Australia since the Financial Agreement in 1927: some amounts shown are repayable to the Commonwealth (e.g. portion of railway project payments) but repayable advances for housing and war service land settlement are not included.

Commonwealth Payments To or For the States, South Australia

Particulars	1929-30	1939-40	1949-50	1959-60	1969-70	1970-71
	\$'000					
Financial Agreement:						
Interest on State Debt	1,408	1,408	1,408	1,408	1,408	1,408
Sinking Fund on State Debt	254	360	488	1,583	3,053	3,226
Special Grants	720	1,990	8,348	2,852	—	5,000
Financial Assistance Grants (tax re- imbursements)	—	—	10,734	55,350	125,706	151,602
Additional Assistance	—	—	—	—	1,690	4,650
Debt charges assistance	522	—	—	—	—	1,496
Commonwealth Aid Roads Act	—	1,006	2,039	9,846	21,000	23,500
Beef cattle roads	—	—	—	—	—	300
Grants to universities	—	—	—	1,787	6,470	8,180
Science laboratories and technical training	—	—	—	—	2,010	2,393
Research Grants	—	—	—	—	551	759
Mental health institutions—contri- butions to capital expenditure	—	—	—	184	1,299	909
Tuberculosis Act, 1948—Capital	—	—	—	214	69	108
Current	—	—	34	1,247	551	545
Agricultural extension services	—	—	30	102	460	538
Water resources investigations	—	—	—	—	142	187
Railway projects	—	40	40	102	12,212	2,370
Natural gas	—	—	—	—	—	2,250
Colleges of advanced education	—	—	—	—	2,402	3,773
Softwood forestry	—	—	—	—	350	300
Price control reimbursements	—	—	148	—	—	—
Coal Strike Emergency Grant	—	—	1,347	—	—	—
Assistance for deserted wives	—	—	—	—	210	294
Teachers colleges	—	—	—	—	2,021	140
Pre-school teachers colleges	—	—	—	—	—	480
Aboriginal advancement	—	—	—	—	535	660
School libraries	—	—	—	—	627	1,343
Independent schools	—	—	—	—	759	1,526
Tailam Bend pipeline	—	—	—	—	1,500	1,500
Dwellings for aged pensioners	—	—	—	—	160	311
Blood transfusion services	—	—	—	32	83	124
Other	—	—	64	120	107	282
Total	2,904	4,804	24,680	74,827	185,375	220,154

NATIONAL WELFARE FUND

The States also receive, from the Commonwealth through the National Welfare Fund, payments in respect of hospital and pharmaceutical benefits, nutrition of children and reimbursement of maintenance expenditure on tuberculosis sanatoria. 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 1970-71 were hospital benefits \$1,682,000, pharmaceutical benefits \$1,836,000, free milk for school children \$892,000, tuberculosis reimbursement of maintenance expenditure and surveys \$582,000.

The amounts stated above for hospital and pharmaceutical benefits relate to particular classes of patients and a limited range of drugs in government

hospitals and are only a small portion of the total hospital and pharmaceutical benefits (see pages 247-51) which are paid from National Welfare Fund to or for residents of this State.

12.3 STATE GOVERNMENT FINANCE

State Government accounting in South Australia is on a 'cash' basis. Receipts and payments fall into five main divisions, namely the Consolidated Revenue Account and Loan Fund (which together constitute the budget sector), Special Commonwealth Advances, Trust Fund Accounts and Deposit and Suspense Accounts.

CONSOLIDATED REVENUE ACCOUNT

This account is credited with receipts from many items of State taxation, fees, licences and charges for services, recoveries of interest and sinking fund, sales of Crown lands, and Financial Assistance Grants (originally entitled Tax Reimbursement Grants) and some other Commonwealth 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.

The following table shows, for the financial year 1970-71 and four earlier years, Consolidated Revenue receipts and payments, the resulting surplus or deficit for the relevant year, and cumulative surplus or deficit at the end of that year: any cumulative deficit is regarded as an application of borrowed funds as indicated in the table on pages 533-4.

Consolidated Revenue Account, South Australia

Particulars	1939-40	1949-50	1959-60	1969-70	1970-71
	\$'000				
Receipts	25,511	58,721	160,555	338,498	386,859
Payments	25,837	59,100	161,177	335,578	386,838
Surplus (+) or deficit (-):					
Current Year	-325	-379	-622	+2,920	+21
Cumulative	+1,999	+3,215	-3,376	-4,579	-4,558

Per Head of Population

	Dollars				
Receipts	42.72	85.50	171.99	293.06	331.41
Payments	43.28	86.05	172.65	290.53	331.40

Sources of Revenue

The sources of revenue for the financial years 1966-67 to 1970-71 were as follows:

Consolidated Revenue Account: Sources of Revenue, South Australia**Total Revenue**

Source of Revenue	1966-67	1967-68	1968-69	1969-70	1970-71
	\$'000				
Net taxation (a).....	43,780	47,188	52,463	58,658	61,551
Business undertakings	69,996	70,256	73,490	86,418	91,282
Territorial: Land sales, rents etc.....	2,120	2,074	2,437	3,028	3,072
Other:					
Interest and exchange....	19,868	20,906	22,566	24,849	26,691
Fees, fines, rents, etc.	27,306	28,247	29,873	36,741	40,055
Commonwealth grants (b) ..	95,753	105,872	117,525	128,803	164,207
Total	258,823	274,544	298,355	338,498	386,859

Per Head of Population

	Dollars				
Net taxation (a).....	39.69	42.31	46.39	51.07	52.73
Business undertakings	63.46	62.99	64.98	75.24	78.20
Territorial: Land sales, rents etc.....	1.92	1.86	2.15	2.64	2.63
Other:					
Interest and exchange....	18.01	18.74	19.95	21.64	22.87
Fees, fines, rents, etc.	24.76	25.32	26.43	31.99	34.31
Commonwealth grants (b) ..	86.81	94.92	103.92	112.15	140.67
Total	234.65	246.14	263.82	294.73	331.41

Proportion of Total Revenue

	Per cent				
Net taxation (a).....	16.92	17.19	17.59	17.33	15.91
Business undertakings	27.04	25.59	24.63	25.53	23.60
Territorial: Land sales, rents, etc.....	0.82	0.76	0.82	0.89	0.79
Other:					
Interest and exchange....	7.68	7.62	7.56	7.34	6.90
Fees, fines, rents, etc.	10.54	10.28	10.00	10.86	10.35
Commonwealth grants (a) ..	37.00	38.56	39.40	38.05	42.45
Total	100.00	100.00	100.00	100.00	100.00

(a) Some items and amounts differ slightly from State Treasury classifications.

(b) Includes grants under Financial Agreement and Financial Assistance Grants (originally entitled 'Tax Reimbursement').

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 \$4,718,000,

\$4,952,000 and \$5,638,000 respectively or 51.70 per cent, 57.02 per cent, and 59.45 per cent of total revenue from taxation. The table below shows receipts of taxation into Consolidated Revenue Account over the last five years: receipts of taxation into other accounts are shown on page 548; the major forms of taxation now left to the State are motor tax, succession and stamp duties, and land tax.

Consolidated Revenue Account: Revenue from Taxation, South Australia^{(a) (b)}

Tax	1966-67	1967-68	1968-69	1969-70	1970-71
	\$'000				
Land tax	7,646	7,701	7,644	7,595	7,550
Succession duty	7,323	8,153	8,822	8,312	9,030
Gift duty	—	—	309	611	733
Racing tax (b)	1,588	1,373	1,374	948	1,018
Motor tax (b)	12,466	12,877	13,728	14,538	15,672
Stamp duties (c)	10,927	12,235	14,847	20,621	(d)20,711
ETSA levy	—	—	—	—	468
Licences: liquor	1,672	2,236	2,633	3,083	3,255
other	543	592	681	746	834
Court fines (estimated)	1,437	1,859	2,286	2,077	2,102
Other	179	161	140	128	178
Total	43,780	47,188	52,463	58,658	61,551

Proportion of Total Taxation

	Per cent				
Land tax	18.09	17.03	15.27	13.46	12.27
Succession duty	17.32	18.03	17.62	14.73	14.63
Gift duty	—	—	0.62	1.08	1.19
Racing tax (b)	3.76	3.04	2.74	1.68	1.65
Motor tax (b)	29.49	28.47	27.42	25.75	25.46
Stamp duties (c)	24.96	25.93	28.30	35.15	(d)33.65
ETSA levy	—	—	—	—	0.76
Licences: liquor	3.96	4.94	5.25	5.47	5.29
other	1.24	1.25	1.30	1.27	1.35
Court fines (estimated)	3.28	3.94	4.36	3.54	3.42
Other	0.41	0.34	0.27	0.22	0.29
Total	100.00	100.00	100.00	100.00	100.00

(a) Some items and amounts differ slightly from State Treasury classifications.

(b) See also State Taxation on page 558.

(c) Excludes stamp duty on third party insurance.

(d) Includes payments in lieu of stamp duty.

Early in 1969 an expanded receipts duty was introduced by the State Government. A duty of 1 cent in each \$10 (or part thereof) became payable on certain receipts including cash sales but excluding salaries and wages. A High Court ruling in relation to appeals against similar legislation in two other States invalidated some parts of the receipts duty legislation in all States: the Court found that duty on some receipts is an excise duty which only the Commonwealth has power to levy. The Commonwealth subsequently agreed to introduce legislation to impose a receipts duty throughout Australia and

to make the proceeds available to the States; such an arrangement existed from 18 November 1969 to 30 September 1970 after which receipts duty ceased to be payable under either State or Commonwealth legislation.

Gift duty is payable under the provisions of the Gift Duty Act, 1968-1969.

For several years a stamp duty has been payable on hire purchase agreements. From early in 1969 a similar duty became applicable to a much wider range of instalment purchase, leasing and other lending transactions.

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) and sales tax. Before 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, in practice, the sole levier of income tax although the States may still legally operate in this field. Total taxation collected by the Commonwealth Government in South Australia far exceeds State taxation: this is evident from a comparison of the figures in the preceding table with those which follow.

Commonwealth Taxation Collected, South Australia

Tax	1966-67	1967-68	1968-69	1969-70	1970-71
	\$'000				
Income tax	192,760	210,549	219,783	288,340	332,936
Sales tax	30,253	32,076	38,733	44,380	48,881
Payroll tax	14,505	15,820	17,703	20,410	23,339
Customs duties	15,228	16,301	19,298	21,006	22,646
Excise duties (a)	65,889	71,707	73,445	79,972	93,510
Estate duty	4,110	4,910	5,956	6,998	5,214
Gift duty	707	804	1,073	707	702
Wool tax	1,958	1,399	1,833	1,706	—
Stevedoring industry charge	934	1,454	1,509	1,710	1,547
Broadcasting Listeners and Television Viewers Licences	4,101	4,219	4,930	5,238	5,657
Other	355	444	471	598	1,407
Total	330,800	359,683	384,733	471,065	535,837
Per head of population	\$ 299.91	\$ 322.47	\$ 340.20	\$ 410.16	\$ 459.04

(a) Excludes net diesel fuel tax, non-commercial users.

Business Undertakings

Business undertakings supply such services as passenger and freight rail carriage, sewerage, water supply, water storage, harbour 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 \$9,914,000, for 1958-59, \$50,370,000 and for 1970-71 it was \$91,282,000. Total revenue from business undertakings during each of the last five years and the proportion of that revenue to total Consolidated Revenue are shown on page 545. A dissection of revenue from business undertakings is given in the following table.

Revenue from Business Undertakings, South Australia^(a)

Undertaking	1966-67	1967-68	1968-69	1969-70	1970-71
	\$'000				
Railways (b)	38,084	38,611	40,350	48,737	48,140
Harbours, jetties and lights ..	6,676	6,436	6,547	7,244	7,461
Sewers	7,201	7,539	8,210	9,382	11,428
Waterworks and water conservation	15,116	14,638	15,580	17,403	20,275
Irrigation and drainage	1,002	1,033	1,042	1,152	1,173
Produce stores	477	558	433	546	809
Forestry (c)	1,440	1,440	960	1,440	1,440
State Bank (c)	—	—	370	515	556
Total	69,996	70,256	73,490	86,418	91,282

(a) Receipts into Consolidated Revenue but excluding recoveries of interest and sinking fund.

(b) Includes grant from Treasury each year—\$14,674,000 in 1969-70, \$14,500,000 in 1970-71.

(c) Contribution to Consolidated Revenue from surplus earned.

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, South Australia

Function	1966-67	1967-68	1968-69	1969-70	1970-71
	\$'000				
Legislation and general administration	15,529	16,712	18,786	20,821	25,064
Law, order, public safety ..	12,594	13,718	14,776	16,329	19,195
Regulation of trade and industry	816	911	1,021	1,153	1,407
Education	58,340	63,982	71,055	83,679	101,644
Encouragement of science, art and research	1,275	1,393	1,564	1,742	2,106
Promotion of public health and recreation	32,295	31,921	33,848	38,476	46,961
Social amelioration	4,584	4,811	5,305	5,919	6,985
War obligations	486	496	484	397	631
Local government (a)	54	80	32	20	61
Development and maintenance of State resources other than business undertakings	18,148	19,293	20,473	21,880	25,064
Business undertakings	54,919	59,689	60,871	68,357	74,529
Public debt charges:					
Interest and exchange	49,884	53,861	58,335	64,681	70,031
Sinking fund	9,793	10,537	11,346	12,124	13,160
Total	258,717	277,404	297,895	335,578	386,838
	\$				
Per head of population	234.35	248.07	262.32	290.52	331.40

(a) Grants and advances are included under various appropriate functions.

Public debt charges were 23.07 per cent of consolidated revenue expenditure in 1966-67 and 21.51 per cent in 1970-71. Apart from public debt charges and expenditure by business undertakings, expenditure on education, 22.55 per cent in 1966-67 and 26.28 per cent in 1970-71, exceeded that on other individual functions.

Expenditure on public health and recreation was 12.48 per cent of the total in 1966-67 and 12.14 per cent in 1970-71.

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. The following is such a table for the financial years 1969-70 and 1970-71, showing also the net cost per head of population.

Total net cost of functions increased in 1970-71 from the total in 1969-70 by \$41,195,000 (or 22.32 per cent). Net cost of education represented 44.62 per cent of the total net cost in 1970-71, an increase of approximately \$17,250,000 on expenditure on education in 1969-70. Total net cost per head of population rose by \$32.70.

Consolidated Revenue Account: Expenditure
Net Cost of Functions, South Australia

Function	1969-70		1970-71	
	Net Cost	Per Head of Population	Net Cost	Per Head of Population
	\$'000	\$	\$'000	\$
Legislation and general administration ..	15,900	13.84	19,266	16.51
Law, order, and public safety	14,274	12.43	16,892	14.47
Regulation of trade and industry	1,106	0.96	1,263	1.08
Education	83,475	72.68	100,726	86.29
Encouragement of science, art and research	1,811	1.57	2,189	1.88
Promotion of public health and recreation	28,962	25.22	37,503	32.13
Social amelioration	5,138	4.47	6,231	5.34
War obligations	446	0.39	662	0.57
Local government (a)	16	0.01	59	0.05
Development and maintenance of State resources other than business undertakings	18,342	15.97	21,589	18.49
Business undertakings	14,624	12.73	18,930	16.22
Revenue deficiencies	447	0.39	424	0.36
Total	184,541	160.68	225,736	193.38

(a) Grants and advances are included under various appropriate functions.

Business Undertakings, Expenditure

Further details of the expenditure of business undertakings for the years 1966-67 to 1970-71 are given in the next table.

Business Undertakings: Expenditure, South Australia

Function	1966-67	1967-68	1968-69	1969-70	1970-71
	\$'000				
Railways.....	39,112	41,317	43,764	49,881	53,191
Navigation, harbours, lights	3,451	3,585	3,684	3,596	4,261
Water supply, sewerage, irrigation and drainage ...	11,777	14,152	12,815	14,183	16,137
Produce Department	580	634	608	697	941
Total	54,919	59,689	60,871	68,357	74,530

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. At 30 June 1971 they represented approximately 1.24 per cent of the indebtedness of the South Australian Government. Total balances at 30 June 1969, 1970 and 1971, with many of the larger balances itemised, are shown in the following table.

Trust Funds Accounts, South Australia**Balances at 30 June**

Particulars	1969	1970	1971
	\$'000		
Commissioners of Charitable Funds	1,521	1,645	244
Electricity Trust of South Australia	900	900	900
Fire Brigades Board	398	555	674
Flinders University of South Australia	801	947	1,165
Municipal Tramways Trust	550	550	550
Natural Gas Pipelines Authority of South Australia ...	1,770	18	1,053
Police Pensions Fund	194	261	392
Royal Adelaide Hospital Endowment Fund	858	901	946
South Australian Housing Trust Fund	5,326	2,925	2,712
South Australian Institute of Technology	386	508	1,398
South Australian Superannuation Fund	359	325	317
University of Adelaide	1,845	1,927	2,724
Other	2,206	2,284	2,778
Balances on which interest is paid	17,114	13,745	15,853
Agricultural Research and Service Grants	250	385	382
Crown Solicitors Trust Account	363	1,132	584
Leigh Creek Coal Fund	763	510	249
Lotteries Fund	278	233	247
Public Trustee; Common Fund Reserve	183	183	183
Commonwealth Grant towards Aboriginal Welfare	220	1	79
Commonwealth Grant for Education Purposes	592	1,361	687
Workmen's Liens	56	155	156
Other	608	698	1,036
Balances on which no interest is paid	3,313	4,658	3,603
Total Trust Funds	20,427	18,403	19,456

LOAN FUND ACCOUNTS

These accounts record the capitalised expenditure on construction or acquisition of assets such as schools, reservoirs, hospitals, forests, plant and stores; advances to public authorities; and for primary production and housing. During recent years some capital grants (e.g. for University, Advanced Education and non-Government hospital buildings) have also been made from loan funds.

State borrowing programmes are subject to consideration and agreement at meetings of the Australian Loan Council. Funds 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 1966-67 to 1970-71 is shown in the next table.

Loan Fund Accounts: Gross Expenditure, South Australia

Particulars	1966-67	1967-68	1968-69	1969-70	1970-71
			\$'000		
Undertakings:					
Railways.....	4,815	5,394	5,212	6,810	7,745
Harbours and jetties.....	2,046	2,117	2,987	4,412	5,307
Water supply and sewers (a)...	24,064	26,989	27,527	30,071	30,527
Irrigation works.....	350	369	425	372	649
South Eastern drainage.....	523	548	453	151	65
Afforestation.....	1,900	2,250	2,282	2,485	3,068
Produce stores.....	100	74	65	120	65
Loans and advances:					
Advances to primary producers	967	1,030	1,584	1,812	2,421
State Bank.....	—	—	—	1,000	2,000
Advances for housing.....	700	700	650	459	2
Electricity Trust.....	6,700	6,700	6,000	6,000	4,500
City of Adelaide.....	700	48	700	900	900
Municipal Tramways Trust.....	—	—	—	—	1,000
Natural gas pipelines.....	—	1,000	3,000	1,500	—
State Planning Authority.....	—	—	—	—	250
Other loans and advances.....	34	282	658	68	60
Other purposes:					
Roads and bridges.....	—	—	—	1,000	—
Buildings:					
Hospitals.....	6,572	6,823	7,791	11,074	10,669
Schools.....	10,757	8,678	13,270	15,500	17,885
Police and courts.....	923	397	594	667	1,329
Other.....	5,751	3,842	3,071	3,537	5,203
River Murray weirs, etc.....	645	393	253	251	48
Capital grants.....	8,802	7,191	6,669	7,390	12,077
Mines Department stores, etc. .	162	208	244	391	264
Education Department, purchase of buses.....	283	269	319	325	379
Data processing equipment.....	69	51	8	8	920
Metropolitan floodwaters, etc. .	511	1,288	1,842	2,627	1,606
Renmark Irrigation Trust.....	—	201	243	174	254
West Lakes.....	—	—	—	1,061	—
Other.....	(b) 1,226	(b) 1,993	764	(b) 2,038	(b) 1,323
	78,599	78,835	86,611	102,201	110,519
Floating Conversion Loans:					
Flotation expenses, etc.	185	224	307	217	425
Total.....	78,784	79,058	86,918	102,418	110,944

(a) Includes Morgan-Whyalla water main and Water Conservation.

(b) Includes \$975,000 in 1966-67, \$1,720,000 in 1967-68, \$829,000 in 1969-70 and \$278,000 in 1970-71 nominal increase in Loan Account occasioned by repatriation of overseas debt.

The following table shows expenditure from loan fund accounts for the year ended 30 June 1971 together with credits and net balances.

Loan Fund Accounts
Gross Expenditure, Credits, and Net Balances, South Australia, 1970-71

Particulars	Expenditure	Credits			Net Aggregate Balance at 30 June
		Repayments, etc.	Other (a)	Total	
			\$'000		
Undertakings:					
Railways	7,745	685	9,992	10,677	135,277
Harbours and jetties	5,307	429	653	1,082	54,156
Metropolitan water supply and sewers	18,228	2,115	1,724	3,840	219,261
Country water supply and sewers (b)	12,299	2,918	1,538	4,456	155,963
Irrigation works	649	74	170	244	10,342
South-Eastern drainage	65	17	112	129	14,953
Afforestation	3,068	2,154	—	2,154	19,003
Produce stores	65	3	58	61	1,611
Loans and advances:					
Advances to primary producers	2,421	2,861	1,290	4,151	7,414
State Bank	2,000	—	74	74	16,637
Advances for housing	2	1,841	342	2,184	75,319
Tramways Trust	1,000	22	2,126	2,148	6,331
Abattoirs Board	—	5	27	31	1,445
Electricity Trust	4,500	398	1,230	1,628	148,615
City of Adelaide	900	—	2,560	2,560	—
Natural Gas Pipelines	—	—	—	—	5,500
State Planning Authority	250	—	—	—	250
Other loans and advances	60	1	—	1	150
Other purposes:					
Roads and bridges	—	—	135	135	9,205
Government buildings:					
Hospitals	10,669	1,063	8,895	9,958	77,634
Schools	17,885	3,145	11,906	15,051	141,596
Police and courts	1,329	4	90	94	13,598
Other	5,203	1,076	358	1,434	39,203
River Murray weirs, etc.	48	—	—	—	13,548
Capital grants	12,077	4,662	8,712	13,374	18,493
Mines Department stores, etc. .	264	118	113	231	1,744
Education Department, purchase of buses	379	—	288	288	1,332
Data processing equipment	920	—	121	121	1,051
Metropolitan floodwaters, etc. .	1,606	38	1,524	1,562	9,608
Leigh Creek coalfield	—	100	88	188	5,444
Renmark Irrigation Trust	254	—	—	—	873
West Lakes	—	20	—	20	935
Other	1,046	505	5,383	5,889	9,025
	110,241	24,254	59,510	83,764	1,215,514
Repatriation of overseas loans ..	278	—	278	278	—
Floating Conversion Loans:					
Flotation expenses, etc.	425	428	—	428	11
Revenue deficits funded	—	—	8,406	8,406	—
Total	110,944	24,682	68,193	92,875	1,215,526

(a) Includes securities redeemed and cancelled by the National Debt Commission on account of South Australia (\$14,773,000), Capital Works grants from the Commonwealth (\$27,420,000) and amount for which the Commonwealth has assumed all interest and principal liability (\$26,000,000).

(b) Includes Morgan-Whyalla water main and water conservation.

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, for loans to home builders, and for railway standardisation 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 \$25,000,000 for 1970-71. Of these advances \$11,750,000 was allocated by the Treasurer to the South Australian Housing Trust, and \$13,250,000 to the Home Builders Fund. Liability of the State to the Commonwealth on this account at 30 June 1971 was \$262,437,000.

During 1970-71 funds provided by the Commonwealth for railway standardisation works totalled \$2,370,000. The State's liability to the Commonwealth at 30 June 1971 was \$16,354,000: this is in addition to the State's liability of \$434,000 to the Commonwealth on account of rolling stock provided for the Indian-Pacific train at a total cost (shared by the Commonwealth, New South Wales, South Australia and Western Australia) of \$4,450,000.

Under the *Railway Equipment Agreement (South Australia) Act 1961* the Commonwealth agreed to make available to the State funds up to a maximum of \$2,650,000 for the purpose of providing diesel locomotives and ore wagons for the Port Pirie-Broken Hill railway. Thirty per cent of the total amount advanced is repayable over a fifty-year period, together with interest thereon. The State's liability to the Commonwealth at 30 June 1971 was \$664,000.

LOAN RAISINGS AND THE PUBLIC DEBT

State Debts Taken Over by Commonwealth

Under the Financial Agreement the Commonwealth took over on 1 July 1929 State responsibilities to bond-holders in respect of State debts existing on 30 June 1927; and all debts of each State existing on 1 July 1929 for money borrowed by that State are deemed to be money borrowed by the Commonwealth for and on behalf of the State. The Commonwealth agreed to contribute one third of sinking funds required to repay those debts over a period of fifty-eight years.

Also for a period of fifty-eight years from 1 July 1927 the Commonwealth agreed to contribute the sum of \$15,169,824 (\$1,407,632 for South Australia) each year towards the interest payable on the State debts. The balance of the interest payable on State debts was to be paid into the National Debt Sinking Fund by the States.

As indicated on page 540 the Commonwealth Government in 1970 passed legislation providing for Commonwealth assumption of responsibility for charges on \$200 million of existing State debt at the beginning of each of the five years commencing 1970-71. The amount taken over at the beginning of 1970-71 was \$26,000,000.

Australian Loan Council

One of the main features of the Financial Agreement was the establishment of the 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 moneys so borrowed or used must be Commonwealth securities on terms approved by the Loan Council.

Since 1936 the Australian Loan Council has, by the consent of its members, exercised substantial control over the limits of borrowing by local government and semi-government authorities.

National Debt Commission

The National Debt Commission and the National Debt Sinking Fund which it administers were created under the *National Debt Sinking Fund Act 1923*. All previously existing sinking funds relating to Commonwealth debt were merged in the National Debt Sinking Fund at the time of its establishment; and under the provisions of the Financial Agreement of 1927 all relevant interest and principal contributions by both the Commonwealth and the States, in respect of State debts, are negotiated through the Fund.

These contributions are not accumulated but 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.

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 1969-70 and 1970-71 are given in the following table. Corresponding figures for all states are also stated.

National Debt Sinking Fund

Particulars	1969-70		1970-71	
	South Australia	All States	South Australia	All States
\$'000				
Receipts:				
Contributions by Commonwealth	3,053	23,271	3,226	24,550
Contributions by State (a)	3,302	25,294	3,474	26,578
4½ per cent contributions by State on cancelled debt	7,189	54,912	7,893	60,284
4 per cent contributions on funded deficits	50	2,600	50	2,615
Contributions by State on loans for wasting assets	240	679	247	686
Interest received from State in respect of repurchased securities to date of cancellation of securities	18	173	16	162
Interest on the temporary investments of State funds during the year	15	98	10	70
Special contributions in respect of loans converted at a discount	16	138	9	123
Interest accrued on securities purchased as a short term investment of State funds	91	730	—	—
Total receipts	13,974	107,895	14,927	115,067
Expenditure:				
Redemptions and repurchases;				
In Australia	9,999	81,284	12,111	87,693
In London	5,719	40,526	969	10,824
In New York	1,184	10,584	1,387	11,841
In Canada	59	433	63	462
In Netherlands	70	545	70	547
Total expenditure	17,030	133,372	14,600	111,367

(a) Includes \$0.75 per cent contributions on Commonwealth Government debentures issued on behalf of the States.

For further information on the detailed operations of the National Debt Sinking Fund see the *Official Year Book of the Commonwealth of Australia*.

The Loan Fund

A summary of loan raisings to finance State Government loan works in South Australia during 1970-71 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, South Australia

	\$'000	\$'000
(1) <i>Cash operations:</i>		
Surplus at 30 June 1970		13,031
Receipts:		
New loan raising		60,344
Repayments		24,682
Capital works grant		27,420
		125,477
Payments		110,666
Surplus at 30 June 1971		14,811
(2) <i>Movement in public debt:</i>		
The public debt at 30 June 1970		1,210,489
<i>Add:</i> Face value of new loans raised:		
For cash		60,344
For conversion		135,380
		1,406,213
<i>Less:</i> Face value of securities redeemed and cancelled by National Debt Commission	14,496	
Loans converted	135,380	
		149,876
The public debt at 30 June 1971		1,256,337

The Public Debt

The following table gives details of the public debt and total indebtedness of South Australia at 30 June 1971 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, South Australia
At 30 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	\$	\$'000	\$'000	\$'000	\$
1962.....	763,399	773.10	98,841	2,166	864,405	875.40
1963.....	807,044	798.50	120,954	2,232	930,230	920.30
1964.....	853,555	822.30	136,236	2,685	992,477	956.10
1965.....	902,823	845.70	157,484	2,989	1,063,297	996.00
1966.....	955,128	872.30	180,466	2,317	1,137,911	1,039.20
1967.....	1,013,060	913.00	201,885	2,419	1,217,363	1,097.10
1968.....	1,074,959	958.60	227,933	2,616	1,305,508	1,164.20
1969.....	1,143,954	1,004.50	261,696	3,313	1,408,962	1,237.20
1970.....	1,210,489	1,046.10	281,587	4,657	1,496,732	1,293.40
1971.....	1,256,337	1,071.20	310,167	3,603	1,570,108	1,338.80

(a) Gross less securities held on these accounts.

Public Debt: Interest Payable and Average Rate, South Australia
At 30 June

Year	Annual Interest on Debt (a) in				Average Rate Per Cent (a)			
	Australia	London	Other	Total	Australia	London	Other	Total
	\$'000				Dollars			
1962.....	30,374	2,181	975	33,530	4.47	3.41	5.03	4.39
1963.....	31,672	2,347	1,231	35,249	4.43	3.50	5.13	4.37
1964.....	33,612	2,534	1,193	37,339	4.42	3.61	5.13	4.38
1965.....	37,088	2,530	1,137	40,756	4.57	3.65	5.13	4.51
1966.....	40,928	2,360	1,267	44,555	4.73	3.65	5.21	4.66
1967.....	44,808	2,323	1,176	48,307	4.83	3.66	5.27	4.77
1968.....	48,868	1,883	1,098	51,848	4.87	3.72	5.27	4.82
1969.....	53,063	1,813	1,026	55,902	4.93	3.73	5.27	4.89
1970.....	59,280	1,382	940	61,601	5.12	3.88	5.28	5.09
1971.....	69,607	1,191	858	71,656	5.76	3.86	5.30	5.70

(a) Based on the Debt converted at rates current at the time of the several raisings, and nominal rate of interest payable at 30 June taking no account of exchange.

Rates of interest and years of maturity on the public debt of South Australia are shown below.

Public Debt According to Rate of Interest, South Australia
At 30 June

Nominal Rate Per Cent	1967	1968	1969	1970	1971		
					Total	Redeemable In	
						Australia	Other (a)
				\$'000			
7	—	—	—	11,491	58,333	58,333	—
6.8	—	—	—	5,480	34,391	34,391	—
6.6	—	—	—	—	15,552	15,552	—
6.5	—	—	—	30,523	61,278	61,278	—
6.4	—	—	—	—	47,902	47,902	—
6	1,322	1,322	1,322	32,168	32,168	30,846	1,322
5.9	—	—	—	7,258	7,258	7,258	—
5.8	—	—	—	17,447	17,447	17,447	—
5.75	5,180	4,884	4,638	15,548	15,375	11,199	4,176
5.6	—	—	—	21,311	21,311	21,311	—
5.5	16,883	16,436	15,958	25,660	25,027	10,640	14,387
5.4	—	—	—	49,353	88,623	64,604	—
5.375	35,172	35,172	35,172	35,172	35,172	35,172	—
5.3	—	—	—	5,352	5,352	5,352	—
5.25	150,001	220,432	247,593	247,241	230,944	228,524	2,420
5.2	—	—	—	10,181	10,181	10,181	—
5	397,111	394,673	404,537	351,052	350,789	348,322	2,467
4.9	—	—	—	21,882	21,882	—	—
4.8	—	31,944	36,181	36,181	—	—	—
4.75	67,159	56,470	56,330	37,576	37,457	36,028	1,429
4.625	7,458	7,458	7,458	7,458	7,458	7,458	—
4.5	172,114	154,818	95,993	61,817	31,706	30,303	1,402
4.25	41,143	41,143	41,143	41,143	41,143	41,143	—
4	9,604	4,239	4,219	4,179	197	197	—
3.75	300	275	247	—	—	—	—
3.4875	2	2	2	2	2	2	—
3.25	20,149	20,049	18,029	5,760	5,170	—	5,170
3	12,446	5,036	5,036	5,008	5,008	214	4,794
2.75	3,709	3,689	3,689	3,589	3,589	—	3,589
2.5	5,872	5,872	5,872	5,872	5,872	—	5,872
2.325	623	621	616	607	605	605	—
1.5	5,177	4,997	4,813	4,627	4,439	4,439	—
1 (b)	6,009	5,738	5,455	5,159	4,850	4,850	—
Special bonds (c)	55,627	59,691	62,882	65,119	75,756	75,756	—
Total	1,013,060	1,074,959	1,143,954	1,210,489	1,256,337	1,209,309	47,028

(a) \$30,832,000 redeemable in U.K., \$12,627,000 in U.S.A., \$1,405,000 in Canada, \$1,402,000 in Switzerland and \$761,000 in Netherlands. Converted at rates current at the time of the several raisings. Debt redeemable at rates of exchange obtaining at 30 June 1971 totalled \$47,610,000, resulting in a contingent liability of \$582,000. (b) Commonwealth Debentures. (c) Rate of interest varies from 4.6 to 6.4 per cent according to date of maturity.

Public Debt According to Year of Maturity, South Australia
At 30 June

Year of Maturity	1967	1968	1969	1970	1971		
					Total	Redeemable In	
						Australia	Other (a)
				\$'000			
1967-68	105,014	—	—	—	—	—	—
1968-69	72,185	72,016	—	—	—	—	—
1969-70	128,224	127,744	125,713	—	—	—	—
1970-71	40,365	89,676	115,339	138,854	—	—	—
1971-72	40,092	39,606	62,604	98,552	125,059	120,744	4,316
1972-73	63,062	62,517	61,872	82,966	102,536	101,107	1,429
1973-74	32,227	31,872	35,328	64,854	93,618	93,618	—
1974-75	59,218	65,198	64,455	63,422	66,646	55,605	11,042
1975-76	57,021	60,428	65,320	64,784	74,809	72,751	2,058
1976-77	31,171	31,171	39,129	48,704	45,134	45,134	—
1977-78	3,467	44,436	45,801	56,659	72,451	69,617	2,833
1978-79	6,139	5,988	21,345	43,664	63,334	58,707	4,627
1979-80	31,609	31,436	31,302	31,112	39,043	37,862	1,181
1980-81	26,416	26,164	28,643	28,401	39,130	36,486	2,644
1981-82	36,372	36,169	35,891	35,668	35,448	29,835	5,612
1982-83	13,366	13,052	12,783	12,512	12,244	9,190	3,054
1983-84	44,362	44,362	48,842	48,842	48,842	48,176	666
1984-85	60,450	60,450	60,450	60,450	60,450	60,450	—
1985-90	129,158	171,732	202,799	214,009	247,138	244,367	2,771
1990-95	23,397	3,287	7,945	28,086	27,970	27,970	—
1995-2000	—	—	3,626	3,626	3,626	3,626	—
2000-2005	3,882	51,798	68,917	68,917	82,456	82,456	—
2005-2010	—	—	—	10,591	10,591	10,591	—
Optional	5,663	5,658	5,652	5,615	5,613	818	4,794
Interminable	197	197	197	197	197	197	—
Indefinite	2	2	2	2	2	2	—
Total	1,013,060	1,074,959	1,143,954	1,210,489	1,256,337	1,209,309	47,028

(a) \$30,832,000 redeemable in U.K., \$12,627,000 in U.S.A., \$1,405,000 in Canada, \$1,402,000 in Switzerland and \$761,000 in Netherlands. Converted at rates current at the time of the several raisings. Debt redeemable at rates of exchange obtaining at 30 June 1971 totalled \$47,610,000, resulting in a contingent liability of \$582,000.

DEPOSIT AND SUSPENSE ACCOUNTS

Reference to these accounts was made in Part 12.1. Although the main function of many of them is to facilitate the allocation of charges and recoups to various headings of revenue and expenditure within the budget sector, some contain, as already noted, substantial transactions which are not reflected in the Budget. Deposit and Suspense accounts showed a credit balance of \$21,860,000 at 30 June 1971.

STATE TAXATION

In addition to those items received into Consolidated Revenue Account the State Government receives certain items of taxation into other accounts. These, together with similar receipts by semi-government authorities, constitute 'total taxation to other accounts' as recorded in the following table.

State Taxation: South Australia^(a)

Tax	1966-67	1967-68	1968-69	1969-70	1970-71
	\$'000				
To Consolidated Revenue (b)	43,780	47,188	52,463	58,658	61,551
To other accounts					
Road maintenance charges	2,070	2,324	2,557	2,839	2,958
Lottery tax (c)	173	1,735	1,734	1,817	1,864
Racing taxes (d)	955	1,289	1,399	1,614	2,112
Stamp duty (e) .....	..	..	400	937	959
Receipts duty (f) .....	..	..	..	234	(g)33
Fire Brigades Board (h) .	777	871	931	1,056	1,144
Builders Licensing Board.	—	—	—	..	101
Other	—	38	66	78	54
Total to other accounts	3,975	6,257	7,087	8,575	9,225
Total taxation	47,755	53,445	59,550	67,233	70,776
	\$				
Per head of population	43.30	47.92	52.66	58.54	60.63

(a) Some items and amounts differ slightly from State Treasury classifications.

(b) See table on page 546 for details.

(c) Surplus from State Lotteries.

(d) Includes off-course duty paid by Totalizator Agency Board to Hospitals Fund, on-course totalisator turnover tax, and amounts collected by Betting Control Board for payment direct to racing, etc., clubs.

(e) Stamp duty on third party insurance. Amounts paid into Hospitals Fund.

(f) Received into deposit account in anticipation of refund.

(g) Net after refund of \$117,000.

(h) Levy on Insurance Companies.

12.4 SEMI-GOVERNMENT FINANCE

REVENUE AND EXPENDITURE

Many semi-government 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-government authorities although a recent extension of public finance work is directed to this end.

Business Undertakings

Some semi-government 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 1966-67 to 1970-71. Capital indebtedness refers to the amount outstanding at the end of the relevant period on indebtedness incurred initially for a period exceeding twelve months.

The Electricity Trust of South Australia

Particulars	1966-67	1967-68	1968-69	1969-70	1970-71
	\$'000				
Income	51,156	56,106	59,788	64,832	69,518
Operating expenses	38,895	42,891	45,956	49,454	(a) 52,997
Surplus on operating	12,261	13,214	13,831	15,378	16,521
Debenture interest	11,742	12,638	13,619	14,602	15,853
Net surplus	518	577	212	776	668
Capital indebtedness	232,514	248,035	263,327	278,257	291,166

(a) Includes Statutory Contribution to State Revenue.

The Municipal Tramways Trust

Particulars	1966-67	1967-68	1968-69	1969-70	1970-71
	\$'000				
Income	6,270	6,225	6,472	6,696	6,881
Operating expenses	5,947	5,879	6,104	6,293	6,986
Surplus on operating	323	346	368	403	-104
Interest charges	474	431	409	410	356
Deficit	151	85	41	6	460
Grant from S.A. Government	20	20	—	—	480
Net deficit	131	65	41	6	-20
Capital indebtedness	8,718	8,118	8,026	6,929	5,781

The State Bank of South Australia

Particulars	1966-67	1967-68	1968-69	1969-70	1970-71
	\$'000				
Income	6,274	7,059	8,018	8,951	10,138
Management expenses etc...	1,343	1,398	1,473	1,644	1,784
Interest on customers' deposits	741	934	1,070	1,269	1,438
Interest on advances from the Treasurer of S.A.	3,444	3,904	4,330	4,802	5,552
Net profit	747	822	1,145	1,236	1,364
Capital indebtedness	78,978	88,820	97,037	107,640	121,435

The Leigh Creek Coal Fund

Particulars	1966-67	1967-68	1968-69	1969-70	1970-71
	\$'000				
Income	5,716	5,873	6,022	6,095	5,284
Operating expenses	5,627	5,812	5,966	6,023	5,234
Surplus on operating	89	61	56	71	50
Interest	89	61	56	71	50
Net surplus	—	—	—	—	—
Capital indebtedness	6,971	6,295	5,817	5,632	5,444

The South Australian Housing Trust

Particulars	1966-67	1967-68	1968-69	1969-70	1970-71
	\$'000				
Income	13,423	14,476	15,631	18,000	19,314
Expenditure	5,779	6,294	6,684	7,335	8,335
Surplus on operating	7,644	8,182	8,947	10,665	10,979
Interest on loan capital	6,508	7,182	7,880	8,521	9,265
Net surplus	1,136	1,001	1,066	2,144	1,714
Capital indebtedness	200,462	213,207	224,824	236,762	253,335

The Savings Bank of South Australia

Particulars	1966-67	1967-68	1968-69	1969-70	1970-71
	\$'000				
Income	18,574	19,833	21,041	23,002	25,654
Management expenses etc.	4,853	5,205	5,925	6,608	7,929
Interest on customers' deposits	12,672	13,530	14,768	15,893	17,026
Net profit	1,049	1,098	347	501	699
Depositors' balances (a)	362,190	377,523	398,143	416,307	438,793

(a) At end of period. Figures include deposit stock.

Metropolitan and Export Abattoirs Board

Particulars	1966-67	1967-68	1968-69	1969-70	1970-71
	\$'000				
Income	4,492	4,713	4,465	6,489	7,713
Operating Expenses	4,705	4,844	4,270	6,301	7,895
Surplus on operating	—213	—131	195	189	—181
Interest	99	107	96	93	90
Net Surplus	—312	—238	99	96	—271
Capital Indebtedness	1,968	1,925	1,869	1,822	1,772

GRANTS FROM STATE GOVERNMENT

The following table shows grants to a number of semi-government authorities during each of the five years ended 30 June 1971. Grants from Consolidated Revenue and from Loan Fund have been consolidated and the figures represent actual amounts paid to authorities, free of all duplication. Payments for goods and services supplied by semi-government business undertakings are not included in the table. Repayable advances from Loan Fund are also excluded.

Semi-Government Authorities: Grants From State Government
South Australia

Name	1966-67	1967-68	1968-69	1969-70	1970-71
	\$'000				
Adelaide Children's Hospital (a)	2,458	2,889	2,419	2,576	3,535
Adelaide and Flinders Universities (b)	11,773	13,998	13,573	15,308	20,126
Fire Brigades Board	204	228	243	277	300
Home for Incurables (a)	1,760	960	634	226	519
Institute of Medical and Veterinary Science	875	1,002	916	1,199	1,374
Municipal Tramways Trust	20	20	—	—	480
National Park Commissioners	110	114	129	153	198
Public Examinations Board	—	—	—	120	124
Queen Victoria Hospital (c)	1,594	685	549	831	1,217
Renmark Irrigation Trust	3	151	243	174	254
S.A. Institute of Technology (d)	2,921	3,013	4,545	4,577	7,816
Total	21,718	23,060	23,251	25,441	35,943

(a) Amounts subsequently recouped to Consolidated Revenue from Hospitals Fund are included.

(b) Includes State Government disbursement of Commonwealth grants except those for residential colleges. Includes Waite Agricultural Research Institute.

(c) Excludes grants for maintenance of X-ray tuberculosis services. (d) Includes Commonwealth grants.

LOAN RAISINGS AND DEBT OUTSTANDING

Details of semi-government authorities loan raisings and debt outstandings are included in the tables below. These statistics cover loan raisings and debt of subsidised hospitals, abattoirs boards, vermin boards, the Renmark Irrigation Trust, the Enfield General Cemetery Trust, the Fire Brigades Board, the National Gas Pipelines Authority, the State Planning Authority and Flinders University, 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 capitalised. 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 capitalised, 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 capitalised), 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 next two tables show, respectively, new money loan raisings and funds provided for redemption of debt for the year ended 30 June 1970 and debt outstanding at 30 June 1969 and 1970. A further table shows debt outstanding at 30 June 1970 according to rate of interest and year of maturity.

**Semi-Government Authorities: New Money Loan Raisings and Funds
Provided for Redemption of Debt, South Australia, 1969-70**

Authority	New Loan Raisings in Australia			Funds for Redemption of Debt (a)		
	From Gov- ernment Lenders	Other	Total	To Gov- ernment Lenders	Other	Total
	\$'000			\$'000		
Banking	12,275	—	12,275	1,672	—	1,672
Coal mining	—	—	—	185	—	185
Electricity supply	6,000	10,895	16,895	1,290	446	1,735
Hospitals	—	25	25	—	8	8
Housing	9,750	4,250	14,000	1,555	506	2,061
Natural gas pipeline ..	1,500	5,016	6,516	—	—	—
Tramways	—	—	—	1,097	—	1,097
Other	61	65	126	34	36	72
Total	29,586	20,250	49,836	5,832	997	6,830

(a) Includes amounts credited to Sinking Funds and excludes amounts redeemed from Sinking Funds.

**Semi-Government Authorities: Debt Outstanding, South Australia
At 30 June 1969 and 1970**

Authority	Debt in Australia at					
	30 June 1969			30 June 1970		
	To Gov- ernment Lenders	Other	Total	To Gov- ernment Lenders	Other	Total
	\$'000			\$'000		
Banking	97,037	—	97,037	107,640	—	107,640
Coal mining	5,817	—	5,817	5,632	—	5,632
Electricity supply	140,132	123,195	263,327	144,842	133,840	278,683
Hospitals	—	174	174	—	213	213
Housing	184,033	40,791	224,824	192,228	44,534	236,762
Natural gas pipeline ..	15,000	16,784	31,784	16,500	21,600	38,100
Tramways	8,053	—	8,053	6,960	—	6,960
Other	2,352	1,380	3,732	2,379	1,340	3,719
Total debt	452,424	182,325	634,750	476,181	201,529	677,710
	Annual Interest Payable (\$'000)					
Total interest ...	20,928	10,014	30,943	22,336	11,350	33,685

**Semi-Government Authorities: Debt Outstanding According to
Rate of Interest and Year of Maturity, South Australia
At 30 June 1970**

Rate of Interest	Debt	Year of Maturity	Debt
	\$'000		\$'000
No interest	959	Fixed dates:	
Under 3 per cent	92	1970-71	6,972
3 and under 3½ per cent	19,087	1971-72	8,037
3½ and under 4 per cent	10,846	1972-73	6,948
4 and under 4½ per cent	111,845	1973-74	7,878
4½ and under 5 per cent	172,229	1974-75	7,133
5 and under 5½ per cent	204,058	1975-76	7,413
5½ and under 6 per cent	124,348	1976-77	5,613
6 per cent and over	31,267	1977-78	10,541
Not specified	2,980	1978-79	9,803
		1979-80	11,200
		1980-81	8,090
		1981-82	4,100
		1982-83	6,760
		1983-84 and onwards	64,072
		Not stated	34,799
		Instalments:	
		Yearly or less	472,229
		Not stated	6,018
		Net overdraft	105
Total debt	677,710	Total debt	677,710

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

The expenditure of monies by local government bodies is authorised by the Local Government Act, 1934-1971. Under the Act each council is required to prepare a balance sheet and statement of its accounts for each financial year and these statements are the basis of the statistics published on local government finance.

Regulations which were passed late in 1967 provide for a new format for local government accounting records effective from 1 July 1968. The main conceptual change is the adoption of the accrual method to replace the cash basis of accounting.

Assessments

Assessments for property rating are based upon annual value or land value. 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; whereas land value is an estimate of the value of the land (regardless of structural improvements) included in a property. A council may adopt the 'annual' valuations used by the Engineering and Water Supply Department, the 'land' valuations used by the Commissioner of Land Tax or may make its own valuation of properties. At 30 June 1971, 44 out of 137 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 declaring 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 authorised 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; Section 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 Highway Fund established under the Highways Act, 1926-1970, 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 Commissioner of Highways 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 respectively. ('Metropolitan' here means the 21 local government areas constituting the metropolitan area under the Local Government Act: this was the metropolitan area for population census purposes before the census of 30 June 1966.) Section 300 (a) makes provision for additional grants for roads to the Corporation of the City of Adelaide.

Revenue Transactions

The following tables show revenue transactions for local government authorities for 1968-69. Values are prepared on an accrual basis as distinct from the cash basis used for years shown in earlier issues of the *South Australian Year Book*.

Local Government Authorities
General Fund and Government Grants Fund, Income
South Australia, 1968-69 ^p

Particulars	Adelaide Statistical Division (a)	Other Areas	Total
		\$'000	
Taxation:			
Rates;			
Declared for year	17,866	8,277	26,143
Fines on overdue rates	51	26	77
<i>Ex gratia</i> payments in lieu of rates	19	36	55
Total rates	17,936	8,339	26,276
Licences and permits;			
Building	213	42	255
Dog	98	61	158
Other	78	27	105
Total licences and permits .	389	129	518
Total taxation	18,325	8,469	26,794
Public works:			
Reimbursements for roadworks;			
State Government (b)	587	688	1,275
Ratepayers (moieties)	853	198	1,052
Other	291	312	604
Sewerage and effluent drainage fees	45	65	109
Total public works	1,777	1,263	3,040
Public services:			
Ferries	—	189	189
Fire protection	56	114	170
Hospitals and health (including cemeteries, etc.)	81	68	149
Libraries	79	25	103
Sanitary and garbage	75	114	190
Street lighting	3	14	17
Tourism	14	48	63
Traffic and parking	981	1	982
Vermin control	—	23	23
Weed control	15	109	124
Other	9	39	49
Total public services	1,314	745	2,059
Council properties:			
Current;			
Commercial premises, n.e.i.	32	20	53
Halls and theatres	155	180	335
Houses	67	54	121
Offices	4	57	61
Parks, gardens and other recreational facilities	618	387	1,005
Swimming pools	173	65	239
Markets and other	219	4	223
Capital (c);			
Land and buildings	4	27	31
Plant and machinery (mainly roadmaking)	39	49	88
Other	1	7	8
Total council properties ..	1,312	850	2,163

Local Government Authorities
General Fund and Government Grants Fund, Income
South Australia, 1968-69 ^p (continued)

Particulars	Adelaide Statistical Division (a)	Other Areas	Total
		\$'000	
Government grants for roadworks:			
Grants (d).....	374	3,626	4,000
Reimbursements (e)	1,237	4,502	5,739
Total Government grants for roadworks	1,611	8,128	9,739
Other income:			
Fines (mainly traffic and parking)	316	4	319
Interest	326	45	371
Reimbursements for private works	258	362	620
Sale of surplus materials	17	62	79
Other.....	26	54	80
Total other income	943	526	1,469
Total income	25,282	19,982	45,263

(a) Adjusted to include the whole of Meadows and Willunga District Council areas and to exclude the whole of Mudla Wirra. (b) Mainly reinstatements. (c) These values are understated to the extent that some councils report expenditures net of trade-ins and do not show trade-in values as income from the sale of assets. (d) Other grants and subsidies are included under respective functional headings above. (e) For work done on behalf of Highways Department. ^p preliminary

Local Government Authorities
General Fund and Government Grants Fund, Expenditure
South Australia, 1968-69 ^p

Particulars	Adelaide Statistical Division (a)	Other Areas	Total
		\$'000	
General administration	2,175	1,601	3,776
Debt services:			
Interest;			
On loans.....	2,161	338	2,499
On overdraft	9	39	48
Principal redeemed	1,909	1,041	2,950
Total debt services	4,078	1,418	5,497
Public works:			
Roads, streets and bridges;			
Construction	5,886	9,313	15,198
Maintenance	3,475	3,228	6,703
Road, etc. plant—running costs unallocated .	208	190	398
Sewerage and effluent drains;			
Construction	50	55	106
Maintenance	6	20	27
Contributions to stormwater drainage schemes (b).....	362	30	392
Total public works	9,988	12,837	22,824

Local Government Authorities
General Fund and Government Grants Fund, Expenditure
South Australia, 1968-69 ^p (continued)

Particulars	Adelaide Statistical Division (a)	Other Areas	Total
		\$'000	
Public services:			
Building Act	276	41	316
Ferries	—	191	191
Fire protection	426	254	680
Hospitals and health (including cemeteries, etc.) (c)	1,107	598	1,705
Libraries	251	71	322
Sanitary and garbage	1,028	251	1,280
Street cleaning	318	4	321
Street lighting	813	188	1,000
Tourism	14	58	72
Town planning	120	4	124
Traffic and parking	736	14	750
Vermin control	3	42	45
Weed control	60	268	328
Other	74	67	141
Total public services	5,224	2,052	7,275
Council properties:			
Current;			
Halls and theatres	325	136	461
Houses	44	53	97
Offices	14	61	75
Parks, gardens and other recreational facilities	2,261	681	2,942
Swimming pools	133	69	202
Markets and other	135	27	162
Capital (d);			
Land and buildings,			
Halls and theatres	125	27	152
Libraries	32	4	36
Offices	35	70	105
Parks, gardens and other recreational facilities	489	49	537
Other	141	107	248
Plant and machinery,			
Roadmaking	553	630	1,183
Other	73	74	147
Other assets,			
Furniture and fittings	90	71	161
Other	—	4	4
Total council properties ..	4,449	2,063	6,512
Other expenditure:			
Cost of private works	247	265	512
Donations to charitable organisations, clubs, etc.	29	85	115
Other	38	75	113
Total other expenditure ..	314	426	740
Total expenditure	26,228	20,397	46,624

(a) Adjusted to include the whole of Meadows and Willunga District Council areas and to exclude the whole of Mudla Wirra. (b) Expenditures in respect of South Western Suburbs drainage scheme are included under debt services above. (c) Includes hospital subsidy to jointly-owned business undertaking. (d) These values are understated to the extent that some councils report expenditures net of trade-ins.

Business Undertakings

Some local authorities operate electricity undertakings, water supply services and quarries. In addition several authorities jointly administer a hospital and transactions of that organisation are included under other business undertakings. Expenditures by authorities for goods and services supplied by their business undertakings are included both in expenditures from general, etc. funds and in income of the business undertakings.

Loan raisings and subsequent expenditures are included under Loan Fund income and expenditure.

Local Government Authorities
Business Undertakings Income and Expenditure
South Australia, 1968-69^P

	\$'000	
Current Account Transactions (a):		
Electricity Undertakings;		
Current income,		
Electricity sales	1,333	
State Government tariff subsidies	213	
Other	36	
Total current income	1,583	
Current expenditure,		
Generation and distribution	535	
Purchase of electricity	785	
Depreciation	54	
Debt services,		
Interest	38	
Principal redeemed	23	
Administration and other	87	
Total current expenditure	1,522	
Surplus		61
Quarries;		
Current income	318	
Current expenditure	210	
Surplus		108
Other;		
Current income,		
Goods and services	585	
Maintenance subsidies,		
State Government	60	
Local authorities	65	
Total current income	710	
Current expenditure,		
Goods and services	696	
Surplus		14
Surplus (all undertakings)		183

**Local Government Authorities
Business Undertakings Income and Expenditure
South Australia, 1968-69 ^p (continued)**

Capital Account Transactions (b):	\$'000
Expenditure on construction or purchase of assets;	
Electricity undertakings,	
Distribution equipment	71
Plant and machinery	23
Meters and other	18
Total electricity undertakings	112
Other (c),	
Buildings	131
Other	32
Total other	163
Total Capital Expenditure (b)	275

(a) Transactions relating to construction or purchase of capital assets are not taken into account in arriving at surplus. (b) Excludes loan fund transactions. (c) State Government capital subsidy received during the year was \$196,000. ^p preliminary

LOAN FUND INCOME AND EXPENDITURE

The following table shows the major items of loan fund income and expenditure for 1968-69. Transaction values are prepared on an accrual basis as distinct from the cash basis used for years shown in earlier issues of the *South Australian Year Book*.

**Local Government Authorities: Loan Fund Income and Expenditure
South Australia, 1968-69 ^p**

Particulars	Adelaide Statistical Division (a)	Other Areas	Total
Income:		\$'000	
Loans raised	5,330	2,595	7,925
Other	34	8	42
Total income	5,364	2,604	7,967
Expenditure:			
Public Works;			
Roads, streets and bridges,			
Construction	2,202	375	2,577
Maintenance	71	26	97
Stormwater drains	411	90	500
Sewerage and effluent drains	16	385	401
Total public works	2,700	876	3,576

**Local Government Authorities: Loan Fund Income and Expenditure
South Australia, 1968-69^p (continued)**

Particulars	Adelaide Statistical Division (a)	Other Areas	Total
	\$'000		
Construction or Purchase of Assets;			
Land and buildings,			
Halls and theatres	—	75	75
Libraries	—	24	24
Offices, etc.	62	209	270
Recreation reserves	489	342	831
Markets and other (including off-street car parks)	736	84	820
Plant and machinery,			
Roadmaking	85	767	852
Other	—	6	6
Furniture and equipment	23	17	40
Total construction or purchase of assets	1,396	1,523	2,919
Business Undertakings (b)	—	128	128
Total Expenditure	4,096	2,399	6,494

(a) Adjusted to include the whole of Meadows and Willunga District Council areas and to exclude the whole of Mudla Wirra. (b) Includes land, buildings, plant, etc. ^p preliminary

LOAN RAISINGS AND DEBT OUTSTANDING

Local government authorities loan raisings and debts outstanding are shown in the following table. The definitions of 'new loans raised' and 'debt', given on page 562 under 'Loan Raisings and Debt Outstanding', apply to the statistics in this section also.

The tables given below show new money loan raisings and debt outstanding for the years 1960-61 to 1969-70. A further table shows debt outstanding at 30 June 1970 according to rate of interest.

Local Government Authorities: New Money Loan Raisings and Funds Provided for Redemption of Debt, South Australia

Year	New Loan Raisings in Australia			Funds for Redemption of Debt(a)		
	From Govt	Other	Total	To Govt	Other	Total
	\$'000					
1960-61	1,409	2,501	3,910	681	577	1,258
1961-62	831	3,613	4,444	807	643	1,450
1962-63	1,157	3,959	5,116	860	778	1,638
1963-64	1,518	5,118	6,636	917	1,258	2,175
1964-65	726	5,391	6,117	1,038	1,219	2,258
1965-66 (b)	3,263	5,282	8,545	1,144	1,331	2,474
1966-67	2,291	6,981	9,272	1,101	1,817	2,917
1967-68	1,027	7,365	8,392	1,009	1,853	2,862
1968-69	470	7,455	7,925	905	2,068	2,973
1969-70	504	9,430	9,934	822	2,481	3,303

(a) Includes amounts credited to Sinking Funds and excludes amounts redeemed from Sinking Funds; both these figures are small in South Australia.

(b) From 1965-66 includes South-Western Suburbs Drainage Scheme.

**Local Government Authorities: Debt Outstanding and
Annual Interest Payable, South Australia**

Year	Debt in Australia			Annual Interest Payable		
	To Govt	Other	Total	To Govt	Other	Total
	\$'000					
1960-61	3,336	12,700	16,036	67	653	720
1961-62	3,365	15,933	19,298	87	837	924
1962-63	3,673	18,953	22,626	85	1,011	1,096
1963-64	4,296	23,226	27,522	99	1,234	1,333
1964-65	4,069	27,235	31,304	103	1,443	1,546
1965-66 (a)	6,185	31,160	37,345	256	1,674	1,931
1966-67	7,368	36,350	43,718	324	1,980	2,305
1967-68	7,380	42,079	49,459	337	2,323	2,660
1968-69	6,956	47,479	54,435	316	2,645	2,961
1969-70	6,637	54,389	61,025	290	3,106	3,396

(a) From 1965-66 includes South-Western Suburbs Drainage Scheme.

**Local Government Authorities: Debt Outstanding
According to Rate of Interest and Purpose, South Australia
At 30 June 1970**

Rate of Interest	Debt	Purpose	Debt
	\$'000		\$'000
No Interest	1,016	Light and power	794
Under 3 per cent	—	Water supply, sewerage and drainage (a)	12,481
3 and under 3½ per cent	52	Roads, streets, bridges and foot- paths	28,499
3½ and under 4 per cent	99	Council properties	11,863
4 and under 4½ per cent	425	Parks, gardens and recreational reserves	5,371
4½ and under 5 per cent	1,765	Other (including not stated) ..	2,017
5 and under 5½ per cent (a)	15,011		
5½ and under 6 per cent	34,586		
6 per cent and over	8,036		
Not specified	35		
Total debt	61,025	Total debt	61,025

(a) Includes South-Western Suburbs Drainage Scheme.

From 1965-66 the tables include details relating to the South-Western Suburbs Drainage Scheme. Works connected with the scheme to provide effective flood-water drainage commenced in 1959-60 with all initial payments being made from the State Loan Fund. When actual expenditures reached \$2,000,000 an estimate was formed of the total anticipated costs of the scheme and the relevant local government authorities then became liable for progressive repayment (over fifty-three years) of half the anticipated total expenditure including interest. Indebtedness was allocated to councils in 1965-66 (\$2,159,000) and 1966-67 (\$210,000): liability of councils is subject to review when total costs become known.

PART 13

PRIVATE FINANCE

13.1 BANKING AND CURRENCY

BANKING

The banking system in Australia comprises a central bank (the Reserve Bank of Australia); fourteen trading banks (one owned by the Commonwealth, three by State Governments, and ten privately owned); the Commonwealth Development Bank and the Australian Resources Development Bank Ltd (specialist banks, owned respectively by the Commonwealth Government and a consortium of the seven major trading banks); and twelve savings banks of which one is owned by the Commonwealth and three by State Governments, two are trustee savings banks, and six are associated with privately owned trading banks.

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* 1959-1966, providing for the constitution and management of the Reserve Bank and the management of the Australian note issue;
- (b) The *Commonwealth Banks Act* 1959-1968, providing for the constitution and management of the Commonwealth Banking Corporation; and
- (c) The *Banking Act* 1959-1967, providing for the regulation of banking and the protection of the currency and public credit of Australia.

The *Banking Act 1959-1967*, which replaced the *Banking Act 1945-1953*, 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 bank interest rates and the volume of credit in circulation, (5) to mobilise 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, 1925-1968 and The Savings Bank of South Australia Act, 1929-1971.

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 30 June 1971

Particulars	Central Bank Department	Note Issue Department	Rural Credits Department	Total (a)
LIABILITIES (\$'000)				
Capital	40,000	—	9,428	49,428
Reserve funds	30,664	—	9,879	40,543
Special Reserve—International Monetary Fund Special Drawing Rights	138,582	—	—	138,582
Development fund	—	—	1,080	1,080
Notes on issue	—	1,369,388	—	1,369,388
Deposits, bills payable and other:				
Statutory reserve deposits	617,522	—	—	617,522
Other trading bank deposits	62,753	—	—	62,753
Savings bank deposits	615,533	—	—	615,533
Other	1,098,856	74,198	288,282	(a) 765,782
Total	2,603,909	1,443,585	308,669	(a) 3,660,610
ASSETS (\$'000)				
Gold and balances held abroad (b)	1,284,997	228,992	—	1,573,989
Other overseas securities	285,030	257,054	—	542,084
Australian Government securities	453,076	447,665	—	900,740
All other	580,806	449,875	308,669	(a) 643,796
Total	2,603,909	1,443,585	308,669	(a) 3,660,610

(a) Inter-departmental accounts totalling \$695,554,000 have been offset in totals.

(b) Includes IMF Special Drawing Rights.

Further details of the activities of the Reserve Bank are given in the *Official 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 14 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 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 average of weekly figures for loans, advances and bills discounted for the month of June in the years 1968 to 1971 were \$226, \$249, \$264 and \$281 million respectively. Of the last mentioned amount, \$24.5 million was advanced in South Australia.

The capital of the Development Bank consists of the capital of the Mortgage Bank and Industrial Finance Department of the Commonwealth Bank immediately before 14 January 1960, \$10 million provided by the Reserve Bank, \$30 million provided by the Commonwealth Government in the 1961-62 and 1963-64 Budgets, 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.

AUSTRALIAN RESOURCES DEVELOPMENT BANK LIMITED

This corporation was formed by the major trading banks with the support of the Reserve Bank and was given bank status by an amendment to the Banking Act in 1967. Its function is to provide finance for major developmental projects, mainly in the form of refinanced trading bank loans but also as a direct lender. The average of weekly figures for loans and advances outstanding for the month of June in 1968 to 1971 were \$11, \$61, \$163 and \$261 millions respectively. Such finance is provided from the Australian capital market (mainly in the form of public issues of Transferable Certificates of Deposit) and, to an increasing extent, from overseas borrowings.

Authorised capital of the Bank is \$10 million of which \$3 million has been issued as fully paid capital. The member banks have approximately equal shareholdings. Although not a shareholder, the Reserve Bank of Australia initially subscribed \$2.1 million in loan capital on which a fixed rate of interest, related to market rates, is paid.

TRADING BANKS

For statistical purposes trading banks are often divided into two groups, 'major' and 'other'. From 1 October 1970 the Australia and New Zealand Bank Ltd and the English Scottish and Australian Bank Ltd merged to form the Australia and New Zealand Banking Group Ltd. The 'major trading banks' now comprise the six private trading banks and the Commonwealth Trading Bank, all of which have interests throughout Australia: together they account for approximately 91 per cent of all general trading bank assets in Australia.

The group 'other trading banks' consists of the three State Government banks (including the State Bank of South Australia) which trade mainly in their respective States, and four other banks (three of them overseas institutions) whose business is either specialised (e.g. financing overseas trade), or both specialised and limited to particular areas.

Banks Originating in South Australia

With a subscribed capital of \$500,000 in 50,000 shares of \$10 each, the first trading bank promoted in South Australia was the Bank of Adelaide which was opened for business on 11 December 1865 and now has branches in all States and the Australian Capital Territory.

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, 1928-1970;

Advances to Settlers Act, 1930-1970;

Loans to Producers Act, 1927-1962;

Advances for wire-netting and vermin proof materials under the Vermin Act, 1931-1967;

Loans for Fencing and Water Piping Act, 1938-1952;

Student Hostels (Advances) Act, 1961.

The State Bank of South Australia does not operate branches or agencies outside the State.

Assets

Under the provisions of the *Banking Act 1959-1967* all trading banks (except State banks trading in their own State) have limitations on their portfolio of assets. These banks are required to hold a certain percentage of total deposits in the form of liquid assets or government securities (this minimum LGS ratio has remained at 18 per cent since 1962). They are also required to maintain a fixed percentage of total deposits as a deposit with the Reserve Bank (Statutory Reserve Deposit): this SRD ratio for major trading banks was reduced from 10.0 per cent to 9.4 per cent on 29 September 1970, to 8.9 per cent on 15 April 1971 and to 7.1 per cent on 20 December 1971.

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 1971.

Trading Banks in Australia: Assets, June 1971^(a)

Assets	Major Trading Banks	Other Trading Banks	All Trading Banks
		\$'000	
Gold, bullion and Australian notes	167,634	9,886	177,520
Cash with Reserve Bank	3,239	1,041	4,280
Australian public securities:			
Commonwealth and State	1,301,458	148,873	1,450,331
Local and semi-government authorities	16,144	9,364	25,508
Statutory Reserve Deposit Account with Reserve Bank	617,753	2,092	619,845
Loans to authorised dealers in short term money market	117,953	24,044	141,997
Other loans, advances and bills discounted	4,770,637	546,796	5,317,433
Bank premises, furniture and sites	164,669	28,744	193,413
Other assets	630,405	39,797	670,202
Total assets	7,789,892	810,637	8,600,529

(a) Excludes inter-branch accounts and contingencies.

Branches and Agencies

Of the fourteen trading banks which operate in Australia, the eight banks listed below conduct business in South Australia:

Government banks:

Commonwealth Trading Bank of Australia
State Bank of South Australia

Private banks:

Australia and New Zealand Banking Group Ltd
The Bank of Adelaide
Bank of New South Wales
The Commercial Bank of Australia Ltd
The Commercial Banking Co. of Sydney Ltd
The National Bank of Australasia Ltd.

The number of branches of both government and private trading banks has increased steadily until 1970-71 when there was a slight decrease in the total because of the closure of branches of private banks, mainly in country areas. Although the number of agencies of government trading banks increased in each of the years 1968-69, 1969-70 and 1970-71, the total number of agencies decreased in each of these years because of decreases in private bank agencies. The total effect in the last three years has been a significant decrease in the number of agencies in both the metropolitan and country areas.

Trading Bank Branches and Agencies, South Australia
At 30 June

Bank	Branches					Agencies	
	1967	1968	1969	1970	1971	1970	1971
Commonwealth Trading Bank ...	45	45	45	45	49	40	45
State Bank of South Australia	35	35	35	35	35	15	16
Private banks	357	357	363	363	353	251	183
Total—Metropolitan area (a) ..	208	210	214	217	216	149	120
Country	229	227	229	226	221	157	124
Total State	437	437	443	443	437	306	244

(a) As determined by individual banks for administrative purposes.

Deposits and Advances

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 ranging from three months to four years and for large amounts from thirty days to four years. Until December 1970 the maximum term for fixed deposits was two years.

Deposits not bearing interest, as a proportion of total deposits, reached a low point of less than 24 per cent in 1933 and rose to a peak of more than 74 per cent in 1953, from which time the proportion has declined to the 47.0 per cent shown for the June quarter 1971.

Advances exceeded deposits in two years during the 1930s but conditions during and immediately following the 1939-45 War were such that advances declined from an earlier average of approximately 70 per cent of deposits to only 29 per cent in 1949. Since then there has been a relatively steady increase in the proportion to 91 per cent in the June quarter 1971.

Trading Banks: Balance of Deposits and Advances, South Australia
Weekly Average, June Quarter 1967 to 1971

June Quarter	Depositors' Balances			Loans, Advances, Etc., Outstanding (a)	Proportion to Total Deposits	
	Bearing Interest	Not Bearing Interest	Total		Deposits Not Bearing Interest	Loans, Advances, Etc., Outstanding (a)
	\$'000				Per cent	
1967....	178,949	199,454	378,401	292,328	52.7	77.3
1968....	194,901	198,276	393,175	340,117	50.4	86.5
1969....	214,136	204,215	418,351	356,336	48.8	85.2
1970....	225,344	212,093	437,436	385,308	48.5	88.1
1971....	236,311	209,374	445,685	407,005	47.0	91.3

(a) Excludes loans to authorised dealers in the short-term money market. Includes bills discounted.

Separate details for 1971 for each of the Government banks and for all private banks are as follows.

Trading Banks: Balance of Deposits and Advances, South Australia
Weekly Average, June Quarter 1971

Bank	Depositors' Balances			Loans, Advances, Etc., Outstanding (a)
	Bearing Interest	Not Bearing Interest	Total	
	\$'000			
Commonwealth Trading Bank	32,915	30,300	63,215	40,434
State Bank of South Australia	28,383	10,362	38,745	139,771
Private trading banks	175,013	168,711	343,725	226,799
Total	236,311	209,374	445,685	407,005

(a) Excludes loans to authorised 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 1967 to 1971.

Major Trading Banks, South Australia and Northern Territory
Advances to Resident Borrowers by Type of Borrower^{(a) (b)}
(At Second Wednesday in July)

Classification	1967	1968	1969	1970	1971
	\$ million				
Business advances:					
Agriculture, grazing and dairying;					
Mainly sheep grazing	22.7	28.2	27.3	27.5	24.5
Mainly wheat growing	16.6	24.2	22.8	24.7	22.5
Mainly dairying and pig raising	4.5	5.5	5.7	5.9	5.1
Other	16.0	21.0	24.4	24.9	25.9
Total agriculture, etc.	(c)59.8	(c)79.0	(c)80.1	(c)83.0	(c)78.1
Manufacturing	30.8	31.8	40.1	37.7	35.9
Transport, storage and communication	5.0	3.5	4.2	6.8	6.5
Finance;					
Building and housing societies	0.8	0.9	0.9	1.2	0.2
Pastoral finance companies	2.3	3.9	5.3	7.7	7.5
Hire-purchase and other finance companies	1.9	2.2	2.9	3.2	3.4
Other	2.4	2.5	2.7	4.0	4.0
Total finance	7.4	9.4	11.8	16.1	15.1

Major Trading Banks, South Australia and Northern Territory
Advances to Resident Borrowers by Type of Borrower^{(a) (b)}
(At Second Wednesday in July) (continued)

Classification	1967	1968	1969	1970	1971
Commerce;					
Retail trade	19.5	24.5	24.1	25.7	29.4
Wholesale trade (d)	18.9	16.2	22.1	21.1	19.5
Total commerce	38.4	40.7	46.2	46.9	49.0
Building and construction	6.2	6.7	7.3	8.4	9.7
Other business	17.3	20.5	25.6	27.7	32.4
Unclassified	2.6	2.5	2.2	3.5	2.6
Total business advances	167.6	194.1	217.6	230.1	229.2
Distribution of business advances:					
To companies	90.3	95.0	116.5	121.3	120.5
Other	77.3	99.1	101.1	108.8	108.7
Advances to public authorities	1.0	0.7	0.5	0.4	0.7
Personal advances:					
Building or purchasing own home	15.4	16.0	16.5	16.0	17.4
Other	17.1	20.5	24.2	29.3	34.0
Total personal advances	32.5	36.5	40.7	45.4	51.3
Advances to non-profit organisations	2.7	3.2	3.2	3.2	3.0
Total advances to resident borrowers .	203.8	234.5	262.0	279.1	284.3

(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.

(c) Includes farm development loan component.

(d) Includes temporary advances to woolbuyers.

Interest Rates

Bank interest rates are not formally determined under the Banking Act. Maximum rates are fixed after discussions between the Reserve Bank and the banks, and with the approval of the Treasurer. State Government banks, although not bound by rulings of the Reserve Bank, tend to broadly conform to them, except for some minor traditional differences which remain.

Interest rates are one of the implements of monetary and banking policy. Trading banks interest rates were increased on 1 August 1969, 9 March 1970 and 8 December 1970 and reduced on 4 February 1972.

The following table shows trading banks interest rates current at 29 February 1972, the dates from which they became operative and the rates which were applicable before those dates.

Trading Banks, Interest Rates at 29 February 1972

Particulars	Rate per Annum	Date from which Operative	Previous Rate per Annum
	%	Lending Rates	%
Overdraft:			
Under \$50,000 (a)	7.75	4.2.72	8.25
\$50,000 and over	(b)	4.2.72	8.25
Unsecured personal loans (a) (c)	6.25	4.2.72	6.50
		Deposit Rates	
Fixed deposits (less than \$50,000) (a):			
3 months and less than 12 months	4.30	4.2.72	5.00
12 months and less than 2 years	4.50	4.2.72	5.00-5.30
2 years and less than 4 years	5.00	4.2.72	5.30-6.00
4 years	5.50	4.2.72	6.50
Fixed deposits (\$50,000 and over) (a) (b):			
30 days to 4 years	6.50	4.2.72	5.50-6.50
Certificates of deposit (\$50,000 and over) (a) (b):			
3 months to 24 months	6.50	4.2.72	5.50

(a) Maximum rate.

(b) Actual rates are a matter for negotiation between banks and their customers.

(c) Flat rate.

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 Development Bank, in South Australia in recent years were as follows:

	\$'000
1966-67	184,523
1967-68	201,841
1968-69	224,360
1969-70	243,378
1970-71	269,835

These figures are the averages of debits during weeks ending on Wednesdays.

SAVINGS BANKS

The Savings Bank of South Australia

The Savings Bank of South Australia commenced operations on 11 March 1848 following the enactment of an ordinance in 1847. At 30 June 1971 there were 136 branches, 887 agencies and 782 school bank agencies within South Australia. The Savings Bank of South Australia does not operate branches in other Australian States but has agent banks to act for it in other States and in the United Kingdom.

The total of depositors' balances first exceeded \$200 million in 1956, reached \$400 million in July 1969 and at 30 June 1971 amounted to more than \$438 million. During the year 1970-71 the Bank made loans amounting to

\$19.8 million to depositors for housing, for rural development and for institutional and other purposes and at 30 June 1971 the total of such loans outstanding was in excess of \$173 million.

The Savings Bank of South Australia, Summary of Business

Year	Operative Accounts (a)	Cash Turn- over (b)	Depositors' Balances (a)	Housing, Rural and Other Loans (a)	Government Securities Held (a)
	No.	\$m	\$'000	\$'000	\$'000
1966-67	894,454	728	362,190	139,703	204,875
1967-68	902,270	777	377,523	151,291	210,674
1968-69	913,914	862	398,143	160,047	219,772
1969-70	919,131	989	416,307	166,587	227,966
1970-71	944,040	1,147	438,793	173,113	237,561

(a) At end of year, as published in the Bank's Annual Report.

(b) Sum of deposits and withdrawals; includes some duplication from amounts transferred by depositors from one type of account to another.

Development of Savings Banks

Post Offices in South Australia acted as agencies for The Savings Bank of South Australia until 1912 when they became agents of the Commonwealth Bank from the date of its establishment.

Savings bank business was conducted entirely by these two government banks until 1956, when the first of the private banks commenced this activity. From 1 October 1970 the Australia and New Zealand Savings Bank Ltd took over the banking business of the English Scottish and Australian Savings Bank Ltd. Savings bank facilities in South Australia are now provided by the eight banks listed below.

Government:

Commonwealth Savings Bank of Australia
The Savings Bank of South Australia

Private:

Australia and New Zealand Savings Bank Ltd
The Bank of Adelaide Savings Bank Ltd
Bank of New South Wales Savings Bank Ltd
The Commercial Savings Bank of Australia Ltd
CBC Savings Bank Ltd
The 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 10 cents 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 organisations 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 savings accounts and the cheque accounts of some non-profit organisations. However, early in 1970 concessions relating to charges and interest on trading accounts were withdrawn from hospital and medical benefit organisations, building societies, credit unions and investment clubs.

Details of assets of all savings banks in Australia at 30 June 1971 are as follows.

Savings Banks: Assets in Australia, 30 June 1971^(a)

Assets	Commonwealth Savings Bank	State Savings Banks	Trustee Savings Banks (b)	Private Savings Banks	Total
			\$'000		
Coin, bullion and Australian notes	4,804	9,938	421	3,090	18,253
Deposits with Reserve Bank	318,260	89,711	1,008	206,550	615,529
Deposits in Australia with trading banks	40,201	26,442	5,862	33,723	106,228
Australian public securities:					
Commonwealth and States . .	1,246,987	396,551	19,719	690,156	2,353,413
Local and semi-government authorities	496,698	540,932	45,681	877,276	1,960,587
Loans, advances and bills discounted :					
Housing	876,234	622,617	26,388	839,026	2,364,265
Other	61,074	101,162	6,486	70,139	238,861
All other assets (c)	221,249	105,701	11,630	78,728	417,308
Total assets	3,265,507	1,893,054	117,195	2,798,688	8,074,444

(a) Excludes inter-branch accounts.

(b) Trustee banks operate only in Tasmania.

(c) Includes loans to authorised dealers the short-term money market.

Assets

Under the provisions of the *Banking Act 1959-1967* all savings banks (except State banks trading in their own State) 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 authorised dealers in the short-term money market. As from October 1970, loans to the Australian Banks Export Refinance Corporation Limited are also a permissible form of investment following an amendment to the Banking (Savings Banks) Regulations.

The amendment also reduced from 65 per cent to 60 per cent, the percentage of depositors' funds which a savings bank subject to the Banking Act must hold in cash or approved securities. This investment ratio was last changed in 1963. Savings banks may not accept deposits from a profit-making body unless it is acting as a trustee for a non-profit-making beneficiary.

Branches and Agencies

The number of branches of both government and private savings banks increased steadily over the years until 1970-71 when there was a slight decrease in the total because of the closure of branches of private banks in country areas.

In 1968-69 and 1969-70 the number of agencies of both government and private banks declined whereas in 1970-71 the number of agencies of private banks declined only. The total effect in the last three years has been a rise in the number of metropolitan agencies and a significant fall in the number in country areas.

Savings Banks: Branches and Agencies, South Australia

At 30 June

Bank	Branches					Agencies	
	1967	1968	1969	1970	1971	1970	1971
Commonwealth Savings Bank	70	74	75	76	78	776	760
Savings Bank of South Australia . .	130	133	134	135	136	868	886
Private Banks	357	357	363	363	353	776	739
Total—Metropolitan area (a).	289	296	295	306	306	1,550	1,529
Country	268	268	277	268	261	870	856
Total State	557	564	572	574	567	2,420	2,385

(a) As determined by individual banks for administrative purposes.

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.

Savings Banks: Accounts and Deposits, South Australia and Australia

At 30 June	South Australia			Australia		
	Accounts Operative (a)	Deposits	Deposits per Head of Population	Accounts Operative (a)	Deposits	Deposits per Head of Population
	'000	\$m	\$	'000	\$m	\$
1967	1,371	605.2	544	13,134	5,764.7	488
1968	1,418	643.7	572	13,823	6,221.5	517
1969	1,472	691.8	605	14,534	6,707.1	545
1970	1,546	733.1	629	15,291	7,104.7	566
1971	1,623	787.9	667	16,019	7,634.5	597

(a) Excludes school bank and inoperative accounts.

The Savings Bank of South Australia has always held a very high proportion of the total of depositors' balances in this State, although its share of total on deposit has dropped from about 75 per cent in 1961 to 56 per cent in 1971. In that time the private banks have increased their share from less than 12 per cent to over 21 per cent.

Savings Bank Deposits, South Australia

At 30 June	Commonwealth Savings Bank	Savings Bank of South Australia	Private Savings Banks	Total
\$ million				
1967.....	132.8	362.2	110.1	605.2
1968.....	142.2	377.5	123.9	643.7
1969.....	153.6	398.1	140.1	691.8
1970.....	165.0	416.3	151.7	733.1
1971.....	180.2	438.8	168.9	787.9

The next table gives an indication of the amount of business conducted by savings 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.

Movement in Savings Bank Deposits, South Australia

Year	Amount on Deposit at Beginning of Year	Deposits during Year (a)	Withdrawals during Year (a)	Interest Added during Year	Increase in Depositors' Balances during Year	Amount on Deposit at End of Year
\$ million						
1966-67.	558.9	784.7	757.4	19.0	46.3	605.2
1967-68.	605.2	841.9	825.0	21.6	38.5	643.7
1968-69.	643.7	941.6	917.5	24.0	48.1	691.8
1969-70.	691.8	1,087.8	1,072.8	26.3	41.3	733.1
1970-71.	733.1	1,193.8	1,167.5	28.5	54.8	787.9

(a) Includes inter-branch transfers.

Interest Rates

On 1 April 1970 the maximum interest rate payable on savings accounts was fixed by the Reserve Bank at 5 per cent for balances up to \$20,000, this being the first change since 1 August 1968; no interest is payable on ordinary savings account balances in excess of this amount but for approved society cheque accounts no interest-bearing limit is set. In practice the general rate of interest payable on ordinary savings accounts varies from 3.75 to 4 per cent for balances up to \$4,000 and from 4.25 to 4.5 per cent for balances over \$4,000 and up to \$20,000. However, in May 1971 the rate of interest on savings bank Investment Accounts was raised from 5 per cent to 5.25 per cent. These accounts are subject to special requirements in respect of notice of withdrawal, minimum balance and minimum amounts for transactions. Interests on savings accounts is calculated on the lowest balance in an account each month. Up to the maximum rate of 5.25 per cent variation between banks and between customers is permissible.

State Government savings banks are not bound by rulings of the Reserve Bank but are generally guided by them.

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 28 April 1968. For many years this bank was the

only one engaged in this field, but in recent years the Commonwealth Savings Bank of Australia and some private banks have commenced similar services at some private schools. However, The Savings Bank of South Australia has sole access to State schools, and retains a major share of school banking business.

With a view to encouraging thrift in school children, deposits as small as one cent are accepted.

Details of school banking in this State are as follows:

	Agencies	Operative Accounts '000	Depositors' Balances \$'000
30 June 1967	869	186	3,941
1968	859	189	4,127
1969	867	192	4,352
1970	875	173	3,452
1971	872	168	3,463

CURRENCY

Under the Commonwealth Constitution the control of currency, coinage, and legal tender in Australia is vested in the Commonwealth.

The Commonwealth Treasurer is empowered by legislation to arrange for the making and issuing of coins of specified denominations. Australia's coin requirements are met by the Royal Australian Mint in Canberra. Australian notes are printed by the Note Printing Branch of the Reserve Bank in Melbourne, while their issue is controlled by the Note Issue Department of that bank.

Decimal Currency

Until 13 February 1966 Australian currency was based on the British unit which was the pound (£), divided into 20 shillings (s) each of 12 pence (d). A decimal currency system was introduced on 14 February 1966 with the major unit, the dollar, equal to ten shillings and the minor unit, the cent, equal to 1.2 pence in the old currency.

At June 1971 decimal currency notes in circulation were of the denominations \$1, \$2, \$5, \$10 and \$20. Coins in circulation were 1 cent and 2 cents (bronze) and 5, 10, 20 and 50 cents (cupro-nickel).

Minting of the 50 cent coin in its original form of 80 per cent silver and 20 per cent copper, ceased in April 1968. A twelve sided version of the 50 cent coin, in cupro-nickel, was issued in September 1969. A special 50 cent coin was issued in 1970 to commemorate the two-hundredth anniversary of Captain James Cook's discovery of the east coast of Australia.

More complete details of Australian currency, including historical references, were included on pages 552-6 of the *South Australian Year Book* 1968.

Rates of Exchange

The following table shows the average telegraphic transfer selling rates of exchange for Sydney, New South Wales, on a selection of overseas countries. The figures appearing in the table, which are averages of daily quotations, are based generally on rates quoted by the Commonwealth Trading Bank of Australia.

**Overseas Exchange Rates: Average Telegraphic Transfer Selling Rates
Sydney, 1968-69 to 1970-71**

Country	Basis of Quotation	1968-69	1969-70	1970-71
New Zealand (a)	Dollars to \$A1 (a)	0.998	0.998	0.998
United Kingdom (a)	Pound Stg to \$A1 (a)	0.465	0.465	0.465
Belgium	Francs to \$A1	55.39	55.22	55.11
Canada	Dollars to \$A1	1.19	1.19	1.13
Ceylon	Rupees to \$A1	6.58	6.59	6.59
China (Mainland) (b)	New Yuan to \$A1	2.72	2.72	2.72
France	Francs to \$A1	5.49	6.16	6.13
Germany (West)	Deutsche Marks to \$A1	4.40	4.16	4.02
Hong Kong	Dollars to \$A1	6.76	6.74	6.74
India	Rupees to \$A1	8.33	8.33	8.33
Italy	Lire to \$A1	689.00	696.00	694.00
Japan	Yen to \$A1	396.01	396.96	397.36
Netherlands	Guilders to \$A1	4.01	4.02	3.99
Pakistan	Rupees to \$A1	5.28	5.29	5.29
Singapore	Dollars to \$A1	3.38	3.40	3.41
South Africa	Rands to \$A1	0.795	0.795	0.795
Switzerland	Francs to \$A1	4.77	4.78	4.76
U.S.A.	Dollars to \$A1	1.11	1.11	1.12
U.S.S.R. (b)	Roubles to \$A1	1.004	1.004	1.004

(a) Usual basis of quotation (i) \$A to \$N.Z. 1; (ii) \$A to £1 Stg. Values quoted are inversions.

(b) Rates of exchange used in converting import values to Australian currency for purposes of calculating customs duty.

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 1945-1965*, every company transacting life insurance business must be registered and must lodge a deposit of up to \$100,000, 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 31 December, but a number balance earlier in the year.

During 1969 there were thirty-seven companies operating in South Australia. All conducted ordinary life insurance business; thirty-two 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 ten 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 since the end of 1945 when for policies in force the sum assured plus bonus additions amounted to \$130 million; by 1956 the \$500 million mark was reached and at the end of 1970 the figure was \$2,550 million.

Life Insurance: Policies in Force, South Australia

31 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
1961.....	424,267	773,307	63,418	24,075	340,649	68,255	3,077	3,111
1962.....	438,417	866,881	74,941	26,330	326,302	70,754	3,485	3,173
1963.....	449,824	961,053	87,634	28,628	312,496	73,418	4,062	3,238
1964.....	467,965	1,083,941	102,045	31,705	299,721	77,968	4,714	3,378
1965.....	486,237	1,212,109	117,815	34,933	289,863	82,268	5,410	3,523
1966.....	503,001	1,353,568	137,001	38,306	275,731	85,430	6,115	3,612
1967.....	522,996	1,528,304	156,013	42,330	269,137	89,721	7,027	3,758
1968.....	544,855	1,712,228	174,713	47,388	262,406	94,748	8,096	3,929
1969.....	571,870	1,930,402	201,139	52,909	256,617	100,800	9,301	4,153
1970.....	600,010	2,202,179	225,481	59,359	252,936	110,728	10,756	4,480

The table above illustrates the growth in life insurance business over the last ten years. Although total business has been increasing, the number of industrial policies has actually declined and industrial premiums have risen only slowly. The heavy relative decline in this form of business has been because of the high cost of collecting premiums and the development of superannuation and group schemes.

Details of policies in force at the end of 1970 are presented in the following table according to the type of policy and the nature of the business. The distinction between endowment insurance and an endowment policy is that endowment insurance provides for the payment of the sum assured upon the insured reaching a specified age or upon his prior death, whereas the sum assured under an endowment policy is paid only upon the insured reaching the specified age.

Life Insurance: Policies in Force, South Australia, at end of 1970

Type of Policy	Ordinary		Superannuation		Industrial	
	Sum Assured	Annual Premiums	Sum Assured	Annual Premiums	Sum Assured	Annual Premiums
	\$'000					
Whole life insurances.	996,288	19,908	37,127	1,011	7,368	320
Endowment insurances	469,438	21,938	210,958	8,095	101,978	4,070
Other insurances	309,543	1,876	142,821	3,846	(a)	20
Endowment	27,453	2,290	8,552	395	1,381	70
Total	1,802,721	46,011	399,458	13,347	110,728	4,480

(a) Included with endowment insurance.

Of the thirty-nine companies undertaking ordinary business in 1970, ten accounted for 88 per cent of business registered at the end of the year, with the five largest accounting for 72 per cent. Although thirty-two companies had superannuation policies registered, ten companies accounted for 97 per cent, and three for 71 per cent of all superannuation business.

New Policies

During 1970 a total of 79,091 new life insurance policies, with an assured value of \$346,917,000, were issued in South Australia. This number exceeded the previous highest figure of 74,311 policies issued in 1969. The value, *i.e.* amount assured, of new policies has increased continuously since 1945.

The number and value of new ordinary, superannuation, and industrial policies issued during the last five years is shown in the next table. The relative importance of industrial policies has declined from approximately 25 per cent of total value in 1945 to less than 5 per cent in 1970. The average value of industrial policies is much lower than for ordinary and superannuation policies.

Life Insurance: New Policies Issued, South Australia

Policy	1966	1967	1968	1969	1970
	NUMBER ISSUED				
Ordinary	44,725	48,018	49,906	55,262	59,174
Superannuation	5,988	5,758	5,984	5,618	6,227
Industrial	13,159	13,203	12,921	13,431	13,690
Total	63,872	66,979	68,811	74,311	79,091
	SUM ASSURED (\$'000)				
Ordinary	181,894	205,056	224,015	260,992	319,387
Superannuation	46,336	63,117	64,703	71,394	100,230
Industrial	11,021	11,823	12,884	14,531	18,081
Total	239,250	279,996	301,602	346,917	437,699

Annual premiums on new policies issued in 1970 amounted to \$11,209,000 and of this amount \$5,225,000 was for endowment insurances and \$3,699,000 for whole of life insurances. Details of sum assured and premiums payable for the various types of policy issued in 1970 are shown in the following table.

Life Insurance: New Business, South Australia, 1970

Type of Policy	Ordinary		Superannuation		Industrial	
	Sum Assured	Annual Premiums	Sum Assured	Annual Premiums	Sum Assured	Annual Premiums
	\$'000					
Whole life insurances.	192,649	3,500	5,963	162	803	37
Endowment insurances	50,451	2,939	43,209	1,658	16,649	628
Other insurances	69,566	335	48,379	1,199	630	7
Endowment	6,721	612	2,679	131	—	—
Total	319,387	7,386	100,230	3,150	18,081	672

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 1970 there were 208 annuities in force with a total sum assured of \$80,000 a year.

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, 1970

Reason for Discontinuance	Ordinary		Superannuation		Industrial	
	Policies	Sum Assured	Policies	Sum Assured	Policies	Sum Assured
	No.	\$'000	No.	\$'000	No.	\$'000
Death	2,319	4,863	286	1,325	1,319	255
Maturity	7,793	6,366	622	1,573	7,993	1,168
Surrender	13,592	42,985	2,043	28,796	5,083	2,890
Forfeiture	7,061	33,425	97	614	2,939	3,963
Transfer	1,884	6,257	36	3,628	40	-126
Other	-284	11,600	1,812	6,406	-3	4
Total	32,365	105,497	4,896	42,343	17,371	8,154

Premiums and Claims

Details of premium income and of cash payments made in respect of policies are shown in the following table. This table does not show investment income or management and commission expenses and accordingly is not a revenue and expenditure table.

Life Insurance: Premiums and Policy Payments, South Australia

Year	Premiums and Considerations for Annuities	Payments					Total
		Death or Disability (a)	Maturity	Surrenders	Annuities	Cash Bonuses	
\$'000							
1966	41,817	5,138	8,620	5,207	61	88	19,114
1967	45,863	5,633	9,140	5,916	67	91	20,847
1968	51,556	7,284	9,439	6,565	70	122	23,481
1969	57,139	7,020	10,448	7,611	72	134	25,285
1970	63,825	8,240	12,354	9,937	88	165	30,785

(a) Includes 'Other'.

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 following table details are given of mortgages on South Australian real estate, loans on policies registered in, and 'other' loans to persons resident in, this State. Only those loans which form assets of the statutory funds, are included.

Life Insurance: Loans Outstanding, South Australia

Nature of Collateral	1966	1967	1968	1969	1970
			\$'000		
Mortgage of real estate	69,252	69,479	74,623	81,001	83,552
Policies:					
Advances of premiums	2,306	3,965	4,118	4,425	4,951
Other	11,004	12,166	13,854	15,602	18,118
Other collateral	255	256	326	186	697
Total	82,817	85,865	92,922	101,214	107,318

GENERAL INSURANCE

General insurance in South Australia is conducted largely by private organisations and the State Government Insurance Commission which commenced business in January 1972. Some government insurance, in particular workmen's compensation, is carried by the State Government's Accident Insurance Office and in addition the State Bank of South Australia insures certain properties on which it has provided mortgage finance. A number of Commonwealth Government instrumentalities also are engaged in insurance in South Australia, notably in respect of housing loans and export payments, but these Commonwealth activities are not included in South Australian statistics.

Under the Commonwealth *Insurance Act* 1932-1966, insurance companies are required to lodge a deposit with the Commonwealth Treasurer, as security against liability to policy holders. The Act does not apply to State insurance within the limits of the State concerned. However, insurance business is conducted almost entirely under State legislation.

Companies, persons or firms of persons carrying on general insurance business are required under the Stamp Duties Act, 1923-1971 to take out an annual licence, such licence being the authority to carry on insurance business in the State. The licence fee varies with premium income. Under the Fire Brigades Act, 1936-1958 insurance companies contribute approximately 60 per cent of the cost of maintaining the services of the Fire Brigades Board.

Insurance for workmen's compensation and motor vehicle third party risks is compulsory under State legislation. Employers, unless specifically exempted, are required under the Workmen's Compensation Act, 1971 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 pages 302-4.

Under the Motor Vehicles Act, 1959-1971 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 pages 500-1.

The statistics in this section are compiled from returns covering transactions of the Government Insurance Office, State Bank and approximately 170 companies licensed to conduct general insurance business. Each return gives details of the organisation's activities during a twelve month period ending within the year shown. Some re-insurance transactions are excluded from the returns to avoid duplication.

The following tables show some details of revenue and expenses relating to general insurance over the last five 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: Principal Items of Revenue, South Australia

Source of Revenue	1966-67	1967-68	1968-69	1969-70	1970-71
	\$'000				
Premiums:					
Fire and sprinkler leakage ...	7,107	7,219	8,169	8,703	9,125
Householders' comprehensive	4,545	4,848	5,301	5,821	6,308
Loss of profits	772	805	912	1,105	1,247
Hailstone	363	170	518	324	200
Marine	1,600	1,734	1,925	2,242	2,574
Motor vehicle;					
Compulsory third party	8,885	11,067	11,912	12,816	13,209
Other	16,433	16,878	17,464	18,881	20,460
Employers' liability and work-					
men's compensation	10,041	9,990	10,699	11,468	12,721
Personal accident	2,389	2,570	2,871	3,285	3,664
Public risk, third party	1,076	1,337	1,455	1,621	1,805
Burglary	577	694	763	845	878
Other	1,626	1,839	2,362	2,652	2,996
Total premiums ...	55,413	59,151	64,351	69,762	75,186
Revenue from investments	701	830	1,003	879	834
Total	56,114	59,981	65,355	70,640	76,020

Details of claims and other expenses 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 are therefore based on income earned in previous years.

General Insurance: Expenses, South Australia

Type of Expense	1966-67	1967-68	1968-69	1969-70	1970-71
	\$'000				
Claims:					
Fire and sprinkler leakage ..	1,914	1,394	2,835	2,965	2,365
Householders' comprehensive	1,089	1,048	1,429	1,367	1,743
Loss of profits	250	224	684	206	581
Hailstone	250	56	236	134	17
Marine	846	1,051	1,265	1,476	1,363
Motor vehicle;					
Compulsory third party	7,350	7,036	8,174	8,745	8,503
Other	9,800	9,832	11,419	13,430	14,206
Employers' liability and work-					
men's compensation	6,146	5,912	6,078	7,246	7,784
Personal accident	1,094	1,065	1,300	1,422	1,544
Public risk, third party.....	423	547	486	758	537
Burglary	349	355	316	404	534
Other.....	739	1,015	1,007	1,115	1,315
Total claims	30,250	29,536	35,228	39,269	40,491
Other expenses:					
Contributions to fire brigades	781	844	939	1,066	1,154
Commission and agents'					
charges	5,804	6,147	6,624	7,131	7,723
Management	10,513	11,520	12,546	13,491	14,950
Taxation	1,417	2,034	2,217	2,244	2,434
Total expenses	48,765	50,082	57,554	63,201	66,751

STATE GOVERNMENT INSURANCE COMMISSION

In October 1970 the State Government Insurance Commission Act, 1970 was passed giving authority to establish a Commission to carry on all types of insurance other than life insurance.

The five members of the Commission were appointed in December 1970, a General Manager was appointed in July 1971 and the Commission commenced business with the public in January 1972.

13.3 OTHER PRIVATE FINANCE

THE STOCK EXCHANGE OF ADELAIDE

The Stock Exchange of Adelaide was formed in 1887 by the amalgamation of the Adelaide Stock Exchange and the Stock Exchange of South Australia. Basically the Exchange provides facilities for trading in securities, with transactions being conducted by brokers who constitute its membership. Trading was conducted on the call system until the end of 1961 when post trading came into operation.

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 president, vice-president and committee of four, elected by the members.

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 the proceedings to be observed.

The figures in the following table have been supplied by the Stock Exchange and show that business transacted during 1970-71 was considerably below the previous year's high level. In the early part of the financial year the market, particularly the mining sector, was active; however, it progressively declined in both turnover (with the exception of industrial shares) and prices during the year.

It should be noted that several companies with diverse activities, including extensive oil and/or mining interests, are classified by stock exchanges as 'industrial' and are shown in that category in the table.

Stock Exchange of Adelaide, Turnover of Securities

Particulars	Year Ended 30 June				
	1967	1968	1969	1970	1971
Shares, Commonwealth loans, semi-government loans, debentures and unsecured notes	Transactions ('000)				
	67	166	164	251	116
Shares:	Number of Shares ('000)				
Industrial	10,814	17,136	19,689	19,331	22,756
Mining	5,690	18,834	23,391	60,266	40,369
Oil	2,145	12,010	11,054	43,575	6,968
Total shares	18,649	47,981	54,134	123,172	70,093
Shares:	Market Value (\$'000)				
Industrial	13,439	28,416	28,454	27,070	22,511
Mining	13,352	41,478	32,212	107,776	43,627
Oil	996	8,153	8,288	11,306	2,240
Total shares	27,787	78,048	68,954	146,151	68,378
Commonwealth loans, semi-government loans, debentures and unsecured notes (a):	('000)				
Face value	4,845	4,674	5,413	2,443	2,701
Market value	4,732	4,271	5,179	2,747	2,477

(a) Excludes occasional large 'off-market' placements of Commonwealth Securities and debentures.

Thirty-eight companies with a combined paid up capital of \$140.5 million were added to the official list during 1970-71. The total value of new issues made by listed companies (including Australian Government and semi-government authorities) during the year was \$816.4 million compared with 1,774.1 million in 1969-70 and \$557.4 million in 1968-69. Twenty-four companies were removed from the official list during the year as a result of takeovers (twelve), company requests (ten) and insufficient share spread (two).

Shown in the next table is the number of listed companies, and the number of listed securities and their paid up value.

Stock Exchange of Adelaide, Official Listings

At 30 June	Listed Companies (a)		Listed Securities	
	Number	Number (b)	Paid up Value	
			\$'000	
1967.....	451	2,226	11,697,000	
1968.....	444	2,235	13,000,000	
1969.....	454	2,326	13,563,000	
1970.....	488	2,340	14,608,000	
1971.....	502	2,328	15,384,000	

(a) Includes Australian Government and semi-government authorities.

(b) All ordinary shares (including rights etc.) of a single company constitute one security; similarly all preference shares of a company; each current debenture issue is one security, as is each current loan issue by a Government authority.

BUILDING SOCIETIES

The operations of building societies in South Australia are regulated by the Building Societies Act, 1881-1968 which is administered by the Registrar of Building Societies with whom all building societies must be registered. The societies fall into two categories—permanent societies and Starr-Bowkett societies.

Permanent societies, which have no fixed arrangement for termination of operations, 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 pages 355-6). Advances for the purpose of building or acquiring homes are made to members and other persons by way of mortgage. Two permanent building societies are approved organisations in which the trustee of an estate may legally invest funds.

Starr-Bowkett societies have a limited life and derive their funds from regular subscription from members. These funds are used to make interest-free advances to members, with priority being determined by ballot. When all members have received a loan the process of winding up commences with share capital being returned to members 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
1966-67.	5	21	17,836	5,886	4,347	2,385
1967-68.	6	21	16,647	5,811	4,705	2,236
1968-69.	6	21	20,627	5,746	5,241	2,392
1969-70.	8	22	28,422	5,441	6,270	2,040
1970-71.	10	21	36,352	5,318	6,783	2,001

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	1966-67	1967-68	1968-69	1969-70	1970-71
Assets:	\$'000				
Advances on mortgages and shares	19,470	22,388	27,529	36,466	45,439
Land and buildings	407	430	440	470	996
Other investments (a)	487	797	1,012	2,824	3,651
Cash and deposits	268	296	341	336	296
Other	39	37	130	150	164
Total assets	20,671	23,947	29,452	40,246	50,545
Liabilities:					
Subscriptions	9,450	11,246	14,820	22,881	30,542
Loans due to Government (b)	7,712	8,709	9,881	11,306	12,903
Deposits	2,202	2,516	3,139	4,457	4,969
Reserves and profits	1,090	1,142	1,190	1,209	1,316
Bank overdraft	161	261	335	276	606
Other	56	73	87	118	210
Total liabilities	20,671	23,947	29,452	40,246	50,545

(a) Includes fixed deposits.

(b) Loans made to permanent building societies under the Commonwealth-State Housing Agreement.

Details of financial transactions by building societies during 1970-71 are given in the next table.

Building Societies: Transactions, South Australia, 1970-71

Particulars	Permanent	Starr-Bowkett	Total
Income:	\$'000		
Interest on mortgage loans	2,625	—	2,625
Other	325	39	364
Total	2,950	39	2,990
Expenditure:			
Interest on borrowed funds	2,293	—	2,293
Administration and taxation	537	33	569
Total	2,830	33	2,863
Deposits:			
Received	3,353	—	3,353
Repaid	2,915	—	2,915
Government housing funds (a):			
Received	1,900	—	1,900
Repaid	240	—	240
Advances:			
Paid	12,607	344	12,951
Repaid	3,619	373	3,992

(a) Transactions between Societies and State Treasury.

CO-OPERATIVE SOCIETIES

For the purpose of collecting the statistics in this section co-operative societies have been defined as producing, manufacturing, marketing or distributing 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 per cent.

All such societies must be registered under the Industrial and Provident Societies Act, 1923-1966. 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 following table societies and members have been classified under these headings.

Co-operative Societies: Societies and Membership, South Australia^(a)

Particulars	1966-67	1967-68	1968-69	1969-70	1970-71
Societies:					
Producers societies	40	39	39	39	39
Consumers societies	14	13	12	12	12
Producers and consumers societies	14	13	12	12	12
Total	68	65	63	63	63
Members:					
Producers societies	18,425	18,431	18,438	14,178	14,380
Consumers societies	103,389	103,141	104,304	105,339	105,887
Producers and consumers societies	3,824	3,813	3,787	3,746	3,754
Total members	125,638	125,385	126,529	123,263	124,021

(a) Figures for consumers societies have been revised because of a redefinition of co-operative societies and details for years before 1966-67 are not comparable.

Of the thirty-nine producers societies operating in 1970-71, seven were co-operative wineries or distilleries, nine represented dairy producers, and fourteen were associated with fruit and vegetable production. Six of the remaining nine societies were associated with other rural production. Of the twelve co-operative consumers societies, seven were trading as general storekeepers, the remainder offering specialised 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, Expenditure and Appropriations
South Australia^(a)**

Particulars	1966-67	1967-68	1968-69	1969-70	1970-71
	\$'000				
Income:					
Sales	50,256	55,319	58,208	61,518	64,059
Other	4,583	4,743	4,756	4,571	5,029
Total	54,839	60,062	62,963	66,089	69,088
Expenditure:					
Purchases	37,546	41,207	43,220	46,260	47,620
Working expenses ^(b)	13,227	14,645	15,412	17,395	18,744
Interest on external borrowing	619	691	752	793	970
Total	51,392	56,543	59,384	64,448	67,334
Appropriations:					
Rebates and bonuses	3,309	3,021	2,869	2,442	2,467
Interest and dividends to shareholders	414	462	456	472	514
Other	822	802	1,182	1,806	1,615
Total	4,545	4,284	4,508	4,720	4,595

(a) Figures for consumers societies have been revised because of a redefinition of co-operative societies and details for years before 1966-67 are not comparable.

(b) Includes provision for depreciation and bad debts.

Details of the liabilities and assets of the societies in each category for 1970-71 are given below. The seven co-operative wineries and distilleries accounted for 49 per cent of producer society assets.

Co-operative Societies: Assets and Liabilities, South Australia, 1970-71

Particulars	Producers Societies	Consumers Societies	Producers and Consumers Societies	Total
	\$'000			
Assets (a):				
Land and buildings	8,109	3,388	2,316	13,813
Fittings, plant and machinery	8,386	316	1,330	10,032
Stock	13,918	2,495	546	16,959
Sundry debtors	6,722	538	1,887	9,146
Cash	344	321	322	987
Profit and loss account	347	9	5	362
Other ^(b)	2,461	1,769	3,567	7,797
Total	40,287	8,834	9,975	59,097
Liabilities:				
Capital	4,378	3,454	968	8,800
Loan capital	10,381	1,877	3,176	15,433
Bank overdraft	5,201	879	1,673	7,753
Sundry creditors	3,222	578	1,830	5,630
Accumulated profits	820	357	—	1,177
Reserves and reserve funds ^(c)	6,416	1,607	992	9,015
Other ^(d)	9,870	82	1,336	11,288
Total	40,287	8,834	9,975	59,097

(a) Assets are shown at net value after deduction of provisions.

(b) Includes investments and advances to members.

(c) Excludes provision for depreciation and bad debts.

(d) Includes amounts due to members.

CO-OPERATIVE CREDIT SOCIETIES

Co-operative Credit Societies are defined as 'financial' organisations, registered under the Industrial and Provident Societies Act, which have more than half of their assets in the form of loans to members and/or derive more than half of their income from such loans. Societies included in this collection, which was conducted for the first time for 1970-71, are mainly Credit Unions or Savings and Loans Societies. The figures below are excluded from the statistics of Co-operative Societies on pages 597-8.

Details of assets and liabilities of these societies, given in the following table, are compiled from individual returns with a variety of balance dates. The figures shown represent the aggregate of returns with balancing dates in 1970-71.

Co-operative Credit Societies, South Australia

Particulars	1970-71
	Number
Societies	29
Shareholders (a)	21,850
Deposit accounts (a)	18,451
Borrowing members	11,072
	\$'000
Selected Receipts and Payments:	
Deposits received (b)	5,129
Deposits repaid (c)	2,975
Loans paid over	5,852
Loan repayments (c)	4,018
Budget savings deposits received	327
Budget savings payments made	293
Income:	
Interest on loans to members	572
Other	40
Total	612
Expenditure:	
Dividends on shares	134
Interest on deposits	223
Other (d)	246
Total	603
Assets:	
Loans to members	7,784
Cash in hand and at bank	69
Investments	222
Other	86
Total	8,161
Liabilities:	
Share capital	332
Reserves and accumulated profits	280
Deposits	7,167
Budget savings accounts	39
Bank overdraft	186
Other	158
Total	8,161

(a) Shareholders may or may not have deposit accounts. Deposit account holders are not always shareholders.

(b) Includes interest credited of \$142,000.

(c) Includes interest.

(d) Includes salaries and wages, administrative expenses, and provisions for taxation, doubtful debts, and long service leave.

ESTATES OF DECEASED PERSONS

During recent years more than 80 per cent of estates of deceased persons have been administered by executors following grants by the Supreme Court of probate on wills left by the deceased. Should the executorship of a will fail for any reason, for example by the death or renunciation of a nominated executor, the Court issues 'letters of administration with the will annexed' but the more usual 'letters of administration' relate to the estates of persons who died intestate. Tables in this section contain details of estates covered by the three types of grant during specified years.

Estates generally are those located in South Australia and not necessarily estates of deceased residents of this State. The net value of an estate is the gross value less proved liabilities; these liabilities do not include Commonwealth estate duty or State succession duties.

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 1970.

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					
1966.....	2,651	14,563	32,112	43,456	16,392
1967.....	2,726	15,839	35,656	47,247	17,332
1968.....	2,896	18,237	37,480	51,768	17,876
1969.....	2,948	17,415	43,199	56,775	19,259
1970.....	2,770	16,320	40,644	51,797	18,699
FEMALES					
1966.....	1,984	6,879	16,047	21,083	10,626
1967.....	2,161	7,355	18,516	24,295	11,243
1968.....	2,196	8,085	18,420	25,032	11,399
1969.....	2,213	7,264	17,680	23,572	10,652
1970.....	2,202	9,034	20,111	27,255	12,377
PERSONS					
1966.....	4,635	21,442	48,159	64,539	13,924
1967.....	4,887	23,194	54,171	71,542	14,639
1968.....	5,092	26,322	55,900	76,800	15,083
1969.....	5,161	24,679	60,878	80,347	15,568
1970.....	4,972	25,355	60,755	79,052	15,899

The distribution of estates through various size groups and the gross value of real and personal estate respectively in each group are shown in the following table for the years 1969 and 1970.

For both years estates with an individual net value under \$2,000 formed more than 20 per cent of the total number but less than 2 per cent of total net value, while estates under \$10,000 constituted approximately 64 per cent of total numbers but less than 17 per cent of total net value. The few estates, about 7 per cent of the total, with an individual net value of \$50,000 or more constituted more than 45 per cent of the total net value.

Real estate formed approximately 29 per cent of the total gross value for all estates.

Estates of Deceased Persons: Size and Structure of Estates, South Australia

Size of Net Estate (dollars)	1969				1970			
	Estates	Value of Estates			Estates	Value of Estates		
		Gross		Net		Gross		Net
		Real	Personal			Real	Personal	
No.	\$'000	\$'000	\$'000	No.	\$'000	\$'000	\$'000	
Under 2,000	1,216	219	1,383	1,140	1,009	292	1,268	971
2,000 and under 4,000	798	707	2,132	2,378	735	587	2,057	2,174
4,000 and under 6,000	630	1,316	2,242	3,115	551	1,159	1,980	2,750
6,000 and under 8,000	510	1,987	1,943	3,552	520	2,029	2,020	3,615
8,000 and under 10,000	348	1,664	1,662	3,090	369	1,759	1,772	3,294
10,000 and under 20,000	751	4,107	7,144	10,411	818	4,924	7,361	11,350
20,000 and under 30,000	275	1,635	5,430	6,654	307	2,462	5,538	7,560
30,000 and under 40,000	160	1,624	4,220	5,515	173	1,631	4,885	6,038
40,000 and under 50,000	115	1,335	4,061	5,185	122	1,446	4,449	5,467
50,000 and under 100,000	248	4,465	13,843	17,575	257	4,936	13,653	17,784
100,000 and under 200,000	92	2,722	10,086	12,279	95	3,279	10,170	12,735
200,000 and under 400,000	10	779	2,046	2,798	13	713	3,959	3,567
400,000 and over	8	2,120	4,689	6,656	3	137	1,642	1,747
All estates	5,161	24,679	60,878	80,347	4,972	25,355	60,755	79,052

The following table provides an analysis of estates on which probate or administration was granted during 1970 according to the age group of persons leaving those estates.

Estates of Deceased Persons: Age and Sex of Deceased, Value of Estates South Australia, 1970

Age of Deceased	Males				Females			
	Estates	Value of Estates			Estates	Value of Estates		
		Gross	Net	Average Net		Gross	Net	Average Net
Under 21 years ..	16	81	75	4.7	5	46	43	8.6
21 to 29 years ...	46	412	366	8.0	6	28	19	3.2
30 to 39 years ...	53	881	695	13.1	14	132	112	8.0
40 to 49 years ...	164	3,756	2,956	18.0	52	397	337	6.5
50 to 59 years ...	401	7,849	6,917	17.2	146	2,085	1,885	12.9
60 to 69 years ...	688	13,934	12,609	18.3	360	5,196	4,892	13.6
70 to 79 years ...	736	17,357	15,941	21.7	703	9,094	8,592	12.2
80 years and over	643	12,298	11,871	18.5	900	11,871	11,084	12.3
Age not stated....	23	396	367	16.0	16	296	292	18.3
All ages	2,770	56,964	51,797	18.7	2,202	29,145	27,255	12.4

REAL ESTATE MORTGAGES

The Real Property Act, 1886-1969, 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	
	No.	\$'000	No.	\$'000
1961-62	28,070	137,072	21,331	59,782
1962-63	33,929	181,982	25,607	74,785
1963-64	37,813	207,097	29,002	93,116
1964-65	38,631	220,077	30,334	95,425
1965-66	38,779	262,812	30,661	104,547
1966-67	37,937	215,926	30,689	104,808
1967-68	36,513	209,450	30,291	97,343
1968-69	35,409	209,402	30,620	117,409
1969-70	37,942	224,132	34,940	126,941
1970-71	38,920	315,793	35,995	146,011

The average value of new loans in 1970-71 was \$8,114 compared with \$5,907 in 1969-70.

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, of items 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 one of the most significant forms of instalment credit. The distinguishing feature of a hire-purchase agreement is that ownership of the good 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, 1960-1971, 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 1970-71 are given in the next table 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, earthmoving 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.

**Instalment Credit for Retail Sales: New Agreements
South Australia and Northern Territory, 1970-71**

Particulars	Unit	Motor Vehicles, Tractors, Etc.	Plant and Machinery	Household and Personal Goods	Total
Hire-purchase:					
Number of agreements	'000	21.5	1.7	45.0	68.2
Value of goods (a)	\$ million	38.9	5.7	10.9	55.5
Amount financed (a)	\$ million	27.4	4.0	9.0	40.3
Other instalment credit:					
Amount financed (a)	\$ million	66.9	1.5	23.0	91.4

(a) Excludes hiring charges, interest and insurance.

In the instalment credit statistics which follow, transactions are classified to the type of business which originally wrote the agreement regardless of whether that agreement was subsequently assigned, discounted or mortgaged.

**Instalment Credit for Retail Sales: Amount Financed
South Australia and Northern Territory^(a)**

Year	Motor Vehicles, Tractors, Etc.	Plant and Machinery	Household and Personal Goods	Total
\$ million				
RETAIL BUSINESSES				
1966-67	1.8	0.3	18.8	20.9
1967-68	2.0	0.3	19.2	21.5
1968-69	2.2	0.5	21.4	24.1
1969-70	2.0	0.4	22.7	25.1
1970-71	1.8	0.3	24.0	26.1
NON-RETAIL FINANCE BUSINESSES				
1966-67	46.4	4.3	10.8	61.5
1967-68	55.3	4.7	8.6	68.6
1968-69	72.0	6.9	7.6	86.5
1969-70	89.4	5.0	7.4	101.7
1970-71	92.5	5.2	7.9	105.7
ALL BUSINESSES				
1966-67	48.1	4.7	29.6	82.4
1967-68	57.2	5.1	27.7	90.0
1968-69	74.2	7.4	29.0	110.6
1969-70	91.4	5.3	30.1	126.9
1970-71	94.3	5.5	32.0	131.8

(a) Excludes hiring charges, interest and insurance.

'Retail businesses' include both retailers who finance their own sales and any business set up by a retailer or group of retailers primarily to finance the sales of that retailer or group. All other businesses engaged in instalment credit financing or retail sales, irrespective of whether their main activity is financing, constitute 'non-retail finance businesses'.

Of the \$92.5 million provided by non-retail finance businesses for motor vehicle purchases in 1970-71, \$41.5 million was for new vehicles and \$51.0 million for used vehicles.

Details of balances outstanding at the end of each of the last five years are given below. A trend away from financing by 'retail businesses' and from hire purchase can be seen.

Instalment Credit for Retail Sales: Balances Outstanding
South Australia and Northern Territory^(a)
At 30 June

Particulars	1967	1968	1969	1970	1971
	\$ million				
Type of business:					
Retail businesses	27.8	25.9	25.6	25.5	25.1
Non-retail finance businesses	104.9	112.1	127.9	148.4	165.4
Total	132.8	138.1	153.5	173.9	190.4
Type of credit:					
Hire-purchase	75.8	65.6	57.4	55.1	58.3
Other instalment credit	57.0	72.4	96.1	118.9	132.2
Total	132.8	138.1	153.5	173.9	190.4

(a) Includes hiring charges, interest and insurance.

FINANCE COMPANIES

Finance companies are defined as companies, incorporated under the Companies Act, whose main activity is providing to the general public (businesses or persons) credit facilities of the following type: hire-purchase and other instalment credit for retail sales; wholesale finance; other consumer and commercial loans; and factoring. Companies whose main activity is leasing are included only if they are related under the Companies Act to another finance company. Special classes of financial institutions such as banks, insurance and investment companies and building and friendly societies are also excluded, although merchant banking companies are included if they come within the scope of the collection.

Finance companies here defined are not equivalent to 'non-retail finance businesses' mentioned on page 602. The statistics of 'instalment credit for retail sales' shown in the second and third of the tables which follow form part of the figures in the tables on page 603 and above.

Shown in the following tables is a summary of transactions of Finance Companies for the last five years. 'Leasing' covers leasing of business equipment and plant, including motor vehicles for business use. The value of goods leased

during the period is the initial capital cost of goods newly leased plus the depreciated value of goods re-leased during the period. The value of goods on lease at the end of the period is the initial capital cost of the goods less depreciation to date.

Finance Companies: Summary of Transactions
South Australia and Northern Territory

Particulars	1966-67	1967-68	1968-69	1969-70	1970-71
	\$ million				
Leasing of business equipment and plant:					
Goods leased during the period ..	5.6	10.0	12.7	16.1	20.5
Goods on lease at end of period ..	9.6	16.4	21.5	27.2	35.7
Other transactions:					
Amount financed	199.4	228.3	272.1	334.8	368.0
Cash collections and other liquidations	235.7	250.9	286.9	349.4	391.7
Balances outstanding at end of period	220.7	239.2	266.7	310.8	353.4

The amount financed, which is the actual amount of cash provided, may be classified according to the type of finance agreement. The following comments are offered to clarify the content of various items in the table below:

1. Instalment credit for retail sales is defined in the same way as in the previous section (see page 602);
2. Wholesale finance relates mainly to the financing of stocks of motor vehicles held under bailment or floor-plan schemes but includes also financing of other trading stock;
3. Personal loans are all loans to persons in their private capacity, other than loans classified as instalment credit or mortgage loans.

Finance Companies: Amount Financed
South Australia and Northern Territory

Type of Agreement	1966-67	1967-68	1968-69	1969-70	1970-71
	\$ million				
Instalment credit for retail sales	57.1	66.0	81.7	98.5	101.9
Wholesale finance	77.1	91.8	110.7	118.6	124.7
Other consumer and commercial loans:					
Personal loans	8.7	12.4	9.5	9.2	7.3
Other (a)	56.5	58.2	70.1	108.5	134.2
Total	199.4	228.3	272.1	334.8	368.0

(a) Includes factoring and mortgage loans.

Collections and other liquidations of balances and balances outstanding may be divided between contracts including charges and those excluding charges. Contracts including charges are those which have interest and other charges written into the contractual amount at the time of origin of the agreement. Practices in this respect vary between finance companies and between types of agreements.

Details of collections and other liquidations and balances outstanding are not available separately for the categories personal loans, mortgage loans and commercial loans, because some finance companies do not segregate these types of agreements in their records of balances and collections.

**Finance Companies: Liquidations and Balances Outstanding
South Australia and Northern Territory**

Year	Instalment Credit for Retail Sales	Wholesale Finance	Other Consumer and Commercial Loans		Total All Contracts
			Contracts Including Charges	Contracts Excluding Charges	
\$ million					
COLLECTIONS AND OTHER LIQUIDATIONS					
1966-67	79.6	77.2	40.7	38.2	235.7
1967-68	79.2	91.1	37.2	43.5	250.9
1968-69	90.9	111.5	41.0	43.4	286.9
1969-70	109.1	119.0	44.4	76.8	349.4
BALANCES OUTSTANDING					
1966-67	101.3	10.3	72.2	36.9	220.7
1967-68	109.1	13.5	81.6	34.9	239.2
1968-69	123.6	15.2	84.2	43.7	266.7
1969-70	145.0	17.4	99.6	48.9	310.8
\$ million					
COLLECTIONS AND OTHER LIQUIDATIONS					
1970-71	119.8	125.3	9.8	39.8	391.7
BALANCES OUTSTANDING					
1970-71	160.9	20.0	14.4	101.3	353.4

(a) Includes mortgage loans, commercial loans and factoring.

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 in excess of 130 years. Generally, all series on each page relate to either financial or calendar years but some financial year series have been included on pages which contain information shown in calendar 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 609) 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

* not yet available

——— break in continuity of figures

STATISTICAL SUMMARY

POPULATION

Year	Population Estimate at 31 Dec. (a)			Population Growth			
				Recorded Natural Increase	Rate of Natural Increase	Total Increase	Rate of Popula- tion Growth
	Males	Females	Persons	(b)	(c)	(d)	%
1836.....	309	237	546			546	
1841.....	8,755	6,730	15,485			855	5.84
1846.....	14,711	11,182	25,893			3,433	15.29
1851.....	37,321	29,217	66,538	577	22.29	2,838	4.46
1856.....	56,264	51,622	107,886	1,786	26.85	10,499	10.78
1861.....	67,409	63,403	130,812	3,341	30.97	5,230	4.17
1866.....	88,024	80,883	168,907	3,589	28.00	7,430	4.60
1871.....	97,019	91,625	188,644	4,029	24.39	4,098	2.22
1876.....	116,894	107,666	224,560	4,704	25.21	14,484	6.89
1881.....	152,453	133,518	285,971	4,674	21.51		
1886.....	160,814	145,896	306,710	6,696	23.81	9,578	3.47
1891.....	168,826	155,895	324,721	6,943	22.54	-2,603	-0.84
1896.....	179,024	173,043	352,067	6,526	20.23	5,774	1.81
1901.....	(d)180,440	(d)178,890	(d)359,330	5,974	16.95	99	0.03
1906.....	184,803	181,710	366,513	5,105	14.29	(d) 2,080	0.58
1911.....	214,061	205,331	419,392	3,049	13.90	3,892	1.07
1916 (e).....	212,585	229,253	441,838	7,019	17.05	12,530	3.08
1921.....	251,170	250,572	501,742	6,780	15.35	-4,147	-0.93
1926.....	285,013	275,912	560,925	6,992	14.07	10,736	2.19
				6,606	11.92	13,877	2.54
1931.....	289,397	287,682	577,079	4,191	7.28	2,612	0.45
1932.....	290,254	289,039	579,293	3,564	6.16	2,214	0.38
1933.....	291,727	291,019	582,746	3,996	6.88	3,453	0.60
1934.....	292,531	291,958	584,489	3,056	5.24	1,743	0.30
1935.....	293,667	293,095	586,762	3,107	5.31	2,273	0.39
1936.....	294,835	294,935	589,770	3,447	5.86	3,008	0.51
1937.....	295,653	296,144	591,797	3,738	6.34	2,027	0.34
1938.....	297,604	298,238	595,842	3,871	6.53	4,045	0.68
1939 (e).....	299,212	300,101	599,313	3,879	6.50	3,471	0.58
1940 (e).....	297,885	301,171	599,056	4,309	7.19	-257	-0.04
1941 (e).....	301,645	304,721	606,366	4,677	7.78	7,310	1.22
1942 (e).....	303,511	307,467	610,978	4,566	7.50	4,612	0.76
1943 (e).....	305,655	310,372	616,027	6,663	10.86	5,049	0.83
1944 (e).....	308,853	314,177	623,030	7,327	11.83	7,003	1.14
1945 (e).....	312,588	318,294	630,882	7,984	12.73	7,852	1.26
1946 (e).....	317,238	323,180	640,418	9,352	14.72	9,536	1.51
1947 (e).....	325,399	329,233	654,632	10,102	15.62	14,214	2.22
1948.....	335,085	335,530	670,615	9,122	13.79	15,983	2.44
1949.....	349,600	346,018	695,618	9,669	14.21	25,003	3.73
1950.....	364,705	358,138	722,843	10,566	14.89	27,225	3.91
1951.....	375,188	368,597	743,785	10,279	14.03	20,942	2.90
1952.....	388,433	380,137	768,570	10,834	14.35	24,785	3.33
1953.....	397,610	388,055	785,665	11,194	14.42	17,095	2.22
1954.....	409,733	398,517	808,250	11,048	13.87	22,585	2.87
1955.....	423,042	411,619	834,661	10,958	13.36	26,411	3.27
1956.....	436,807	425,145	861,952	11,371	13.40	27,291	3.27
1957.....	448,411	437,841	886,252	11,960	13.68	24,300	2.82
1958.....	458,401	449,652	908,053	12,304	13.72	21,801	2.46
1959.....	471,868	462,629	934,497	12,429	13.49	26,444	2.91
1960.....	483,802	473,220	957,022	13,162	13.93	22,525	2.41
1961.....	493,356	483,765	977,121	14,584	15.03	20,099	2.10
1962.....	501,920	493,910	995,830	13,129	13.32	18,709	1.91
1963.....	513,255	506,535	1,019,790	13,166	13.06	23,960	2.41
1964.....	527,594	521,557	1,049,151	11,960	11.56	29,361	2.88
1965.....	542,635	537,312	1,079,947	12,103	11.38	30,796	2.94
1966.....	553,900	549,700	1,103,600	11,017	10.07	20,687	1.91
1967.....	559,200	556,500	1,115,600	11,315	10.20	11,999	1.09
1968.....	566,600	565,100	1,131,700	11,291	10.06	16,021	1.44
1969.....	574,500	574,200	1,148,700	12,640	11.09	17,053	1.51
1970.....	584,200	585,200	1,169,400	12,479	10.78	20,671	1.80
1971.....	591,500	593,100	1,184,600	13,310	11.32	15,182	1.30

(a) Figures before January 1966 exclude full-blood Aborigines. (b) Births and deaths of full-blood Aborigines, where identified in registrations, have been excluded from natural increase figures before 1 January 1966. (c) Excess of births over deaths per 1,000 of mean population. The population used in the calculation of rate is inclusive or exclusive of full-blood Aborigines as appropriate. (d) Northern Territory included before 1901, but subsequently excluded. (e) 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	Tuberculosis
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			
1861.....	5,551	43.30	1,064	191.68	1,962	15.30		0.05	0.98
1866.....	6,782	41.06	1,385	204.22	2,753	16.67		0.08	1.25
1871.....	7,082	37.95	851	120.16	2,378	12.74		0.16	1.25
1876.....	8,224	37.84	1,228	149.32	3,550	16.34		0.18	1.05
1881.....	10,708	38.08	1,364	127.38	4,012	14.27		0.35	1.22
1886.....	11,177	36.29	1,409	126.06	4,234	13.75		0.32	1.16
1891.....	10,737	33.36	976	90.77	4,211	13.08		0.34	1.34
1896.....	10,012	28.44	1,015	101.02	4,038	11.47		0.49	1.31
1901.....	9,079	25.41	909	100.12	3,974	11.12		0.53	1.17
1906.....	8,921	24.57	675	75.66	3,872	10.66		0.60	1.06
1911.....	11,057	28.86	670	60.60	4,038	9.81	1.04	0.77	1.08
1916.....	11,857	26.85	868	73.21	5,077	11.50	1.29	0.74	0.85
1921.....	11,974	24.09	784	65.48	4,982	10.02	1.13	0.81	0.93
1926.....	11,483	20.73	509	44.33	4,877	8.81	1.00	0.92	0.80
1927.....	11,492	20.33	614	53.43	5,128	9.07	1.03	0.96	0.71
1928.....	11,408	19.98	542	47.51	5,147	9.02	1.07	0.94	0.64
1929.....	10,665	18.63	436	40.88	5,039	8.80	1.10	1.01	0.60
1930.....	9,984	17.42	483	48.38	4,851	8.46	1.05	1.11	0.60
1931.....	9,079	15.77	330	36.35	4,888	8.49	1.39	1.04	0.51
1932.....	8,521	14.74	312	36.62	4,957	8.58	1.48	1.20	0.58
1933.....	8,900	15.32	286	32.13	4,904	8.44	1.40	1.13	0.48
1934.....	8,459	14.50	301	35.58	5,403	9.26	1.64	1.17	0.52
1935.....	8,270	14.13	289	34.95	5,163	8.82	1.76	1.12	0.48
1936.....	8,911	15.16	277	31.09	5,464	9.29	1.87	1.04	0.44
1937.....	8,985	15.24	297	33.06	5,247	8.90	1.77	1.26	0.40
1938.....	9,410	15.86	287	30.50	5,539	9.34	2.02	1.23	0.44
1939.....	9,618	16.11	336	34.93	5,739	9.61	2.21	1.30	0.37
1940.....	10,017	16.72	356	35.54	5,708	9.53	2.25	1.18	0.38
1941.....	10,965	18.24	356	32.47	6,288	10.46	2.62	1.25	0.37
1942.....	11,278	18.51	448	39.72	6,712	11.02	2.73	1.26	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	23.09	448	20.00	7,815	8.06	2.92	1.26	0.06
1962.....	21,361	21.67	409	19.15	8,232	8.35	3.06	1.37	0.03
1963.....	21,367	21.20	399	18.67	8,201	8.14	2.99	1.27	0.04
1964.....	20,866	20.16	397	19.03	8,906	8.61	3.24	1.32	0.01
1965 (d).....	20,891	19.63	385	18.43	8,788	8.26	3.11	1.30	0.03
1966.....	20,362	18.61	364	17.88	9,345	8.54	3.22	1.32	0.02
1967.....	20,386	18.37	346	16.97	9,071	8.17	3.09	1.36	0.02
1968.....	21,207	18.89	345	16.27	9,916	8.83	3.29	1.41	0.02
1969.....	21,977	19.29	347	15.79	9,337	8.19	2.96	1.47	0.02
1970.....	22,617	19.53	367	16.23	10,138	8.76	3.21	1.43	0.01
1971.....	22,996	19.56	366	15.92	9,686	8.24	2.91	1.41	0.02

(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.

(d) Vital events of full-blood Aborigines, where identified in registrations, were excluded before 1966.

SOCIAL DEVELOPMENT
Marriages and Divorces; Law and Order

Year	Marriages		Divorces (b)	Bank- ruptcies	Court Convictions		Police (g)	
	Total	Rate (a)			Supreme Court (c)	Courts of Summary Juris- diction (d)	Active Strength	Expen- diture by State
								\$'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	90
1871.....	1,250	6.70		247	91	4,864	187	74
1876.....	1,852	8.52		200	129	7,905	257	108
1881.....	2,308	8.21		696	213	13,231	371	164
1886.....	1,976	6.42	10	535	121	6,808	401	178
1891.....	2,315	7.21	5	142	85	6,918	388	172
1896.....	2,183	6.20	6	240	110	5,149	347	150
1901.....	2,304	6.45	6	165	98	4,968	359	152
1906.....	2,679	7.38	3	172	92	5,249	373	153
1911.....	4,036	9.80	20	190	74	7,303	423	183
1916.....	3,602	8.16	14	324	52	7,145	541	262
1921.....	4,383	8.82	88	155	97	8,968	566	391
1926.....	4,503	8.13	71	439	174	21,417	633	499
1927.....	4,501	7.96	97	493	196	22,876	645	524
1928.....	4,146	7.26	113	446	264	18,665	717	550
1929.....	3,719	6.50	106	306	261	17,353	802	630
1930.....	3,312	5.78	146	622	304	15,609	785	656
1931.....	3,069	5.33	138	996	274	14,760	763	641
1932.....	3,636	6.29	134	654	236	14,705	743	586
1933.....	3,973	6.84	163	570	224	13,060	740	550
1934.....	4,310	7.39	188	626	206	13,728	719	549
1935.....	4,845	8.28	211	597	172	14,838	705	556
1936.....	5,182	8.81	213	551	171	14,920	701	570
1937.....	5,340	9.06	206	468	183	17,297	692	599
1938.....	5,489	9.25	243	461	172	18,341	712	641
1939.....	5,670	9.50	241	630	179	20,429	724	(e)654
1940.....	6,950	11.60	309	437	163	18,364	723	677
1941.....	6,855	11.40	273	284	177	21,990	707	689
1942.....	8,129	13.34	312	222	211	(f)	680	695
1943.....	6,263	10.21	452	93	208	22,502	674	712
1944.....	6,019	9.72	503	49	158	22,079	704	734
1945.....	5,321	8.49	617	24	203	20,554	771	770
1946.....	6,700	10.55	654	23	231	20,585	830	819
1947.....	6,668	10.31	695	32	246	24,491	833	888
1948.....	6,704	10.14	630	32	185	24,164	869	1,052
1949.....	6,247	9.18	590	52	205	22,834	928	1,208
1950.....	6,585	9.28	661	44	207	25,496	942	1,398
1951.....	6,646	9.07	637	53	307	28,675	913	1,647
1952.....	6,241	8.27	581	76	328	27,432	952	2,073
1953.....	6,149	7.92	628	91	330	30,229	982	2,429
1954.....	6,190	7.77	594	89	312	25,482	986	2,617
1955.....	6,226	7.59	624	106	340	29,264	969	2,517
1956.....	6,277	7.40	567	150	362	28,221	1,018	3,060
1957.....	6,581	7.53	529	244	459	30,658	1,143	3,303
1958.....	6,505	7.25	483	278	457	32,621	1,183	3,677
1959.....	6,614	7.18	503	366	499	34,203	1,243	4,084
1960.....	6,607	6.99	610	368	580	42,531	1,301	4,499
1961.....	6,804	7.01	718	561	606	52,155	1,376	5,043
1962.....	7,021	7.12	685	620	718	53,531	1,466	5,651
1963.....	7,302	7.24	765	584	745	57,189	1,441	5,825
1964.....	7,765	7.50	887	675	629	55,408	1,496	6,245
1965.....	8,680	8.16	852	582	713	62,238	1,558	6,912
1966.....	9,051	8.27	1,069	648	738	71,694	1,595	7,319
1967.....	9,434	8.50	929	660	707	87,110	1,660	8,417
1968.....	9,652	8.60	915	759	692	105,027	1,777	9,137
1969.....	10,599	9.30	963	659	712	105,966	1,845	9,568
1970.....	10,864	9.38	939	611	(h) 694	114,499	1,881	10,621
1971.....	10,833	9.22	1,264	681	931	110,543	1,971	12,181

- (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 30 June from 1943.
 (g) Year ended 30 June. (h) From late 1970 covers also District Criminal Courts to which some juris-
 diction transferred.

SOCIAL DEVELOPMENT

Education

Year	Number of Schools (a)		Number of Pupils (a)				Universities		State Expenditure on Education (d)
	State	Private (Primary and Secondary)	State Schools			Private Schools (Primary and Secondary)	Students	Receipts (including Government Grants)	
			Primary (b)	Secondary (b)	Technical (c)				
							\$'000	\$'000	
1851.....	115		3,031					6	
1856.....	147		6,516					24	
1861.....	219	236	10,711					30	
1866.....	292	n.a.	14,690					44	
1871.....	307	n.a.	15,791					48	
1876.....	281	326	25,889				58	116	
1881.....	405	363	36,888				74	268	
1886.....	504	n.a.	44,405				197	254	
1891.....	552	285	47,094				246	266	
1896.....	639	232	59,944				320	312	
1901.....	706	230	63,183				591	390	
1906.....	708	215	57,270			9,753	626	380	
1911.....	743	184	53,494	1,800	2,811	11,121	641	522	
1916.....	857	(e)222	63,935	3,047	3,571	(e)12,785	491	650	
1921.....	973	177	77,111	3,067	6,045	13,951	1,338	1,183	
1926.....	1,019	195	79,204	6,527	7,216	16,139	1,575	1,762	
1927.....	1,028	193	80,298	7,472	7,748	15,750	1,724	2,093	
1928.....	1,043	191	81,231	8,060	7,750	15,857	1,778	2,184	
1929.....	1,068	196	80,618	8,861	8,324	16,087	1,813	2,256	
1930.....	1,074	195	80,332	9,558	7,783	15,599	2,085	2,330	
1931.....	1,075	193	81,218	10,503	6,585	14,310	2,092	2,185	
1932.....	1,087	190	80,905	9,880	6,302	13,887	2,084	2,190	
1933.....	1,107	195	80,215	9,683	6,808	13,861	2,123	2,461	
1934.....	1,111	192	78,753	8,778	7,457	14,189	2,066	2,336	
1935.....	1,123	193	77,714	8,936	8,339	13,971	2,072	2,330	
1936.....	1,100	190	75,411	9,280	8,654	7,808	2,025	2,117	
1937.....	1,091	193	72,849	9,722	9,247	10,920	2,113	2,238	
1938.....	1,078	184	69,664	9,701	9,610	9,529	2,307	2,359	
1939.....	1,054	188	66,861	10,608	9,721	10,700	2,354	2,452	
1940.....	1,060	182	65,682	10,546	9,980	13,621	2,443	2,523	
1941.....	1,006	181	63,303	10,761	10,518	13,915	2,211	2,515	
1942.....	950	178	61,326	10,173	9,768	14,220	1,799	2,563	
1943.....	897	172	59,764	11,196	10,952	15,328	1,897	2,588	
1944.....	909	168	59,460	12,265	12,534	15,868	2,132	2,816	
1945.....	837	159	60,029	11,583	14,178	16,312	2,599	3,096	
1946.....	811	157	61,242	11,870	16,175	16,310	3,723	3,387	
1947.....	782	155	63,853	11,723	16,665	16,468	4,045	4,001	
1948.....	773	154	66,653	11,550	18,145	17,169	4,266	4,673	
1949.....	759	157	71,337	11,922	18,664	18,426	4,126	5,210	
1950.....	743	158	76,369	12,732	18,910	19,655	4,069	6,201	
1951.....	728	156	81,642	14,106	18,961	20,677	3,720	7,806	
1952.....	716	155	89,630	15,121	20,206	22,393	3,612	9,842	
1953.....	723	157	97,262	16,933	20,542	23,631	3,565	12,097	
1954.....	716	166	105,022	17,972	21,785	24,949	3,555	13,020	
1955.....	701	165	111,909	19,485	23,078	26,840	3,617	14,458	
1956.....	699	171	118,365	22,134	25,647	29,050	3,828	17,293	
1957.....	694	171	123,132	24,734	27,482	30,504	4,424	18,980	
1958.....	674	169	125,678	28,189	31,383	31,792	4,816	21,475	
1959.....	668	170	129,850	33,042	33,809	33,201	5,300	25,767	
1960.....	681	171	132,372	37,901	30,404	34,996	5,723	29,944	
1961.....	686	174	135,274	41,889	31,140	35,654	6,250	34,471	
1962.....	682	172	136,924	46,499	32,760	36,402	6,824	40,309	
1963.....	682	174	140,520	49,637	34,193	37,031	7,416	44,842	
1964.....	685	177	145,042	54,026	38,448	37,651	8,203	50,854	
1965.....	700	179	150,809	57,811	41,858	37,612	8,658	57,362	
1966.....	698	179	154,253	60,834	43,391	37,187	9,364	64,562	
1967.....	688	180	157,424	65,630	43,056	37,002	9,658	68,286	
1968.....	682	178	157,997	68,814	40,424	36,413	10,095	75,000	
1969.....	675	177	159,682	71,599	45,231	36,460	10,411	83,040	
1970.....	680	176	164,599	n.a.	44,695	37,106	10,473	97,623	

(a) Includes Northern Territory before 1958.
 (b) Net enrolment. Includes correspondence pupils and pupils receiving junior technical education.
 (c) Net enrolment plus correspondence pupils. Includes Institute of Technology.
 (d) Year ended 30 June. Gross expenditure from Consolidated Revenue only.
 (e) Private schools compulsorily registered—previous years incomplete.

STATISTICAL SUMMARY

SOCIAL DEVELOPMENT

Health

Year	Public Hospitals				Mental Hospitals (a)		Medical Practitioners Registered	Nurses Registered
	Number of Hospitals	Patients Treated	Revenue		Admissions During Year	Patients at end of Year		
			Govt Aid	Total				
			\$'000	\$'000				
1846.....	1				10	6	22	
1851.....	1	413			9	11	68	
1856.....	1	559			69	177	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	96	132	273	1,084	299	
1916.....	27	12,453	130	186	302	1,158	326	
1921.....	31	15,642	254	397	272	1,190	360	
1926.....	45	22,438	467	730	249	1,282	445	1,271
1927.....	46	24,480	500	751	272	1,306	476	1,309
1928.....	47	25,167	452	741	280	1,350	437	1,399
1929.....	49	25,787	601	915	260	1,374	445	1,472
1930.....	50	26,114	451	736	260	1,404	445	1,565
1931.....	51	26,505	356	574	250	1,395	457	1,601
1932.....	52	28,780	354	591	250	1,410	461	1,650
1933.....	52	29,306	405	678	271	1,465	464	1,687
1934.....	52	31,686	377	659	267	1,519	461	1,757
1935.....	52	31,878	369	652	269	1,572	480	1,826
1936.....	52	34,014	383	730	272	1,627	477	1,886
1937.....	52	35,477	414	775	270	1,709	509	1,977
1938.....	52	37,285	502	891	254	1,747	792	2,068
1939.....	55	39,146	539	931	286	1,800	804	2,239
1940.....	56	41,392	575	1,017	240	1,847	802	2,359
1941.....	55	40,593	607	1,063	247	1,905	814	2,562
1942.....	55	40,137	625	1,200	219	1,892	839	2,768
1943.....	57	41,620	642	1,301	197	1,889	846	2,914
1944.....	58	43,582	762	1,479	276	1,925	866	3,006
1945.....	(b)	(b)	(b)	(b)	(b)	(b)	883	3,153
1946.....	58	46,696	836	1,697	302	2,024	947	3,314
1947.....	59	52,388	1,135	2,133	332	2,107	983	3,380
1948.....	59	50,480	1,382	2,476	330	2,165	1,012	3,589
1949.....	60	53,558	1,671	3,065	398	2,213	1,053	3,808
1950.....	59	54,334	2,109	3,719	379	2,310	1,111	4,018
1951.....	60	57,401	2,694	4,503	452	2,411	1,172	4,199
1952.....	61	59,374	3,739	6,110	426	2,425	1,244	4,461
1953.....	62	61,681	4,673	7,442	498	2,534	1,202	4,585
1954.....	62	62,138	4,340	7,386	548	2,644	1,265	4,724
1955.....	63	64,310	5,524	8,819	516	2,612	1,348	4,884
1956.....	65	69,295	8,214	11,702	553	2,658	1,395	5,026
1957.....	65	73,249	11,370	15,449	543	2,594	1,469	5,122
1958.....	64	75,282	10,425	15,372	659	2,667	1,507	5,475
1959.....	65	79,426	10,260	15,638	712	2,643	1,601	5,583
1960.....	65	82,948	10,474	16,829	1,637	2,810	1,681	5,817
1961.....	66	87,386	10,155	17,414	1,846	2,833	1,739	6,123
1962.....	65	89,409	10,366	18,350	1,925	2,914	1,821	6,523
1963.....	65	94,144	10,007	19,307	2,604	2,799	1,883	6,879
1964.....	65	99,491	12,094	21,166	3,132	2,838	2,002	7,255
1965.....	65	105,098	14,171	24,084	3,061	2,752	2,080	7,699
1966.....	67	111,313	19,681	30,386	2,810	2,646	2,175	8,065
1967.....	65	117,693	22,138	34,532	2,866	2,494	2,282	8,467
1968.....	65	122,835	16,626	31,039	2,733	2,465	2,372	8,832
1969.....	65	132,864	21,364	37,064	2,964	2,283	2,474	9,275
1970.....	66	135,433	23,198	41,500	3,378	2,269	2,568	9,855
1971.....	67	139,842	32,971	53,942	3,527	2,193	2,707	10,506

(a) From 1959-60 covers all in-patients (certified and voluntary) in institutions. Before this covered only certified patients in two 'long-term' institutions.

(b) Year ended 30 June from 1946.

SOCIAL DEVELOPMENT

Social Welfare

Year	Public Relief (a) Expenditure	Children's Welfare Expenditure	Pensions and Benefits Paid in South Australia by Commonwealth Government					Pensioners	
			Age and Invalid Pensions	War and Service Pensions	Child Endowment	National Health Services	Total (a) (includes Other)	Age and Invalid	War and Service
			\$'000					Number	
1895-96	30.0	28.4							
1900-01	36.6	35.4							
1905-06	40.0	38.2							
1910-11	29.0	46.4					7,237		
1911-12	32.0	52.6					7,996		
1912-13	39.2	56.0					8,708		
1913-14	44.6	58.0					9,575		
1914-15	55.8	62.8					10,529		
1915-16	69.8	67.0	544	20			10,993	794	
1916-17	76.0	74.6	704	230		1,052	11,301	4,272	
1917-18	73.4	78.2	728	528		1,370	11,703	10,119	
1918-19	72.4	79.4	882	822		1,816	11,782	14,959	
1919-20	84.0	84.4	898	890		1,902	12,086	16,794	
1920-21	101.8	95.0	910	1,028		2,060	12,320	14,663	
1921-22	94.2	98.5	924	890		1,936	12,513	14,210	
1922-23	86.2	97.1	942	876		1,936	12,759	14,341	
1923-24	91.0	98.0	1,142	894		2,152	13,141	14,848	
1924-25	101.4	98.6	1,174	932		2,224	13,519	15,542	
1925-26	117.6	100.7	1,404	978		2,496	14,098	16,144	
1926-27	129.8	102.8	1,454	1,006		2,574	14,666	16,589	
1927-28	206.0	112.2	1,536	1,002		2,656	15,581	16,835	
1928-29	298.2	109.8	1,648	986		2,746	16,774	16,581	
1929-30	441.8	114.8	1,798	998		2,900	18,291	16,791	
1930-31	154.8	103.7	1,982	994		3,074	20,602	16,653	
1931-32	1,922.2	95.2	1,878	908		2,848	21,897	15,801	
1932-33	1,500.6	90.9	1,826	844		2,726	21,461	15,517	
1933-34	1,359.0	88.8	1,896	854		2,804	22,805	15,352	
1934-35	1,277.0	87.8	2,068	892		3,016	24,517	15,248	
1935-36	1,163.4	89.4	2,298	942		3,298	26,134	15,997	
1936-37	1,086.6	89.4	2,522	1,036		3,622	27,308	16,340	
1937-38	995.4	93.7	2,868	1,076		4,010	28,039	16,865	
1938-39	989.6	94.0	2,836	1,098		4,008	28,857	16,680	
1939-40	1,062.2	99.2	2,908	1,104		4,086	29,521	16,145	
1940-41	389.9	101.4	3,032	1,088		4,192	29,642	15,424	
1941-42	288.1	106.6	3,274	1,108	1,720	6,162	28,422	15,296	
1942-43	232.8	113.3	3,628	1,274	1,810	7,076	27,423	16,333	
1943-44	214.8	131.5	3,688	1,654	1,908	8,076	27,530	18,472	
1944-45	215.4	143.1	3,624	1,838	1,870	8,276	27,507	22,071	
1945-46	238.7	155.2	4,670	2,272	2,854	244	11,262	29,512	30,687
1946-47	250.7	197.8	5,102	2,692	3,196	856	13,212	32,387	35,117
1947-48	261.3	224.4	6,284	3,046	3,212	770	14,708	34,229	38,505
1948-49	279.3	255.6	7,170	3,718	4,024	1,054	17,442	35,470	42,931
1949-50	273.0	287.5	7,888	4,178	4,938	1,220	19,966	36,524	47,303
1950-51	279.0	337.6	8,600	5,214	7,564	2,122	25,216	36,582	51,589
1951-52	336.6	446.7	10,360	6,442	8,298	3,554	30,532	37,363	54,758
1952-53	445.6	466.8	12,616	7,130	9,540	4,154	25,878	39,700	58,591
1953-54	458.6	475.7	14,150	7,686	9,154	4,880	38,202	42,216	61,039
1954-55	487.2	491.2	15,310	8,778	9,428	5,824	41,560	45,147	63,767
1955-56	545.6	553.0	17,718	9,074	10,998	6,140	46,322	47,754	66,535
1956-57	686.4	494.0	19,244	9,572	10,500	6,710	48,926	50,209	68,291
1957-58	865.9	545.6	21,432	10,664	10,860	7,704	54,256	62,699	69,852
1958-59	770.4	674.6	23,150	10,860	12,618	9,868	60,460	55,181	71,331
1959-60	641.9	778.1	26,366	12,697	11,794	11,977	66,157	57,336	72,013
1960-61	691.4	914.8	28,537	13,722	14,092	12,811	73,594	60,483	72,695
1961-62	773.5	1,107.5	32,844	14,241	12,671	14,567	80,283	64,374	74,454
1962-63	693.1	1,129.9	33,951	14,867	12,861	16,066	83,393	64,156	73,239
1963-64	693.3	1,275.5	36,120	16,224	15,916	17,080	91,514	65,573	72,518
1964-65	704.3	1,516.8	38,509	16,006	16,563	18,948	96,362	66,798	70,678
1965-66	841.6	1,716.6	39,691	17,692	16,988	21,254	102,661	67,999	68,439
1966-67	996.3	1,914.4	43,720	16,776	19,063	23,100	111,394	70,521	66,624
1967-68	1,047.5	2,008.2	46,711	17,252	17,835	25,448	116,625	74,016	65,078
1968-69	1,212.0	2,235.9	50,828	19,065	18,162	28,411	126,581	76,616	62,986
1969-70	1,405.2	2,466.6	58,720	19,435	20,287	33,476	143,542	85,076	61,928
1970-71	1,745.7	2,912.8	64,714	20,405	18,284	41,773	158,708	88,936	60,406

(a) 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 (end June) (d)
	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			5,825
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	146.4	3,147
1946-47.....			56.7	14.0	38.1	5.0	200	40.2	1,310
1947-48.....			59.1	14.3	38.1	5.8	51	8.0	778
1948-49.....			60.9	14.9	38.1	5.5	14	1.2	654
1949-50.....			63.1	15.3	38.6	7.0	326	66.2	431
1950-51.....			66.8	16.2	36.9	6.1	6	0.8	406
1951-52.....			68.0	15.9	37.4	4.7	17	2.0	1,613
1952-53.....			67.1	13.4	38.3	5.0	841	264.0	2,343
1953-54.....	178.6	55.7	70.7	14.8	37.8	5.6	270	100.4	964
1954-55.....	183.9	60.1	73.7	15.9	37.6	5.0	66	24.8	1,207
1955-56.....	194.0	64.0	76.1	16.4	37.3	4.7	77	22.2	1,948
1956-57.....	193.3	64.1	75.5	16.4	36.4	3.9	681	227.4	3,363
1957-58.....	194.4	65.9	75.9	16.6	35.2	2.7	1,534	611.0	5,082
1958-59.....	201.1	68.4	77.4	16.7	35.0	3.6	1,641	724.8	3,958
1959-60.....	206.4	72.6	81.3	17.7	33.8	2.6	1,223	498.2	4,547
1960-61.....	207.5	72.3	81.9	18.1	34.0	2.3	1,610	685.6	9,035
1961-62.....	211.2	76.7	81.8	17.3	33.7	2.1	3,643	1,785.6	6,886
1962-63.....	219.6	80.9	86.7	18.6	33.3	1.9	2,244	1,184.7	6,479
1963-64.....	229.4	86.0	90.9	19.9	33.2	1.4	1,513	751.1	4,339
1964-65.....	239.9	93.4	94.7	21.5	32.6	1.3	800	390.4	3,533
1965-66.....	242.8	106.1	96.2	22.1	32.1	1.0	1,306	708.9	7,357
1966-67.....	245.7	109.8	96.1	22.1	31.3	0.8	3,094	1,653.2	8,484
1967-68.....	254.0	116.2	98.9	22.5	29.7	0.7	3,299	1,637.4	8,359
1968-69.....	261.6	121.4	(e) 92.8 p	(e) 23.3 p	29.4	0.6	2,576	1,286.1	6,300
1969-70.....	266.6	129.9	*	*	28.9	0.6	1,636	1,008.4	6,360
1970-71.....	271.7	136.3	*	*	28.2	0.5	2,043	1,378.3	7,975

(a) At June; includes all industries except agriculture, defence and female private domestics. (b) Average employment including working proprietors during the year. (c) Permanent employees only. (d) Includes Northern Territory registrations. (e) Direct comparisons with figures for previous years are not possible because of changes in the scope of the census and in the census units.

WAGES

Year	State Living Wage (a)		Commonwealth Basic Wage (a) (d)		Minimum Weekly Wage Rates (b)		Average Weekly Wage of Factory Employees (c)	
	Males	Females	Males	Females	Males	Females	Males	Females
	\$	\$	\$	\$	\$	\$	\$	\$
1911.....			5.10				4.38	1.59
1912.....			5.10				4.67	1.59
1913.....			5.10				4.90	1.69
1914.....			5.55		5.44	2.41	5.05	1.73
1915.....			6.35		5.47	2.45	4.93	1.63
1916.....	5.40		6.15		5.90	2.48	n.a.	n.a.
1917.....	5.40		5.85		6.31	2.78	5.58	1.80
1918.....	6.30	2.75	6.40		6.55	2.94	5.89	1.99
1919.....	6.30	3.00	7.00		7.04	3.32	6.07	2.15
1920.....	7.50	3.00	8.95		8.27	4.06	6.22	2.47
1921.....	7.95	3.50	7.95		8.94	4.52	7.31	2.88
1922.....	7.75	3.50	7.95		8.75	4.40	7.81	3.06
1923.....	7.85	3.50	8.55		9.08	4.63	7.80	3.19
1924.....	8.20	3.80	8.40		9.18	4.65	8.18	3.38
1925.....	8.55	3.95	8.60		9.43	4.88	8.38	3.52
1926.....	8.55	3.95	8.55		9.57	5.00	8.67	3.62
1927.....	8.55	3.95	8.80		9.66	4.99	9.18	3.84
1928.....	8.55	3.95	8.50		9.62	5.09	9.42	3.95
1929.....	8.55	3.95	8.85		9.72	5.13	9.33	4.00
1930.....	7.50	3.95	7.80		9.27	5.12	9.26	3.99
1931.....	6.30	3.15	5.81		7.50	4.39	8.43	3.61
1932.....	6.30	3.15	5.72		7.26	4.09	7.45	3.17
1933.....	6.30	3.15	5.96		7.34	4.10	7.32	3.10
1934.....	6.30	3.15	6.30		7.55	4.19	7.21	3.05
1935.....	6.60	3.15	6.70		7.79	4.24	7.38	3.12
1936.....	6.60	3.30	6.90		7.95	4.33	7.49	3.12
1937.....	7.40	3.65	7.40		8.58	4.68	7.89	3.20
1938.....	7.40	3.65	7.60		8.71	4.78	8.15	3.29
1939.....	7.80	3.80	7.70		9.41	4.96	8.49	3.32
1940.....	8.40	4.10	8.00		9.85	5.21	8.60	3.49
1941.....	8.70	4.35	8.40		10.58	5.54	9.32	3.89
1942.....	9.40	4.62	9.30		11.50	6.02	11.26	5.18
1943.....	9.40	4.62	9.40		11.61	6.12	12.07	6.05
1944.....	9.40	4.62	9.30		11.58	6.53	12.11	6.56
1945.....	9.40	4.62	9.30		11.60	6.72	11.74	6.34
1946.....	9.85	5.50	10.20		12.41	7.60	11.76	6.00
1947.....	10.60	5.90	10.60		13.78	8.80	12.74	6.52
1948.....	11.70	6.65	11.60		15.22	9.51	14.82	7.67
1949.....	12.50	6.85	12.60		16.44	10.10	16.99	8.76
1950.....	15.80	11.85	15.80	11.85	19.79	14.21	18.74	9.90
1951.....	19.50	14.60	19.50	14.60	23.60	17.02	22.43	12.38
1952.....	22.90	17.15	22.90	17.15	27.08	19.68	27.55	15.60
1953.....	23.10	17.30	23.10	17.30	27.35	19.91	30.00	17.38
1954.....	23.10	17.30	23.10	17.30	28.16	19.99	31.71	17.92
1955.....	23.10	17.30	23.10	17.30	28.50	20.18	33.97	18.35
1956.....	24.10	18.05	24.10	18.05	29.63	20.92	35.59	19.11
1957.....	25.10	18.80	25.10	18.80	30.69	21.95	36.67	19.52
1958.....	25.60	19.20	25.60	19.20	31.24	22.38	37.32	20.63
1959.....	27.10	20.30	27.10	20.30	33.99	23.92	38.17	20.90
1960.....	27.10	20.30	27.10	20.30	34.22	24.29	41.85	22.13
1961.....	28.30	21.20	28.30	21.20	35.46	25.20	43.28	22.78
1962.....	28.30	21.20	28.30	21.20	35.65	25.23	43.86	23.47
1963.....	28.30	21.20	28.30	21.20	36.40	25.52	45.71	23.86
1964.....	30.30	22.70	30.30	22.70	38.69	27.29	47.25	25.23
1965.....	30.30	22.70	30.30	22.70	39.48	27.75	51.72	26.39
1966.....	32.30	24.20	32.30	24.20	41.75	29.42	52.30	27.31
1967.....	33.30	25.20	(d)	(d)	43.79	31.32	55.39	28.89
1968.....	34.65	26.55	(d)	(d)	48.23	33.60	59.45	30.62
1969.....	(e) 34.65	(e) 26.55	(d)	(d)	50.76	35.94	n.a.	n.a.
1970.....	(e) 34.65	(e) 26.55	(d)	(d)	52.11	37.49	n.a.	n.a.
1971.....	37.85	29.00	(d)	(d)	58.81	43.47	n.a.	n.a.

(a) At end of year.

(b) Adult rates, at end of year, for all industries excluding rural.

(c) Excludes drawings of working proprietors.

(d) Superseded by total wage from July 1967.

(e) An economic loading of 3 per cent of the sum of the living wage plus margin was added to all award rates of pay from December 1969 to January 1971.

STATISTICAL SUMMARY

PRICES

Year	Retail Price Indexes: Adelaide						Agricultural Produce at Principal Markets		
	'C' Series (a)			Consumer (b)			Wheat (per bushel) (c)	Barley (per bushel)	Wool (per lb)
	Food and Groceries	Rent	All Groups	Food	Housing	All Groups			
							\$	\$	cents
1901.....	575								
1906.....	549								
1911.....	570						0.346	0.375	7.07
1912.....	645						0.379	0.400	6.36
1913.....	626						0.358	0.375	7.40
1914.....	683	611	699				0.367	0.250	7.21
1915.....	858	574	780				0.725	0.550	6.97
1916.....	835	573	798				0.475	0.325	8.97
1917.....	805	606	832				0.475	0.367	11.39
1918.....	862	656	887				0.475	0.442	11.96
1919.....	1,012	707	1,018				0.550	0.542	12.14
1920.....	1,225	783	1,164				0.900	0.600	11.76
1921.....	941	819	989				0.800	0.442	11.22
1922.....	937	852	954				0.504	0.383	9.96
1923.....	1,019	887	1,008				0.492	0.375	14.80
1924.....	1,002	942	1,015				0.467	0.333	18.33
1925.....	1,029	963	1,028				0.608	0.542	19.14
1926.....	1,045	927	1,026				0.621	0.400	12.45
1927.....	1,030	942	1,018				0.529	0.363	12.35
1928.....	993	1,022	1,027				0.544	0.496	14.47
1929.....	1,055	986	1,037				0.473	0.377	12.47
1930.....	937	916	952				0.433	0.308	7.57
1931.....	789	755	837				0.229	0.225	5.68
1932.....	761	691	802				0.317	0.296	5.73
1933.....	731	694	789				0.281	0.223	6.10
1934.....	767	700	806				0.263	0.242	11.37
1935.....	780	736	820				0.304	0.271	6.82
1936.....	798	795	839				0.383	0.223	9.93
1937.....	826	832	859				0.515	0.406	11.38
1938.....	861	868	888				0.356	0.352	9.40
1939.....	897	888	906				0.227	0.271	7.58
1940.....	900	892	936				0.406	0.354	9.95
1941.....	905	893	988				0.447	0.486	9.87
1942.....	1,046	893	1,075				0.456	0.332	9.79
1943.....	1,003	893	1,102				0.531	0.450	11.37
1944.....	993	892	1,098				0.618	0.432	11.32
1945.....	1,002	892	1,102				0.563	0.546	11.21
1946.....	1,006	894	1,120				0.802	0.633	11.24
1947.....	1,067	897	1,165				0.993	0.892	18.37
1948.....	1,230	903	1,277				1.543	1.685	29.90
1949.....	1,351	912	1,393	38.6	38.4	45.0	1.242	0.838	36.78
1950.....	1,494	929	1,521	41.7	40.0	48.4	1.442	1.127	48.14
1951.....	1,931	949	1,833	48.2	42.5	54.6	1.463	1.169	107.63
1952.....	2,380	1,055	2,159	62.5	47.6	66.8	1.650	1.627	53.77
1953.....	2,444	1,155	2,246	68.7	55.9	73.1	1.681	1.613	62.48
1954.....	2,525	1,174	2,277	71.2	61.5	74.7	1.452	1.017	62.68
1955.....	2,657	1,247	2,354	72.9	63.2	75.6	1.335	1.360	54.73
1956.....	2,871	1,358	2,466	76.2	67.6	78.1	1.350	1.060	46.98
1957.....	2,710	1,468	2,463	78.9	72.3	81.2	1.450	1.100	61.52
1958.....	2,768	1,592	2,536	76.9	74.9	81.8	1.456	1.188	46.76
1959.....	2,998	1,674	2,647	80.7	76.7	83.6	1.402	1.121	38.03
1960.....				84.6	78.3	86.2	1.465	1.010	44.85
1961.....				90.9	83.2	89.8	1.507	0.916	40.14
1962.....				87.7	85.9	89.5	1.516	1.121	41.59
1963.....				86.6	86.7	89.1	1.468	1.100	44.87
1964.....				88.8	88.7	90.2	1.433	1.114	54.22
1965.....				93.9	92.1	93.9	1.412	1.153	44.14
1966.....			Not calculated	97.1	95.7	97.0	1.501	1.176	46.71
1967.....				100.0	100.0	100.0	1.488	1.192	45.22
1968.....				104.7	102.1	102.9	1.602	1.190	37.59
1969.....				106.4	104.7	105.3	1.361	0.932	41.62
1970.....				107.1	109.3	108.2	1.451	0.835	34.03
1971.....				109.5	115.9	112.5	1.481	1.129	27.10

(a) Base: Average all groups six capital cities 1923 to 1927 = 1,000.

(b) Base of each group 1966-67 = 100. Index numbers are for year ended 30 June in the year stated.

(c) Bulk wheat from 1962, previously bagged.

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	2,199.5	104.5	36.1	61.3
1965	10.51	11.52	111	13.34	64.89	2,439.1	101.9	36.7	63.2
1966	11.09	16.67	123	19.49	63.45	2,431.6	105.3	38.0	62.4
1967	6.37	8.67	89	10.11	76.32	2,841.3	102.2	39.0	63.1
1968	16.63	21.34	141	25.72	73.62	2,409.7	109.5	35.9	62.6
1969	11.07	16.34	112	20.68	70.20	2,664.7	105.9	39.0	62.0
1970	12.32	14.72	149	19.01	73.45	2,657.8	104.9	37.2	61.8
1971	n.a.	n.a.	147	26.46	71.39	2,624.4	103.2	39.5	62.7

(a) From 1905 rainfall is the weighted average over agricultural areas, previously average of 50 selected stations. (b) Eight months April to November inclusive.

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		22.6
1922-23	14,210	99,594	117,686	29,942	131,689	3,088	3,575		26.3
1923-24	14,453	109,082	127,246	29,850	141,502	3,099	3,563		27.9
1924-25	14,457	108,797	126,694	29,776	139,438	3,100	3,557	67	35.3
1925-26	14,696	102,872	121,209	29,884	135,510	3,196	3,584	124	36.4
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	14,353	117,085	139,640	28,585	149,965	3,405	3,972	3,499	71.0
1956-57	15,206	117,295	139,727	27,936	149,931	3,400	3,979	3,677	66.1
1957-58	15,342	115,715	138,370	27,971	152,045	3,463	3,907	4,005	81.2
1958-59	15,447	115,111	138,304	28,105	152,312	3,692	4,148	3,716	85.1
1959-60	15,533	121,772	145,377	28,527	155,437	3,679	4,059	3,471	100.9
1960-61	15,681	122,258	145,752	28,711	156,456	4,326	4,966	3,300	102.0
1961-62	15,751	122,122	145,796	28,886	156,897	4,063	4,509	3,583	108.4
1962-63	15,864	123,123	146,807	28,922	156,697	4,415	4,932	3,750	112.8
1963-64	15,961	122,718	146,382	28,711	158,905	4,788	5,380	3,993	117.9
1964-65	16,065	124,043	147,661	28,754	156,954	4,775	5,290	4,714	123.1
1965-66	16,111	126,830	150,422	28,759	159,394	4,869	5,293	5,093	128.8
1966-67	16,523	125,689	149,192	28,957	161,510	5,123	5,737	5,237	138.8
1967-68	16,543	127,269	149,530	29,058	160,765	5,033	5,609	5,130	173.2
1968-69	16,570	127,083	149,327	29,137	162,109	6,007	6,876	4,270	173.9
1969-70	16,601	127,132	149,951	29,035	162,692	5,284	5,948	4,962	186.0
1970-71	16,620	126,895	149,651	29,087	162,584	4,654	5,292	4,788	191.0

RURAL PRODUCTION
Crop Areas and Yields

Year	Cereals for Grain						Hay (a)	Orchards (b) (c)	Vineyards (b)
	Wheat		Barley		Oats				
	Area	Yield per Acre	Area	Yield per Acre	Area	Yield per 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
1964-65.	2,727	19.37	1,095	24.60	444	20.23	314	43.0	58.9
1965-66.	2,745	14.56	1,098	16.86	455	12.37	299	44.0	58.7
1966-67.	2,960	18.18	1,107	21.41	509	20.19	482	44.2	57.1
1967-68.	2,864	9.39	1,157	10.70	525	6.29	429	45.1	58.1
1968-69.	3,748	22.19	1,412	20.92	516	23.07	615	44.5	60.6
1969-70.	3,210	18.43	1,384	22.01	372	17.94	384	44.8	64.8
1970-71.	1,983	14.64	1,714	19.10	482	17.46	485	45.3	68.3

(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 '000 lb	Milk Production '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 lb	'000 gal	'000	'000	No.	No.	No.	
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	44,533							
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				
1922-23 ..	6,305	426	170	268	58,699	42,000	1,291	123				
1923-24 ..	6,597	413	169	264	57,882	47,600	956	140				
1924-25 ..	6,359	400	145	255	62,439	45,400	933	151	882			
1925-26 ..	6,810	373	136	244	69,007	41,400	1,028	155	1,252			
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	<i>n.a.</i>			<i>n.a.</i>
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
1964-65 ..	17,289	697	182	(a)	215,736	102,300	3,100	275	34,164	15,172		7,328
1965-66 ..	17,993	690	176	(a)	229,633	98,400	3,474	277	33,998	15,386		7,040
1966-67 ..	17,864	687	170	16	237,493	98,700	3,358	265	35,829	15,392		6,634
1967-68 ..	16,405	695	157	(a)	222,667	88,800	4,019	245	36,590	15,758		6,645
1968-69 ..	18,392	865	163	(a)	233,060	102,800	2,977	220	36,574	15,693		6,263
1969-70 ..	19,747	1,026	149	16	274,540	106,200	4,232	249	37,264	15,746		5,947
1970-71 ..	19,166	1,196	145	(a)	258,509	103,600	5,101	264	37,023	15,852		5,571

(a) Not collected.

MINING AND FACTORY PRODUCTION

Year	Mining				Factories		
	Principal Minerals Produced			Value of Production (a)	Number of Establishments	Value of Land and Buildings, Plant and Machinery	Value Added
	Copper Ore and Concentrate	Coal	Iron Ore				
	Tons	'000 tons	'000 tons	\$'000	\$'000	\$'000	
1846.....	6,461			285			
1851.....	7,717			622			
1856.....	11,791			825			
1861.....	11,259			920			
1866.....	23,287			1,657			
1871.....	26,522			1,347			
1876.....	28,145			1,205			
1881.....	25,462			842			
1886.....	18,417			554			
1891.....	16,627			551			
1896.....	4,951			496			
1901.....	8,605			1,079			
1906.....	8,208		75	1,652			
1911.....	5,922		42	900	1,314	11,159	9,148
1916.....	7,279		188	2,504	1,266	12,782	9,748
1921.....	1,532		507	2,086	1,438	17,938	14,556
1926.....	231		584	2,924	1,791	31,685	25,348
1927.....	201		722	3,254	1,807	33,900	27,311
1928.....	192		618	2,755	1,860	36,415	26,975
1929.....	277		848	3,270	1,844	38,633	25,137
1930.....	99		928	2,882	1,814	38,447	21,953
1931.....	22		289	1,297	1,644	37,203	15,510
1932.....	—		538	1,885	1,662	35,314	13,924
1933.....	72		721	2,456	1,710	34,733	15,709
1934.....	207		1,244	3,724	1,733	34,302	17,283
1935.....	256		1,869	5,113	1,803	34,483	19,114
1936.....	451		1,887	5,241	1,895	35,098	23,339
1937.....	340		1,866	5,244	1,916	34,528	24,543
1938.....	254		2,245	6,304	1,980	35,564	27,640
1939.....	110		2,572	7,294	2,067	36,921	27,358
1940.....	308		2,313	7,077	2,265	41,291	28,807
1941.....	605		2,240	7,074	2,230	51,744	33,832
1942.....	392	2	2,122	6,342	2,167	66,948	49,132
1943.....	102	—	2,183	6,287	2,134	70,643	56,732
1944.....	135	35	2,029	6,085	2,149	72,089	56,823
1945.....	134	41	1,520	4,917	2,182	69,665	54,530
1946.....	—	135	1,818	6,101	2,395	74,930	51,203
1947.....	—	193	2,146	7,253	2,707	74,136	62,133
1948.....	4	240	2,035	7,514	2,865	81,861	77,339
1949.....	3	345	1,448	6,236	2,927	90,019	87,443
1950.....	—	261	2,350	8,857	3,046	98,436	104,706
1951.....	2	388	2,401	9,875	3,141	100,123	135,618
1952.....	5	418	2,684	12,094	3,245	121,367	166,493
1953.....	2	448	2,591	12,406	3,339	144,029	178,378
1954.....	3	495	2,867	17,160	3,577	166,735	200,443
1955.....	—	455	3,044	(b) 41,419	3,750	188,555	222,055
1956.....	12	481	3,587	47,853	3,908	223,900	241,872
1957.....	39	609	3,389	46,352	4,063	254,380	253,532
1958.....	52	755	3,353	47,076	4,168	280,840	266,570
1959.....	66	690	3,423	49,332	4,235	302,055	279,620
1960.....	30	885	3,437	50,870	4,684	351,745	325,947
1961.....	8	1,115	3,991	58,242	5,042	401,658	340,123
1962.....	4	1,392	3,510	53,958	5,519	449,600	347,828
1963.....	16	1,512	4,242	62,431	5,766	506,571	379,142
1964.....	54	1,736	4,367	67,597	5,826	560,908	427,356
1965.....	114	2,016	4,392	67,863	5,887	645,469	498,588
1966.....	141	2,021	4,799	72,342	6,065	699,989	527,477
1967.....	1,447	2,045	4,572	69,345	6,222	767,310	563,764
1968.....	510	2,078	5,478	77,398	6,255	813,610	631,104
1969.....	3,608	2,210	6,931	98,526	(c) 3,224	n.a.	(c) 639,800

(a) Value at site of production. Quarries included from 1916.
 (b) Comparability affected by revaluation of iron ore.
 (c) For a description of the changes in definitions see pages 440-4.

GROSS VALUE OF RURAL PRODUCTION

Year	Agricultural				Pastoral		Dairying	Total Rural Production
	Wheat	Barley	Vine and Orchard Fruit	Total	Wool (a)	Total		
	\$'000							
1909-10	9,635	239	1,330	14,761	4,394	6,231	1,492	23,365
1910-11	8,419	174	1,572	14,186	4,514	7,087	1,715	24,004
1911-12	7,717	254	1,599	14,965	3,836	5,789	1,693	23,535
1912-13	7,703	466	1,871	15,817	4,232	6,260	1,643	24,841
1913-14	6,210	324	1,632	12,400	3,990	5,865	1,705	21,136
1914-15	2,557	247	1,155	8,203	2,878	3,462	1,601	14,342
1915-16	16,214	521	2,244	24,813	3,260	2,441	1,809	30,117
1916-17	21,729	599	1,653	27,677	4,274	11,200	2,759	42,909
1917-18	13,629	683	2,416	20,583	5,948	12,269	2,874	37,117
1918-19	12,615	1,262	2,859	22,692	7,258	11,774	3,093	39,009
1919-20	13,482	1,451	3,530	27,456	7,332	10,449	3,413	43,193
1920-21	27,407	1,681	3,811	39,963	5,874	11,248	4,666	58,287
1921-22	12,577	1,227	3,491	23,221	5,252	8,296	3,678	37,273
1922-23	14,152	1,364	3,768	26,292	8,688	11,792	3,959	44,226
1923-24	16,124	1,065	3,962	28,312	10,612	15,479	4,970	50,961
1924-25	18,572	1,648	4,399	30,636	11,952	16,276	4,305	53,609
1925-26	17,979	1,656	3,352	28,307	8,591	12,930	4,171	47,629
1926-27	19,052	1,685	4,082	30,181	8,937	12,140	3,895	48,357
1927-28	13,247	1,497	3,394	23,257	11,338	14,584	4,125	44,464
1928-29	12,845	1,737	3,909	23,880	9,308	12,472	3,810	42,375
1929-30	10,243	1,448	3,819	21,059	5,098	8,183	3,892	35,055
1930-31	8,091	893	3,241	15,708	3,608	5,801	3,121	26,335
1931-32	17,163	1,363	3,442	25,291	3,843	5,452	3,140	35,444
1932-33	13,097	1,371	3,463	20,921	4,619	5,834	3,654	32,030
1933-34	10,933	1,280	3,618	19,533	9,013	10,608	3,108	34,776
1934-35	10,318	1,553	3,882	19,965	5,309	7,706	3,091	32,489
1935-36	13,135	1,457	3,953	22,863	8,116	10,885	3,797	39,126
1936-37	14,955	1,766	4,191	26,044	8,720	12,315	4,310	44,366
1937-38	15,665	3,040	4,964	29,453	8,141	11,443	5,291	48,241
1938-39	8,580	2,046	4,056	20,008	7,802	12,327	5,171	39,613
1939-40	16,692	3,524	4,637	30,132	10,470	14,792	5,585	52,487
1940-41	8,379	2,321	4,873	20,167	10,532	14,757	6,079	43,134
1941-42	13,913	4,490	4,725	30,142	10,294	13,875	6,735	53,016
1942-43	19,399	2,709	6,481	35,423	12,359	16,917	7,917	63,091
1943-44	12,765	2,188	9,159	32,088	13,067	18,277	8,807	63,003
1944-45	6,065	1,931	6,283	23,548	11,963	17,928	8,880	54,810
1945-46	17,490	4,956	7,729	40,434	8,275	14,535	9,959	69,399
1946-47	27,685	7,598	8,283	51,209	17,092	22,602	10,950	90,106
1947-48	50,154	26,228	9,677	99,477	32,606	37,487	12,525	155,615
1948-49	32,450	10,242	10,087	64,138	40,268	47,636	13,440	131,527
1949-50	40,834	14,524	10,616	81,707	56,268	63,058	16,148	167,594
1950-51	45,587	19,803	13,720	97,871	132,494	139,895	15,500	259,627
1951-52	45,288	27,706	20,382	120,507	72,394	86,034	21,145	234,587
1952-53	57,302	42,128	19,161	139,160	97,158	109,154	23,527	279,982
1953-54	43,939	28,804	20,788	115,744	88,868	105,950	24,238	254,537
1954-55	41,591	23,243	17,426	104,914	83,204	101,059	25,037	239,022
1955-56	38,514	25,227	20,335	110,570	79,822	100,882	30,826	250,685
1956-57	44,846	34,022	23,265	129,994	114,578	138,118	29,003	305,365
1957-58	20,970	19,573	24,435	90,089	84,708	111,027	26,384	235,337
1958-59	43,791	39,889	23,984	140,858	67,595	99,135	32,103	280,007
1959-60	16,495	10,999	21,394	71,092	85,382	123,351	29,454	231,751
1960-61	68,001	37,977	24,525	161,437	70,484	94,451	30,306	294,087
1961-62	51,515	22,952	27,051	124,022	85,801	111,850	29,848	273,451
1962-63	56,285	19,152	25,857	128,417	92,514	127,386	31,968	295,043
1963-64	77,660	26,399	29,567	165,634	113,409	150,466	34,267	358,802
1964-65	74,550	30,135	36,200	178,132	94,328	135,916	37,533	360,507
1965-66	59,559	20,234	31,411	144,017	103,635	152,224	39,293	345,015
1966-67	79,612	26,912	36,779	184,090	104,588	169,226	40,303	404,864
1967-68	42,183	12,818	32,423	127,288	79,925	129,504	37,163	306,222
1968-69	112,551	25,657	37,815	221,097	95,054	136,070	39,016	408,842
1969-70	84,814	23,724	43,329	186,766	91,224	148,939	40,834	388,523
1970-71	41,854	35,337	46,140	166,737	65,086	123,419	43,590	346,761

(a) Shares of profits from sale of wool under war-time disposal schemes excluded.

NET VALUE OF PRODUCTION

Year	Rural				Other Primary (a)	Mining and Quarrying (a)
	Agricultural	Pastoral	Dairying	Total		
	\$'000					
1925-26	19,374	11,497	2,988	34,648	1,537	2,684
1926-27	19,755	10,697	2,955	34,098	1,618	2,924
1927-28	13,661	12,861	3,146	30,858	1,784	3,254
1928-29	12,840	10,912	2,721	27,514	1,639	2,755
1929-30	10,521	6,795	2,988	21,189	1,685	3,270
1930-31	4,368	4,684	2,285	12,051	1,304	2,882
1931-32	16,681	4,450	2,435	24,259	1,357	1,297
1932-33	12,565	4,775	2,839	20,758	1,458	1,885
1933-34	11,820	9,122	2,278	23,768	1,445	2,456
1934-35	12,751	6,363	2,242	22,121	1,460	3,724
1935-36	14,673	9,205	2,786	27,242	1,489	4,739
1936-37	18,115	10,435	3,176	32,270	1,683	4,874
1937-38	18,320	9,713	3,782	32,510	1,758	4,941
1938-39	10,978	10,110	3,886	25,903	1,722	5,909
1939-40	19,482	12,413	4,388	37,412	1,931	6,887
1940-41	12,290	12,427	4,204	29,862	2,062	6,659
1941-42	19,314	11,559	4,276	36,181	2,495	6,595
1942-43	24,495	14,265	6,207	46,888	2,793	5,899
1943-44	22,086	15,577	6,991	47,063	2,961	5,949
1944-45	13,995	15,391	6,912	39,113	2,886	5,870
1945-46	29,935	12,396	7,652	52,640	3,417	4,756
1946-47	39,525	19,170	8,484	70,571	4,124	5,937
1947-48	83,901	33,861	9,970	131,832	4,858	7,037
1948-49	47,901	42,913	10,511	105,545	5,850	7,194
1949-50	65,579	57,116	13,637	140,976	5,814	5,882
1950-51	72,805	131,594	12,629	221,425	6,944	8,375
1951-52	93,807	77,929	17,714	193,792	8,862	9,292
1952-53	102,488	99,837	18,854	225,741	10,363	10,305
1953-54	83,399	94,847	20,514	203,296	11,598	10,075
1954-55	78,361	90,440	21,330	193,795	11,702	14,202
1955-56	82,542	89,249	26,547	202,430	12,151	(b) 37,302
1956-57	99,376	124,187	25,022	252,554	11,966	43,008
1957-58	64,635	89,726	15,651	173,506	10,287	41,249
1958-59	101,141	76,849	18,725	200,694	11,254	42,458
1959-60	48,492	100,135	18,281	170,450	10,694	44,311
1960-61	116,647	72,237	16,926	208,842	11,012	45,773
1961-62	90,933	91,256	19,826	204,484	10,911	52,623
1962-63	93,357	103,991	19,741	218,828	11,574	49,603
1963-64	125,180	125,979	21,195	274,720	12,279	57,836
1964-65	134,239	110,054	25,005	271,350	14,173	62,727
1965-66	105,657	123,757	25,127	256,934	15,817	62,727
1966-67	137,042	134,608	25,238	300,112	14,941	66,909
1967-68	90,903	98,722	22,169	214,300	15,482	63,492
1968-69	161,605	106,329	23,253	293,682	16,120	71,618
1969-70	133,474	117,337	28,188	283,698	18,614	n.a.
1970-71	120,448	94,041	30,782	250,207	20,027	n.a.

(a) To 1934-35, local value, i.e. gross value less marketing costs.

(b) Comparability affected by revaluation of iron ore.

TRADE
Overseas Exports

Year	Value of Exports					Proportion of Total Exports Classified by Principal Countries of Destination				
	Total	Wheat and Flour	Barley	Wool	Minerals (a)	Japan	New Zealand	U.K.	U.S.A.	Other Countries
	\$'000					Per cent				
1861.....	1,837	76		1,302	362		3.42	89.46		7.12
1866.....	2,837	146		1,518	1,030		4.62	81.48	2.44	11.46
1871.....	3,630	578		1,948	744		4.00	89.62	n.a.	6.38
1876.....	5,928	2,146		2,884	658		1.96	89.58	0.07	8.39
1881.....	6,311	1,846		3,496	488		0.71	82.03	—	17.26
1886.....	5,877	420		3,508	1,126		0.69	86.90	0.04	12.37
1891.....	11,197	2,728		3,776	3,714	0.01	0.29	80.82	0.90	17.98
1896.....	8,111	222		3,038	3,878	1.38	0.48	56.39	0.28	41.47
1901.....	8,866	2,232		2,208	3,252	0.07	0.65	51.62	0.10	47.56
1906.....	13,742	4,780		3,360	3,574	—	0.26	51.68	0.24	47.82
1911.....	20,350	7,671		4,007	6,195	0.04	0.17	45.96	0.13	53.70
1915-16.....	12,272	3,511	19	2,824	4,747	—	1.01	42.92	21.15	34.92
1920-21.....	35,339	28,675	1,175	6,035	828	—	1.11	59.40	1.16	8.33
1925-26.....	38,900	14,825	275	8,865	10,745	6.88	1.70	51.94	1.16	38.32
1926-27.....	34,246	14,189	703	8,297	6,971	2.25	1.47	44.30	0.93	51.05
1927-28.....	36,060	10,831	464	9,788	8,991	2.23	0.58	45.87	1.80	49.52
1928-29.....	29,623	7,822	422	8,463	8,027	0.43	0.58	44.64	1.12	53.23
1929-30.....	30,019	7,734	155	4,487	9,211	3.30	0.63	58.25	1.59	36.23
1930-31.....	20,123	6,078	685	3,006	5,656	2.38	0.81	54.11	0.79	41.91
1931-32.....	24,495	11,803	826	3,243	3,283	3.34	0.75	58.69	0.63	36.59
1932-33.....	25,634	10,450	640	4,379	3,787	7.91	0.65	61.78	0.14	29.52
1933-34.....	25,435	5,463	588	7,526	5,562	4.90	1.24	66.85	0.39	26.61
1934-35.....	23,670	8,279	691	4,881	4,321	7.26	1.58	61.66	0.77	28.73
1935-36.....	30,762	9,020	707	7,561	6,860	6.66	2.05	67.44	1.11	22.74
1936-37.....	33,496	9,890	864	8,144	7,320	2.73	1.52	68.26	2.23	25.26
1937-38.....	38,114	13,848	1,493	6,576	7,909	1.01	1.31	71.37	0.99	25.32
1938-39.....	29,682	6,061	559	7,069	7,107	1.59	2.42	67.76	1.06	27.17
1939-40.....	31,916	4,971	727	10,726	6,317	1.91	1.93	75.40	0.88	19.88
1940-41.....	26,393	8,617	226	6,656	2,606	5.29	3.46	50.46	15.48	25.31
1941-42.....	29,624	3,863	338	11,596	6,220	1.01	3.39	32.02	34.14	29.44
1942-43.....	18,847	4,085	122	6,843	2,084	—	10.61	45.27	15.12	29.00
1943-44.....	31,170	10,504	410	8,509	2,313	—	9.18	40.36	8.61	41.85
1944-45.....	38,334	13,175	115	8,376	5,589	—	6.30	42.34	13.18	38.18
1945-46.....	40,307	7,407	718	14,917	6,550	—	4.95	25.45	26.43	43.17
1946-47.....	65,023	12,304	2,998	16,095	16,138	0.01	5.37	39.47	8.86	46.29
1947-48.....	105,805	24,507	16,030	25,608	17,460	—	4.44	39.01	8.51	48.04
1948-49.....	138,866	38,990	11,952	40,619	24,230	0.07	2.31	44.37	8.04	45.21
1949-50.....	127,864	23,227	10,564	49,621	23,262	2.95	6.38	42.42	7.63	40.62
1950-51.....	215,348	36,852	14,662	109,900	29,893	5.90	2.39	39.58	14.41	37.72
1951-52.....	194,501	42,155	18,035	65,806	42,995	4.60	7.26	39.36	14.65	34.13
1952-53.....	245,897	36,062	30,975	87,135	56,007	8.17	3.32	45.12	12.93	30.46
1953-54.....	220,498	30,518	24,465	78,817	54,059	6.35	5.80	41.66	10.57	35.62
1954-55.....	190,158	24,075	15,794	69,195	50,620	5.05	6.59	40.78	11.57	36.01
1955-56.....	195,332	26,266	14,069	70,063	53,972	6.71	7.47	38.70	10.71	36.41
1956-57.....	245,848	32,558	18,535	98,924	63,707	13.62	7.40	31.73	13.09	34.16
1957-58.....	199,764	24,868	17,183	73,082	50,249	11.23	7.85	31.50	9.32	40.10
1958-59.....	181,831	23,656	20,404	63,208	38,682	13.25	7.86	34.81	8.50	35.58
1959-60.....	181,652	19,028	12,251	74,830	38,085	12.91	4.30	32.08	7.91	42.80
1960-61.....	198,557	36,598	19,219	64,328	44,203	18.11	5.60	27.55	4.71	44.03
1961-62.....	243,975	47,819	23,422	83,107	51,374	14.80	4.14	25.83	8.56	46.67
1962-63.....	212,945	32,603	6,968	83,400	47,555	16.45	4.57	25.87	8.69	44.42
1963-64.....	322,159	76,337	13,828	107,398	63,489	17.59	4.83	26.63	5.99	44.96
1964-65.....	302,242	53,256	15,247	92,535	79,005	17.22	5.06	25.82	7.49	44.41
1965-66.....	296,276	45,864	7,050	94,486	76,896	18.38	5.89	22.81	10.37	42.55
1966-67.....	325,170	55,675	13,056	98,013	76,855	20.43	4.69	15.46	8.85	50.57
1967-68.....	282,767	31,487	2,321	77,008	88,579	21.82	5.04	18.20	11.03	43.91
1968-69.....	300,934	27,421	11,683	84,747	92,806	25.52	4.55	16.46	9.78	43.69
1969-70.....	417,030	59,457	16,133	81,797	119,292	19.02	5.58	17.03	9.41	48.96
1970-71.....	393,737	83,629	23,670	62,831	93,209	18.07	5.66	13.70	6.39	56.18

(a) Rocks, minerals and hydrocarbons, pig iron, pig lead, other lead and lead-base alloys, refined and unrefined silver.

TRADE

Overseas 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	Canada	U.K.	U.S.A.	Other Countries	Total Excluding Motor Vehicles etc.	Motor Vehicles etc.
	\$'000		Per cent				\$ million	
1861.....	2,756	310		80.14	0.32	19.54		
1866.....	4,193	570		89.69	1.80	8.51		
1871.....	2,891	342		81.85	1.45	16.70		
1876.....	6,428	1,084	0.15	81.30	1.44	17.11		
1881.....	7,133	1,022	0.04	79.06	3.80	17.10		
1886.....	5,003	770	0.05	78.90	6.82	14.23		
1891.....	8,063	1,644	0.81	71.36	7.91	19.92		
1896.....	6,475	1,198	0.21	68.59	7.82	23.38		
1901.....	7,854	1,432	0.71	56.91	14.17	28.21		
1906.....	7,965	2,104	1.38	63.10	10.17	25.35		
1911.....	12,492	4,132	1.41	58.60	12.81	27.18		
1915-16.....	10,304	2,816	2.27	47.68	19.81	30.24		
1920-21.....	24,764	6,558	2.96	42.07	21.25	33.72		
1925-26.....	28,160	10,602	2.18	43.30	27.84	26.68		
1926-27.....	31,015	12,774	2.29	42.72	29.98	25.01		
1927-28.....	25,019	9,388	1.67	44.51	27.62	26.20		
1928-29.....	22,612	7,908	3.03	42.31	25.88	28.78		
1929-30.....	18,721	5,914	2.33	42.01	26.12	29.54		
1930-31.....	7,833	1,802	2.77	36.96	16.66	43.61		
1931-32.....	5,643	896	4.52	37.88	14.00	43.60		
1932-33.....	7,521	1,140	5.15	35.49	14.34	45.02		
1933-34.....	7,359	1,692	5.07	41.48	14.84	38.61		
1934-35.....	7,931	2,296	5.81	42.91	15.75	35.53		
1935-36.....	10,839	3,616	5.48	38.65	21.16	34.71		
1936-37.....	10,877	3,678	6.55	42.50	15.79	35.16		
1937-38.....	14,948	5,906	7.34	36.49	23.19	32.98		
1938-39.....	11,702	3,924	7.34	37.74	17.13	37.79		
1939-40.....	13,435	3,256	7.49	34.89	14.43	43.19		
1940-41.....	10,924	3,158	5.71	38.09	12.01	44.19		
1941-42.....	14,924	5,164	2.29	28.11	12.36	57.24		
1942-43.....	11,718	3,580	1.45	20.56	14.44	63.55		
1943-44.....	9,562	2,128	1.22	24.97	33.53	40.28		
1944-45.....	9,313	1,388	3.08	24.49	19.91	52.52		
1945-46.....	17,556	3,622	3.19	62.28	10.13	24.40		
1946-47.....	23,875	6,788	7.19	35.25	13.79	43.77		
1947-48.....	45,908	12,740	3.89	37.96	15.45	42.70		
1948-49.....	60,914	21,678	2.36	49.33	9.02	39.29		
1949-50.....	91,509	44,334	1.92	52.15	8.81	37.12		
1950-51.....	112,002	50,446	1.76	48.31	8.42	41.51		
1951-52.....	186,062	80,450	1.72	39.99	9.37	48.92		
1952-53.....	86,549	41,456	4.15	43.53	11.71	40.61	271.7	84.3
1953-54.....	102,945	47,142	7.04	50.63	8.93	33.40	294.4	97.6
1954-55.....	129,607	63,144	4.17	49.18	13.28	33.37	324.4	113.4
1955-56.....	125,504	64,656	3.78	49.17	11.70	35.35	347.8	123.6
1956-57.....	90,813	40,536	5.24	44.01	12.26	38.49	362.3	124.7
1957-58.....	94,205	40,792	4.88	46.37	11.91	36.84	367.2	125.4
1958-59.....	90,693	40,534	6.78	42.08	11.50	39.64	387.2	138.0
1959-60.....	119,493	57,962	5.76	43.89	12.15	38.20	436.6	160.2
1960-61.....	142,764	72,570	6.57	32.66	17.61	43.16	448.9	156.1
1961-62.....	103,386	46,774	6.01	31.95	21.87	40.17	451.6	143.1
1962-63.....	139,826	71,820	6.79	31.83	22.92	38.46	479.9	180.5
1963-64.....	179,511	94,302	5.43	24.75	30.63	39.19	525.3	212.5
1964-65.....	204,856	108,243	5.46	23.72	29.11	41.71	574.5	238.0
1965-66.....	198,156	103,032	5.80	23.32	27.25	43.63	602.0	220.4
1966-67.....	196,771	97,861	4.96	21.64	27.72	45.68	627.1	214.7
1967-68.....	215,619	113,215	8.30	17.29	32.71	41.70	663.6	242.0
1968-69.....	231,956	134,222	9.35	19.82	27.35	43.48	706.5	260.9
1969-70.....	201,223	98,204	7.36	21.49	21.50	49.64	760.9	284.1
1970-71.....	198,358	98,358	5.92	25.10	17.32	51.66	812.3	295.1

TRANSPORT AND COMMUNICATION
Public Transport

Year	Railways			Buses and Trams (a)		Civil Aviation		Shipping (Entering S.A.) (b)
	Passengers Carried	Goods Carried	Revenue	Passengers Carried	Revenue	Passengers Carried	Freight Carried	
	'000	'000 tons	\$'000	'000	\$'000	'000	short tons	'000 net tons
1841.....								18
1846.....								25
1851.....								75
1856.....	248	32	44					114
1861.....	310	145	185					103
1866.....	425	171	236					169
1871.....	394	228	235					187
1876.....	1,400	387	402					347
1880-81.....	2,902	683	837					641
1885-86.....	3,962	779	1,098					771
1890-91.....	5,296	1,427	2,448					1,288
1895-96.....	5,436	1,057	1,973					1,661
1900-01.....	8,864	1,628	2,473					1,967
1905-06.....	10,715	1,732	2,700					2,785
1910-11.....	16,620	2,731	4,030	34,013	480			3,625
1915-16.....	20,513	2,397	3,931	43,372	649			2,566
1920-21.....	23,788	2,682	5,884	55,324	1,111			2,887
1925-26.....	25,752	3,563	8,524	66,207	1,322			4,526
1930-31.....	15,453	2,175	5,201	52,756	1,444			4,166
1931-32.....	15,608	2,430	5,514	48,467	1,319			4,139
1932-33.....	16,074	2,401	5,489	48,154	1,287			4,375
1933-34.....	16,325	2,155	5,142	47,021	1,256			4,387
1934-35.....	16,660	2,347	5,339	48,118	1,279			4,974
1935-36.....	17,431	2,482	5,781	50,625	1,347			5,318
1936-37.....	17,777	2,400	6,043	52,082	1,399			5,292
1937-38.....	17,632	2,897	6,598	51,674	1,385			5,711
1938-39.....	17,529	2,661	6,267	52,906	1,422	9	108	5,761
1939-40.....	17,642	2,700	6,367	52,928	1,429	n.a.	n.a.	4,629
1940-41.....	20,360	2,770	7,060	56,518	1,537	n.a.	n.a.	3,047
1941-42.....	28,513	3,128	9,928	69,132	1,891	n.a.	n.a.	2,447
1942-43.....	30,864	3,460	11,665	85,133	2,309	n.a.	n.a.	1,589
1943-44.....	27,356	3,673	12,004	91,312	2,445	n.a.	n.a.	1,814
1944-45.....	24,820	3,502	10,969	95,035	2,563	n.a.	n.a.	1,868
1945-46.....	23,119	2,997	9,794	90,239	2,469	n.a.	n.a.	1,733
1946-47.....	19,827	3,093	9,243	91,238	2,594	160	2,048	3,086
1947-48.....	19,067	3,396	10,219	89,661	2,661	230	3,966	3,651
1948-49.....	18,210	3,544	11,770	82,939	3,084	263	5,573	4,365
1949-50.....	17,385	3,425	(c)13,098	77,999	2,535	266	6,941	5,217
1950-51.....	17,178	3,519	14,715	78,141	3,238	298	8,363	5,283
1951-52.....	18,269	4,966	19,022	75,436	3,684	323	7,745	5,529
1952-53.....	17,565	4,172	24,976	66,571	(d)4,232	295	9,028	5,900
1953-54.....	17,605	4,457	25,848	66,972	4,145	272	11,457	6,108
1954-55.....	16,849	4,497	26,522	66,446	4,267	310	12,514	6,123
1955-56.....	16,434	4,436	26,662	63,515	4,668	329	12,539	6,282
1956-57.....	17,406	4,518	28,132	62,190	4,578	334	12,003	6,360
1957-58.....	17,564	4,166	27,033	60,083	4,988	337	10,143	6,569
1958-59.....	16,805	4,227	26,179	59,613	5,056	402	9,802	6,744
1959-60.....	17,038	4,059	25,652	58,168	5,641	463	9,990	6,745
1960-61.....	15,574	4,537	27,883	58,912	5,515	449	9,254	7,613
1961-62.....	15,176	4,638	27,984	57,950	5,430	446	8,591	7,646
1962-63.....	14,922	4,530	27,826	58,039	5,436	493	9,035	7,886
1963-64.....	15,227	5,213	29,673	58,571	5,473	548	9,621	9,486
1964-65.....	15,196	5,131	29,960	56,434	5,899	671	9,987	9,697
1965-66.....	15,511	4,823	29,137	53,112	6,049	769	11,962	9,517
1966-67.....	15,432	4,909	30,417	49,735	6,270	827	10,641	10,219
1967-68.....	15,242	4,401	28,244	47,813	6,225	n.a.	n.a.	10,028
1968-69.....	14,423	5,037	30,522	45,393	6,472	n.a.	n.a.	10,345
1969-70.....	13,990	5,922	33,566	43,345	6,696	n.a.	n.a.	12,213
1970-71.....	13,946	6,025	34,635	41,259	6,881	n.a.	n.a.	11,303

(a) Buses and trams operated by Municipal Tramways Trust only. Years ended 31 July from 1912 to 1939, 31 January from 1940 to 1952, and 30 June from 1953.

(b) Years ended 31 December to 1913; thereafter year ended 30 June.

(c) Excludes Treasury grant from 1949-50.

(d) Excludes Government grant from 1952-53.

STATISTICAL SUMMARY

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TRANSPORT AND COMMUNICATION

Year	Motor Vehicles on Register			Drivers and Riders Licences in Force	Telephone Services in Operation (a)	Radio Licences in Force (b)	Post Office Revenue		
	Cars and Station Wagons	Utilities, Vans, Trucks, Buses	Total (incl. Cycles, Scooters)				Postal, Etc. (c)	Tele-graph (c)	Tele-phone
	Number						\$'000		
1851.....							14		
1856.....							18		
1861.....							33	15	
1866.....							56	24	
1871.....							58	22	
1876.....							114	64	
1881.....							166	123	
1886.....							214	160	
1891.....							227	201	
1896.....							250	242	
1901.....					1,831		282	263	
1906.....					2,510		342	182	61
1911.....					6,086		490	233	93
1916.....					10,184		484	277	212
1921.....	13,178		21,407		15,984		762	420	468
1926.....	42,540	8,189	62,540	79,659	33,547	12,105	867	402	903
1927.....	50,603	10,961	74,096	88,695	37,132	15,904	929	446	1,026
1928.....	54,892	12,424	79,637	92,198	40,407	20,247	809	351	1,249
1929.....	58,227	13,636	85,472	82,973	42,186	23,927	876	360	1,249
1930.....	(d)50,391	(d)12,327	(d)72,590	94,381	42,868	25,651	871	340	1,266
1931.....	45,140	12,139	67,324	106,053	39,552	32,075	879	282	1,168
1932.....	46,558	12,638	68,932	81,300	37,815	43,268	871	273	1,060
1933.....	46,413	14,197	71,065	89,507	37,339	55,639	913	318	1,064
1934.....	48,939	17,267	76,676	96,916	37,713	72,337	935	323	1,076
1935.....	49,496	17,157	77,394	93,258	38,652	81,629	954	337	1,119
1936.....	53,728	19,415	84,253	92,227	39,911	93,881	1,017	327	1,197
1937.....	56,101	21,728	88,631	135,320	41,467	105,045	1,048	355	1,280
1938.....	60,537	24,985	95,735	137,627	43,307	115,571	1,099	375	1,370
1939.....	59,345	25,740	94,577	138,089	45,224	120,584	1,113	399	1,419
1940.....	58,184	24,499	91,898	129,950	46,767	127,995	1,140	423	1,515
1941.....	54,528	24,382	86,172	122,280	47,962	136,457	1,252	458	1,522
1942.....	53,558	22,583	82,023	106,455	48,747	144,209	1,588	553	1,732
1943.....	56,608	23,714	86,651	113,556	49,152	153,356	1,858	819	1,957
1944.....	59,271	24,906	91,316	105,951	50,161	155,046	2,049	816	2,024
1945.....	61,372	26,959	97,124	117,310	51,266	157,604	2,093	831	2,099
1946.....	64,370	31,450	107,238	137,979	53,126	164,497	1,921	815	2,170
1947.....	67,449	34,748	115,226	149,304	56,449	180,371	1,989	875	2,345
1948.....	75,741	36,364	127,558	159,814	60,249	196,336	2,190	946	2,507
1949.....	84,331	40,702	143,439	172,063	64,008	211,436	2,345	848	2,761
1950.....	97,501	45,960	163,888	192,469	69,907	226,723	2,546	1,169	3,536
1951.....	108,941	51,171	183,553	215,157	74,457	243,019	2,938	1,550	4,271
1952.....	120,523	55,944	200,449	232,119	80,919	(e)207,527	3,872	1,818	5,588
1953.....	129,663	61,224	214,270	252,216	86,977	210,808	4,086	1,191	6,070
1954.....	139,704	64,621	226,866	265,727	93,104	218,745	4,311	1,112	6,728
1955.....	150,506	70,193	244,403	281,091	100,171	221,118	4,670	1,028	7,266
1956.....	161,441	73,174	257,498	299,158	107,649	228,625	5,033	1,075	8,067
1957.....	171,922	75,693	269,262	315,044	114,390	234,120	5,579	1,358	8,993
1958.....	184,258	77,823	282,957	328,833	122,311	238,916	5,877	1,385	9,950
1959.....	200,331	80,962	301,493	340,973	131,060	247,468	6,247	1,421	10,524
1960.....	214,928	84,143	318,317	369,584	138,019	249,148	7,359	1,487	12,793
1961.....	224,521	82,456	325,176	393,869	144,502	249,475	7,729	1,643	14,544
1962.....	238,905	82,463	338,085	397,803	152,785	249,673	7,761	1,434	15,604
1963.....	258,116	83,686	357,172	414,656	162,012	256,741	8,322	1,592	16,508
1964.....	278,625	86,005	378,649	427,717	173,314	266,027	8,709	1,852	19,181
1965.....	295,914	85,949	394,571	447,985	182,249	(f)269,040	9,312	2,187	23,038
1966.....	310,969	86,733	409,709	464,778	192,922	281,747	9,759	2,398	24,757
1967.....	323,951	86,310	422,770	481,496	203,191	278,069	10,117	2,521	26,990
1968.....	338,527	86,559	438,079	491,765	212,842	290,051	11,378	2,688	30,124
1969.....	359,478	88,490	461,336	513,687	224,174	297,877	(g)13,211	(g)1,606	(g)34,523
1970.....	378,099	89,356	482,306	535,184	239,452	302,519	13,885	1,918	38,465
1971.....	395,205	90,111	502,805	550,745	251,330	310,485	15,847	1,988	43,333

(a) At 30 June from 1916; at 31 December in earlier years. (b) At 31 December from 1931 to 1943; otherwise at 30 June in years shown. (c) Years ended 30 June from 1886; earlier years ended 31 December. Telegraph includes telephone to 1901 and radio to 1948, from which time radio etc., licence fees have been excluded from Post Office revenue. (d) Vehicles in actual use on roads from 1930. (e) All receivers at the one address covered by one licence from 1952. (f) Combined radio and television licences included since 1 April 1965. (g) From 1968-69 content not comparable with previous years.

STATISTICAL SUMMARY

PUBLIC FINANCE

Year	State Government					State Taxation (a)	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	\$	\$'000	\$'000	\$'000	
1840-41	51	180							
1845-46	95	77							
1850-51	445	367				202			
1855-56	960	1,160		590	5.50	326	54	114	
1860-61	1,117	966		1,733	13.30	282	46	114	
1865-66	1,900	2,130		1,551	9.20	478	60	162	
1870-71	1,556	1,519		4,335	23.00	498	80	194	
1875-76	2,640	2,647		7,674	34.20	920	118	286	
1880-81	4,344	4,108		22,394	78.30	1,168	188	488	
1885-86	4,558	4,767	2,800	36,680	118.60	1,603	208	502	
1890-91	5,464	5,207	968	43,315	135.80	1,655	276	702	
1895-96	5,043	5,019	886	48,433	137.60	1,600	264	652	
1900-01	5,648	5,693	845	52,129	146.40	1,203	302	738	
1905-06	5,612	5,437	900	60,165	165.80	735	348	740	
1910-11	8,363	7,929	3,752	(b)56,065	136.50	1,092	481	1,004	
1915-16	8,714	9,483	4,371	79,049	179.40	1,403	652	1,150	
1920-21	14,303	15,087	9,351	104,725	210.70	3,244	986	1,936	
1925-26	20,948	20,922	12,860	160,521	290.10	5,428	1,640	3,441	
1926-27	21,570	23,669	12,149	173,121	306.40	5,771	1,804	3,930	
1927-28	22,694	23,244	9,865	181,225	317.20	7,473	1,908	4,151	
1928-29	21,682	23,544	7,056	183,307	323.80	7,536	1,976	4,206	
1929-30	21,102	24,354	4,977	186,838	326.00	6,976	1,942	3,836	
1930-31	21,452	25,079	6,581	199,055	345.70	6,800	1,672	2,612	
1931-32	20,964	23,091	568	203,198	351.50	6,153	1,584	2,627	
1932-33	20,321	22,339	7,038	207,415	357.00	5,467	1,572	2,798	
1933-34	20,376	22,064	3,361	210,839	361.40	5,818	1,574	2,659	
1934-35	22,003	21,931	1,131	210,699	360.10	6,449	1,210	2,194	
1935-36	22,819	22,521	2,502	211,397	359.70	6,409	1,665	2,824	
1936-37	23,479	23,200	1,653	213,188	361.80	7,081	1,674	3,078	
1937-38	24,922	24,669	1,230	214,901	362.40	7,844	1,745	3,232	
1938-39	24,607	25,402	843	217,774	365.00	8,232	1,779	3,424	
1939-40	25,511	25,837	1,253	218,688	365.00	9,127	1,835	3,347	
1940-41	25,849	26,015	2,548	219,599	365.30	8,683	1,851	3,170	
1941-42	30,004	27,425	263	218,380	359.00	(c) 9,484	1,909	3,017	
1942-43	30,385	29,919	Cr. 1,640	216,858	353.70	3,091	1,953	2,755	
1943-44	31,090	31,059	Cr. 896	216,610	349.60	3,262	1,924	3,043	
1944-45	32,226	32,226	Cr. 83	217,742	347.00	3,724	1,935	3,165	
1945-46	32,687	32,687	3,419	221,498	348.80	4,036	2,040	3,474	
1946-47	34,385	34,506	4,423	228,260	353.20	4,286	2,271	4,061	
1947-48	37,686	38,312	4,963	237,704	359.50	4,573	2,610	4,740	
1948-49	43,690	44,259	9,281	249,440	367.20	5,740	2,967	5,513	
1949-50	58,721	59,100	17,339	266,349	375.40	6,591	3,248	6,380	
1950-51	67,344	66,885	33,871	296,776	405.20	8,104	3,830	7,579	
1951-52	85,276	85,098	52,875	346,872	459.40	9,586	4,686	9,548	
1952-53	98,203	98,153	40,885	389,706	502.30	9,983	5,761	10,800	
1953-54	104,751	101,132	39,879	429,446	538.80	13,073	6,524	13,416	
1954-55	103,768	108,236	42,912	472,925	577.10	15,092	7,041	14,213	
1955-56	118,805	121,665	42,666	512,179	603.60	16,150	8,162	16,310	
1956-57	131,522	131,619	43,793	552,880	633.20	18,620	9,563	18,436	
1957-58	141,285	142,083	37,153	593,628	662.00	19,541	10,333	19,721	
1958-59	145,360	147,414	41,442	635,404	690.00	20,435	11,060	21,080	
1959-60	160,555	161,177	43,432	678,210	717.50	22,297	11,971	22,535	
1960-61	172,559	170,182	44,739	722,038	743.20	23,425	13,076	(d) 3,524	
1961-62	186,405	185,392	43,773	763,399	773.10	25,150	14,887	2,984	
1962-63	195,168	194,589	42,047	807,044	798.50	26,940	15,943	3,215	
1963-64	211,006	207,755	44,218	853,553	822.30	29,825	16,968	4,317	
1964-65	222,181	224,803	53,100	902,823	845.70	34,901	18,625	3,804	
1965-66	236,816	243,560	55,089	955,128	872.30	36,852	20,412	4,106	
1966-67	258,823	258,717	57,016	1,013,060	913.00	43,780	22,875	4,244	
1967-68	274,544	277,404	55,382	1,074,959	958.60	47,188	24,369	4,493	
1968-69	298,355	297,895	61,390	1,143,954	1,004.50	52,463	26,276	4,874	
1969-70	338,498	335,578	67,469	1,210,489	1,046.10	58,658	*	*	
1970-71	386,859	386,838	71,491	1,256,337	1,071.20	61,551	*	*	

(a) Excludes all taxation paid to Special Funds. From 1966-67 the coverage of this item does not completely coincide with S.A. Treasury classifications.

(b) Debt of Northern Territory and Port Augusta-Oodnadatta railway transferred to Commonwealth.

(c) Uniform taxation in force.

(d) Excludes reimbursement for work done on behalf of Highways Department from 1961.

STATISTICAL SUMMARY

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PRIVATE FINANCE

Year	Banking			Life Insurance		General Insurance Revenue (b)	Members		
	Trading Banks		Savings Bank Deposits at 30 June	New Policies Issued Sum Assured	Policies in Existence Sum Assured		Co-operative Societies (b)	Friendly Societies	Building Societies (b)
	Advances (a)	Deposits (a)							
\$'000									
Number									
1846.....		183							
1851.....		426	29						
1856.....		1,419	106						
1861.....	2,864	1,480	243						
1866.....	6,240	2,803	499						
1871.....	5,715	3,043	982						
1876.....	9,449	6,632	1,703						
1881.....	13,483	9,885	2,499						
1886.....	19,226	9,924	3,306						
1891.....	16,297	15,550	4,316						
1896.....	9,470	15,343	5,673						
1901.....	8,546	13,437	7,591						
1906.....	10,612	15,598	9,534						
1911.....	16,970	22,257	14,872				10,248		9,572
1916.....	20,325	27,264	20,070				13,270	65,540	8,962
1921.....	27,296	44,199	32,635	6,000	40,272	1,305	28,762	70,155	10,621
1926.....	31,672	51,574	43,558	9,341	60,244	2,045	41,539	77,791	17,011
1927.....	38,159	53,555	47,202	9,666	63,689	2,285	42,386	78,422	18,003
1928.....	38,612	52,572	49,883	9,800	67,108	2,246	44,000	78,284	19,208
1929.....	46,161	46,045	50,457	9,297	69,469	2,216	45,176	77,785	19,161
1930.....	47,412	44,869	48,024	8,132	68,312	2,007	45,346	76,363	16,663
1931.....	44,119	44,956	42,844	6,266	65,016	1,627	45,791	(c)	14,081
1932.....	41,232	48,503	43,134	7,060	64,905	1,640	47,189	72,133	11,869
1933.....	42,198	49,571	45,031	7,556	66,083	1,652	42,614	71,275	10,814
1934.....	42,524	51,633	46,875	7,847	67,785	1,651	42,746	70,881	9,715
1935.....	44,285	51,269	48,370	9,160	71,130	1,698	44,080	71,043	9,617
1936.....	43,760	52,399	50,617	10,791	75,984	1,859	45,592	71,658	9,257
1937.....	41,957	57,751	53,012	12,511	82,328	2,127	49,456	73,131	9,418
1938.....	44,244	58,720	54,487	12,070	87,769	2,434	52,064	74,703	10,364
1939.....	45,019	58,680	54,794	11,434	92,583	2,527	53,320	74,486	10,569
1940.....	41,697	61,792	53,127	10,090	96,387	2,584	53,943	75,481	10,532
1941.....	39,547	64,182	55,019	11,416	101,825	2,643	n.a.	76,357	n.a.
1942.....	36,082	73,975	61,232	9,812	106,429	2,802	n.a.	77,233	n.a.
1943.....	32,574	86,491	77,126	10,783	112,590	2,706	n.a.	78,600	n.a.
1944.....	31,328	100,201	97,184	13,417	121,736	2,604	n.a.	79,530	n.a.
1945.....	31,970	108,498	113,991	14,816	130,764	2,602	64,924	80,403	16,894
1946.....	31,560	93,397	131,729	22,805	147,230	2,705	70,620	80,419	18,665
1947.....	39,674	99,653	135,800	24,935	165,025	3,372	80,150	79,827	19,774
1948.....	39,585	119,859	147,226	26,555	183,753	4,371	84,470	78,246	20,815
1949.....	41,387	142,558	162,351	29,003	204,289	5,755	87,733	76,761	22,017
1950.....	50,412	159,136	175,390	33,076	227,616	7,312	92,066	75,168	22,646
1951.....	62,109	206,743	195,698	44,899	261,931	9,298	92,424	71,591	22,782
1952.....	89,163	214,630	207,452	48,475	298,494	12,370	96,134	67,563	23,016
1953.....	79,574	247,260	227,750	51,671	335,457	14,593	100,323	63,922	23,801
1954.....	95,968	250,802	245,898	59,540	377,093	16,165	107,069	61,345	23,814
1955.....	106,740	250,795	263,384	70,458	426,881	18,321	109,667	59,149	24,397
1956.....	108,515	241,044	271,512	75,301	477,554	20,590	114,018	57,216	24,266
1957.....	105,618	266,897	284,802	89,470	539,120	23,835	109,636	55,499	(d)
1958.....	125,971	262,700	297,716	94,137	599,723	24,656	(d)	54,181	24,321
1959.....	124,924	272,599	314,304	111,440	676,406	26,223	112,844	53,114	24,665
1960.....	149,172	265,498	331,996	131,951	756,581	27,975	116,645	52,239	24,847
1961.....	147,348	269,848	333,485	143,628	841,563	32,363	111,031	51,551	24,835
1962.....	161,508	281,496	361,980	157,636	937,635	33,740	116,405	51,198	21,854
1963.....	181,162	290,892	416,155	165,183	1,034,471	37,499	108,283	50,765	21,260
1964.....	199,816	328,484	475,803	197,790	1,161,922	41,695	113,224	50,946	22,348
1965.....	239,123	352,411	519,268	215,946	1,294,378	45,433	115,828	51,258	22,746
1966.....	271,132	371,362	558,857	239,250	1,438,998	50,121	120,042	51,109	23,611
1967.....	292,328	378,401	605,167	279,996	1,618,024	56,114	125,638	51,001	23,722
1968.....	340,117	393,175	643,690	301,602	1,806,839	59,981	125,385	51,070	22,458
1969.....	356,336	418,351	691,778	346,917	2,031,212	65,354	126,529	50,880	26,373
1970.....	385,308	437,436	733,100	437,699	2,312,907	70,640	123,263	50,796	33,863
1971.....	407,005	445,685	787,901	*	*	76,020	124,021	50,488	41,670

(a) Weekly average of balances during June quarter of year stated.

(b) Year ended 30 June.

(c) Membership at 30 June from 1932; previously 31 December.

(d) Balance dates of societies do not coincide; from this year figures are aggregates of members at balance dates within the year ended 30 June.

APPENDIX B

PRINCIPAL EVENTS

CHRONOLOGICAL LIST OF IMPORTANT EVENTS IN SOUTH AUSTRALIA SINCE 1836

- 1836**—First migrants landed at Kangaroo Island on 20 July. First South Australian newspaper published in London. Colony's first school opened on Kangaroo Island. The Surveyor-General, Col Light, arrived in November and commenced survey of Adelaide. Governor Hindmarsh arrived in HMS *Buffalo* and proclaimed South Australia a Province on 28 December.
- 1837**—Col Light completed survey of Adelaide and designed the city's present layout. First Adelaide land allotments made. First newspaper published in South Australia. South Australian Supreme Court established. First hospital opened in North Terrace, Adelaide.
- 1838**—First overland cattle and sheep drives from New South Wales. First export from South Australia, a small clip of wool, dispatched. 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 buried in Light Square. First road in South Australia built between Adelaide and Port Adelaide. Adelaide Chamber of Commerce founded.
- 1840**—Eyre started overland journey to Western Australia. The Municipality of Adelaide incorporated, the first in Australia. McLaren Wharf, Port Adelaide, opened by Governor Gawler.
- 1841**—First South Australian mine (silver-lead) opened near Glen Osmond. Assisted migration suspended because of depression. Following financial crisis Governor Gawler recalled and succeeded by Governor Grey. Eyre arrived at Albany in Western Australia.

- 1842—Registration of births, deaths and marriages commenced. Portions of South Australia divided for first time into counties. Copper discovered at Kapunda. Legislative Council constituted. The South Australian Board of Colonisation Commissioners abolished by the British Government.
- 1843—Stripper invented by Ridley. A flour mill built at Hindmarsh.
- 1844—First Colonial Census held, and showed a population of 17,366.
- 1845—Copper discovered at Burra. Sturt explored the north-eastern part of the State. Gold found in South Australia, near Montacute. Assisted migration resumed.
- 1846—First pastoral leases granted.
- 1847—First winery in the Barossa Valley commenced operation. St Peters College 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 established.
- 1850—An Act granting representative government to South Australia passed by the British Parliament.
- 1851—The Central Board of Education set up.
- 1852—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—State's first railway (horse-drawn) built from Goolwa to Port Elliot.
- 1855—First South Australian postage stamps issued.
- 1856—First telegraph line opened from Adelaide to Port Adelaide. The new Constitution Act embodying the principle of responsible government proclaimed; it provided for Parliament to consist of two Houses; a Legislative Council and a House of Assembly. First steam railway from Adelaide to Port Adelaide constructed. Population of the State passed 100,000.
- 1857—Railway to Smithfield and Gawler 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 constructed at Glenelg. Copper discovered at Wallaroo.
- 1860—Water supplied to the City of Adelaide by means of a main connected with the reservoir at Thorndon Park.
- 1861—Copper discovered at Moonta. Water laid on to houses in Adelaide. John McDouall Stuart set out to cross the continent from south to north. The South Australian boundary shifted west to coincide with the boundary of Western Australia.
- 1862—Stuart reached Chambers Bay on the coast of the Northern Territory.
- 1863—Administration of the Northern Territory taken over by South Australia. Shops of Adelaide lit for the first time with gas.
- 1865—Annual leases of pastoral lands sold by auction for first time. The Bank of Adelaide founded.
- 1866—Camels for the purposes of exploration introduced by Sir Thomas Elder. The Adelaide Town Hall opened.

- 1867—Visit of Alfred, Duke of Edinburgh, who laid the foundation stone of the General Post Office.
- 1869—Foundation stone of St Peters Cathedral laid. Prince Alfred College opened. Adelaide Chamber of Manufactures founded.
- 1870—Construction of the transcontinental telegraph from Port Darwin commenced. John Forrest and party made first of two journeys of exploration from Perth.
- 1872—Transcontinental telegraph from Port Darwin completed and first direct telegram from London received.
- 1873—Eight-hour working day adopted. First Health Act, establishing a Central Board of Health, passed.
- 1874—The University of Adelaide founded.
- 1875—The State Education Act passed. First Forestry Board established.
- 1876—Telegraph communication with New Zealand established. The Smith brothers invented the 'stump jump' plough. South Australia became first State to give legal recognition to trade unions.
- 1877—Overland telegraph line from Port Augusta to Eucla completed and first telegram from Perth transmitted. The Adelaide Bridge completed.
- 1878—Provisions of the Education Act relating to compulsory school attendance brought into force in the Adelaide school district. First tramway (horse-drawn) in any Australian city commenced carrying passengers to Kensington and North Adelaide. The State's population passed 250,000.
- 1879—Foundation stone of the Adelaide University laid. First bridge across River Murray in South Australia opened at Murray Bridge.
- 1881—First reclamation of swamp areas of River Murray. Art Gallery opened by His Royal Highness Prince Albert Victor. Construction of the weir which created the Torrens Lake completed.
- 1882—Establishment of Fire Brigades Board.
- 1883—The Telephone Exchange commenced operations. Roseworthy Agricultural College opened to students.
- 1884—Largs Bay Fort opened. Adelaide Trades and Labor Council, the first delegates society, inaugurated.
- 1885—Broken Hill silver mines opened. Column erected on Mount Lofty summit as a prominent landmark for mariners.
- 1887—Act authorising payment to members of Parliament passed. Renmark Irrigation Colony established. 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—Totalisator legally authorised by an Act of Parliament.
- 1889—The School of Mines and Industries opened. Smelting of silver-lead ore from Broken Hill commenced at Port Pirie.
- 1890—First South Australian built locomotive completed.
- 1892—Education made free to the compulsory age, and standard.
- 1894—Act granting the franchise to women passed by Parliaments. Inauguration of industrial arbitration by the establishment of Boards of Conciliation.
- 1896—State Bank of South Australia opened. Women voted for the first time at the general election. Happy Valley Reservoir opened. One of Adelaide's most severe droughts commenced, and continued for several years.

- 1899—Second referendum concerning the establishment of Federation held. In South Australia, 65,990 electors voted for Federation and 17,053 against. First military contingent left South Australia for the Boer War.
- 1900—Adelaide lit for the first time with electric light. The Commonwealth of Australia Constitution Act received Royal Assent and a Proclamation was issued uniting the States as the Commonwealth of Australia as from 1 January 1901. Conservatorium of Music opened. First Workmen's Compensation Act passed.
- 1901—Early closing of shops introduced. First Commonwealth Parliament 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 connected to Whyalla by railway.
- 1902—Flinders column, at Mount Lofty, dedicated to the public by the Governor, Lord Tennyson.
- 1905—First kindergarten in South Australia opened.
- 1906—Military cadet system inaugurated.
- 1907—High schools were established in a number of country centres. Municipal Tramways Trust incorporated. First Commonwealth basic wage judgment—the 'Harvester' award—made.
- 1908—Penny savings bank accounts for children established. The Outer Harbor opened. Adelaide High School established.
- 1909—Adelaide electric tramways commenced operations. Payment of old age pensions by the Commonwealth commenced.
- 1910—Payment of invalid pensions by the Commonwealth commenced. First recorded monoplane flight in Australia made by F. C. Custance at Bolivar.
- 1911—'Penny Postage' to all parts of the British Empire introduced. The Federal Defence Act came into operation. Administration of the Northern Territory transferred to the Commonwealth.
- 1913—Medical inspection of school children introduced. Commonwealth Bank formally opened. Metropolitan Abattoirs established.
- 1914—First South Australian military expeditionary force embarked at Outer Harbor. South Australia experienced its most severe drought.
- 1915—Prices of commodities fixed by a commission. A referendum approved the closing of liquor bars at 6 p.m. Women appointed as justices of the peace for the first time. First shipment of iron ore made from Whyalla to steelworks in Newcastle. First women police appointed. Opal discovered at Coober Pedy.
- 1916—Referendum proposing compulsory military service abroad defeated. First Public Service Commissioner appointed. First State living wage with general application declared.
- 1917—German private schools in South Australia were closed. East-West trans-continental railway completed and the first train ran to Perth. Mr R. G. Carey, in a Bleriot 60, made the State's first airmail flight from Enfield to Gawler.
- 1918—Wool clip purchased by the British Government at a flat rate of 13c a lb.
- 1919—Captain Butler flew from Adelaide across Gulf St Vincent carrying air mail to Minlaton. Soldier Settlement Bill passed by the South Australian Parliament. First Lord Mayor of Adelaide elected.

- 1920—Sir Ross Smith and party arrived at Adelaide by non-stop flight from Melbourne. Peace Exhibition held at the Jubilee Exhibition buildings. The Prince of Wales visited South Australia.
- 1921—The State's population passed 500,000.
- 1922—First lock on the River Murray completed and opened at Blanchetown.
- 1923—The Government approved an extensive re-organisation of the railway system.
- 1924—Public Debt Commissioners were appointed. Air mail between Adelaide and Sydney inaugurated. Waite Agricultural Research Institute established. First radio stations commenced broadcasting.
- 1925—Show Grounds at Wayville opened. The first Commonwealth election at which voting was compulsory took place. Foundation stone of Adelaide Teachers Training College laid.
- 1926—The South Australian barley exhibit won all prizes at the Brewers Exhibition in London. The State Bank opened for general banking business. Construction of a 3ft 6in gauge railway from Oodnadatta to Alice Springs approved. State petrol tax declared invalid following a Commonwealth writ against the State.
- 1927—Extension of the North-South railway 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 abolished and replaced by a voluntary system. Electric tram service to Glenelg commenced.
- 1930—All officers of the South Australian Public Service over the age of sixty-five years were compulsorily retired. The South Australian basic wage was reduced by 18c to \$1.25 a day. Transport Control Board, State Finance Committee and Unemployed Relief Council established.
- 1931—City Bridge opened. Financial Plan formulated at the Premiers' Conference adopted and Financial Emergency Act passed. Commonwealth basic wage reduced by 10 per cent for twelve months but was to be adjusted in accordance with a retail price index. State basic wage reduced from \$1.25 to \$1.05 a day. Basic wage for females reduced, first from \$3.95 to \$3.50 and later to \$3.15 a week.
- 1932—Boundaries and names of a number of local government areas changed and others abolished following the report of a commission.
- 1933—Wool auction values for the season rose 6c to 12c a lb. The Farmers Assistance Board, the Betting Control Board and the Metropolitan and Export Abattoirs Board established.
- 1934—Water restrictions 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—Centenary year of the State's foundation celebrated. Contract signed for the completion of Parliament House and the foundation stone laid by the Governor, Sir Winston Dugan.
- 1937—South Australian Housing Trust established. New Commonwealth basic wage of \$7.40 per week which incorporated a 'prosperity' loading declared. First trolley bus service inaugurated. Mount Bold reservoir with a capacity of 6,662 million gallons filled, almost doubling Adelaide's water storage. Schools closed and other precautions taken as a result of an epidemic of poliomyelitis.

- 1938**—First South Australian Housing Trust dwelling completed.
- 1939**—State's worst heat wave and disastrous bush fires experienced during the first two months of the year. Record high temperature of 117.7°F recorded in Adelaide. New Parliament House opened by His Excellency the Governor-General, Lord Gowrie.
- 1940**—Goolwa Barrage completed at a cost of \$1,400,000. Birkenhead Bridge 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 commenced. First naval vessel built in South Australia launched. First blast furnace to be built at Whyalla went into operation. Child endowment payments inaugurated. Pay-roll tax commenced.
- 1942**—Daylight saving of one hour introduced for almost three months. Wages and prices pegged and profits and interest rates restricted. Racing and bookmaking prohibited. Rationing of tea and clothing commenced. Widows pensions instituted. The uniform Income Tax Act came into force. First coal obtained from Leigh Creek.
- 1943**—Price stabilisation 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 resumed but betting shops remained closed.
- 1944**—Rationing of meat began. Morgan-Whyalla pipeline officially opened. The first State election with compulsory voting took place. Severe water restrictions imposed. First output of Leigh Creek coal for electricity generation.
- 1945**—Unemployment and sickness benefits came into operation. Restrictions imposed on the use of gas and electricity for domestic and industrial purposes.
- 1946**—Commonwealth munition factories taken over by various private firms. Payment of government subsidies to hospitals commenced. Restrictions on the use of gas and electricity again imposed. The South Australian Electricity Trust took over the property and functions of the Adelaide Electric Supply Co.
- 1947**—Fruit fly detected in metropolitan orchards and efforts made to eliminate it by stripping gardens and orchards. Sugar rationing abolished. Conciliation commissioners appointed following an amendment to the Commonwealth Conciliation and Arbitration Act. Severe restrictions imposed on imports from North America.
- 1948**—Restrictions on the use of gas and electricity imposed on a number of occasions during the year because of the shortage of coal. Preparation of the Woomera rocket range commenced. Forty hour working week introduced by Arbitration Court award. Serious bush fires occurred in January. Severe storms during April resulted in widespread damage including the destruction of the Glenelg jetty. Referendum on Commonwealth price control defeated. The free medicine scheme came into operation. Clothing and meat rationing abolished. Control of prices handed to the States by the Commonwealth. Full-scale production of the 'Holden' car commenced.

- 1949**—Petrol rationing by the Commonwealth declared illegal but resumed later in the year under a State Act. An extended national coal strike occurred. Water pipeline to the Woomera rocket range completed. The Commonwealth and South Australian Governments ratified an agreement for the standardisation of railway gauges.
- 1950**—Petrol, butter and tea rationing discontinued. Commonwealth free drugs scheme came into operation. Basic wage increased by \$2 a week. Water restrictions imposed in December and remained in force until June 1951.
- 1951**—Serious bush fires occurred in January. Wool prices reached a record high level. Distribution of free milk to school children introduced.
- 1952**—The hospital benefits scheme came into operation. Price control on clothing removed in South Australia. Severe import restrictions gazetted. Installations for the bulk handling of grain opened at Ardrossan. Compulsory chest X-rays introduced.
- 1953**—Remaining controls on building 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 discontinued. Size of the State Cabinet increased from six to eight Ministers.
- 1954**—A severe earthquake occurred in Adelaide on 1 March. Her Majesty Queen Elizabeth II visited South Australia. First unit of Port Augusta power station opened. Construction of dwellings in Elizabeth commenced. Radium Hill mines and treatment works officially opened. Water from the River Murray pumped into metropolitan reservoirs through the Mannum pipeline.
- 1955**—Adelaide Airport at West Beach opened. Mannum-Adelaide pipeline officially opened. The sulphuric acid plant at Port Adelaide commenced operations. Uranium treatment at Port Pirie also commenced. The new satellite town at Elizabeth officially opened.
- 1956**—River Murray flooded for several months and caused considerable damage in irrigation and reclaimed areas. Town Planning Committee established. Pyrites plant at Nairne opened. Charges for beds in public wards at the Royal Adelaide Hospital made for the first time. Atomic device exploded at Maralinga. Salk poliomyelitis vaccination programme commenced.
- 1957**—Centenary of responsible government in South Australia celebrated. Long service leave legislation 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**—South Australia ceased to be a claimant State for special grants from Commonwealth Grants Commission. Full-scale television transmission commenced. Sir Thomas Playford created record term as Premier in a British country (26 years 125 days). Aborigines became eligible for age, invalid and widows pensions.
- 1960**—First Adelaide Festival of Arts held (March 12-26). Discovery of high grade limesand deposits near Coffin Bay. Completion of second unit and formal opening of Thomas Playford power station at Port Augusta.

- 1961**—First United Kingdom Trade Commissioner appointed to South Australia. 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. Post trading replaced call system at stock exchange.
- 1962**—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.
- 1963**—Population of the State passed 1,000,000 mark. Port Stanvac oil refinery 'on stream'. School leaving age increased to fifteen years. Three weeks annual leave for employees governed by State awards and determinations introduced. Ratifying legislation passed for construction of Chowilla dam. First direct dialling for an overseas telephone call from South Australia. Major gas flow from Gidgealpa No. 2 well. Royal visit by Her Majesty, Queen Elizabeth II.
- 1964**—Work commenced on conversion of Port Pirie-Broken Hill railway to standard gauge. First gas from Port Stanvac refinery piped for use in Adelaide's gas supply. Record wind gust (92mph) and all-time low barometric reading (29.09 inches) registered at Adelaide on 12 July. New world land speed record set by Donald Campbell on Lake Eyre.
- 1965**—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. First woman judge in Australia appointed to Supreme Court of South Australia. Size of the State Cabinet increased from eight to nine Ministers.
- 1966**—Women sworn in for jury service for the first time. The Flinders University of South Australia at Bedford Park officially opened by Queen Elizabeth, the Queen Mother. Second major natural gas strike in Gidgealpa area. New outlet tunnel 9,000ft long from Happy Valley Reservoir completed. ELDO rocket Europa-1 launched at Woomera. Industrial Commission of S.A. replaced the S.A. Board of Industry.
- 1967**—Totalizator Agency Board operated off-course in South Australia for the first time. First South Australian lottery drawn. Commonwealth Basic Wage superseded by Total Wage concept. Liquor trading hours extended to 10 p.m. WRESAT-1, first Australian orbital satellite launched from Woomera. New record low annual rainfall for Adelaide (10.11 inches). Torrens Island power station commenced operations. First off-shore drilling rig—*Ocean Digger*—constructed and launched at Whyalla.
- 1968**—State elections held, Labor Government returned but subsequently defeated on the floor of the House at the first meeting of the new Parliament. New Liberal Premier, Mr R. S. Hall sworn in. Four weeks leave for State Government employees introduced. Construction commenced on State's first satellite communications station at Ceduna. Legal drinking age lowered from twenty-one to twenty. Sealed highway from Broken Hill to Adelaide opened. Sir James Harrison first Australian-born governor of South Australia sworn in.

- 1969**—Work begun on second major pipeline to bring River Murray water to Adelaide. Chowilla dam project deferred indefinitely. Forty-first Congress of the Australian and New Zealand Association for the Advancement of Science held in Adelaide. Electricity Trust signed \$120 million contract for supply of natural gas. Natural gas flowed through completed 486 mile pipeline from Moomba-Gidgealpa to Adelaide.
- 1970**—Bulk carrier of 55,000 tons the *Yarra River*, the fiftieth ship to be built at Whyalla since 1941, launched. Abortion law reformed in South Australia. Standard gauge working on new line between Port Pirie and Broken Hill begun. First direct telecast from England to Australia via satellite. First contracts signed for construction of \$4.8 million Adelaide Festival Theatre. Plans announced for Australian Mineral Foundation at Glenside after a \$1 million gift. Hall LCL Government defeated on vital issue and Dunstan ALP Government returned at subsequent general election. Contract let for building of \$3,625,000 Port Augusta Hospital. Hairy-nosed wombat adopted as State's faunal emblem. World record price of \$27,200 paid for merino stud ram at Adelaide Royal Show. Royal Commission appointed to investigate disorder arising out of a street demonstration. Contract let for a \$1.9 million bridge across Spencer Gulf at Port Augusta. Ministry increased by one to ten members. South Australian wine production of 43,764,704 gallons in 1969-70 a record. Duplication of Morgan-Whyalla pipeline ready for use. South Australian Government applied to Commonwealth Grants Commission for financial assistance and received an interim grant.
- 1971**—Mr Raymond C. Taylor named as South Australia's new Agent-General in London. Fluoridation of Adelaide Water Supply commenced. Agreement for supply of natural gas to Sydney from South Australian gas fields finalised. The *Amanda Miller*, an oil tanker of 62,000 tons launched at Whyalla. Points demerit scheme for drivers who commit road traffic offences introduced. Age of Majority reduced from twenty-one to eighteen. Keel of *Clutha Capricorn*, the largest ship ever built in Australia (approximately 83,000 tons) laid at Whyalla. Plans announced for the building of \$50 million civic centre at West Lakes. Commonwealth Government transferred power to levy payroll tax to the States. Ministry of Environment and Conservation created. Daylight saving introduced in South Australia for the first time since the 1939-45 War. Cattle and pig numbers in S.A. a record. Agreement to build Dartmouth Reservoir ratified by S.A. Parliament. Plans announced for development of Patchawarra oil field at estimated cost of \$200 million including pipelines to Adelaide and Sydney. Death of S.A. Governor Sir James Harrison in office and Sir Mark Oliphant, the first S.A. born Governor, sworn in. Wearing of seat belts in motor vehicles made compulsory. Plans announced by the South Australian National Football League for new headquarters at West Lakes.
- 1972**—Seventh Festival of Arts held in Adelaide. Plans announced for creation of new city of more than 100,000 people near Murray Bridge. S.A. liquor laws relaxed. New Stirling to Verdun freeway opened. Plans announced for the sealing of the Eyre Highway from Penong to the W.A. border. Another major oil flow from the Tirrawarra field announced. The *Clutha Capricorn* launched.

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 653.

PART 1—NATURAL ENVIRONMENT

Weather Conditions in South Australia (pages 17-19)—During summer 1971-72 there was great variation in rainfall aggregates over the pastoral areas. While all of the north-east and southern half of the Far North Division received above-normal amounts with some stations up to four times normal, the North West District and the remainder of the Far North recorded disappointing rains. Some aggregates in the Lake Gairdner and Oodnadatta areas were about one-eighth of normal. District averages for the summer were: 20 per cent below normal for the North West; 120 per cent above normal for the Far North; and 150 per cent above normal for the North East. Most of the rain fell early in January.

Although rains were generally above normal throughout the settled areas, a large inland section of the Far West received about half normal summer rainfall. Aggregates over the Upper North, Yorke Peninsula, Kangaroo Island and the Lower South East were almost double normal in a number of instances. District averages ranged from slightly above normal over the Murray Mallee to about 50 per cent above normal throughout the remainder of the settled areas except the Upper North, West Central and Lower South East, where the surplus was between 75 and 150 per cent. Most of the rain fell during December and January.

Mean summer maximum temperatures were generally below average. Throughout the area bounded by Ceduna in the West, Oodnadatta in the North and Port Augusta in the East and over most of the Central and Mid-North Districts mean maxima were 2 and 3 degrees below average. The remainder of the State experienced mean maxima between 1 and 2 degrees below average. This summer was noteworthy for its low number of century temperatures. Along the coastal belt mean maxima were mostly in the mid to upper seventies, grading through the eighties up to around the ninety mark over the northern settled areas and into the middle nineties in the extreme north of the State.

Mean minima generally displayed only slight deviation from the average with only the extreme northern sectors recording means of more than 2 degrees below average. Means for most parts were in the mid to upper fifties about the coasts, the low sixties over the remainder of the settled areas and the upper sixties throughout the interiors.

During autumn 1972 rainfall was below average throughout the State. Over the pastoral areas there were a few heavy falls near the northern border early in March and light to moderate falls in the North East early in May, otherwise these districts were virtually rainless. Deficits were fairly general over the whole area with district averages being below normal by 80 to 95 per cent.

In the settled areas, rainfall was well below normal. The worst served areas were the northern parts of the Western Agricultural and the Upper and Lower North Districts where there were some deficits of 80 to 90 per cent and district averages were down by 70 to 75 per cent. Most of the remainder of the settled areas experienced deficits of around 50 per cent, with the Lower South East experiencing a deficit of 39 per cent. Most of the rain fell during April with some further showers over the southern settled areas about the middle of May.

Autumn maximum temperatures were well above normal throughout the State, being 2 to 5 degrees above, in the Northern and Western Districts; 2 to 3 degrees above, over Yorke Peninsula, Adelaide Plains, Mount Lofty Ranges, Murray Districts and parts of the Lower and Upper South East; and nearly 4 degrees above in the extreme South East.

Minimum autumn temperatures were mainly below average in the Northern and Western Districts, part of the Mount Lofty Ranges and part of the South East Districts. In the remainder of the State, minimum temperatures, were near or slightly above average. An isolated section of the Upper North reported a deviation of greater than 2 degrees below average. Frost became more widespread during the latter half of May.

PART 6—SOCIAL ENVIRONMENT

Social Welfare (pages 238-62)—On 1 July 1972 the Community Welfare Act, 1972 was proclaimed and its provisions relating to the reorganisation of welfare services in this State came into force from that date. The Act changed the name of the Department of Social Welfare and Aboriginal Affairs to the Department for Community Welfare, and repealed the Aboriginal Affairs Act, 1962-1968; the Childrens Protection Act, 1936-1969; and the Social Welfare Act, 1926-1971.

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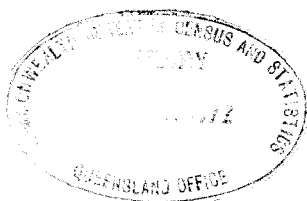
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Flora: T. N. Lothian; 1967, 23-27.

Droughts in South Australia: Director and staff members of Bureau of Meteorology; 1967, 7-10.

Flinders University of South Australia: Vice-Chancellor and staff members of Flinders University; 1967, 163-8.

The Wine Industry of South Australia: J. C. M. Fornachon and E. W. Boehm; 1968, 376-95.

Soils of South Australia: K. C. Northcote and J. A. Beare; 1969, 21-31.

Weapons Research Establishment: Director and staff members of Weapons Research Establishment; 1969, 184-92.

Aboriginal Relics: Robert Edwards; 1969, 201-8.

Geology of South Australia: N. H. Ludbrook and R. K. Johns; 1970, 3-18.

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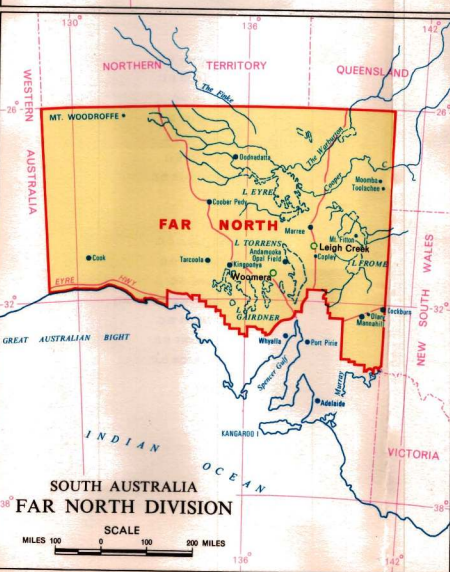
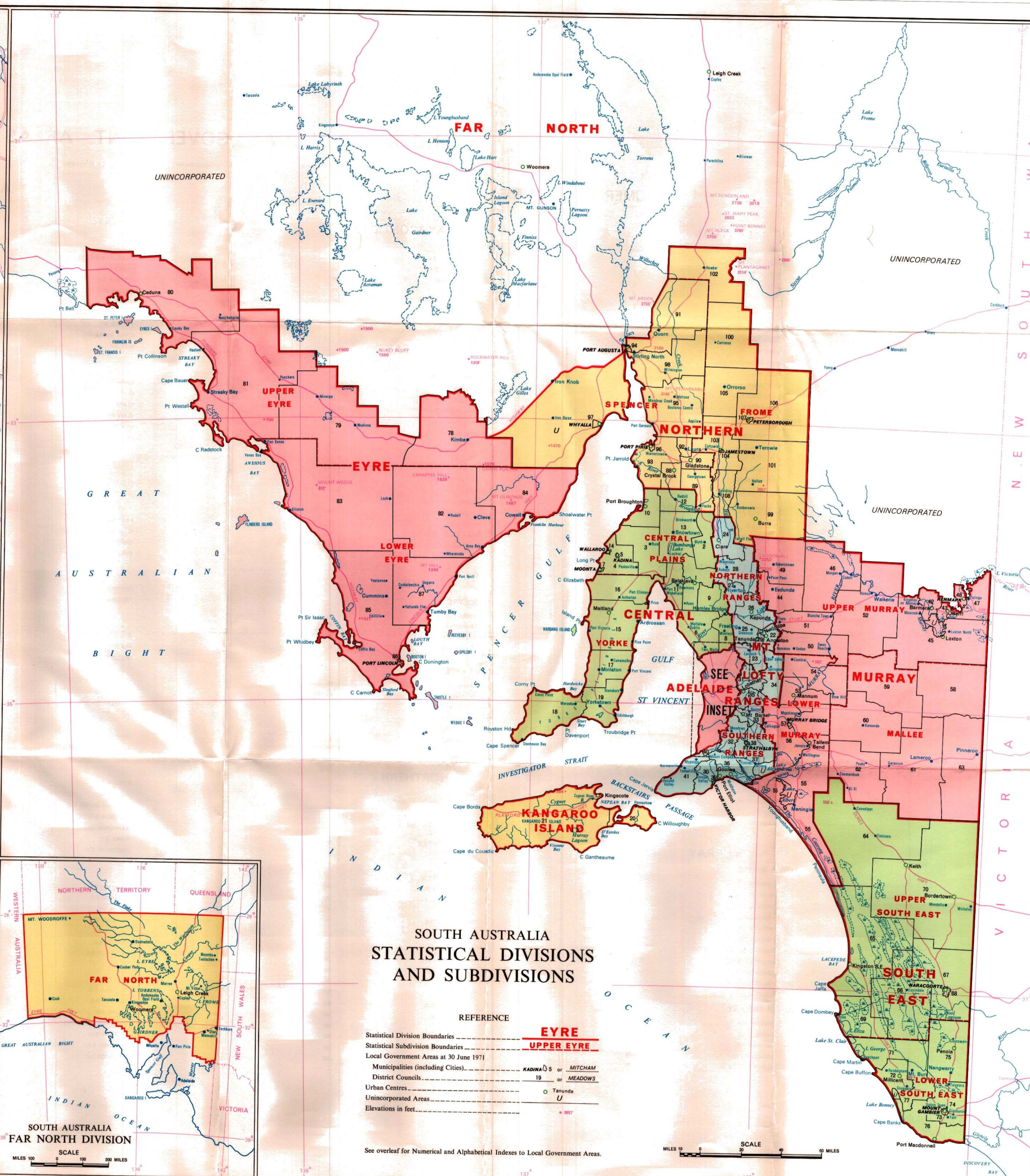
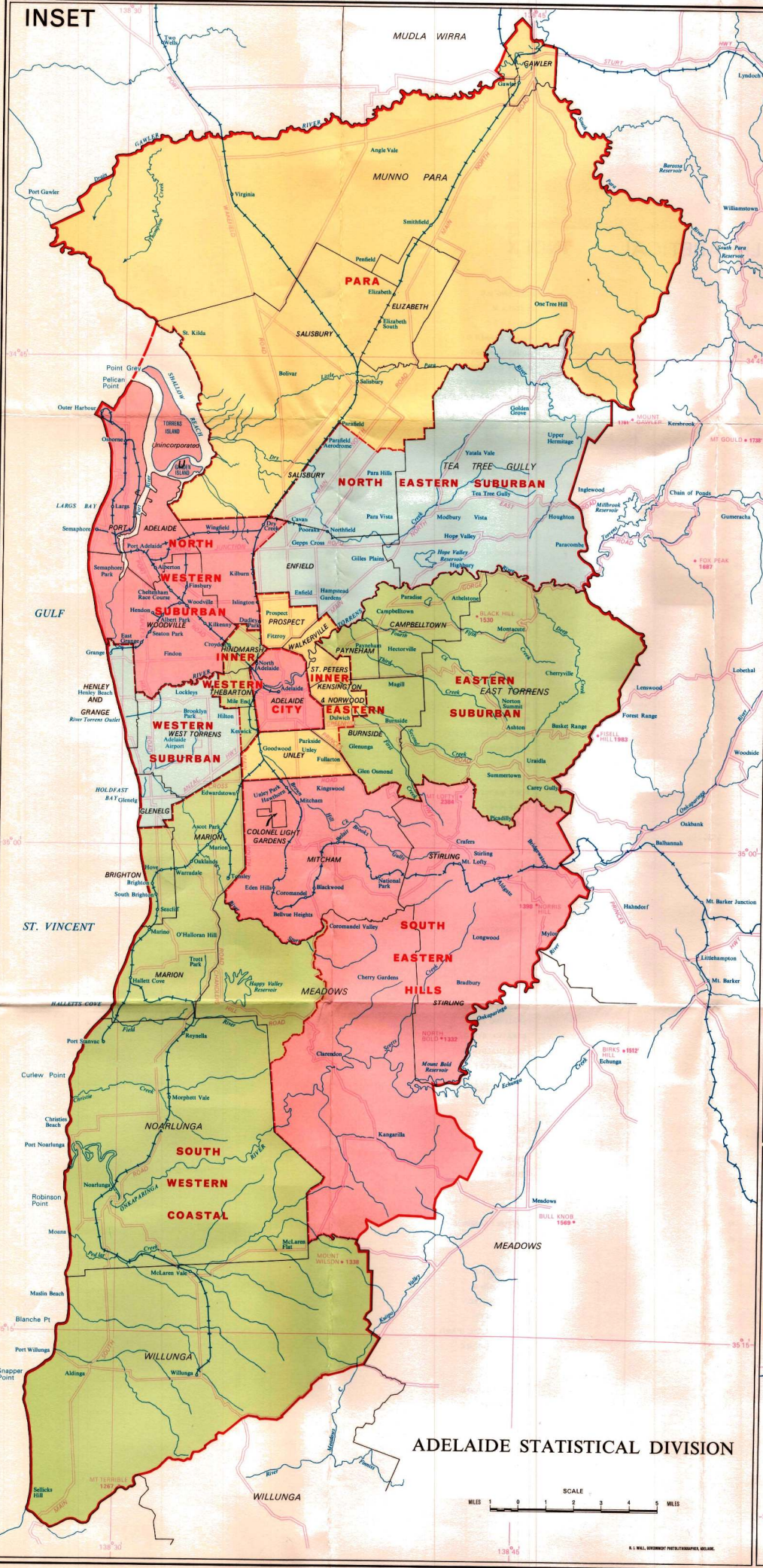
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INSET



**SOUTH AUSTRALIA
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