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TASMANIAN YEAR BOOK

1978



The Tasmanian Coat of Arms ('fruitful and faithful')

[By courtesy of the Premier's Department]

**AUSTRALIAN BUREAU OF STATISTICS
TASMANIAN OFFICE**



TASMANIAN

YEAR BOOK

PERIODICALS SECTION,
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R. LAKIN
DEPUTY COMMONWEALTH STATISTICIAN
AND GOVERNMENT STATISTICIAN OF TASMANIA

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PREFACE

The *Tasmanian Year Book* is designed to present a comprehensive statistical and descriptive account of the physical environment and of the social, demographic, economic, etc. structure of the State with particular emphasis on change and development in more recent years.

This edition (the twelfth) of the Year Book includes special articles on the following: Sir James Milne Wilson, Premier of Tasmania from 1869 to 1872; Tasmanian spiders (contributed by E. Turner of the Tasmanian Museum and Art Gallery); the Report on Private Forestry Development in Tasmania; the 'Joy Committee' Report on the Tasmanian railway system; the Robbins Pty Ltd Company at Kingston; the State Strategy Plan for Tasmania Draft Report (contributed by the Town and Country Planning Commission); the 1977 Callaghan Inquiry into Tasmania's industrial structure and employment situation; the recently created Department of Planning and Development; and Tasmania's caves. A new section titled 'Tourism' has been added to Chapter 18 and includes contributions from the Department of Tourism in addition to tourist accommodation statistics. Chapter 8 once again includes a section on problems experienced by the Mt Lyell Mining and Railway Co. Ltd and Chapter 9 includes a description of two proposed alternative schemes for a hydro-electric development in the Lower Gordon River area.

An index of special articles precedes the General Index and covers all such articles included in this and previous issues of the Year Book.

As far as possible, the latest available statistics and significant developments which have occurred during 1977 have been embodied in each chapter. Where this has not been practicable, brief details have been included in the Appendix. Under 'Chapter 17' in the Appendix appears a new section on indexes of relative retail prices of food for Australian capital cities and selected Tasmanian towns. This edition of the Year Book has had to be reduced in length and the price raised significantly due to a rapid increase in printing costs. To achieve the reduction in length, historical material has either been excluded or shortened, with references being made to more detailed coverage in earlier editions.

I gratefully acknowledge the valuable assistance given by officers of the various Federal and State Government Departments and instrumentalities and by others who have contributed information, often at considerable trouble, and by those who have provided photographs. In particular, I express my appreciation to the Tasmanian Government Printer and his staff for their enthusiasm and co-operation in printing this volume.

More detailed statistics relating to most matters treated in the Year Book are available in the various statistical bulletins and other publications issued by the Bureau. Information about these publications is provided in the section 'Publication of Tasmanian Statistics' which precedes the Index of Special Articles.

The Year Book has been compiled under the direction of Mr R. S. White, B.A., M.A.C.S.; Mr D. J. Maclaine, B.A., was responsible for editing this issue.

R. LAKIN

*Deputy Commonwealth Statistician
and
Government Statistician of Tasmania*

Australian Bureau of Statistics,
HOBART, April 1978

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SYMBOLS AND USAGE

The following symbols, where used, mean:

ASIC	Australian Standard Industrial Classification.
n.a.	Not available.
n.e.c.	Not elsewhere classified.
n.e.i.	Not elsewhere included.
n.p.	Not available for separate publication; included in totals where applicable.
p	Preliminary—figure or series subject to revision.
r	Revision to figure or series published in previous issue.
..	Nil or less than half the unit shown, or not applicable.
—	Break in continuity of the series (where drawn across a column between two consecutive figures).
(H)	Located in Hobart Statistical Division;
(S)	Located in Southern Statistical Division;
(H)(S)	Parts in both Divisions.

A blank space in a table indicates that the figure is not yet available.

Any discrepancies between totals and sums of components in tables are due to rounding.

Where reference is made to Acts of the Federal or State Parliaments, the year quoted refers to the year in which the principal Act was passed; all subsequent amendments are inferred.

VALUES AND MEASURES

Values are shown in Australian dollars (\$) and/or cents (c). Metric units have been substituted for imperial units. The use of dollar currency and metric units has not been confined merely to tables; for the sake of uniformity, they have also been introduced into historical texts. See the table opposite for metric conversion factors.

LOCAL NAMES OF CERTAIN REGIONS

Tasmanians describe certain regions in a manner confusing to strangers; nevertheless this book employs local usage in most contexts. The chief peculiarities are:

North-West Coast: The *north* coast from approximately Port Sorell, west to Cape Grim is called the *North-West Coast*.

North-East Coast: The *north* coast from approximately Low Head, east to Cape Portland is called the *North-East Coast*. With most of the north coast referred to as either 'north-west' or 'north-east', the term 'north' is rarely applied to this coastal region.

West Coast: The Tasmanian *West Coast* may refer only to the mining settlements of Queenstown, Rosebery, etc. In other contexts, the user may be thinking of inland mountains and rainforests rather than of a coastline.

Midlands: The true *Midlands* are probably the Central Plateau but the Tasmanian term means the rural area east of the Plateau and lying along the axis of the Hobart-Launceston road (the *Midland Highway*).

METRIC CONVERSION FACTORS

Unit		Conversion factor	
Imperial	Metric	Imperial to metric (multiply imperial by)	Metric to imperial (multiply metric by)
Length			
inch (in)	centimetre (cm)	2.540 00	0.393 701
foot (ft)	metre (m)	0.304 800	3.280 84
yard (yd)	metre (m)	0.914 400	1.093 613
mile	kilometre (km)	1.609 34	0.621 371
nautical mile	kilometre (km)	1.852 00	0.539 957
Area			
square foot (ft ²)	square metre (m ²)	0.092 903 0	10.763 9
square yard (yd ²)	square metre (m ²)	0.836 127	1.195 99
acre (ac)	hectare (ha)	0.404 686	2.471 05
square mile	square kilometre	2.589 99	0.386 102
Mass			
ounce (oz)	gram (g)	28.349 5	0.035 274 0
troy ounce (oz tr)	gram (g)	31.103 5	0.032 150 7
pound (lb)	kilogram (kg)	0.453 592	2.204 62
hundredweight (cwt)	kilogram (kg)	50.802 3	0.019 684 1
short ton (sh ton)	tonne (t)	0.907 185	1.102 31
ton	tonne (t)	1.016 05	0.984 207
Volume			
pint	litre (ℓ)	0.568 261	1.759 75
cubic foot (ft ³)	cubic metre (m ³)	0.028 316 8	35.314 7
cubic yard (yd ³)	cubic metre (m ³)	0.764 555	1.307 95
bushel (bush)	cubic metre (m ³)	0.036 368 7	27.496 1
super foot true	cubic metre (m ³)	0.002 359 74	423.776
super foot hoppus	cubic metre (m ³)	0.003 004 51	332.833
ton measure (40 cubic ft)	cubic metre (m ³)	1.132 67	0.882 868
imperial gallon (gal)	litre (ℓ)	4.546 09	0.219 969
proof gallon (pf gal)	litre alcohol (ℓ al)	2.595 7	0.385 3
Energy			
British thermal unit (Btu)	kilojoule (kJ)	1.055 06	0.947 813
Power			
horsepower (hp)	kilowatt (kW)	0.745 700	1.341 02
Temperature			
degree Fahrenheit (°F)	degree Celsius (°C)	$^{\circ}\text{C} = \frac{5(^{\circ}\text{F} - 32)}{9}$	$^{\circ}\text{F} = \frac{9 \times ^{\circ}\text{C}}{5} + 32$

NOTE: 1 hectare (ha) = 10 000 square metres (m²)
 1 square kilometre (sq km) = 100 hectares (ha)
 1 tonne (t) = 1 000 kilograms (kg)
 1 litre (ℓ) = 1 000 cubic centimetres (cc) = 1 000 millilitres (ml)
 1 cubic metre (m) = 1 000 litres (ℓ)

Chapter 1

HISTORY AND CHRONOLOGY

INTRODUCTION

The 1977 and earlier editions of the *Year Book* included short sections on 'Discovery' and 'Settlement' but these have been omitted from this edition as part of an effort to reduce its length. The 1967 *Tasmanian Year Book* (the first edition) also included sections on 'The Aborigines' and 'The Convicts'. Subsequent Year Books have all included special historical articles as well as a chronology of important Tasmanian events. The table below lists historical articles appearing in all Year Books up to and including this issue. It can be seen that these articles broadly cover Tasmania's history for most of the period from discovery and first settlement up until 1872. The 'Chronology' at the end of this Chapter lists important events from the discovery of Tasmania up to the present.

Year Books: Historical Articles

Issue	Title	Pages
1967-1977	Discovery; Settlement	1-6
1967	The Aborigines	6-10
	The Convicts	10-13
1968	The Aborigines, Robinson's Journals	6,7
	The Administration of Colonel George Arthur (1824-1836)	7-14
1969	The Administration of Sir John Franklin (1837-1843)	6-11
	The Narrative of Sir John Franklin	12-19
1970	The Land Exploration of Tasmania	6-16
	The Administration of Sir John Eardley-Wilmot (1843-1846)	16-30
	Profile of a Premier: Thomas Gregson	30-35
1971	The Van Diemen's Land Company	7-11
	The Administration of Sir William Thomas Denison (1847-1855)	11-22
	Profile of a Premier: Sir Francis Smith	22,23
1972	The Governorships of Thomas Davey and William Sorell (1813-1817 and 1817-1824)	7-16
1973	The Parliament of Tasmania, 1823-1901	6-10
	Wybalena, The Tasmanian Aboriginal Settlement on Flinders Island	10-13
1974	Colonial Developments During the Government of Francis Smith (1857-1860)	6-16
1975	Tasmania: 1861 to 1866	6-21
1976	Sir Richard Dry: Premier of Tasmania, 1866 to 1869	6-26
1977	The Tasmanian Main Line Railway Company	6-22
	Divisions and Alignments in the Tasmanian Community During the Great War (1914-1919)	22-29
	John Glover's Migration to Tasmania	506-513
1978	Sir James Milne Wilson, Premier (1869-1872)	1-22

SIR JAMES MILNE WILSON, K.C.M.G.

PREMIER OF TASMANIA 5 AUGUST 1869 to 11 NOVEMBER 1872

Early Life

James Milne Wilson was born in Banff, Scotland on 29 February 1812 to Barbara and John Wilson, ship owners. James had three brothers and one sister. His early education was in Banff but he was later transferred to the guidance of an eminent Scots professor in Edinburgh.

The Wilson family's connections with Van Diemen's Land date from the early 1820s. Captain William Wilson, James' eldest brother, sailed the merchant ship *Deveron* between Hobart Town, Sydney and England at that time. In 1824 William married a girl from Hobart Town and settled down as a merchant. John, the second brother who had been working in the Commissariat Office in Sydney, transferred to Hobart Town to live with his brother, but died there in the same year, 1825.

In a letter from Barbara Wilson to William in 1828¹ we learn that James was determined to go to sea and had been studying navigation to realise his ambition. He joined his brother's old ship the *Deveron* in England and sailed as a crew-man to Hobart Town arriving on 21 December 1829. Alexander, the youngest brother, also expressed a wish to follow his brothers in migrating to the Colonies but died before leaving England.

After the voyage to Hobart Town, James decided that perhaps the seafaring life was not for him and became a clerk in Sydney before returning to Tasmania. He did make one or two voyages as commander of his brother William's boats when needed. The most notable of these occasions was when he went to New Zealand to bring back the *Cheviot*, which the commander, against the owners' wishes, was trying to sail to America.

After settling in Tasmania, James studied engineering under Messrs Easby and Robertson of Hobart Town. He then entered into a commercial enterprise that brought widespread acclaim from around the Colonies. Wilson and two partners, Messrs Walker and James, leased the Cascade Brewery (then known as the Degraives Brewery) for 14 years. He was manager and brewer for most of this time. In 1867 the 'Cascade' beer won a medal at the Victorian Exhibition and received much praise. Wilson put the beer's success down to the coolness of climate and the water. It was while working at the brewery that James Wilson met Deborah Degraives, daughter of Peter Degraives, owner of the Cascade Brewery. They were married at St George's Church, Battery Point on 14 December 1847.

This was not the only partnership with the Degraives family. In 1851, in partnership with William Degraives, his brother-in-law, James purchased a property belonging to the 'South Australian Company' at Mount Gambier for \$18 000. The property consisted of 15 800 hectares with 28 000 fine-wool sheep. His cousin Claud Allardyce of Melbourne had been urging James to buy property in Victoria since 1847², but trouble over William's estate kept him in Tasmania until 1850. By the time James had acquired the property he found that property fortunes as large as those made in the 1840s were no longer to be had and he eventually sold up and returned home to his wife and family in Tasmania. In 1854-1855 James returned home to Scotland and England for a visit with his wife and two children. A third child was born in London.

Wilson's Early Public Life

James Wilson's involvement in public life began during his time in Victoria. He was appointed a Commissioner of the Peace for the City of Melbourne and subsequently gazetted a Justice of the Peace for Victoria in 1852.

In 1859 Wilson stood for the Legislative Council in the Hobart District and was successful. He remained in the Legislative Council holding the same seat for 21 years. During this time Wilson was a member of the Executive Council twice. The first time was in the Whyte-Meredith Administration as a member without office, for almost four years (20 January 1863 to 24 November 1866).

This length of service entitled him to use the title 'Honourable' in the colonies for life. The Governor, Colonel Thomas Gore Browne, nominated him for the title in the despatches of July 1866 and the Imperial Government gave assent. Following the defeat of the Whyte-Meredith administration by Sir Richard Dry and Mr T. C. Chapman in September 1866, Wilson became a member of the Opposition.

When a seat on the Hobart City Council became vacant in 1867, Wilson stood, was elected and became Mayor in 1868. It was not uncommon during those times for men to hold a seat on the City Council as well as in the Colonial Parliament. While Mayor, Wilson bought and donated the Mayor's Chains (worth \$210) for use by all future mayors of Hobart Town. He resigned from the Council and the position of Mayor when he accepted the Premiership in 1869. Prince Alfred, Duke of Edinburgh, a son of Queen Victoria, visited the Colony in 1868. He was the first Royal visitor to the Colony. Wilson as Mayor was elected chairman of the reception committee in Hobart Town.

The Hon. James Milne Wilson, Premier

In August 1869 Sir Richard Dry, Premier and Colonial Secretary, died, much to the regret of all colonists. A native-born Tasmanian, he had been a very popular man, both in private circles and in public life. On the death of Sir Richard Dry, the Governor, Charles Du Cane, summoned Mr T. C. Chapman who had been Colonial Treasurer in Dry's administration. On Mr Chapman's advice Du Cane summoned the Hon. James Milne Wilson, M.L.C. and requested that he form a Government. This he did and the services of T. C. Chapman, Colonial Treasurer, and Mr Dobson, Attorney-General, were retained. The other members of the Executive Council were to be Henry Butler and J. A. Dunn. Mr W. R. Giblin replaced Mr Dobson as Attorney-General on 5 February 1870, when Mr Dobson was elevated to the Justices Bench. Messrs Butler and Dunn were both initially on the Executive Council without office, but when the portfolio of Minister for Lands and Works was created Mr Butler took up that portfolio.

It was widely believed that Mr Chapman allowed Wilson to become Premier and Colonial Secretary to enable Chapman and his colleagues to retain their positions. Wilson did give the administration a coalition basis as he had been a member of the administration that Dry, Chapman and colleagues had turned out of office in 1866. Wilson came in for much criticism for being a turncoat and deserting his friends. To counteract this he claimed that he had asked Whyte to join him in Government, although Whyte denied this. (Political parties at that time were not clearly defined and were really only groups of men who had some common ideas and who were used to working with each other. As there was no rigid party structure or discipline, it was easy for men to move from group to group and form new alliances.)

On accepting office as Colonial Secretary, a paid Government office, Wilson had to stand for re-election in his district of Hobart. Any person who was to receive a Government salary after being elected to Parliament was required to stand for re-election. Members of Parliament without office were not paid.

A Mr Belbin opposed Wilson and they fought a close contest; the vote in Wilson's favour was only 175 votes to 167. At the declaration of the polls, Wilson's unpopularity with many people was expressed by the crowd, with Mr Belbin receiving the cheers. One of the main topics of the day in Hobart Town was a proposal for construction of a main line railway between Hobart and Launceston.

Wilson was very non-committal on this in his election speeches, whereas Belbin came out strongly in favour of the proposal as being necessary for the development of the Colony's economy.

During Wilson's Premiership the main concern was the continuing depressed state of the economy and colonial finances—increasing expenditure and diminishing revenue. The desire for railways, the quest for gold, the collapse of the volunteer artillery forces and the pressures for intercolonial free trade were all manifestations of the poor economic state of the Colony.

Colonial Finances and the Tasmanian Economy

Despite Sir Richard Dry's and Mr Chapman's efforts during the three years of their administration as Premier and Colonial Treasurer, respectively, Tasmania's economy was still depressed. Two of the major contributing factors were:

- (i) the small population isolated from the Mainland, with the closest market, Victoria, having high protective customs duties; and
- (ii) the poor system of agriculture with crude tools, inadequate drainage or irrigation systems and little crop rotation.

The colonists believed their problems could be alleviated by increasing the population through immigration drives and the lure of the gold fields, thus lifting the numbers of workers and consumers. Immigration and emigration societies were formed both in the Colony and in England to promote groups of people or individuals to migrate. An Immigration Board was set up in Tasmania to aid immigrants and residents who wished to obtain employees through immigration. Discovery of payable gold fields was seen as a possible redeemer capable of attracting capital and people to the Colony as long as customs duties were kept low and there was no possibility of direct taxation.

Governor Du Cane often wrote in his despatches of the poor system of agriculture in the Colony. A drainage and irrigation bill was introduced into the 1871 session of Parliament in an effort to stimulate these two activities but it was discharged in the House of Assembly after the second reading. The bill as it stood was not considered workable because individual farmers were not considered, only the district as a whole into which they were grouped. A second attempt to introduce a bill on this matter was made in the first session of 1872 but lapsed in the House.

An Act for controlling scab in sheep which came into force in March 1870 was not the disaster it had been predicted to become. Although the original Act did require a succession of amendments to make it workable, the sheep and wool industry improved as a result of the control of this disease.

Other problems the farmers had to face included the following:

- (i) Plagues of rabbits had already been noted by 1869 and the numbers were still increasing in 1871. A bill for their control was introduced in 1871.
- (ii) A plague of caterpillars in the summer of 1869-70.
- (iii) The spreading of the Californian Thistle.
- (iv) A drought during the first half of 1871.
- (v) A poor harvest in the 1871-72 season.

Agriculture and forestry and sawmilling were the main industries of the Colony in the 1860s and early 1870s, with very little manufacturing. In 1869 the Government, in an effort to promote and stimulate the growth of manufacturing

industries, enacted legislation to provide bonuses or rewards for the production of certain articles—sugar, salt, woollen products, flax hemp and hemp sacks—in given quantities. These were designed to help businesses over the difficult period of establishment. Not everybody was in favour, as some people believed that any industry that needed propping up was not worth having. The offer of bonuses did not have the desired effect as by June 1872 no payments had been made. Some attempts had been made at growing sugar beet and flax, and the production of salt was tried, but the quantities involved were insufficient to qualify for the bonuses. It was not until 1874 that the first woollen products were made at the Waverley Woollen Mills in Launceston.

The Wilson Government laboured under the stress of falling customs revenues, which were the main source of finance at that time. Demands upon these resources were increasing—for example expenditure to promote the growth of the railways. Revenue from the sale and lease of Crown lands was also falling faster than the demands on the Land Fund, leaving large deficits that had to be covered by debenture and Treasury note issues. Cut-backs in Government expenditure and reduction of customs duties were advocated to help solve Tasmania's financial ills. A few efforts to reduce expenditure were made including several bills to reduce the salary and allowances paid by the Colonial Government to the Governor. The first bill introduced in 1868 did not receive Royal Assent but the 1870 and 1871 bills were assented to. Some small reductions in the public service were also made over the three years but increases in other expenditure—e.g. the takeover of the Launceston and Western Railway and the construction of the Mainline Railway—outweighed these cut-backs.

The first financial statement of the Wilson administration, presented in August 1869, deferred any moves on retrenchments and customs duties until after an inter-colonial conference, proposed to be held in January 1870, to discuss the possibility of forming an Australasian customs union. The Intercolonial Conference was finally held in Melbourne in June 1870 but an agreement on a customs union was not reached, leaving the various colonial governments still able to set their own rates of customs duties. With revenues falling the Government, in September 1870, increased customs duties. The bill amending the customs duties schedule faced severe criticism both inside and outside Parliament. Chapman, the Colonial Treasurer, only just succeeded in getting the bill through, requiring a joint sitting of the two Houses to sort out the differences of opinion. A compromise on the most criticised of the new taxes, to be levied on the import of sheep and cattle, was necessary to see the bill enacted. Chapman was also criticised and accused of being hypocritical as he had claimed himself to be an advocate of free trade and yet imposed duties which appeared to be protective. The Government claimed that the duties were for revenue purposes only.

Increased revenue expected from the new taxes was \$24 000 for the remainder of 1870. The expectations were not, however, realised and the customs revenue for 1870 fell short of the estimates (of September 1870) by \$10 000, giving a total deficit in general revenue of \$20 000 for the year. For the first half of 1871, the first full six months the new rates had applied, revenue fell short of that for the same period in 1870 by \$1 446.

In retaliation against the new Tasmanian sheep and cattle taxes, Victorian tariffs on the import of fruit, jam and timber (Tasmania's main exports) were raised.

Unemployment was relatively high in 1871 and a group of unemployed men in Hobart Town made a deputation to the Premier to ask that the Government provide relief. Stone breaking was offered to married men at Brighton and 20

men were employed there by the Government. The Hobart City Council also provided work for married men—breaking stone at the Domain quarry and repairing Brown and Park Streets. By 17 October 1871, 79 heads of families were registered for work with the City Surveyor. Single men were not considered for relief work as it was considered they were able to move about the Colony more easily to find employment. The City Council petitioned the Colonial Government to provide funds to enable them to employ more of the unemployed but were refused. Launceston experienced a similar situation in 1872 when, during August alone, 100 men applied for work as stone breakers but only a dozen or so could be accommodated.

There was much dissatisfaction with the state of affairs in the Colony just prior to the 1871 general elections due to high unemployment, high customs duties, and the apparent inability of the Government to reduce public expenditure. Public meetings were held to demonstrate this dissatisfaction. A group of Launceston business men banded together and elected a sub-committee to set out a financial program for the Colony, covering both expenditure and revenue. The recommendations of the sub-committee were:

- (i) expenditure from General Revenue should be cut by \$94 116 (from \$463 346 down to \$369 230) and from the Land Fund by \$108 006 (from \$578 426 down to \$470 420), a total reduction of \$202 122;
- (ii) abolition of customs duties except those on wine, spirits, tobacco, malt liquors, tea, sugar and coffee; and
- (iii) the balance of the necessary revenue was to be raised by occupation, trade and business licences.

That program did not, however, receive unanimous support and was criticised for arbitrarily cutting many items of expenditure without knowing all that was involved and for proposing a system of licences which was expected to be harmful to business. Initially the program had also contained a recommendation for a property tax and although this proposal was later abandoned in favour of wider customs duties, it was also the subject of some criticism.

A public meeting was called, out of which grew the Tasmanian Patriotic Association. By mid-September 1871 the Association had nearly 100 members. The main aim of the Association was to bring to the public's attention the necessity to reduce Government expenditure and customs duties, and give support to those candidates at the general election who believed in these two ideals. The Association did not nominate candidates. There was also great concern about the size of the colonial debt which, at the beginning of 1871, stood at \$2 million with an annual interest bill of \$145 644. In 1869 the interest bill had been only \$83 846.

Thirteen new members were elected and took up their seats in the House of Assembly in November 1871 but there was still not enough cohesion among Opposition members to form an alternative government.

Chapman's financial statement of 1871 again did not indicate any substantial retrenchments, only a little paring here and there. The estimated expenditure for 1872 (\$466 292) was greater than that for 1871 (\$453 352). A motion was introduced into the House stating that the estimates submitted were in excess of the resources of the Colony and it was desirable that they should be revised, so that they could be met out of current resources without raising further debentures. The Government still had sufficient numbers behind them to have this rejected and to secure Supply for the next six months.

June 25 saw the opening of the 1872 session of Parliament and the Treasurer's financial statement was presented on 5 July. The main features were:

- (i) A large contemplated deficiency because of falling receipts from the sale of Crown lands; and the proposal to give relief to those districts liable to the interest levy due in respect of the Launceston and Western Railway debentures.
- (ii) The deficiency of receipts to be met by fresh taxation, the amount estimated to be needed being \$116 000. Probate duties were to be increased and an annual 'charitable rate' of 4 cents in the dollar on property introduced. The charitable rate was ostensibly for the support of pauper and charitable institutions but there was no effort to apply funds raised to the charity expenditure estimates.
- (iii) The selling of the Hobart Town Barracks and part of the Launceston Swamp to repay Treasury bills. This was an unpopular move.
- (iv) Interest paid to the company building the Main Line Railway during construction was to be raised by the issue of debentures.

Extra taxation was expected as Chapman had been reported as saying in the *Launceston Examiner* in March that, ' . . . there was a necessity for bringing up the revenue of the country and there was a very considerable taxation looming in the distance . . . ' ²³ but the proposal to raise a property tax came as a surprise. Chapman, in his financial statement only seven months previously in November 1871, had come out against property tax and implied that people who suggested such a thing in lieu of customs duties were either rogues or fools.

The charitable rate was withdrawn because of the subsequent outcry and in its place Chapman proposed an income tax. The proposed levy was 2½ per cent on incomes over \$200 per annum earned by residents from within the Colony and 5 per cent on incomes over \$200 per annum earned by non-residents from within the Colony. This was also a shock, as Chapman had on previous occasions come out against income taxes. He was a member of the party that brought the Whyte-Meredith Government down when they had dared to consider the same move in 1866.

The Downfall of the Government

The attempt to introduce an income tax was enough to bring down the Government. The Opposition, although not cohesive enough to form a new alternative government, was united sufficiently to give a 'yes' vote to a motion of no confidence in the Government. Mr Gellibrand introduced the motion on 19 July 1872 while the House of Assembly was sitting as Committee of Ways and Means. The vote went 16 to 14 against the Government, one member being absent.

Although the House had not passed the Appropriation Bill, they had approved the Estimates with only small reductions. They had also acknowledged that customs duties as a source of revenue were exhausted but they rejected the Government and their proposed taxation scheme although having no alternatives. Mr Meredith, whose Government had advocated an income tax in 1866, was also among those who voted against the Government.

Wilson and his fellow Ministers tendered their resignations and Wilson advised Governor Du Cane to summon Mr Meredith. He justified giving this advice by Parliamentary practice; Mr Gellibrand, the mover of the no confidence motion, was not recognised as a leader of any party and he had only limited experience in

Parliament while Mr Meredith was considered leader of the Opposition. Mr Meredith failed to form a Government. The Governor then sent for three others, including Mr Gellibrand and Mr Innes, none of whom could form a Government. Wilson was then asked to withdraw his resignation and resume office; this he would only do if the House would reverse the vote of no confidence. However, that vote was confirmed, leaving the Governor no choice but to dissolve Parliament and call an election. Wilson and his colleagues consented to remain in office until the new Parliament could select a Government after the elections. The Appropriation Bill which had been held over to prevent the Government proroguing Parliament in June for six months, was passed to enable the Colony and its institutions to function and to maintain the credit standing of the Colony until the political situation was remedied.

The stumbling block for each successive hopeful in forming a Government was a person to fill the position of Attorney-General. A suitable replacement for Mr Giblin could not be found and he refused to desert his colleagues.

Mr Giblin's and Mr Chapman's election speeches gave some indication of government expenditure restraint but only after careful consideration of the needs; they did not favour arbitrary cutbacks. The new income tax was to remain—a necessity because of increased expenditure due to the railways and falling land revenues—but Chapman hoped to be able to repeal this in the near future.

Parliament was opened after the elections on 22 October 1872 and six new members took their seats in the House. The Opposition met on 22 and 23 October to organise themselves. Chapman made yet another financial statement, the tone of which was somewhat more optimistic than the July statement had been. Expected general revenue and the estimated demands on it were closer together and the Land Fund revenue was expected to be higher. Higher estimated general revenue receipts resulted from: (i) customs revenue recovering and making up for past deficiencies; and (ii) traffic receipts from the running of the Launceston and Western Railway (which had been taken over in August 1872). Estimated expenditure and interest payments were also higher than had been estimated in July due to the charges of the Launceston and Western Railway but the increase in these was not as great as the expected increase in revenue.

Mr Clerke moved a vote of no confidence in the Government on October 31 as an amendment to the motion that the House go into Committee of Ways and Means; Mr Meredith seconded it and the motion was carried by 17 to 13. The Governor then summoned Mr Clerke and he submitted the names for a new Ministry:

Premier and Colonial Treasurer—Mr F. Innes.

Colonial Secretary—Mr James Reid Scott.

Minister for Lands and Works—Mr C. Meredith.

Attorney-General—Mr J. A. Jackson.

The Hon. James Milne Wilson was unanimously elected President of the Legislative Council to replace Mr Innes, the new Premier.

Intercolonial Free Trade

Before Sir Richard Dry's death it had been proposed that a conference of delegates from each of the Australasian colonies be held early in 1869. However, a mutually convenient time could not be found due to clashing parliamentary sittings and changes in governments throughout the colonies. January 1870 was later proposed but was found not to be mutually convenient for all colonies. New

Zealand delegates arrived in Sydney for the conference to find only New South Wales and Queensland in attendance. The three governments did come to some agreements and drew up a document setting them down. The main point of discussion and point of agreement was to press the Imperial Government to repeal restrictive legislation preventing the duty free interchange of their several products and manufactures. They also agreed to press for the right to enter into conventions with foreign powers, especially the right to attempt to obtain an agreement with the United States to have wool from the Colonies admitted there duty free.

Wilson was a strong believer in intercolonial free trade and devoted much of his time and effort to promoting this cause. He wanted to see a full customs union between the colonies as suggested by the Secretary of State for the Colonies in his despatch to the Governor of New South Wales in January 1869. Wilson was instrumental in organising the conference of delegates held in Melbourne in June 1870. This was attended by delegates from South Australia, Victoria, New South Wales and Tasmania; Tasmania was represented by Wilson (Premier and Colonial Secretary) and Chapman (Colonial Treasurer); Queensland could not attend, Western Australia did not at that stage have responsible government and New Zealand refused the invitation. New Zealand refused not only because its representatives had been in Australia in January, but also because they did not believe that a full customs union would work and that the disadvantages outweighed the advantages. The main problem they saw was the difficulty of setting the external tariffs to suit all parties—and if they could be set, then how were they to be varied? A compromise would have to be made on the rate set and that would be unlikely to suit anybody. It would most likely result in other forms of taxation being imposed where the revenue returns were too low to cover expenditure. Without a federal parliament representing all Australasian colonies being established, the New Zealand Government believed the tariff would be virtually irreversible once set.

The Conference did not come to an agreement on a customs union because New South Wales and Victoria would not agree to a uniform tariff, New South Wales having a free trade philosophy and Victoria a protectionist policy. An agreement was reached, however, on the principle that the colonial governments should have the power to enter into trade agreements with each other for the interchange of their various products and manufactures duty free. Other topics of mutual interest also discussed at the Conference included:

- (i) the reduction of postal and telegraphic charges;
- (ii) the desire and need for immigration and greater co-operation between the colonies for its promotion;
- (iii) establishment of an Australian Court of Appeal;
- (iv) the necessity for Britain to establish a protectorate over the Fiji Islands;
- (v) establishment of telegraphic communication with Port Darwin;
- (vi) the issue of new silver coins to replace those defaced;
- (vii) the withdrawal of Imperial troops and a resolution to request the Imperial Government to undertake to protect and defend the coastline of Australia and British commercial shipping in Australian ports;
- (viii) the suggestion by the Victorian Chamber of Commerce that the 'cental system' of weights be used for grain sales (it was agreed that this was desirable but the details for a uniform system were not discussed); and

- (ix) the necessity for uniform statistics and the desirability of having the Registrar-Generals or other statistical officers of the colonies communicate with each other with this object in view.

All the governments represented recognised the fact that there was Imperial legislation that prevented intercolonial free trade, while allowing the colonies to impose customs duties on imports from the rest of the world. The acts that required amending were an *Act for the Better Government of the Australian Colonies* and the various Constitutional Acts of the Australian colonies. These acts prevented the colonies from imposing differential duties and the enacting of any legislation contrary to Imperial Government foreign treaties. The Imperial Government had previously indicated a willingness to accept and support a customs union between two or more of the Australasian colonies and, where necessary, repeal the restrictive legislation. Therefore its subsequent strong resistance to intercolonial reciprocity on trade was not anticipated.

Tasmania undertook to draft a bill on the subject of intercolonial free trade in order to facilitate reciprocity with respect to customs duties on colonial products and a copy was sent to each of the other colonies for their consideration. This bill was presented to the 1870 session of Parliament and was passed by both Houses, but never received Royal assent. Similar legislation was also passed in South Australia and New Zealand. The Governments of New South Wales, Victoria and Queensland, although they had agreed in principle to the idea, did not follow the example set by the other three colonies. Queensland would not enact legislation because the Government did not believe it was in the best interests of the colony to enter into such agreements at that time but it did agree that Imperial restrictions should be lifted. Victoria and New South Wales were reluctant to enact legislation while the constitutional and other Imperial restrictions remained in force. Wilson urged these governments to introduce such legislation to further demonstrate the colonies' desire for intercolonial reciprocity.

The Imperial Government's arguments against assenting to such legislation were based on the principles that it was a form of protection and that free trade policies were the best. The colonial governments saw the situation differently—as a step towards a customs union by breaking down the jealousies that already existed and preventing further barriers from growing, especially the increasing of tariffs for retaliatory purposes. Wilson argued persistently in favour of the proposed agreements and was supported by Governor Du Cane on more than one occasion.

Du Cane, although he agreed that this was a form of protection, thought that it was no worse than that which already existed and that the choice was not between free trade and protectionism but between protectionism and a modified version of protectionism which was a step towards lowering the barriers. In his despatch home dated 24 March 1871 he stated ' . . . that the concession to these Colonies of powers of this kind would tend to promote the ultimate establishment of a complete customs union and to strengthen at the same time their relations with the Mother Country . . . ' He also believed it would be of great potential benefit to Tasmania, enabling the Government to negotiate freer entry of Tasmanian products into the other Australian colonies, thus giving the Tasmanian economy a boost.

The New Zealand Government was also very vocal on the subject and supported the Australian governments even though New Zealand was not bound by the same legislation, the only relevant provision being one in their Constitution preventing the passing of legislation contrary to any British foreign treaty. The Imperial Government admitted that there were no treaties that prevented intercolonial trade reciprocity legislation.

Wilson believed that precedences existed in the Empire and cited three cases:⁴

- (i) Newfoundland and Prince Edward Island legislation enacted in 1856 which gave the Governor power to enter into reciprocal trade agreements;
- (ii) the Dominion of Canada and the other British North American colonies had similar legislation which had been enacted in 1867; and
- (iii) within Australia goods were passing across the land border between New South Wales and Victoria free of all duty while those entering via the ports and wharves had to have the duty paid.

The Imperial Government did not view these three situations as precedences but as exceptional cases and considered that the circumstances surrounding the assent for reciprocity in the case of Newfoundland, Prince Edward Island and the Dominion of Canada were not applicable to the Australasian colonies. The situation existing between New South Wales and Victoria was viewed by the Imperial Government as virtually a customs union, with a free flow of goods across the common border.

Insult was added to injury when the Secretary of State for the Colonies, in his despatch dated 13 July 1871, stated that he doubted if absolute freedom of action could be given to the colonies as regards the imposition of differential duties and that any agreements made would most likely require Imperial Government sanction for each particular case. This was justified on the following grounds: (i) the Imperial Government alone was responsible for treaty agreements between foreign countries and the whole Empire; and (ii) the treaties were more likely to be political than commercial.

This despatch arrived shortly before the Intercolonial Conference of September 1871 which was held primarily to discuss the postal service between Australia and Britain. At this conference the Tasmanian delegates, including the Premier, Wilson, signed their names to two resolutions in response to the despatch. In the first of these resolutions the colonies asserted that they had the right to control their own fiscal policy without interference from the Mother Country and Her Majesty's Ministers. At the same time they affirmed the desire for strong and affectionate ties with the Mother Country. The second resolution confirmed the resolution of the 1870 conference for the right to make agreements with each other and also asked that prohibitive Imperial legislation be repealed. In addition it stated that Imperial Treaty obligations ought not to limit the freedom of intercolonial reciprocity conventions. The latter resolution was signed by New South Wales, South Australia, Victoria and Tasmania. Victoria declined to sign the first resolution and the Queensland delegates refused to be party to either, having only been given commissions to deal with postal matters.

The Secretary of State for the Colonies, in the circular despatch dated 19 April 1872, defined the difference as seen by the Imperial Government between a customs union and reciprocity arrangement situations. They were as follows:

- (i) A customs union between neighbouring communities removes the barriers created by artificial boundaries and creates a cheaper and more convenient mode of collecting customs revenue of the united countries. It does not involve the protection of native industry nor inequality of treatment of imports from countries not in the union; and

- (ii) A reciprocity arrangement is not for the promotion of free intercourse between each party involved. It is intended to secure for the trade of the respective colonies special advantages, as against imports from other places, in return for corresponding concessions. It may mitigate the evils of retaliatory tariffs of a protective character but would also tend to perpetuate and strengthen the system of protection.

The Imperial Government still refused assent to the Intercolonial Free Trade Bill of 1870, despite all the efforts of Wilson and his Government in arguing the benefit to the colonies of such legislation. They had been supported most strongly by New Zealand and the other Australian colonies, who agreed that intercolonial reciprocity in trade was one step towards a customs union or confederation of the colonies.

Defence of the Colony

The Withdrawal of Imperial Troops

In 1869 the Imperial Government announced its intention of reducing the number of troops stationed in Tasmania to one company. The privilege of having the troops free of cost was also to be withdrawn and the Colonial Government was to contribute towards the cost on the same basis as for the other Australian colonies. These decisions brought a strong reaction from the Colonial Government, headed at that time by Sir Richard Dry. The Government believed that the Imperial Government had, in 1863, undertaken to maintain three companies in Tasmania at its own expense until the effects of transportation were 'borne out'—that is as long as Imperial convicts remained in Tasmanian prison establishments. Imperial prisoners still remained at Port Arthur in 1869, although the numbers were diminishing. The Colonial Government thought those remaining there were of the worst character and that the Imperial troops were needed to protect the free population of the Colony in case of a break out.

In retaliation the Colonial Government threatened to withdraw Colonial convicts from Port Arthur and stop payment of its proportional costs of maintaining the establishment. The Imperial Government would be left to pay all costs which were not expected to diminish greatly because of the nature of the establishment. However, the immediate reduction of the troops did not take place. In February 1870 two of the three companies were withdrawn but they were replaced. The proposed reduction of Imperial troops in Tasmania was part of a plan to rationalise troops in the Australian colonies. Only one regiment of infantry was to be stationed in Australia and if a complete regiment was not accepted by the colonies then all troops were to be withdrawn. Victoria and Queensland were not willing to accept their proportion of the regiment and South Australia only wished to have one out of the two companies allocated to her. Thus all troops were to be withdrawn. It was Army policy that artillery units were not to remain where there were no infantry units, thus the artillery units were also to be withdrawn. This left Australia with only the Australian Naval Squadron provided by the Imperial Government for defence purposes.

There was much criticism of the Imperial Government both inside and outside Parliament for its decision to withdraw Imperial troops. The departure of all remaining troops on 17 August 1870 was seen as breaking a tie between Tasmania and the Home Country, an outward and visible sign of the diminishing links with England.

Colonial Defences

In 1868 the Colonial Government had requested assistance to construct defence works but this was refused. The Government then suspended all further expenditure in connection with the maintenance of the Volunteer Artillery forces and batteries, except that necessary to secure the works, guns and military houses from injury, until it had time to consider the general question of defence of the Colony. Maintenance of the two Volunteer Corps was extended until the end of 1869.

The feeling of insecurity grew in 1870 due to the withdrawal of the Imperial troops, fear that Britain might become involved in the war between France and Prussia and the unfriendly relations between England and Russia and between England and America. It was feared that if England became involved in war then the Australian colonies would come under attack from England's enemies. At the Intercolonial Conference in June 1870 the question of defence of the Australian colonies was discussed. The report on the conference stated ' . . . it is the opinion of this Conference that Her Majesty's Imperial Government should undertake to provide for the defence and protection of the coast-line of Australia and of British Commerce in its various ports . . . '

The Colonial Government thought that Tasmania (and especially Hobart Town) was an exceptional case with Hobart Town being the most vulnerable major town in Australia. It did not have the resources to build, maintain and man sufficient land batteries to safely defend the town, so the Tasmanian Government suggested that the Australian Naval Squadron should make its permanent base there. If that could not be done, they requested that alternatively at least one Man of War or one 'shot proof' boat should permanently be stationed in the Derwent to co-operate with the land batteries for at least part of the year.

The Imperial Government had assured the colonies that in the event of war Britain would provide for their maritime defences. This was interpreted to mean that during war the existing Australian Naval Squadron would be augmented to enable it to cope with any foreign naval force. The Tasmanian Government felt that this was not enough because a solitary vessel or group of vessels could enter the Derwent estuary and take the town while the squadron was engaged elsewhere or was unaware of its presence. The enemy would then be able to use Hobart Town as its southern base to strike at the other colonies and British interests in the region. However, the Imperial Government would not pledge a single permanent vessel for the defence of Hobart Town even in the event of war. They believed the best strategic moves for the whole Empire had to be considered first.

The Tasmanian Government did make some efforts to provide for the defence of the Colony by taking steps towards the building of the Alexandra Battery at One Tree Point (now Lower Sandy Bay). Kangaroo Bluff at Bellerive was also considered for the building of a battery. Du Cane urged the Government to outlay money for batteries, men and arms and estimated an initial outlay of \$85 000 plus \$6 000 annually would need to be set aside. The Government was reluctant, however, to place amounts on the Estimates for the volunteer forces and batteries without the Imperial Government's assurance that the latter would be supported in times of war by a floating battery. It was thought that even with large sums expended on batteries Tasmania would still be virtually defenceless.

At the beginning of 1871 rumours reached Australia of an American filibustering expedition that was said to be either on its way or being prepared for an attack on the Australian colonies, as a result of the strained relations between England and the United States over the Alabama question. The points of attack were reported to be Melbourne and Sydney, and Dunedin in New Zealand. There was in fact

no truth in the rumour but it added to the fear of attack and the feeling of insecurity surrounding the withdrawal of troops and the Imperial Government's refusal to support the Tasmanian Government's efforts with the supply of a war ship.

The volunteer forces that had been constituted in 1860 by re-organisation of earlier volunteer forces were allowed to lapse. The Southern Corps virtually ceased to exist at the end of 1870 for want of funds and was finally disbanded in 1877.

The Railways

There was much continuing agitation in Tasmania for the construction and operation of a railway system. The Launceston and Western Railway was the first sanctioned by Parliament and construction was commenced in 1868. In the southern parts of the Colony and especially Hobart Town there was much jealousy concerning the northern railway, as well as a strongly held belief that the building of a main line railway between Hobart and Launceston would be of vital economic importance for the Colony.

The Main Line Railway

The Ministry had decided before the 1869 session of Parliament to introduce a definite Main Line Railway proposal. On 10 September 1869 the Attorney-General moved that the House should go into committee to discuss the railway, much to the delight of the general population of Hobart Town. The resolution submitted, and the subsequent legislation enacted, authorised the Governor-in-Council to guarantee to a company the sum of \$600 000 to construct, maintain and work a railway line between Hobart and the Launceston and Western Line. The total proposed cost was not to exceed \$1 800 000.

A Captain Audley Coote, acting on behalf of an English group of capitalists, had prior to this, in August, put a proposal before the Government for the construction of the Main Line Railway. The proposal was that they would construct it on a Government guarantee of 6 per cent per annum for 30 years and work it on their own account or hand it over to the Government on twelve months notice.

After the Main Line Railway Bill had been enacted Captain Audley Coote returned to England to discuss the terms of the bill with the Company he represented. He arrived back in Tasmania in June 1870 with the news that the Company was not prepared to construct the line under the terms and conditions laid down in the legislation. Three alternative plans were laid before the Government:

- (i) Construction of a 1600 mm (5 ft 3 in.) or 1435 mm (4 ft 8½ in.) gauge line, with the Government to guarantee the Company \$50 000 per annum for 30 years.
- (ii) Construction of a 1067 mm (3 ft 6 in.) gauge line on reduced terms that would cost the Government \$70 000 less than the above proposal.
- (iii) Construction of a line of any gauge and on completion, and once established that it was in perfect working order, purchase of the line, at a valuation determined by arbitors mutually named, by the Government.

All three proposals were rejected and a further proposal was put forward by Coote. The Government, under this proposal, was to guarantee the Company 5 per cent net income per annum for 35 years on \$1 300 000, the estimated cost of a railway with a 1067 mm (3 ft 6 in.) gauge. It was to have the option of taking over the line at the end of 10 years or any other subsequent time, after

giving 12 months notice, at a value to be determined by mutually named arbitors at the point of take over. The maximum pay-out the Government would have to make in any one year would be \$65 000 if the railway paid working expenses. If the Company made any profit in any one year then the Government would only have to make up the difference between what was earned and the guaranteed 5 per cent net income. If profits were above 6 per cent in any one year the excess was to be divided equally between the Company and the Government.

This proposal was accepted and during the 1870 session of Parliament the Main Line Railway Act Amendment Bill was introduced. This passed through the House of Assembly without difficulty but was very nearly thrown out in the Legislative Council during the committee stages. After the discussion of the Bill in committee the President of Committees reported to the President of the Council that there was nothing to report, rather than stating that each clause had been rejected, as was the case. Thus Wilson was able to propose that the bill be submitted for reconsideration, which, with the President's casting vote, was agreed to. The following week, when the numbers in the Council were such that the bill could be passed, it was reconsidered and its passage was secured.

Provisions included in the bill were that: (i) the guarantee be paid on money expended on construction over a period not exceeding four years; (ii) the gauge was to be 1067 mm (3 ft 6 in.); (iii) the weight of the rails was not to be less than 19·84 kilograms per metre (40 pounds per yard); (iv) four trains were to run each day over its entire length, the average speed of one train each way to be 37 kilometres per hour (23 miles per hour); (v) the Company was to keep the line in a proper state of repair—failure to do so would render it liable to be charged for such repairs as considered necessary; and (vi) in the event of any breach of contract by the Company, the Government was empowered to ask the Supreme Court of the Colony to rescind the contract.

It was not until after a considerable delay that the Company signed the contract on 15 March 1872 even though the Government had signed on 15 August 1871. The Company engineer, Mr Wylie, arrived in Tasmania in June 1871 to begin the work of surveying the line but he died before completing the task. Mr Grant was sent out in 1872 to resurvey the line and to prepare for its construction.

The Launceston and Western Railway

Construction of this line was started in 1868 and it was to be opened in 1870. The opening was delayed until February 1871 by heavy rain that caused damage to the tracks, cuttings and embankments during the late winter and early spring of 1870. The official opening by the Governor on 10 February 1871 was a grand affair, with two trains running from Launceston to Deloraine and back carrying the official guests and other enthusiasts. The journey took two hours each way with luncheon served in the railway sheds at Deloraine. In the evening a banquet was held in the Launceston Town Hall.

With the passing of the *Main Line Railway Act* in 1869 and the subsequent amendment Act in 1870 there was much bitterness in Launceston and the other districts adjoining the Launceston and Western Railway. The Launceston and Western Railway debenture interest was to be guaranteed by the districts, as defined in the Act. If the earnings of the Launceston and Western Railway Company were insufficient then they were liable to make up the deficit. There were no such provisions in the *Main Line Railway Act* and the Government was to guarantee the Main Line Railway Company's net income. The people of the districts involved had accepted the provision, when that was the only alternative, but they considered a new precedent had been set with the passing of this Act.

The Northern Railway Association was formed in Launceston and several branches established to organise a petition to be sent to the Governor to have the Launceston and Western Railway put on the same footing as the Main Line Railway. The annual interest bill of \$48 000 was quite substantial. Not only was there the initial debenture issue of \$500 000 but another of \$100 000 was raised in lieu of share capital that could not be raised, plus \$200 000 issued when the estimated cost of \$800 000 was exceeded.

The first six months yielded a profit of \$2 910 on the running of the line but then net income diminished, especially after November 1871 when maintenance of the line became the Company's responsibility. The adjoining districts then became liable for the interest payments as the line's operating profits did not cover the interest bill. The Railway Commissioners drew up a valuation roll for the properties that lay within the defined districts. A Court of Appeal was set up in February 1872 to hear complaints against the valuations made and to place any inadvertant omissions onto the roll. The magistrates rejected the roll as being incomplete as many properties were omitted and others were given nil value which, under the Act, was not possible. By definition, if a property was within the designated railway district it benefited from the Railway and therefore should have a value. The Government, unable to extract the interest due from the districts, decided to serve a writ on the Company in May 1872. A decision in favour of the Government was made on 11 June.

With the coming of the winter rains the Company again ran into difficulty with damage to the line. With receipts only just covering working expenses there was little money available to maintain the line and the Company asked that the Government waive the preferable lien against all other creditors so that they could raise a further \$10 000 to maintain the line until revenue receipts improved. The Government refused to accede to this proposal, as it required Parliamentary approval, and suggested instead an advance of up to \$200 per week until Parliament could consider the matter. This advance was to be made on the condition that, if in any week receipts were greater than working expenses, the excess was to go towards paying back any advances already paid. This was rejected by the Company which then asked for a straight advance to pay past debts for maintenance as well as repairs then needed. The Government rejected this proposal. Railway Commissioner Kemp reported to the Government that if the offer had been accepted when first made, on 13 June 1872, the sums offered would have been adequate to maintain the line and keep it open. On this advice the Government rested on the Company the responsibility for closing the line at the end of June. The judgment obtained by the Colonial Treasurer empowered the Government to take over the Railway and in a letter to the Company's Secretary⁵ on 3 July 1872 the Directors were invited to surrender the Railway and Works because:

- (i) a large interest bill was outstanding—\$72 083;
- (ii) of the admitted inability of the Company to keep the railway in a proper state of repair;
- (iii) the Company was without funds to pay and had discharged the working staff;
- (iv) traffic had been suspended and could have only resumed with a large outlay; and
- (v) there were no funds or income beyond traffic receipts and these had proved inadequate to meet working expenses and repairs.

The Railway was officially handed over on 3 August 1872. Parliament in July had sanctioned the spending of \$2 000 to put the line in working order and it was re-opened for traffic on 12 August.

On taking over the line the Government decided to give some relief to the landholders of the district by foregoing interest then due and to make them liable only for the 6 per cent per annum on \$500 000 (the original amount proposed to be raised by debentures and voted on by the landholders). In the first half-year the rate was collected the Government received \$14 000 out of the \$15 000 due but in the second half-year it became obvious that nearly all would resist paying. Distress warrants were issued to 1 200 defaulters leading to riots in Launceston. The following year all liability on the districts was lifted.

The Mersey and Deloraine Tramway

Compared with the Launceston and Western Railway Company the Mersey and Deloraine Tramway Company received substantial concessions and encouragement. This line was originally a wooden tramway and was later converted to iron rail. The Government, to encourage the conversion, granted the Company half a mile of land on each side of the line where it passed through Crown land. It was initially intended that the grant be made on completion of the line, but the Act was changed so that the Company received the land as each mile was completed.

Only 29 kilometres (18 miles) of line was laid by the Company between Latrobe and Coilers Creek, with 19 kilometres (12 miles) between the end of the line at Coilers Creek and Deloraine to be negotiated by horse and cart. The line did open for a short time in 1872 but, because of the small traffic receipts, was forced to close. It was not completed until the Kennerley Government purchased it a few years later.

Immigration

Tasmania in the 1860s and 1870s had only a small population and with the nearest market for trade, Victoria, having adopted protectionist tariff policies the opportunities for new industry were small. It was thought that an increased population would enable the economy to expand and new industries to develop through ensuring a greater working population together with a larger home market. Two classes of immigrant were considered to be most suitable at that time. These were small farmers with sufficient capital to enable them to create a viable farm out of the virgin lands and farm labourers willing to work for others who one day would be able to buy their own farms.

Immigration and emigration societies were formed in Tasmania and in Great Britain to encourage the surplus British population to migrate to the colonies. Several British emigration societies were set up on a co-operative basis to promote emigration, provide aid towards the cost of passage and to buy land for settlement in the colonies. They issued prospectuses and those interested could subscribe to a society; aid was given on a loan basis. Two of these societies which showed an interest in Tasmania were the Emigrant and Colonists Aid Corporation and the Alexandra Colonial Co-operative Land Society. The former did not establish in Tasmania but in January 1871 it was appointed as agent for the Tasmanian Immigration Board in the United Kingdom.

Mr Whitesmith of the Alexandra Colonial Co-operative Land Society wanted large concessions granted but the Government would not agree to his requests. The *Waste Lands Acts* and the *Immigration Acts* set down the terms for the granting and purchasing of land and the Government was not prepared to go beyond these. Mr Whitesmith wanted tracts of land placed at the disposal of the society at a minimum value of \$1·24 per hectare (5 shillings per acre) for pastoral lands and \$4·94 per hectare (£1 per acre) for agricultural land or, if preferred, \$2·47 per hectare (10 shillings per acre) for the latter with the association being bound to

expend a further \$2.47 per hectare (10 shillings per acre) in constructing roads. In addition, the Society wanted reservation at nominal rental of lands on which to construct wharves, jetties, docks, slip-ways and iron works and also for railways and tramways. The Society believed that because it was a special case it deserved special considerations. As time progressed it became obvious there was little support for the Society in England and Mr Whitesmith became interested in obtaining Tasmanian capital to support it. However, as there was no Tasmanian capital available, the Society abandoned the idea of establishing a settlement in Tasmania.

The Government had set up an Immigration Board in 1855 to aid those people who wished to migrate to Tasmania and people wishing to employ immigrants. Bounty tickets were sold to persons in the Colony desirous of introducing immigrants from Britain. A family ticket cost \$30 which secured the importation of a man, his wife and all children under 12 at the expense of the Colony; for each single person over 12 the cost was \$20 per male and \$10 per female.

The *Immigration Act* of 1867 provided for the appointment of Immigration Agents in England and other countries. Mr Buck was appointed in December 1868 as agent in Germany. This caused some disquiet because at the time of his appointment no agent had been appointed in England. It was thought that England ought to have had first priority as she was the Mother Country with which Tasmania had the closest cultural, political and ethnic ties. The first German immigrant ship, the *Victoria*, arrived in Hobart Town on 21 August 1870 but those aboard were not all that the people of the Colony had anticipated or hoped for. They had difficulty in finding employment and stayed for many months at the Immigration Depot. Tasmania was not all that the immigrants had expected either. They had come willing to work but could find none, so they petitioned the Governor asking if they could be placed on Crown lands. To pay for the land they proposed that the money allowed under provisions of the *Waste Lands Acts* for the development of roads in newly opened country could be applied to their debt. They would then work on the roads for three days a week. The Government refused to grant these demands because it believed them to be outside the provisions of the *Waste Lands Acts*. A second petition was made on 5 November 1870 after the arrival at Hobart Town of the second German immigrant ship, the *Figaro*, on 26 October 1870. In November 1870 there were still 10 families that had not found places. They asked for three months provisions free of charge, on the grounds that they would probably be at the depot for that length of time at least and that the Government had to pay their keep. These requests were not granted. Mr Buck's commission was cancelled on 6 December 1870 but not before he had already arranged for another group of 300 immigrants to sail in the *Eugenie* for Tasmania.

Mineral Resources

Gold

The finding of a payable gold field was seen as the possible salvation of the Colony's economy. The earlier gold rushes in Victoria and New South Wales were seen to have boosted their populations and economies and it was hoped that a gold rush would do the same for Tasmania. Gold was discovered in 1869 around Fingal and Waterhouse and this created much excitement. The newspapers of the day, especially the northern paper, the *Launceston Examiner*, during 1869 and the first part of 1870, carried news of the gold fields in almost every issue.

Speculation became rife and if any mine was reported to be 'looking good' the price of shares would rocket. This was especially so if it was a Victorian capitalist (who it was assumed must know all about gold reefs) who stated that a

mine was promising. Many companies were successfully floated on this type of information without a proper evaluation of a potential mine's worth. Liquidation often followed without a company having produced any substantial quantities of gold. These failures were seen initially not as indicators of poor reefs and poor prospects but as distractions keeping capital and hard working men away from the fields.

In May 1870 there were 86 companies with leases in the north and north-east of the Colony. At Waterhouse there were 20, Nine Mile Springs (now Lefroy) 31, Pipers River 17, Fingal 2, Mangana 7 and on the West Tamar 6. The biggest of the companies were: at Waterhouse the United Victoria and Tasmania Quartz Mining Company with 5 300 issued shares at a nominal value of \$10 each; at Mangana the Tower Hill Company with 6 000 shares of \$12 each nominal value; and at Nine Mile Springs the Specimen Hill Company with 9 000 shares of \$8 each nominal value. By April 1870 there had been 1 730 miners rights issued, the largest number being at Waterhouse (983).

Despite the apparent lack of success the gold returns for 1871 reported that 70·17 kg (2 256 oz) valued at \$17 230 was exported through Hobart and 44·70 kg (1 437 oz) valued at \$11 206 through Launceston, excluding amounts carried out by private means and not accounted for. By 1875 only two companies remained in operation: the City of Hobart Company at Black Boy in the Fingal District and the Native Youth Company at Nine Mile Springs. It was not until June 1877 that the Beaconsfield Reef at Brandy Creek was discovered, the only truly successful gold mine found in Tasmania.

Silver

The Penguin Silver Mine started with a flourish but came to nothing. A company was formed in April 1870 with a proposed capital of \$92 000 to mine the ore found near Penguin. It was reported to be of high concentration—of samples sent to Melbourne to be assayed one yielded 469 g silver per tonne (15 oz 6 dwt 12 gr per ton) and the other 612 g silver per tonne (20 oz per ton). The battery and works were opened on 7 June 1871 and a dinner attended by 200 people was held to celebrate. Two months later the result of the assay done in London indicated only 214 g silver per tonne (7 oz per ton). Operations were suspended in October 1871 and at a meeting of shareholders in September 1872 the decision was made to close the mine.

Tin

The discovery of tin in December 1871 by James Smith at Mount Bischoff received very little publicity. Smith took out two leases of 32 hectares (80 acres) each and set to work cutting tracks into the area. It was not until 1873 that the first ore was brought out and sent to Melbourne. The Mount Bischoff Tin Mining Company was formed to work the leases shortly thereafter.

Iron

Iron ore was discovered at Ilfracombe, Gawler, York Town and near the River Leven. In 1872 two companies were formed to work the deposits at Ilfracombe which was the most promising field. These were the Tasmanian Charcoal Iron Company and the Ilfracombe Iron Company. The former, in December 1872, laid the cornerstone of the first iron smelting furnace in Tasmania. The blast furnace worked during 1876-77 but the ore was found to contain 5 to 7 per cent chromium making it unsaleable at that time (if present in cast iron it causes the iron to be hard and brittle). The furnace closed shortly after opening.

Port Arthur

There was much agitation to have the Port Arthur penal settlement closed down when the Colonial Government took it over. This would reduce Government expenditure and behind the agitation there was also a desire to be rid of the transportation system stigma. The proposed takeover was announced in October 1869 and the date of formal transfer was 1 June 1871. In its despatch of 2 November 1869 Wilson's Government set down terms for the takeover which it thought were fair. Negotiations progressed from there.

The initial proposals were:

- (i) The takeover of the buildings, stores, furniture and fixtures, plus the agricultural land equipment and stock plus boats and vessels, free of charge. The stores on route from England to Tasmania to be paid for at cost plus freight and other charges.
- (ii) The maintenance of all Imperial prisoners, paupers, lunatics and hospital patients to be paid for on a per head per year rate, this being set for each class of inmate.
- (iii) \$16 000 to be paid towards the construction of buildings to accommodate any inmates transferred from Port Arthur to other Colonial establishments.
- (iv) The Imperial Government was to contribute \$12 000 per annum towards the cost of maintaining the police and gaols in the Colony for a period of 12 years.

The Government believed these terms to be reasonable. At 30 September 1869, of the 408 inmates 381 had originally been transported. Of all persons convicted in the Superior Courts in Tasmania and serving sentences during the previous 12 months, 64 out of 84 were in the same category. Of those 64, 61 were chargeable to Colonial funds and only three to Imperial funds. Any prisoner re-convicted at least 12 months after having been set free by servitude or pardon became the responsibility of the Colonial Government. It believed the effects of transportation to still be apparent.

Some discussion was held over the valuation and transfer of those articles other than buildings and fixtures at Port Arthur. The Imperial Government wanted the Colonial Government to pay for them, but the Colonial Government argued that they had in the past contributed to their cost and some things made by the convicts were made with local materials by Colonial prisoners. These were as much Colonial possessions as Imperial and it would therefore only pay for unused stores. In lieu of the proposed contribution to the buildings the Imperial Government suggested that the Colonial Government could have all War Department buildings.

The Colonial Government objected as it did not want to mix the two questions and also thought it unfair when Canada had received all such buildings free of charge. The Colonial Government finally consented to forego the \$16 000 towards construction of buildings.

The terms were finally agreed upon by both parties and the transfer was completed. It was not until 1877 under the Reibey administration that Port Arthur was finally closed down as part of an effort to reduce Government expenditure.

The Franchise

The depressed state of the economy had resulted in a fall of property values in Tasmania and a reduction in the franchise qualifications was thought necessary. Not only was the existing property value franchise reduced for the House of

Assembly but the franchise base was widened to include all those people with a Tasmanian Associate of Arts Degree. For the Legislative Council the franchise was widened to include those people with large leaseholds.

On 7 February 1870 a census was conducted and formed the basis for electoral boundary changes which were effected at the same time as the franchise reductions. The number in the Legislative Council was raised to 16, an increase of three, and in the House of Assembly there was an increase of two from 30 to 32.

Communications

Communications and travel between England and Australia were made faster and easier with the opening of the Suez Canal on 17 November 1869. In 1872 a direct telegraphic line between Australia and England was opened. On 24 June the first telegrams were sent from Adelaide to England via Port Darwin and Java. At that stage the land line was not complete between Adelaide and Port Darwin and a horse express was employed to cover the uncompleted section. The first direct telegram arrived in Launceston on 23 October 1872. It took 24 hours to get there (allowing for the time differences). A banquet was held in London on 15 November 1872 to celebrate the opening of the direct cable link with Australia.

Wilson's Involvement in other Public Activities

Military

When the City Guards were formed in 1860 Wilson was appointed as Captain Commanding and when the volunteer forces were reorganised three years later in 1863 he was appointed Major of the First Administrative Battalion, Southern Division, Tasmanian Volunteers. He was the first non-military volunteer to hold that rank in the Colony.

During an invasion scare in 1878 Wilson again took an interest in the volunteer rifle and artillery corps and fostered the growth of the Southern Tasmanian Rifle Association of which he became President. On the formation of the Volunteer Rifle Regiment he was gazetted as Major and on their behalf received the colours of the Regiment from Mrs Weld, wife of the Governor, who had worked them herself. It was while on drill with the Volunteer troops in 1878 that Wilson damaged a heart valve from over exertion; the damaged valve was the cause of his death in 1880.

Horse Racing

Horse racing was one of Wilson's loves and he became involved in the formation of the Tasmanian Racing Club. (At the time of his death the club was known as the Tasmanian Jockey Club.) From its inauguration he was Vice Patron and Chairman of Committees and when the position of President was created he was elected to it, a position he held until his death. During that time he was a prime mover in securing the Elwick Race Course for the Club and raising the funds for its purchase.

Other Interests

James Milne Wilson was also the Honorary Treasurer of the first regatta held in Hobart in 1838, an event that he supported until his death; Secretary for the Hobart Town Theatre (later called the Theatre Royal), in which his father-in-law held a substantial financial interest; and Vice President of the Tasmanian Club.

Other positions held by Wilson at various times included Chairman of Directors of the Bank of Van Diemen's Land; Director of the Derwent and Tamar Fire, Life and Marine Assurance Society; and President of the Tasmanian Agricultural and Pastoral Society.

After his Government resigned the Hon. James Milne Wilson was elected President of the Legislative Council, a position he held until his death. In 1873 Wilson was nominated and became Knight Bachelor and in 1878 Knight Commander of St Michael and St George for services to the Colony.

Wilson's interest and involvement in intercolonial affairs did not end with his Premiership; in 1873 he attended, with the Premier (Mr Innes, his successor), a conference on Intercolonial and Free Trade in Melbourne. In 1876 he attended, as Tasmania's only delegate, a conference to discuss a proposed second line for telegraphic communication with England.

On his death Sir James Milne Wilson, K.C.M.G. left behind him a widow and five children (three daughters and two sons). He was buried in the Degraeves family vault at the Cornelian Bay Cemetery, Hobart.

Footnotes

¹Letters from John and Barbara Wilson to their sons William and John among the *Wilson Family Papers*. Reproduced on microfilm and held in the Archives Office of Tasmania by courtesy of Mrs C. Firbank, England.

²Correspondence between Claud Allardyce and James Milne Wilson, among the *Wilson Family Papers*, *ibid.*

³The *Launceston Examiner*, (9 March 1872).

⁴ and ⁵ Colonial Secretary's Office Correspondence Files.

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CHRONOLOGY

Preface

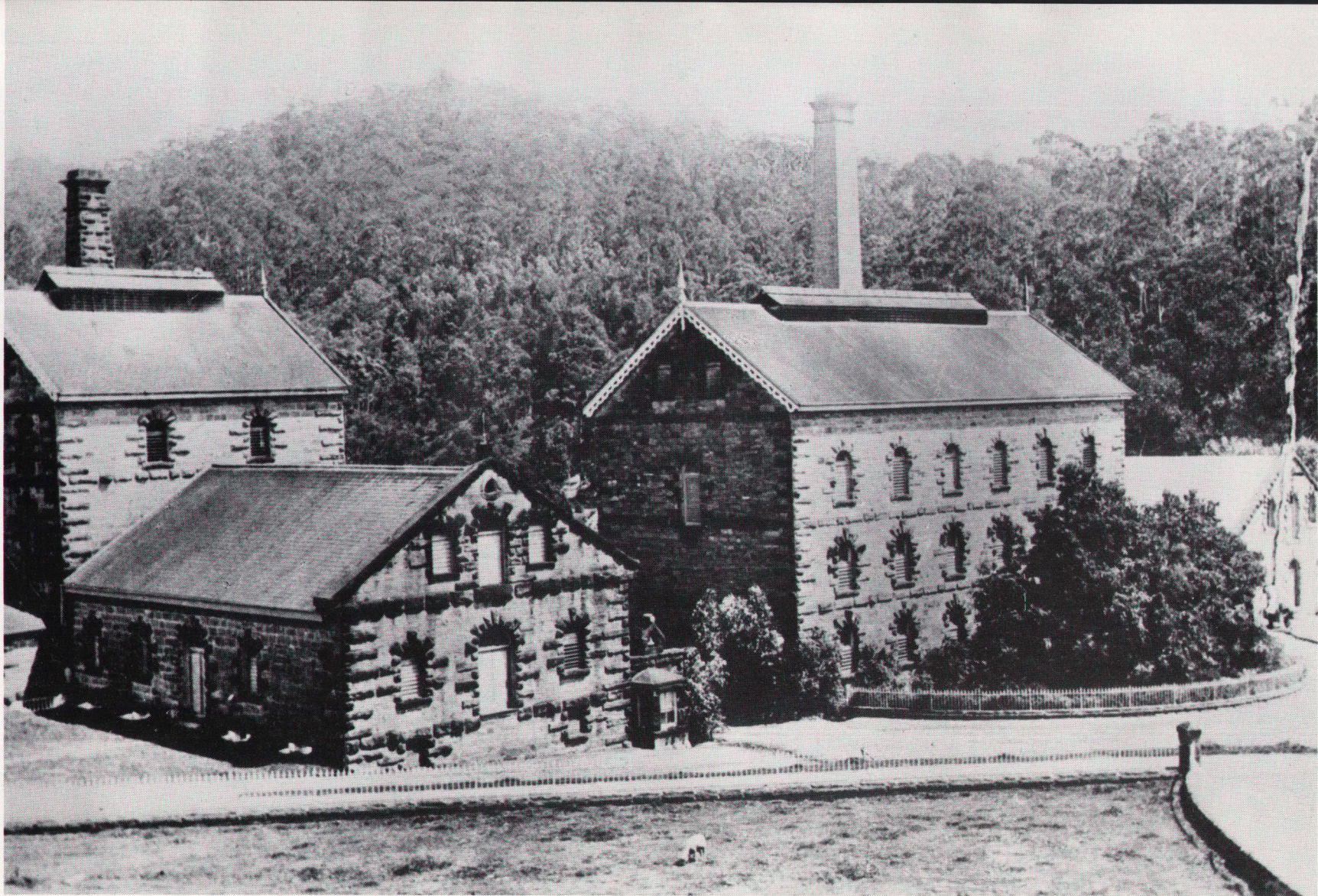
The following chronology was originally compiled in two sections, the period 1642 to 1929 from a document specially prepared by officers of the State Archives, and the period beginning 1930 from a search of contemporary newspapers by Bureau officers. Greater detail is included in earlier editions of the *Year Book*.

In the record of more recent years, it was found impossible to describe purely Tasmanian events in isolation since certain national events necessarily form part of the history of a state within a federal system; particularly is this true with regard to some Federal Government decisions, the state of the economy and industrial arbitration. On the other hand, there is the difficulty of deciding which events of a purely local character are sufficiently important to warrant



Sir James Milne Wilson, Mayor of Hobart Town, 1868

[By courtesy of the Archives Office of Tasmania]



The Cascade Brewery, 1868

[By courtesy of the Archives Office of Tasmania]



New Wharf, Hobart Town, c 1870

[By courtesy of the Archives Office of Tasmania]



Kangaroo Point from Rosny, c 1870

[By courtesy of the Archives Office of Tasmania]



Government House, near Hobart Town, 1869

[By courtesy of the Archives Office of Tasmania]



View of Launceston from Cataract Hill, c 1870

[By courtesy of the Archives Office of Tasmania]

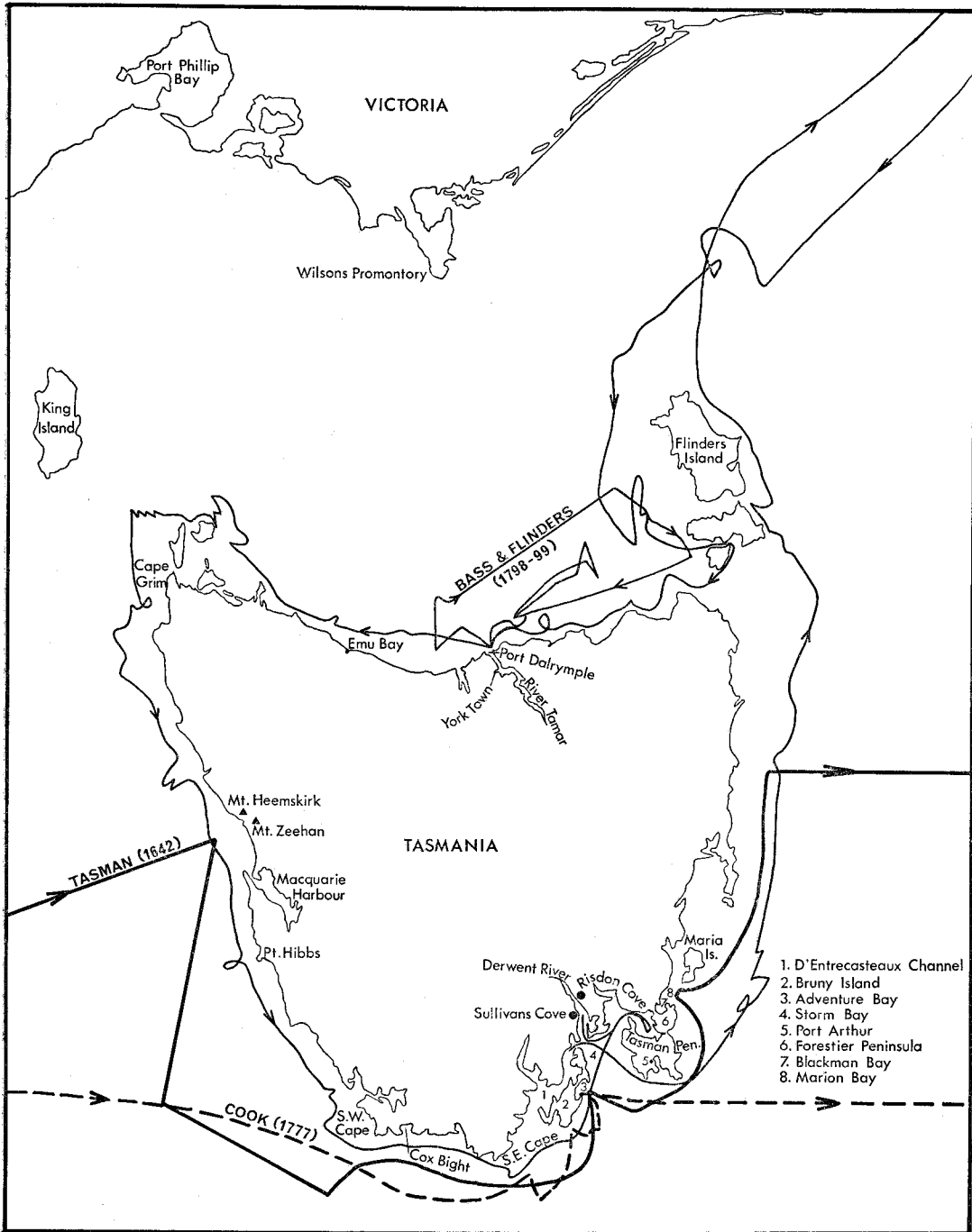
inclusion. Some items have been introduced not because they are important but because they have a strong local flavour. This difficulty of selection is partly avoided by giving the record of the most recent years in more detail but inevitably such a policy results in matters of major and minor importance being mingled without distinction. It follows also that the second part of the chronology is limited largely to what the newspapers of the day considered important and that some events of greater significance may have escaped notice.

To round off the picture of any given year, there is a constant temptation to introduce events of world importance; as far as possible, this has been avoided except where such events had considerable local impact. In no way should the record which follows be interpreted as an 'official' chronology of the State; in actual fact, the record derives from two levels of subjective evaluation, firstly, the selection of items of importance by contemporary journalists and, secondly, the further selection of items from this narrowed field by the compilers of the chronology.

Chronology of Events from First Discovery of Tasmania

- 1642 Abel Janszoon Tasman, commanding *Heemskirk* and *Zeehan*, sighted west coast and named his discovery 'Anthony Van Diemenslandt'. Landings on Forestier Peninsula and near Blackman Bay on east coast.
- 1772 Landing of a party from Du Fresne's expedition at Marion Bay and affray with the Aborigines.
- 1773 Tobias Furneaux in the *Adventure*, became separated from James Cook in *Resolution* and landed a party at Adventure Bay.
- 1777 James Cook anchored *Resolution* in Adventure Bay on third expedition.
- 1788 William Bligh anchored *Bounty* in Adventure Bay on first breadfruit expedition.
- 1789 John Henry Cox sailed *Mercury* from Cox Bight to Maria Island.
- 1792 William Bligh, on second breadfruit voyage, anchored *Providence* in Adventure Bay. Bruny D'Entrecasteaux, commanding *La Recherche* and *L'Esperance*, discovered D'Entrecasteaux Channel and charted south-east coast.
- 1793 D'Entrecasteaux returned for further exploration of south-east coast. John Hayes, commanding *Duke of Clarence* expedition, explored Derwent River
- 1798 Matthew Flinders and George Bass circumnavigated Tasmania.
- 1802 Nicholas Baudin, commanding *Geographe* and *Naturaliste*, explored south-east coast.
- 1803 John Bowen's party of 49 made first settlement at Risdon Cove.
- 1804 David Collins' settlement party landed at Sullivans Cove (Hobart). Aborigines killed in an affray at Risdon. Risdon settlement closed down. William Paterson's settlement party landed at Port Dalrymple (Tamar Estuary).
- 1805 Collins forced by famine to cut rations by one-third.
- 1806 Settlers moved from York Town to Launceston area.
- 1807 Thomas Laycock's party crossed island overland from Port Dalrymple to Hobart. First Norfolk Island settlers shipped to Hobart in *Lady Nelson*.
- 1809 Governor William Bligh aboard *Porpoise* anchored in Derwent after N.S.W. mutiny and embarrassed Collins with problem of jurisdiction.
- 1810 Lieutenant-Governor Collins' death. Issue of newspaper *Derwent Star*.

TASMANIA: DISCOVERY AND EXPLORATION



1. D'Entrecasteaux Channel
2. Bruny Island
3. Adventure Bay
4. Storm Bay
5. Port Arthur
6. Forestier Peninsula
7. Blackman Bay
8. Marion Bay

- 1811 Governor Lachlan Macquarie's first visit to Tasmania.
- 1812 Lieutenant-Governor Thomas Davey arrived. Northern settlement at Port Dalrymple made subordinate to Hobart. *Indefatigable* brought first shipload of convicts direct from England.
- 1815 Hobart and Port Dalrymple declared free ports for import of goods. Davey proclaimed martial law against bushrangers. James Kelly circumnavigated island in a whaleboat.
- 1816 First issue of *Hobart Town Gazette*.
- 1817 Succession of William Sorell as Lieutenant-Governor.
- 1818 Death of Michael Howe, notorious bushranger.
- 1820 Visit by John Thomas Bigge to conduct inquiry into colonial administration.
- 1821 Second tour by Governor Macquarie.
- 1822 Penal settlement established at Macquarie Harbour.
- 1823 Passage of British Act 'for the better administration of justice in N.S.W. and Van Diemen's Land'.
- 1824 Inauguration of Supreme Court. Arrival of Lieutenant-Governor George Arthur.
- 1825 First Launceston newspaper, the *Tasmanian and Port Dalrymple Advertiser*, established. Tasmania constituted a colony independent of N.S.W. Establishment of appointed Executive and Legislative Councils. Departure of Governor Darling from Tasmania left Arthur with the authority of Governor (but not the title).
- 1826 Van Diemen's Land Co. sent first party to select land and establish farming operations. Appointment of Commissioners of Survey and Valuation.
- 1827 Lieutenant-Governor received a petition for trial by jury and some representation in Legislative Council.
- 1828 Passage of British Act 9 Geo. IV, cap. 83 which increased membership of Legislative Council. Martial law proclaimed against Aborigines.
- 1829 First settlement at Emu Bay (Burnie).
- 1830 George Augustus Robinson began his mission to conciliate the Aborigines. First use of juries in civil cases. Beginning of the 'Black Line', the military campaign to round up the Aborigines. Publication of *Quintus Servinton*, first novel to be published in Australia. Port Arthur established as a penal settlement.
- 1831 Approval of British Government's new land regulations discontinuing free grants of land, and replacing them with land sales.
- 1832 First shipment of Aborigines to Straits Islands. Establishment of the Caveat Board to settle land disputes and to confirm titles. Maria Island closed down as a penal settlement.
- 1833 Macquarie Harbour penal settlement closed down.
- 1834 Henty brothers from Launceston became first settlers in Victoria occupying land in Portland Bay area.
- 1835 John Batman sailed from Launceston to Port Phillip as agent for the Port Phillip Association. Tasmania divided into counties and parishes. Opening of Ross Bridge. Population estimated as 40 172 persons.
- 1837 Arrival of Sir John Franklin and assumption of office as Lieutenant-Governor.
- 1838 Sessions of Legislative Council opened to the public.
- 1840 Cessation of transportation to N.S.W. and consequent increase in numbers transported to Tasmania. Population estimated as 45 999 persons.

- 1841 Assignment System of convict discipline replaced by the Probation System. Rossbank Observatory for magnetic and meteorological observations established in Hobart.
- 1842 Tasmania created a separate Anglican diocese. Hobart made a city. Peak year for convict arrivals (5 329).
- 1843 Recall of Sir John Franklin and succession of Sir John Eardley-Wilmot.
- 1844 Transfer of Norfolk Island penal settlement from N.S.W. to Tasmanian control.
- 1845 Resignation of the 'Patriotic Six' members of the Legislative Council, over the drain on colonial revenue for support of Imperial police.
- 1846 Recall of Eardley-Wilmot. Foundation of the Launceston Church Grammar and The Hutchins Schools.
- 1847 Succession of Sir William Denison. The Lieutenant-Governor re-appointed the 'Patriotic Six'.
- 1848 Tasmania now the only place of transportation in the British Empire.
- 1850 Foundation of the Anti-Transportation League. Population estimated as 68 870 persons.
- 1851 British Act provided for limited representative government. First elections for 16 non-appointed members of the Legislative Council.
- 1852 First payable gold found near Fingal. Elections held for first municipal councils in Hobart and Launceston.
- 1853 Arrival of last convicts to be transported.
- 1854 Bad floods throughout Colony. Passage of bill establishing responsible government.
- 1855 Succession of Sir Henry Fox Young; title now Governor. British Government approved Constitution Bill.
- 1856 Name of Van Diemen's Land changed to Tasmania. Opening of new bi-cameral Parliament with W. T. N. Champ leading first government in the House of Assembly. Re-organisation of Police Department.
- 1858 Council of Education set up. *Rural Municipalities Act* passed.
- 1859 Charles Gould appointed to make geological survey of western Tasmania. Telegraph link established with Victoria.
- 1860 Population estimated as 89 821 persons.
- 1861 Succession of Colonel Thomas Gore Browne. Telegraph cable to Victoria failed.
- 1862 Promotion of scheme for a railway between Launceston and Deloraine.
- 1864 Arrival of first successfully transported salmon and trout ova.
- 1868 Visit by Alfred, Duke of Edinburgh. Primary education made compulsory.
- 1869 Succession of Charles Du Cane. Death of William Lanny, thought to be the last male full-blood Aboriginal. Death of Sir Richard Dry. New cable laid to Victoria.
- 1870 Withdrawal of remaining Imperial troops. Population 99 328 (Census).
- 1871 Opening of Launceston-Deloraine railway. Tin discovered at Mt Bischoff.
- 1872 Contract concluded for building Main Line Railway.
- 1873 Main Line Railway construction began. Start of economic recovery.
- 1874 Riots in Launceston in protest at rates levied for Launceston-Deloraine railway.

- 1875 Succession of Sir Frederick Weld.
- 1876 Race meetings established at Elwick. Gold nugget worth \$12 200 found at Nine Mile Spring. Death of Trugannini, thought to be last female full-blood Aboriginal. Main Line Railway opened for traffic.
- 1877 Port Arthur closed down as a penal settlement.
- 1878 Increased activity in exploration of West Coast.
- 1879 Settlement of constitutional issue known as the 'Hunt Case'. Rich lode of tin discovered at Mt Heemskirk.
- 1880 First telephone in Tasmania with line from Hobart to Mount Nelson Signal Station.
- 1881 Succession of Sir George Strahan. Population 115 705 (Census).
- 1882 Increased prospecting on the West Coast.
- 1883 Discovery of the 'Iron Blow' at Mt Lyell.
- 1885 Russian war scare followed by activity in improvement of defences. Formation of Mt Lyell Prospecting Association.
- 1887 Succession of Sir Robert Hamilton.
- 1890 Establishment of University of Tasmania.
- 1891 Collapse of Van Diemen's Land Bank; deep economic depression.
- 1892 Mt Lyell Mining Co. established.
- 1893 Succession of Viscount Gormanston.
- 1896 Establishment of Tattersalls Lottery by George Adams.
- 1898 Serious bush fires. Tasmanians four to one in favour of Federation at poll.
- 1899 Departure from Hobart of *Southern Cross* (Borchgrevinck) expedition to Antarctic.
- 1900 Departure of Tasmanian contingent to fight in the Boer War.
- 1901 Proclamation of the Commonwealth read. Polling for first elections to Federal Senate and House of Representatives. Succession of Sir Arthur Havelock. Population 172 475 (Census).
- 1903 Celebration of 100 years' settlement cancelled because of smallpox epidemic in Launceston. Suffrage extended to women.
- 1904 Succession of Sir Gerald Strickland at reduced salary.
- 1905 Experiments in wireless telegraphy between Tasmania and the mainland.
- 1907 New Public Library opened; built with gift from Andrew Carnegie.
- 1909 Succession of Sir Harry Barron. Potato crop wiped out by Irish blight. State's first Labor Government under John Earle.
- 1912 Disastrous fire at North Lyell Mine, Queenstown.
- 1913 Succession of Sir William Ellison Macartney.
- 1914 First aeroplane flight in Tasmania. Departure of first Tasmanian contingent to fight in Great War. Formation of Hydro-Electric Department.
- 1915 Serious bushfires.
- 1917 Establishment of electrolytic zinc works at Risdon and of Snug carbide works.
- 1918 End of Great War.
- 1919 First export of frozen meat.
- 1920 Visit by Edward, Prince of Wales. Purchase of site for Cadbury's chocolate factory at Claremont.

- 1921 Population 213 780 persons (Census).
- 1922 Completion of Waddamana power station.
- 1924 First superphosphate manufactured by Electrolytic Zinc Co. at Risdon.
- 1925 Discovery of osmiridium fields at Adamsfield.
- 1927 Inquiry into proposed bridge over Derwent. Visit by Duke and Duchess of York.
- 1929 Serious floods throughout Island. Establishment of automatic telephone system in Hobart. Beginning of economic depression.
- 1930 Export prices fell to half 1928 level. Australian pound devalued so that £1 sterling equalled \$A2.50 (£A1.25).
- 1931 Depression continued—10 per cent cut in federal basic wage. Initiation of austere Premier's Plan. Conversion loan to reduce rate of interest on internal federal debt by 22½ per cent. Census of population deferred.
- 1933 Commonwealth Grants Commission appointed to inquire into affairs of claimant states.
- 1934 Beginning of 35 years of continuous Labor Government with the election of the A. G. Ogilvie Ministry. Second phase of hydro-electric development commenced at Tarraleah and Butlers Gorge.
- 1936 Tasmania linked with Victoria by submarine telephone cable.
- 1937 Epidemic of poliomyelitis. Economic recovery evidenced by \$0.50 'prosperity' loading added to federal basic wage.
- 1938 Paper mill using native hardwoods established at Burnie. First turbines began operating at Tarraleah power station.
- 1939 Outbreak of World War II.
- 1940 Tasmanians sailed for Middle East with Australian 6th, 7th and 9th Divisions.
- 1941 Newsprint production began at Boyer on the Derwent. Tasmanians sailed for Malaya with Australian 8th Division.
- 1942 Uniform federal income tax commenced.
- 1943 The floating-arch Hobart Bridge opened for traffic.
- 1944 Pay-as-you-earn (PAYE) income taxation introduced from 1 July.
- 1945 End of World War II.
- 1946 Cessation of man-power controls. Rejection by Legislative Council of bill to grant Federal Government price control powers for three years.
- 1947 Court action to stop bank nationalisation by Federal Government. Demobilisation of forces completed. 'Displaced persons' commenced arriving from Europe. Population 257 078 (Census).
- 1948 Forty-hour week awarded to most workers from 1 January. Tasmanians voted 'No' almost two to one in referendum denying Federal Government power over prices and rents. Legislative Council's denial of Supply forced dissolution of House of Assembly—Cosgrove ministry returned to power.
- 1949 Compulsory X-ray introduced in fight against tuberculosis. Clark Dam at Butlers Gorge completed. Theatre Royal purchased by the Government. Sterling devalued by 30.5 per cent and Australian pound similarly devalued.
- 1950 End of federal petrol rationing. Dissolution of House of Assembly granted by Governor and Cosgrove ministry returned to power. Communist Party Dissolution Bill passed by Federal Parliament.

- 1951 *Communist Party Dissolution Act* declared invalid by High Court. Double Dissolution of Federal Parliament. Referendum to give Federal Government powers in regard to communism—'No' vote prevailed although Tasmanians expressed slight preference for 'Yes'.
- 1952 Single licensing authority established for hotels, clubs, etc. State's free hospital scheme ceased.
- 1953 In September, Court abandoned system of quarterly adjustment of federal basic wage. State wages boards suspended quarterly basic wage adjustments.
- 1954 Royal visit by Queen. Bill passed to resolve deadlocks in House of Assembly. Foundation of the Metropolitan Transport Trust.
- 1955 Uranium ore discovered at Mt Balfour and Royal George. Bell Bay aluminium plant officially opened. Trevallyn and Tungatinah power schemes officially opened. Anti-Communist Labor Party (later D.L.P.) formed.
- 1956 State wages boards' restoration of 'cost-of-living' adjustments effective from 1 February but these later again suspended. Sir Ronald Cross granted dissolution of House of Assembly. Labor Party returned to power in State. Official opening of E.Z. Co.'s sulphate of ammonia plant. Centenary of self-government celebrated.
- 1957 Legislative Council rejected bill giving aid to private schools. First satellites—Sputniks I and II—seen over State. Centenary of Hobart's incorporation celebrated.
- 1958 Establishment of Rivers and Water Supply Commission. Public Service Tribunal established as an industrial authority.
- 1959 First election to fill 35 seats in House of Assembly; Labor re-elected. New Federal Government system of grants reduced claimant states to two—Tasmania and Western Australia. *Princess of Tasmania* commenced roll-on roll-off ferry service Melbourne to Devonport.
- 1960 Liapootah power station commissioned. Zeehan-Strahan railway closed. Inland Fisheries Commission created. First Tasmanian telecast. Australian 'give way to the right' rule introduced on roads.
- 1961 *William Holyman*, cargo container vessel, entered Bass Strait trade. Legislative Council rejected equal pay legislation.
- 1962 Catagunya turbines began producing electricity. State wages Boards granted three weeks annual leave. State subsidies announced for municipal fluoridation schemes. Closure of Mt Lyell Railway, Queenstown to Strahan.
- 1963 Abolition of State entertainments tax. Federal Court increased margins 10 per cent and granted three weeks annual leave. Universities Commission recommended medical school for Tasmanian University.
- 1964 T.A.A. commenced intrastate air services. Tasman Bridge opened for traffic. Hobart's water supply fluoridated. Glenorchy raised to city status.
- 1965 *Empress of Australia* sailed from Sydney on first voyage to Hobart. Provisional driving licences introduced. Dental nurse scheme for schools announced. D'Entrecasteaux scallop beds closed for 1965 season.
- 1966 Decimal currency introduced 14 February. Burnie-Launceston co-axial cable completed. Equal pay for certain State Public Service females. Breathalyser tests approved for use by police. S.T.D. extended to Tasmania.
- 1967 Bush fire disaster of 7 February resulted in 62 deaths and over 1 000 houses destroyed. Federal Arbitration Commission abolished basic wage and substituted total wage concept but basic wage retained in State awards. Mt

- Cleveland tin mining town of Luina completed. H.E.C. water reserves only 16 per cent of normal; introduction of daylight saving and power rationing.
- 1968 H.E.C. Repulse Dam on lower Derwent completed. Batman Bridge across lower Tamar opened. Federal Government subsidy for apples and pears exported to U.K. and other countries. Full adult suffrage for Legislative Council elections from 1 July 1969. Capital punishment abolished.
- 1969 Parangana Dam (Mersey-Forth scheme) completed. North-West General Hospital opened at Burnie. State election resulted in 17 A.L.P., 17 Liberals, one Centre Party (Mr Lyons). Mr Lyons combined with Liberals to form coalition government; ended 35-year Labor rule in Tasmania. Full Bench of Federal Arbitration Commission granted equal pay to females performing equal work; female salaries to be raised to male salaries in stages. Copper smelter at Mt Lyell closed; concentrate sent to Japan and Port Pirie (S.A.) for treatment.
- 1970 First pyrites railed from Rosebery to Burnie sulphuric acid plant. E.Z. Co. to establish \$6.3m residue treatment plant. Royal visit. Parliament legislated to introduce permanent daylight saving. State premiers accepted Tasmanian formula for reimbursement in lieu of receipts duty.
- 1971 \$25m A.P.P.M. Ltd Wesley Vale paper plant opened. \$9m expansion program at Comalco (Bell Bay) completed. Serious shipping strike. Population 390 413 persons (Census).
- 1972 K. O. Lyons resigned cabinet portfolios and ended Liberal-Centre Party Coalition. A.P.P.M. Long Reach woodchip plant commenced production. Waterside workers awarded 35-hour week. A.N.L. vessel *Princess of Tasmania* made her final trip to Tasmania. Mt Lyell Mining and Railway Company Ltd fired last charge at its West Lyell Open-cut Mine. State Government announced cigarette and tobacco tax. King Island's Naracoopa rutilite mine re-opened by Buka Minerals (N.L.). Federal elections—A.L.P. returned to power (after 23 years in Opposition). 300 million years old fossil of dragon fly discovered in Hellyer Gorge (west coast area).
- 1973 First train travelled the Bell Bay rail link. The first legal casino in Australia—Wrest Point—officially opened. Vote extended to 18-year-olds. The \$121m Mersey-Forth H.E.C. scheme officially opened. Storeys Creek tin mine closed down. Heavy concentrations of zinc, copper and cadmium found in oysters collected from Derwent and Tamar estuary areas. The *Blythe Star* lost at sea while on charter to the Transport Commission. Preliminary work began on H.E.C. Pieman scheme. Tasmania voted in line with other Australian states on prices and incomes referenda—'No' to both. Alginates (Australia) Ltd closed down its east coast seaweed harvesting and processing operation.
- 1974 B.H.P. announced \$28.5m expansion project for the Temco ferro-alloy plant at Bell Bay. Workers under State Wages Boards' awards granted four weeks annual leave. Anti-pollution regulations under the *Environment Protection Act* gazetted. Royal Commission's report on urban transport advocated cessation of suburban rail services. Transport Commission's ship *Straitsman* sank in Yarra River. High Court ruled Tasmanian tobacco tax valid, but method of collection invalid. Double dissolution of Federal Parliament. Severe floods in eastern Tasmania. Federal Labor Government re-elected. Tobacco tax withdrawn but legislation not repealed. Tasmania withdrew as a claimant state for Special Grants. Textile industries retrenched workers. A.N.L. announced 25 per cent increase in freight rates for Tasmanian run. Women under State Wages Boards determinations

awarded equal pay. Goliath Cement Holdings disclosed a \$12m expansion program. European carp discovered in farm dams along the north-west coast. A.N.L. freight rates for north bound freight from Tasmania to be reduced by an average of 25 per cent. The 140 metre high Gordon Dam completed. No fault third party insurance scheme implemented. A.P.P.M. Ltd's Burnie mill retrenched 154 workers.

- 1975** Tasmanian suburban rail services ceased. Bulk ore carrier *Lake Illawarra* rammed the Tasman Bridge, leaving a 128 metre gap and causing 12 deaths. Initial federal grant of \$13m for Tasman Bridge restoration announced. T.A.B. began operating. Transmission of colour television programs commenced in Tasmania. Electrolytic Zinc Co. announced the retrenchment of 391 employees following reductions in production. Carbon dating of charcoal confirmed that Tasmanian Aborigines occupied Hunter Island 18 550 years ago. Arbitration Commission adopted wage indexation in principle. Draft Management Plan for the South-West National Park officially released. Plans released for second permanent Derwent crossing and additional lane for the existing bridge. Federal Government takeover of Tasmanian railways. State Budget deficit a record \$13.6m for 1974-75. A.N.L. interstate freight rates increased by 40 per cent and passenger fares by 30 per cent. Devonport Council rejected N.W. Regional Water Scheme. Tenders called for \$11m maternity wing for the Royal Hobart Hospital. Prime Minister dismissed by the Governor-General and the Leader of the Liberal Party appointed Caretaker Prime Minister pending a general election. Flash flooding in the southern Midlands took two lives and cut major roads and bridges. Temporary Bailey bridge crossing on the Derwent opened to traffic. \$5m Police Academy completed at Rokeby. Hotels opened for the first day of Sunday trading under new State licensing laws. Federal Liberal-Country Party Government elected with a majority in both Houses.
- 1976** Hobart recorded its highest ever maximum temperature of 40.9°C. Family law Courts established in Tasmania to handle divorces under the Federal *Family Law Act*. 900 employees stood down at A.P.P.M.'s Burnie Mills for two weeks due to a strike by maintenance workers. Consumer Price Index for Hobart rose by 7.5 per cent during the December quarter 1975. Approval given for a \$5.5m water scheme for George Town-Bell Bay area. Unemployment in Tasmania rose to 6.9 per cent of the work force in January (11 846 persons). Arbitration Commission granted a 6.4 per cent National Wage increase in line with indexation guidelines. Mt Lyell Co. reported record losses. 'Nimmo Report' on transport to and from Tasmania released. Investigation of a site for a second Derwent crossing began. A government-commissioned inquiry recommended the abolition of the T.C.A.E. in Hobart and expansion of the northern campus. Opening of the Tasmanian Military Tattoo attended by 4 500 spectators. A \$3.5m contract let for the provision of a fifth lane on the Tasman Bridge. Completion of Pieman River H.E.C. scheme postponed for five years. A Tasmanian consortium investigated the modernisation of the Electrona carbide works, preventing an imminent shutdown. Wool storemen returned to work following a two-month strike. The bones of Tasmania's last full-blood Aboriginal, Truganini, were cremated on the 100th anniversary of her death. Tender accepted for an \$11m extension to the Royal Hobart Hospital. 47th ANZAAS Conference held in Hobart. An estimated 5 000 sheep shot and buried following low sheep prices. Mass tuberculosis X-rays phased out. Sea cargo to and from Tasmania to be subject to a freight-equalisation scheme; A.N.L. freight rates increased by 24 per cent following introduction of the direct subsidy scheme. King Island Scheelite Ltd began a \$5.5m

expansion project. Tasmania's budget surplus a record \$4.1m for 1975-76. State's rail freight rates increased by 15 per cent. New terminal costing \$1.6m opened at Hobart Airport. \$23.7m spent on work associated with Tasman Bridge disaster in 1975-76 and \$16m allocated for 1976-77. Unions tied up the roll-on roll-off vessel *Australian Trader* at Bell Bay following a decision to withdraw it from the Tasmanian run. National Wage Case resulted in a 1.5 per cent wage increase with a minimum increase of \$2.50—only half the full indexation claimed by unions. Cormo sheep, a new breed developed in Tasmania, exported to the U.S.A. A new method of allocating Federal funds to the states, in the form of a 33.6 per cent return of personal income tax collections, yielded Tasmania \$189m for 1976-77. South-West National Park doubled in size in line with South-West Management Plan proposals. 60 textile workers retrenched by Coates Patons in Launceston. State Government announced stamp duty exemptions of up to \$500 to apply to the purchase of a first home. A proposed \$5.7m expansion project at Electrona carbide works dependent upon continued tariff protection. British importers called for changes in the fruit marketing system following the arrival of poor quality apples from Tasmania. *Australian Trader* sailed on last voyage from Bell Bay. Land tax rates reduced; abolished completely on private forests. \$30m allocated for upgrading technical education facilities in Launceston. Precipitous Bluff to be included in South-West National Park following an agreement by A.P.M. to relinquish timber concessions in the area. A.P.M. announced plans for a \$185m expansion project at Wesley Vale but meanwhile the plant was to operate on a five-day working week. Comalco Ltd began a \$10m expansion project to increase output by 19 000 tonnes per year. Government commissioned a feasibility study on the establishment of a sugar beet industry. Tasmania experienced an 85 per cent eclipse of the sun but heavy cloud reduced its effect. Francene Maras of W.A. was crowned Miss Australia 1977 in Hobart. Constitutional Convention at Wrest Point in Hobart. U.S. nuclear aircraft carrier *Enterprise* visited Hobart for eight days. Mt Lyell Mining and Railway Co. announced plans to retrench 400 employees. First stage of the Don College at Devonport officially opened. Arbitration Commission granted a 2.2 per cent National Wage increase in line with the September quarter C.P.I. increase. Federal Government announced introduction of south-bound freight subsidy scheme which would apply retrospectively to cargo shipped from 1 July 1976. A 17½ per cent devaluation of the Australian dollar announced on 28 November. E.Z. Co. announced that planned expenditure to complete its pollution control program would exceed \$12m. Total decline in jobs in the textile industry in Launceston over 2½ years reached almost 1 500 following retrenchment of 35 employees by Waverly Woollen Mills at Christmas. Announced that the Australian Maritime College would be built in Launceston. The Neilson Labor Government returned to power with a reduced majority: A.L.P., 18 seats; Liberals, 17 seats (H. of A.). Tanker carrying 20 000 tonnes of petrol ran aground at George Town: state of emergency declared and 800 residents evacuated overnight. Resignations from the Council of Advanced Education totalled three for the year. A.N.M. Ltd announced new plant developments which would cost approximately \$13m.

1977 See Appendix following Chapter 18.

Chapter 2

PHYSICAL ENVIRONMENT

GENERAL DESCRIPTION

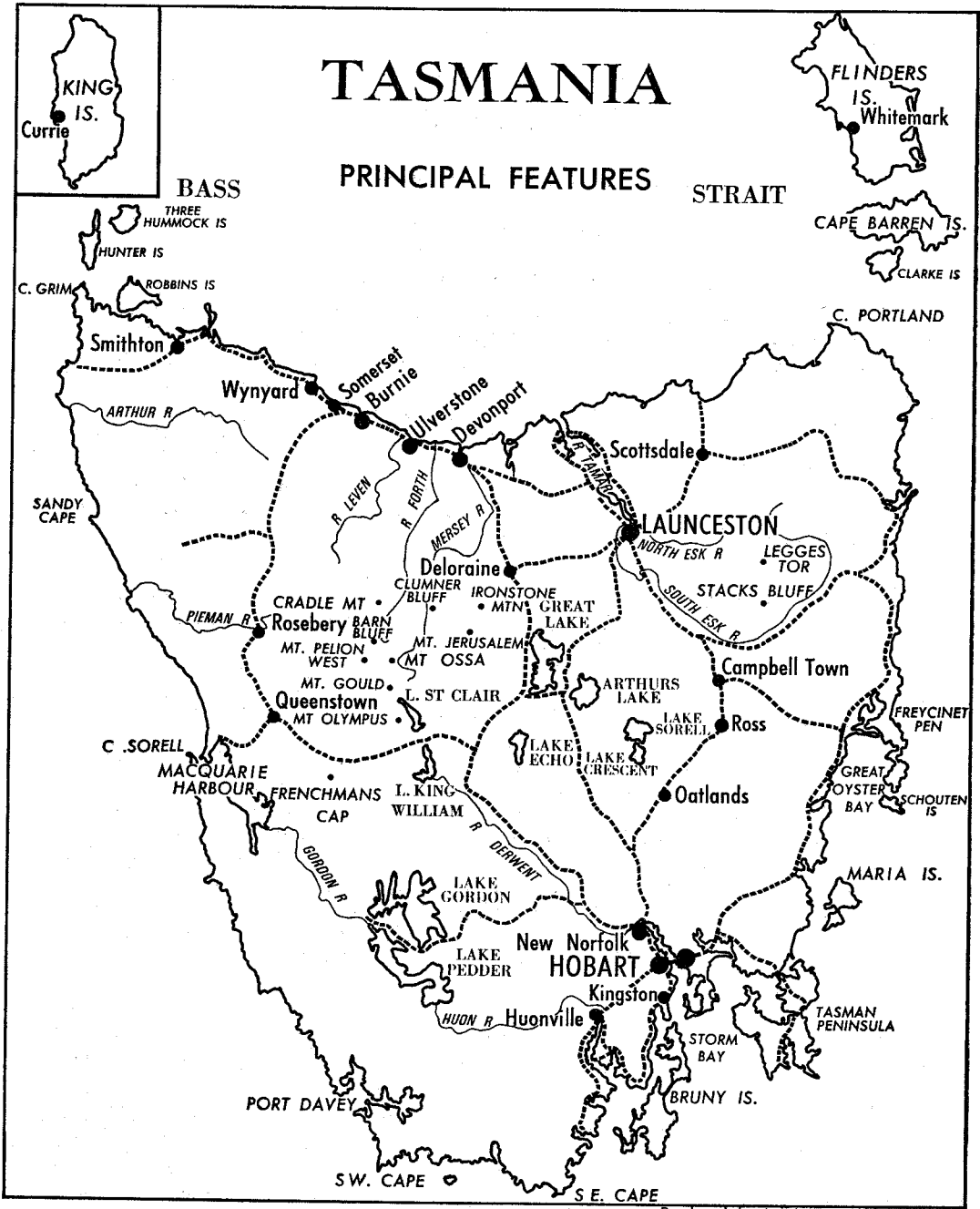
Location and Area

The State of Tasmania is a group of islands lying south of the south-east corner of the Australian mainland; the major island is Tasmania and the more important of the lesser islands are King, Flinders and Bruny. Roughly shield shaped with the greatest breadth in the north, Tasmania extends from $40^{\circ} 38'$ to $43^{\circ} 39'$ south latitude and from $144^{\circ} 36'$ to $148^{\circ} 23'$ east longitude. The coastline is bounded by the Southern Ocean on the south and west and the Tasman Sea on the east, while the approximately 240 kilometres wide Bass Strait separates the island from the Australian mainland. Macquarie Island, a part of the State, is situated at $54^{\circ} 38'$ south latitude, $158^{\circ} 53'$ east longitude and is bounded by the Southern Ocean.

The area of the whole State, including the lesser islands, is 68 300 square kilometres or about 0.9 per cent of the total area of Australia (7 686 900 square kilometres); it is just under one-third the size of Victoria, the smallest mainland state, and is less than half the size of England and Wales.

Mainland Australia, extending as it does well north of the Tropic of Capricorn, and with much of its area in the zone of the sub-tropical anti-cyclones, is basically a warm, dry continent. Tasmania is in the temperate zone and practically the whole island is well watered with no marked seasonal concentration; there are no deserts or drought areas as found extensively on the adjacent continent. Being south of latitude 40° , it is on the edge of the wind belt commonly known as the *Roaring Forties* and, with South America the nearest land mass to the west, Tasmania's weather is subject at times to strong winds and heavy rain about the south and west coastal areas. Because Tasmania is the most southern state, there is a tendency to think of it as being close to the Antarctic but its latitude is matched, in the northern hemisphere, by that of Madrid (Spain) and Pittsburgh (U.S.A.). In addition, as Tasmania is an island, it is sheltered from the extremes of heat and cold experienced in these two centres. The effect of its insular position is illustrated by the variation between summer and winter mean temperatures in coastal towns—this rarely exceeds 8° Celsius. Comparing Hobart (Tasmania) with Melbourne (Victoria), mean maxima are some 3°C warmer and mean minima 1.5°C warmer in the Victorian capital.

Apart from the Great Dividing Range in the east, continental Australia is predominantly a land of low plateaux and plains with little relief. By way of contrast, Tasmania could legitimately be called the island of mountains, since it has the largest proportion of high country to its total area, compared with the other states. The distinctive feature of the island is not so much the height of the mountains—few exceed 1 500 metres—but rather the frequency with which they occur. The *Australian Pilot*, Vol. II describes Tasmania as 'probably the most thoroughly mountainous island on the globe'.



Produced by Lands Dept. Hobart 1973

Principal Physical Features

The following table lists the principal mountains, lakes and rivers of Tasmania (for their location see the previous map):

Principal Physical Features

MOUNTAINS			
Name	Height (metres)	Name	Height (metres)
Mt Ossa	1 617	Stacks Bluff	1 527
Legges Tor	1 573	Mt Gould	1 491
Barn Bluff	1 559	Mt Jerusalem	1 458
Mt Pelion West	1 554	Mt Pelion East	1 451
Cradle Mountain	1 545	Clumner Bluff	1 449

LAKES			
Name	Area (square kilometres)	Name	Area (square kilometres)
Lake Gordon (a)	272	Lake King William (a)	41
Lake Pedder (b)	241	Lake Echo (c)	41
Great Lake (c)	158	Lake St Clair	28
Arthurs Lake (c)	64	Lake Augusta (c)	12

RIVERS			
Name	Length (kilometres)	Name	Length (kilometres)
South Esk (d)	r 201	Huon	r 170
Gordon	r 185	Arthur	113
Derwent	r 182	Pieman	r 98

(a) Man-made.

(b) Man-made—inundated the much smaller natural Lake Pedder.

(c) Natural lake enlarged by dam(s).

(d) From source to confluence with North Esk; at this point the river becomes known as the Tamar. If the Tamar is included in the length of the South Esk a further 70 km is added to its length.

Population Distribution

With a population of only 407 000, Tasmania is still thinly populated although its population density of only six persons per square kilometre is exceeded only by Victoria and New South Wales among the Australian states. By comparison, the population density of England and Wales at 30 June 1974 was 326 persons per square kilometre (area 151 140 square kilometres; population 49.2 million). To have this population density, Tasmania (area 68 331 square kilometres) would require a population of 22.2 million.

A marked characteristic of the mainland states of Australia is the very high concentration of population in their respective metropolitan areas, Brisbane providing the only example where this concentration falls below 50 per cent of the State's total population. In contrast, the Tasmanian population is concentrated in two main areas: (i) Urban Hobart, with about 36 per cent; and (ii) Urban Launceston with about 17 per cent. This deviation from an Australian pattern is partly explained by the relative proximity of Launceston to the principal mainland markets. However, terrain and climate have also had a large influence on the distribution of the State's population. A convenient way to summarise, in

approximate terms, the present pattern of settlement is to imagine three circles of 40 kilometres radius centred on Hobart (representing the south-east), Launceston (the north) and Ulverstone (the north-west): (i) with Hobart as centre, 43 per cent of the Tasmanian population was located within the 40 kilometre circle at 30 June 1974; (ii) with Launceston as centre, 21 per cent; (iii) with Ulverstone, 18 per cent. Since all circles are exclusive of each other, these three defined areas together contained more than 82 per cent of the State's population and this fact justifies the generalisation that the main settlement is in the south-east, the north and the north-west.

PHYSIOGRAPHY

Introduction

Tasmania is an island of mountains and is unique among Australian states in being predominantly influenced by polar maritime air masses. From the point of view of settlement and development, these two factors have combined to create assets against which must be weighed certain liabilities. The island, a mere 296 kilometres from north to south and 315 kilometres from east to west, has a wide variety of mountains, plateaux and plains, of rivers, lakes and tarns, of forest, moorland and grassland, of towns, farms and uninhabited (and virtually unexplored) country. The temperate maritime climate partly explains Tasmania being called the most English of all states but other factors operate to heighten the comparison—the pattern of agricultural settlement with orchards, hedges and hopfields; the lake country; the early freestone architecture still common in the east; the roads and villages dotted with oaks, elms and poplars. Nature and the early settlers have provided the assets for a flourishing tourist industry which is currently being vigorously developed. Assured rainfall and mountain storages have also given birth to massive development of hydro-electric power and, indirectly, to industry. The growth of forests, too, is promoted by suitable rainfall and temperature, and this forms the basis for industries such as timber-milling, newsprint and other paper production and wood-chipping.

The mountainous nature of the island is confirmed by survey, which shows six features exceeding 1 500 metres, 28 exceeding 1 220 metres and a further 28 exceeding 915 metres. The highest mountain is Mt Ossa (1 617 metres) some 16 kilometres north-west of Lake St Clair, and north-west again from this peak lie Mt Pelion West (1 554 metres), Barn Bluff (1 559 metres) and Cradle Mountain (1 545 metres); the furthest distance, 24 kilometres, is from Mt Ossa to Cradle Mountain. In the Ben Lomond area, the principal features are Legges Tor (1 573 metres) and about 10 kilometres south, Stacks Bluff (1 527 metres). Each of these mountainous regions and a number of others have been set aside as national parks, two of which, Ben Lomond and Mt Field, are renowned for winter sport.

Water Resources and Rainfall

Fresh-water navigation has played very little part in Tasmania's development, the rivers being too fast-running, shallow or short. Of the four major ports, three are located on tidal estuaries—Hobart on the Derwent; Launceston on the Tamar and Devonport on the Mersey (Burnie has built a port, on the open sea, protected by breakwaters). Rivers, however, are significant for three reasons: (i) use of headwaters for electricity generation; (ii) domestic and industrial water supply; and (iii) irrigation. Hobart for example draws much of its water supply direct from the upper Derwent River without use of a dam and the river flow is adequate to serve a population at least 10 times greater than that at present. The

development of hydro-electric power has been based on full utilisation of the sources and tributaries of the Derwent with a chain of power houses stretching from Clark Dam on Lake King William to Meadowbank only 51 kilometres from Hobart. The naturally southward draining Great Lake waters are diverted northwards through the Poatina power station and discharged into the South Esk River system. The waters of the South Esk have been further harnessed at Trevallyn. In the north-west, the Mersey-Forth scheme exploits the Fisher, Mersey, Wilmot and Forth Rivers in a development spread over approximately 2 070 square kilometres. Stage I of the Gordon River power development scheme in the south-west, expected to be completed by early 1978, will create the largest fresh-water storage in Australia. This does not exhaust the possibility of future development as construction work on the Pieman River system has commenced with completion scheduled for 1985, and the Lower Gordon, Franklin and King Rivers are also considered to have substantial potential for power development.

To obtain a true perspective, it should be appreciated that large areas of the State cannot be cultivated because there is too much rainfall (in contrast with the mainland of Australia where often the reverse situation applies). Further, the mountainous terrain and accompanying highland climate have restricted farming to relatively small areas of suitable country, mainly river valleys, coastal plains and the lower plateaux. In 1976, farm statistics showed that 36 per cent of the State's area was occupied by rural holdings. Only 2.4 per cent of the area of rural holdings was under crop and a further 38.0 per cent under sown pasture. The remaining 59.5 per cent of rural holdings included bush runs, uncleared scrub or possibly land unsuitable for any rural purpose at all. A high proportion of the State's area not included in rural holdings is composed of forests, national parks and lakes.

Physiographic Regions

To explain the pattern of settlement, it is necessary to isolate the various physiographic regions of the State as follows:

Central Plateau: The main feature is a relatively undissected, dolerite-capped plateau sloping generally south-eastward from an average level of 1 065 metres in the north to 610 metres in the south, and drained almost wholly by the Derwent system. The northern and eastern boundaries of the Plateau are the Great Western Tiers (paradoxically named since they lie in the central north of the island). This is known as the 'lake country' of the island and is the chief source of hydro-electric power.

High Dissected Plateau: West of Lake St Clair, dolerite caps steeply-tilted sediments and the plateau is much dissected; it comprises a series of peaks and broken ridges. The coastlands in the extreme south of the region are rugged but in the D'Entrecasteaux Channel and Huon River areas, narrow coastal belts have been devoted to specialised agriculture.

Western Ranges: The high dissected plateau is bound by a mountainous series of ranges running parallel to the west coast and in this region are located the State's principal mines. The south of the region is virtually uninhabited except for construction workers on the Gordon power scheme.

Western Coastal Platforms: Throughout almost the entire length of the west coast, an uplifted and much dissected peneplain slopes westward from about 275 metres altitude, ending abruptly in cliffs more than 30 metres high. In the south of this region, superhumid button grass plains predominate, and the area is unin-

habited. On the coastal plain south of the Arthur River, however, dairy cattle are wintered on agistment runs, while north of the river dairying begins to appear and swamps formed by recent emergence have been cleared for farming.

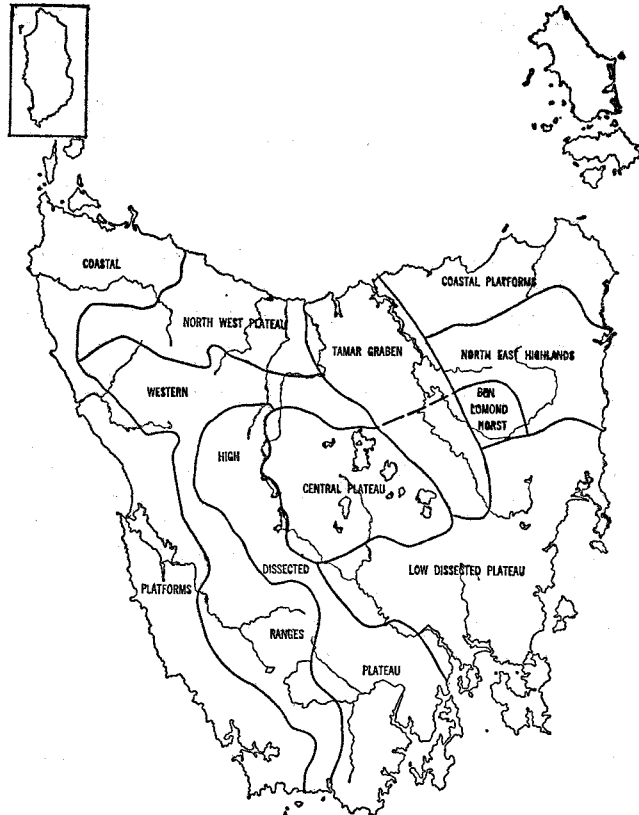
North-West Plateau: North of the Western Ranges lies a plateau averaging nearly 610 metres altitude and important mainly for forestry; the coastlands derive mainly from basalt, giving rise to intensive mixed farming based on dairying, potatoes and crops for canning and freezing, such as peas and beans.

Tamar Graben: This graben (rift valley) is the largest plain and the leading agricultural and pastoral district in the State; it ends in the drowned inlets of the Tamar and Mersey estuaries and of Port Sorell, in the north.

North-East Coastal Platforms: This region consists of undulating lowland but the soils are acidic and the land is used only for grazing.

North-East Highlands and Ben Lomond Horst: This region comprises mostly uplifted remnants of old fold mountains dominated by the 1525 metre dolerite-capped plateau horst of Ben Lomond, an outlier of the Central Plateau. Here agriculture is largely confined to small basalt-derived basins. Some minerals are worked.

TASMANIA PHYSIOGRAPHIC REGIONS



The above regions derive from a classification by J. L. Davies, M.A., Ph.D., University of Tasmania.

Low Dissected Plateau: In the south-east lies a low dissected dolerite plateau averaging perhaps 365 metres and used mainly for grazing. The northern coastlands of this region are narrow and also devoted to sheep, but the southern coastland is important for its specialised agriculture. At the extreme south of the region is the drowned estuary of the Derwent and the Tasman and Forestier Peninsulas.

DESCRIPTION OF STATISTICAL DIVISIONS

Introduction

Earlier in this chapter the State of Tasmania was briefly described by analysing its terrain in terms of physiographic regions. For statistical purposes, the State is also analysed in divisions but these do not necessarily coincide with physiographic regions, one reason being that the former are basically groupings of whole municipalities. The traditional Tasmanian statistical divisions, in use for over 50 years, were exposed to searching scrutiny in 1971 and the decision was taken to introduce a new structure, to be applied to statistics in respect of periods commencing on or after 1 July 1972.

History of Statistical Divisions

The grouping of administrative areas into divisions for statistical purposes can be found in annual volumes of the *Statistics of Tasmania* dating back to the nineteenth century. The administrative areas included: police districts; registration districts; electoral districts; and municipalities. The boundaries of these areas were subject to periodic changes. The *Local Government Act* 1906 provided a basis for the whole State coming under uniformly constituted local government and gradually the divisional grouping of administrative areas was confined, in official statistics, to municipalities. As a result of this Act, fixed local government area (municipality) boundaries were delineated in 1907 by a commission specially set up for the purpose. The new boundaries have remained broadly unchanged since 1907 although there have been numerous relatively minor boundary changes. One exception is that the old municipalities of 'Hobart', 'Queenborough' and 'New Town' were combined to form the new municipality of 'Hobart' in 1919. The names of several municipalities have also been changed since 1907. Small area statistics relating to 1907 and earlier years are not generally comparable with later statistics produced by the Bureau due to the boundary changes in 1907.

In 1919, groupings of local government areas used were very similar to those still used in 1971; in some series Hobart, Launceston and Glenorchy were separately specified as components of an 'Urban Division' distinct from the region in which each was located.

The basis for these 1919 groupings can only be inferred since no specific criteria were specified in the records. The Western Division clearly combined the 'west coast' mining municipalities into one entity; the Southern seemed to be based on orcharding, small fruit and hop areas; while the South Eastern was allied more with pastoral and grazing areas. In short, the main determinant may well have been similarity of rural activity (with the Western Division a special case because of its mining activity).

After the 1966 population census, a new division was formed with the title Hobart Division, comparable with similar capital city divisions in other states; its boundaries were drawn wide enough to encompass the expected expansion of the inner urban area for a period of 20 to 30 years. Apart from this, the broad divisional structure in 1971 was very much the same as it had been in 1919.

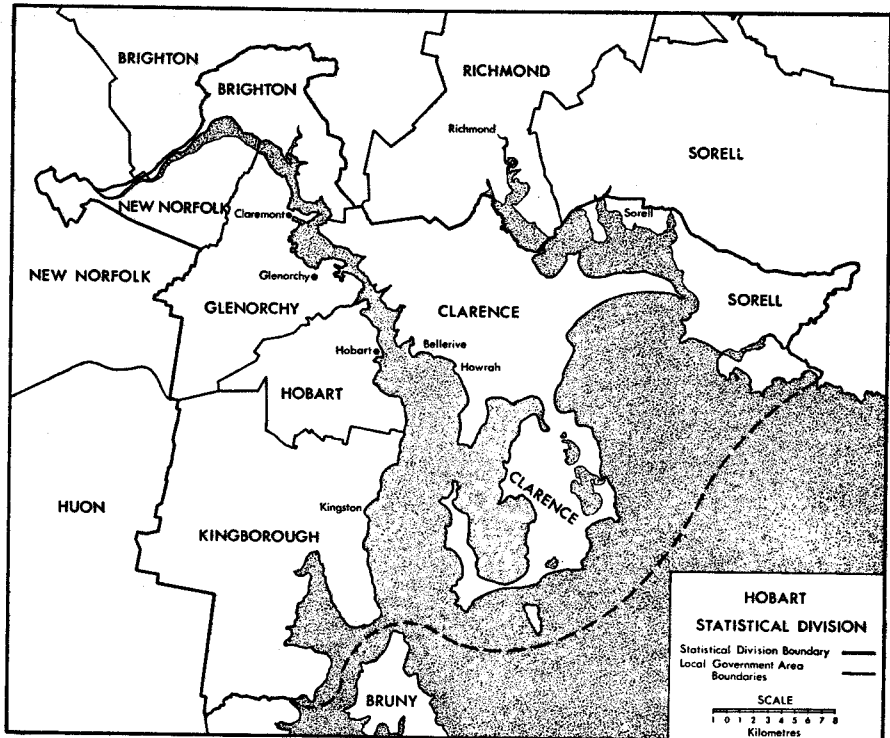
In 1972 a new statistical division structure, using the three principal urban centres of influence as a basis, was designed. The three urban centres and their areas of influence were: (i) Hobart—south and south-east; (ii) Launceston—north and north-east; and (iii) Burnie-Devonport—north-west and west. The following divisional structure was then adopted: (i) with Hobart as focus—Hobart and Southern Divisions; (ii) with Launceston as focus—Northern Division split into Tamar and North Eastern Sub-divisions; and (iii) with Burnie-Devonport as focus—Mersey-Lyell Division split into North Western and Western Sub-divisions.

Outline of the Present Structure

The divisions in the new structure are as follows:

Hobart Division

This Division comprises Hobart and Glenorchy Cities, the Municipality of Clarence, and parts of four other municipalities: Brighton; Kingborough; New Norfolk; and Sorell. The Division is Tasmania's principal industrial region and the administrative focal point. The Hobart Division boundaries were drawn wide enough to contain the expected outward growth of the inner urban area for a period of 20 to 30 years.



One important component of the Hobart Division is Urban Hobart, defined as the densely settled contiguous parts of the cities of Hobart and Glenorchy, and of the municipalities of Clarence and Kingborough. The boundaries of Urban Hobart and of the Hobart Division do not conform with borders defining local government areas. (The details of these boundaries are given in Chapter 6 'Demography' under 'Population Centred on Hobart'.)

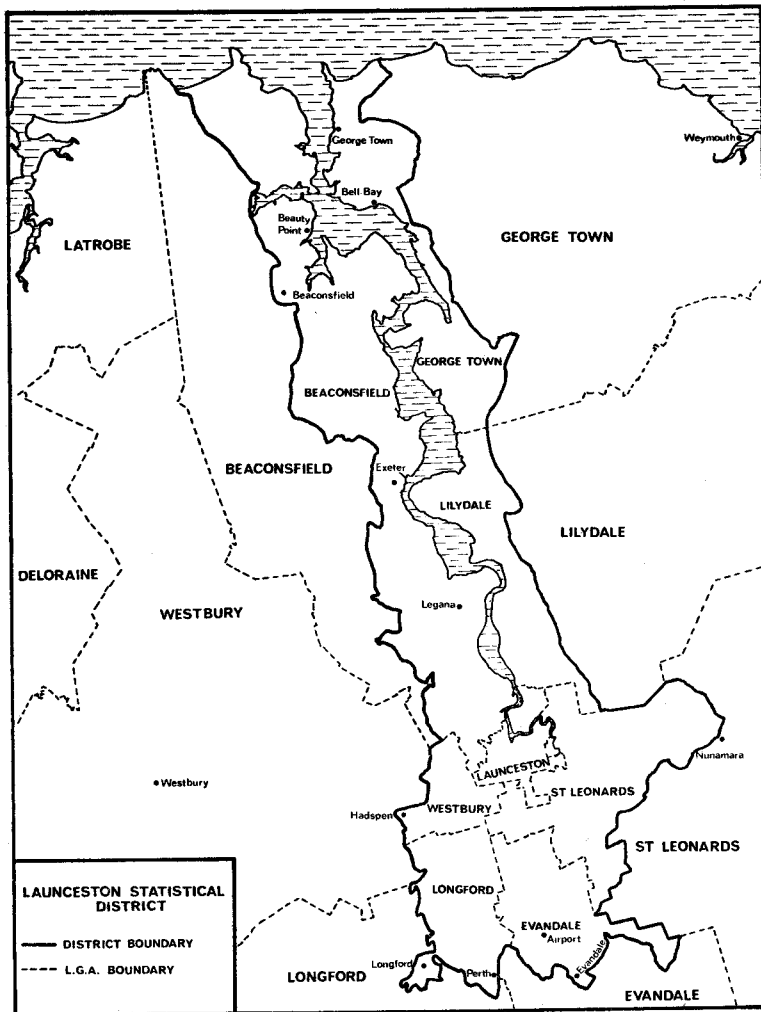
Southern Division

Comprises the southern local government authority areas which have Hobart as their urban focus. Predominant activities include orcharding, sheep and cattle grazing, forestry and timber processing.

Northern Division

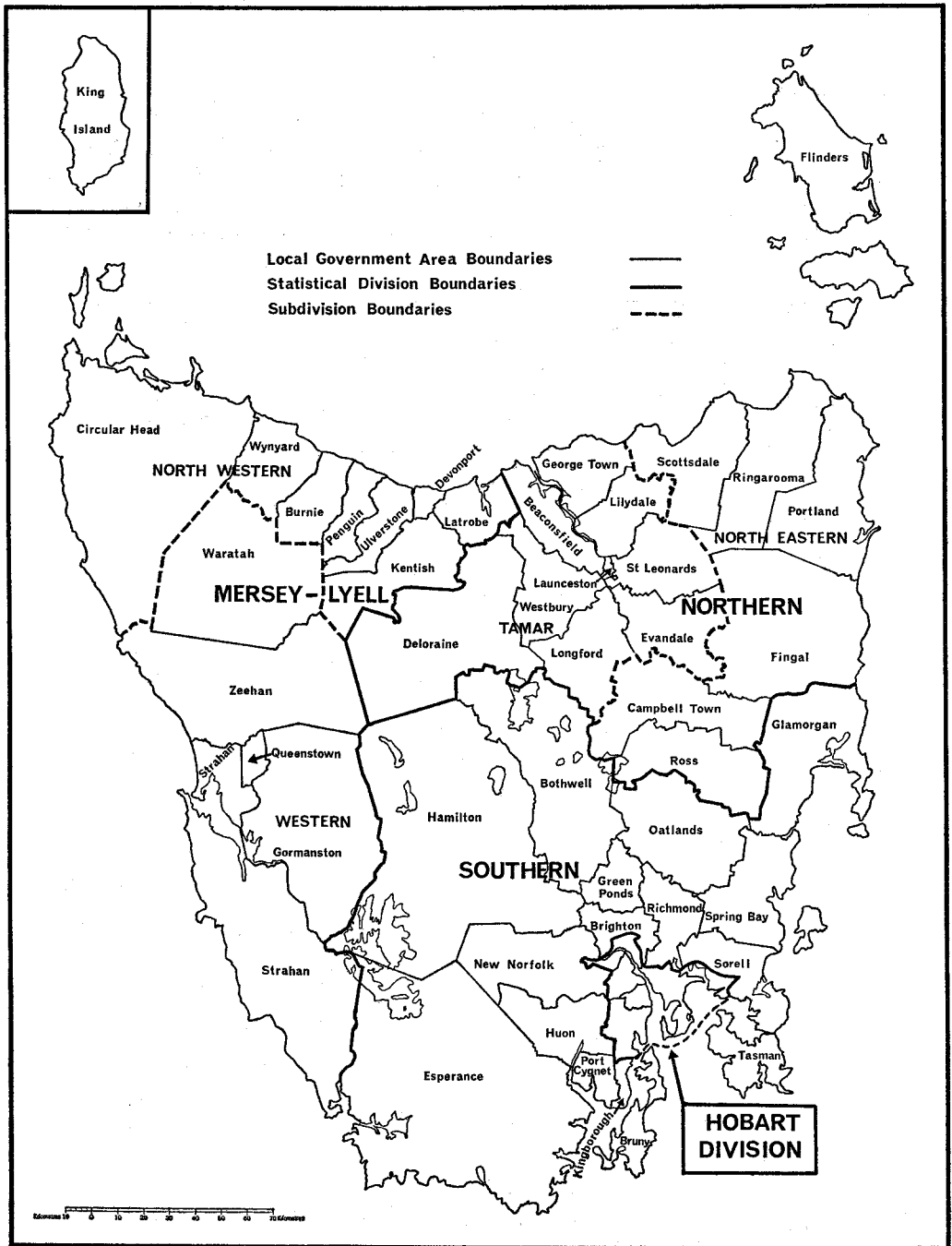
The Northern Division is the region with Launceston as its urban focus.

(i) *Tamar Sub-division*: This is the region dominated by the Tamar Valley. In the centre of this area is Launceston and its suburbs (known as Urban Launceston). This Sub-division includes several major manufacturing industries, port facilities of the northern region and agricultural, pastoral, dairying and forestry industries.



Launceston Statistical District: A new boundary delineating the Launceston Statistical District was drawn for the purpose of presenting results of the 1976

TASMANIA: LOCAL GOVERNMENT AREAS AND STATISTICAL DIVISIONS



Population Census. The boundary was drawn to contain the area of expected urban growth over the next two decades and includes the City of Launceston and parts of seven other municipalities.

Urban Launceston is defined for statistical purposes as the City of Launceston plus the contiguous urban parts of the following municipalities: Lilydale, St Leonards, Evandale, Westbury and Beaconsfield.

(ii) *North Eastern Sub-division*: Comprises the outer seven municipalities of the Northern Division. Principal activities include agriculture, dairying, sheep and cattle grazing, forestry and some mining.

Mersey-Lyell Division

This division encompasses the north-west and western portions of the State. The region has a twin urban focus of Burnie-Devonport.

(i) *North Western Sub-division*: Comprises the municipalities stretching along Bass Strait from Latrobe to Circular Head plus Kentish and King Island. The Sub-division includes several major manufacturing industries and is a principal agricultural, pastoral, dairying and forestry area for the State.

(ii) *Western Sub-division*: Contains Tasmania's western municipalities where mining activities predominate.

The accompanying maps show: (i) Statistical division and sub-division boundaries; (ii) local government authority components of statistical divisions; and (iii) the boundary of the Launceston Statistical District.

ADMINISTRATION AND AREA OF STATE

Sovereignty

On 17 December 1975, the High Court of Australia announced its decision on an action by the six states challenging the validity of the federal *Seas and Submerged Lands Act*. This Act gives the Federal Government sovereignty over the Australian territorial sea, air space, sea-bed and subsoil; and over the continental shelf beyond the limits of the territorial sea. In their action, the state governments claimed that the sovereign powers given the states over their land mass included sovereignty over the territorial sea adjacent to their coastlines for a distance of at least 3 miles (4.8 km). The full bench of the High Court dismissed the action by the states and upheld the validity of the *Seas and Submerged Lands Act*. Prior to this decision, Tasmania had claimed sovereignty (including mining and fisheries jurisdiction) over an area bound by the approximate rectangle 39° 12' to 45° south latitude and 140° to 150° east longitude.

Since the boundary line between Tasmanian and Victorian sovereignty is defined as 39° 12' south latitude, numerous Bass Strait Islands, the chief being the Furneaux group, King Island and the Hogan, Curtis and Kent groups, are part of Tasmania. In effect some Tasmanian territory (Rodondo and West Moncoeur Islands) is located only 13 to 16 kilometres from the Victorian coast.

Macquarie Island, site of an Antarctic research station, is also part of the State of Tasmania and is situated in 54° 38' south latitude, 158° 53' east longitude; its area is included in Esperance, a State coastal municipality.

Area of Major and Minor Islands

The official area of the State of Tasmania including many smaller islands (based on a 1963 survey) is 68 331 square kilometres (6 833 100 hectares). The following table shows the area of the main islands and the municipalities to which they belong:

Area of Islands

Island	Area (square kilometres)	Municipality
Bruny	362	Bruny (a)
King	1 099	King Island (a)
Flinders	1 374	Flinders (a)
Prime Seal	10	
Badger	10	
Vansittart	6	
Cape Barren	445	
Clarke	113	Circular Head
Three Hummock	70	
Hunter	74	
Robbins	101	Spring Bay Glamorgan Esperance
Maria	101	
Schouten	34	
Macquarie	123	
Total islands	3 922	
Mainland Tasmania	64 409	
Total Tasmania	68 331	

(a) Island municipality.

Area of Municipalities and Cities

In the table that follows, the measured areas of local government areas have been rounded to the nearest 10 square kilometres and the area of Tasmania has been rounded to the nearest 100 square kilometres as the accuracy of more detailed measurement is difficult to determine. Where municipal boundaries lie in the sea or an estuary these legal limits have been disregarded so that the stated area relates to a physical boundary (i.e. the coastline). However, the areas shown include all smaller islands which form part of the State.

Area of Statistical Divisions, Sub-divisions and Local Government Areas
(Square Kilometres)

Local government area (statistical division and sub-division in bold type)	Area	Local government area (statistical division and sub-division in bold type)	Area
Hobart (a) (H) ..	(b) 80	Launceston (a)	(b) 28
Glenorchy (a) (H) ..	(b) 120	Beaconsfield	640
Clarence (H) ..	250	Deloraine	2 920
Brighton (H) (S) ..	440	Evandale	990
Kingborough (H) (S) ..	350	George Town	650
New Norfolk (H) (S) ..	1 320	Lilydale	680
Sorell (H) (S) ..	780	Longford	1 000
Bothwell (S) ..	2 610	St Leonards	890
Bruny (S) ..	360	Westbury	900
Esperance (S) ..	6 190	Tamar	8 700
Glamorgan (S) ..	1 540		
Green Ponds (S) ..	420	Campbell Town	1 440
Hamilton (S) ..	5 850	Fingal	2 730
Huon (S) ..	770	Flinders	1 990
Oatlands (S) ..	1 540	Portland	1 580
Port Cygnet (S) ..	240	Ringarooma	1 630
Richmond (S) ..	570	Ross	1 240
Spring Bay (S) ..	1 120	Scottsdale	1 290
Tasman (S) ..	480	North Eastern	11 900
HOBART	940	NORTHERN	20 610
SOUTHERN	24 090		

Area of Statistical Divisions, Sub-divisions and Local Government Areas—*continued*
(Square Kilometres)

Local government area (statistical division and sub-division in bold type)	Area	Local government area (statistical division and sub-division in bold type)	Area
Burnie	620	Gormanston	2 870
Circular Head	4 920	Queenstown	140
Devonport	120	Strahan	3 730
Kentish	1 190	Waratah	2 710
King Island	1 100	Zeehan	3 000
Latrobe	550	Western	12 460
Penguin	430		
Ulverstone	510	MERSEY-LYELL	22 700
Wynyard	810		
North Western	10 240	TASMANIA	68 300

(a) City.

(b) To nearest square kilometre.

At the 1966 Population Census, new definitions based on high population density were employed to fix the boundaries of urban areas. The two major centres in the State at the 1971 Population Census, with boundaries conforming to the definitions, were: (i) Urban Hobart (approximately 112 square kilometres); and (ii) Urban Launceston (approximately 74 square kilometres). (See Chapter 6 for definition of these areas.)

CLIMATE OF TASMANIA

(The following section was prepared by the Bureau of Meteorology)

Introduction

Since Tasmania lies between 40° and 43½° south of the Equator and is an island with no point more than 115 kilometres from the sea, its climate is classified as temperate maritime. On the coast the daily temperature range averages about 8° Celsius, rising to about 12° Celsius further inland, indicating a slight continental effect.

The combination of mountainous terrain in the western half of the State and prevailing westerly winds produce a marked west-east variation of climate, and especially of rainfall.

Summers are mild and characterised by greatly lengthened days. The sun reaches a maximum elevation of 70-73° in mid-summer, giving 15 hours of daylight in the north and 15½ hours in the south. In mid-winter, the sun's elevation does not exceed 20-23°, and the shortest day consists of 9¼ hours of daylight in the north, falling to slightly under nine hours in the south.

In winter, westerly winds reach their greatest strength and persistence, causing a distinct maximum in rainfall distribution in the west and north-west. In the east and south-east, rainfall is more evenly distributed throughout the year. Coastal areas of Tasmania enjoy relatively mild winters as compared with Boston (U.S.A.), for example, which is about the same latitude north but experiences more severe winter weather conditions.

Winds

The prevailing winds over most of the island are north-west to south-west, with greatest strength and persistence during late winter. Speed and direction vary with the eastward passage of high and low pressure systems. In the summer months, when westerlies are weak, afternoon sea-breezes become the predominant wind in coastal areas. Occasional periods of north-east to south-east winds occur.

The highest average wind speeds are associated with extensive deep depressions over ocean areas south of Tasmania.

Temperature

Sea level temperatures are reduced by approximately 1°C for each 100 metres of altitude. Hence in a mountainous island like Tasmania the isotherms (lines of equal temperature drawn on a map) will be much influenced by topography. Greater cloud cover over the western half, a result of the persistent westerlies, further decreases day-time temperatures in the west, while the Föhn effect warms and dries the westerly airstreams as they descend to the Midlands, the east coast and south-east districts.

The incidence of frosts is affected markedly by topography, the valleys acting as natural channels for the drainage of cold air at night. Widespread severe frosts are experienced in winter on the Central Plateau and in upland valleys. Inland centres below 300 metres are virtually frost-free only in summer, while the north coast, the east and south-east have few frosts after early October. Above 300 metres there is no frost-free month.

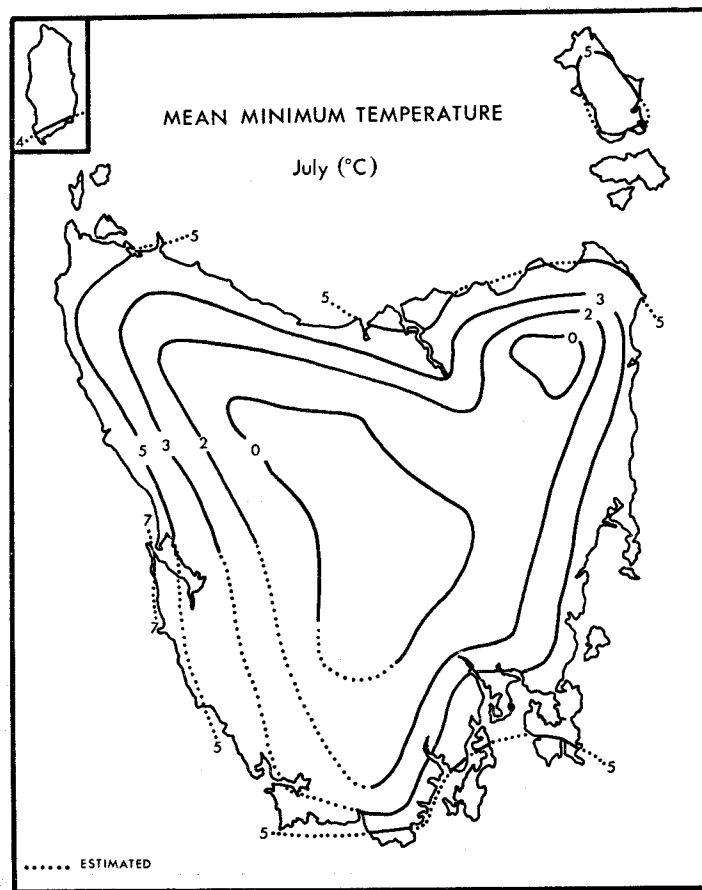
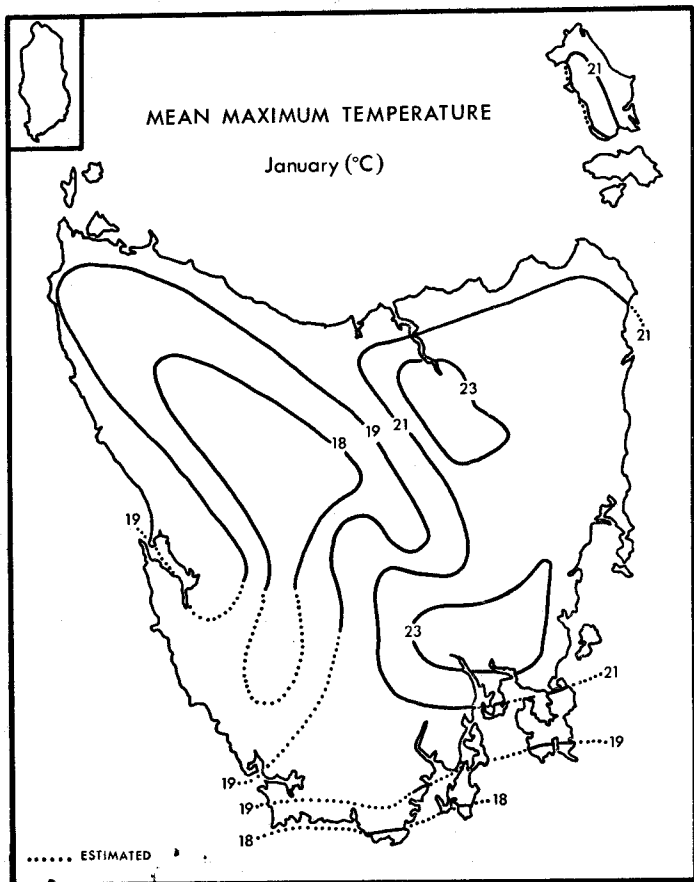
Tasmania only occasionally experiences the extremes of temperature common to the other states. High temperatures recorded in the east and south-east of Tasmania generally occur on the last day of a warm spell during which a dry air mass of mainland origin is advected over the State, from a direction between north and north-west. Some cooling in the lower air layers over the waters of Bass Strait prevents the northern coast from reaching the higher temperatures that are experienced in the south under these conditions. The highest temperatures ever recorded in Tasmania are 40.8°C at Bushy Park in December 1945 and at Hobart in January 1976. The lowest temperature recorded was -12.8°C at Oatlands in May 1902.

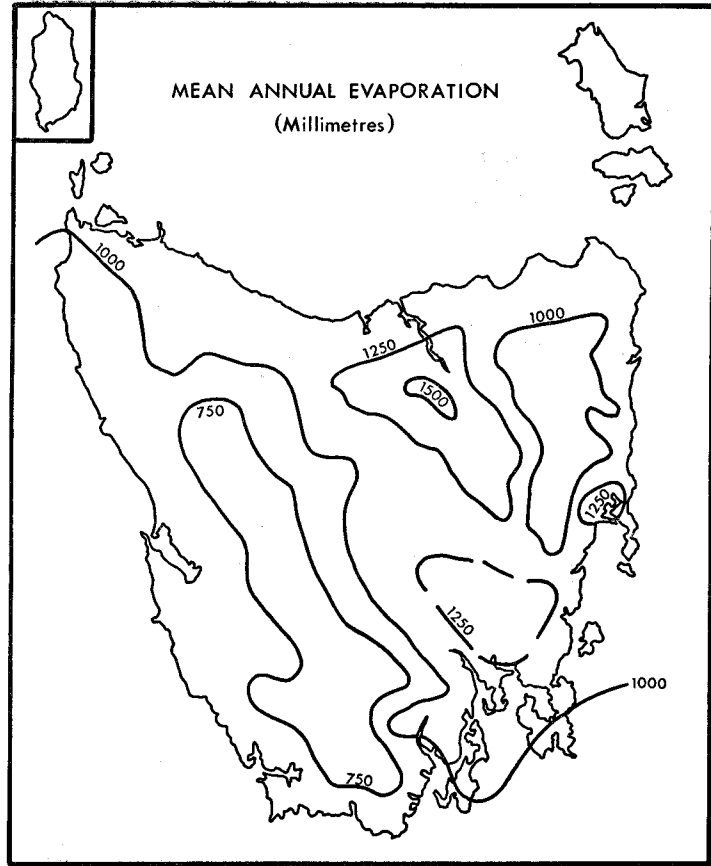
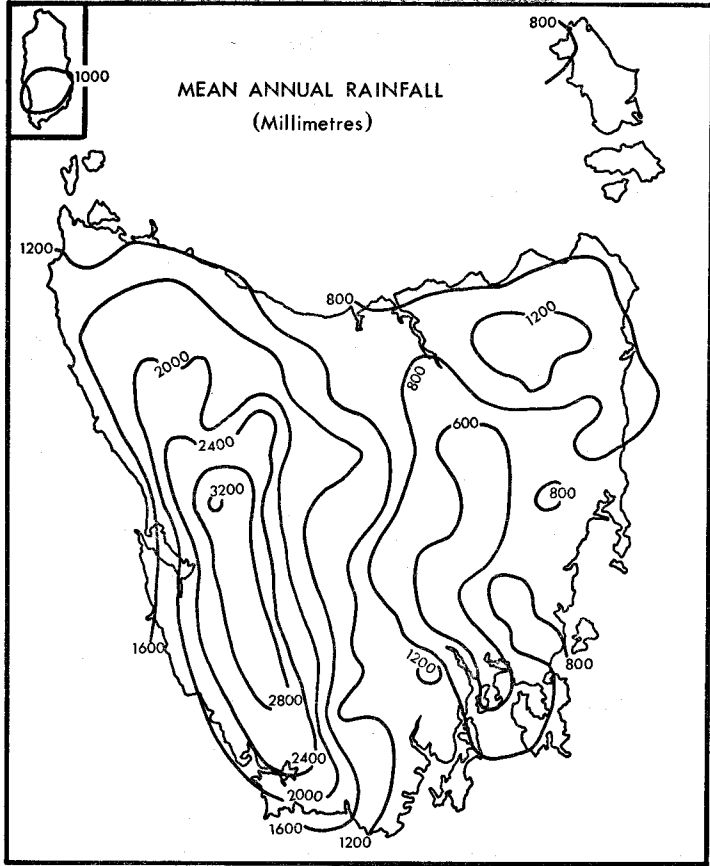
The recorded extremes of temperature for Hobart are 40.8°C in January 1976 and -2.8°C in June 1972. Readings above 38°C or below -1°C are rare, the mean maximum temperature in summer being 21.1°C and the mean minimum in winter, 4.9°C .

The mean maximum temperature for January and the mean minimum temperature for July over Tasmania are shown in the two preceding maps. The mean maximum is the average of daily maxima for January; the mean minimum the average of daily minima for July.

Rainfall

Tasmania's position on the northern edge of the 'Roaring Forties' (a westerly air-stream), its exposure to this stream and the mountainous nature of the terrain are the controlling influences on the amount, distribution and reliability of the State's rainfall.





In the west, average annual rainfall ranges from 1 300 to 1 500 mm on the coast to 3 600 mm at Lake Margaret; in the north-east, from 550 mm on the coast to 1 300 mm on the highlands; while rainfall in the north-west ranges from 900 mm near the coast to 1 750 mm in the higher inland areas.

Extreme three to five-day rainfalls occur most often on the west coast in late June when the westerlies are increasing in strength and persistence and the sea temperature is well above the land temperature. In the north, short periods of extreme precipitation occur when wind flow is sustained for up to two days from the north-east, usually in mid to late autumn. The high moisture content of such streams from over the relatively warm waters of the Tasman Sea results in heavier, if less prolonged, rainfall than is produced in the westerly streams.

There is a strong gradation in rainfall from west to east, because of topography, with a distinct rain shadow east of the Central Plateau. Parts of the Midlands average less than 500 mm per year. Totals in the east and south-east are higher (up to 1 000 mm on exposed slopes).

Rainfall is least reliable in the east, south east, Midlands and Derwent Valley. These areas are driest when westerlies are relatively absent or at their strongest—in late summer and late winter, respectively. Highest rainfall in these areas tends to occur in autumn and spring, under the influence of small cyclonic depressions off the east coast.

Effective rainfall is the amount necessary to compensate for evaporation, begin germination and maintain plant growth above wilting point. Average rainfall is sufficient for this purpose from May to September. From October to January the chance of receiving effective rainfall decreases, except in the west and north-west, where the probability is usually better than 50 per cent. In the Midlands, the Derwent Valley, the south-east and east, and in the northern inland, the chance of receiving at least effective rainfall during the summer months is very small.

The average annual rainfall distribution over Tasmania is shown on an accompanying map.

Snow and Hail

Snow and hail can be experienced over the highlands at any time of the year. Heaviest snowfalls occur, as a rule, in late winter and spring, and less frequently in June and July. Extensive snow below 150 metres occurs, on the average, less than once every two years, associated with an unusually vigorous outbreak of cold air from Antarctic regions. There is no permanent snowline, but patches of snow often remain on the highest peaks until December.

Hail is most likely in spring, though possible in any month. Hail storms are a big risk to fruit crops in the Huon Valley and on the Tasman Peninsula, and sometimes cause extensive damage.

Thunderstorms

These are most common in the north and north-west of the State and are associated with the lifting of warm moist air by a cold front. Thunderstorms occur mainly in the summer months. Hobart and Launceston average five to seven storms per year, and the north and north-west, 10 to 15. The Central Plateau and north-eastern highlands report, on average, about five storms per year, while the Midlands, as gauged by Oatlands, has less than three.

Floods

In Tasmania the river system most affected by flooding is the South Esk. The Esk catchment includes most of the north-eastern highlands, where annual rainfall averages about 1 300 mm, and part of the Western Tiers where run-off can be rapid. As many rivers in the South Esk system flow through flat country, flooding can be widespread and disruptive.

Flooding of the Derwent River system can be extensive but is less frequent than in the South Esk. The most severe flood on record in the Derwent occurred in April 1960 with the peak discharge flow recorded as 3 400 cumecs (cubic metres per second) at Macquarie Plains. However, it is most unlikely that flooding of this severity will again occur on the Derwent due to the completion of four dams across the River since 1960 by the Hydro-Electric Commission.

Flooding of rivers in the west and south of the State can be of greater frequency than in the Derwent and Esk systems but because of mountainous terrain and lack of population these pass mostly unnoticed. Similarly, the short, fast-flowing rivers of the east coast flood and fall rapidly, but can cause damage and disruption of road systems.

On two occasions in 1974 torrential rain caused severe flooding in the north-east of Tasmania. There was widespread damage to property, serious damage to road systems and high stock losses in the floods which occurred less than two months apart.

In the north and north-west of Tasmania many rivers have their catchments along the northern edge of the Central Plateau and can flood quickly.

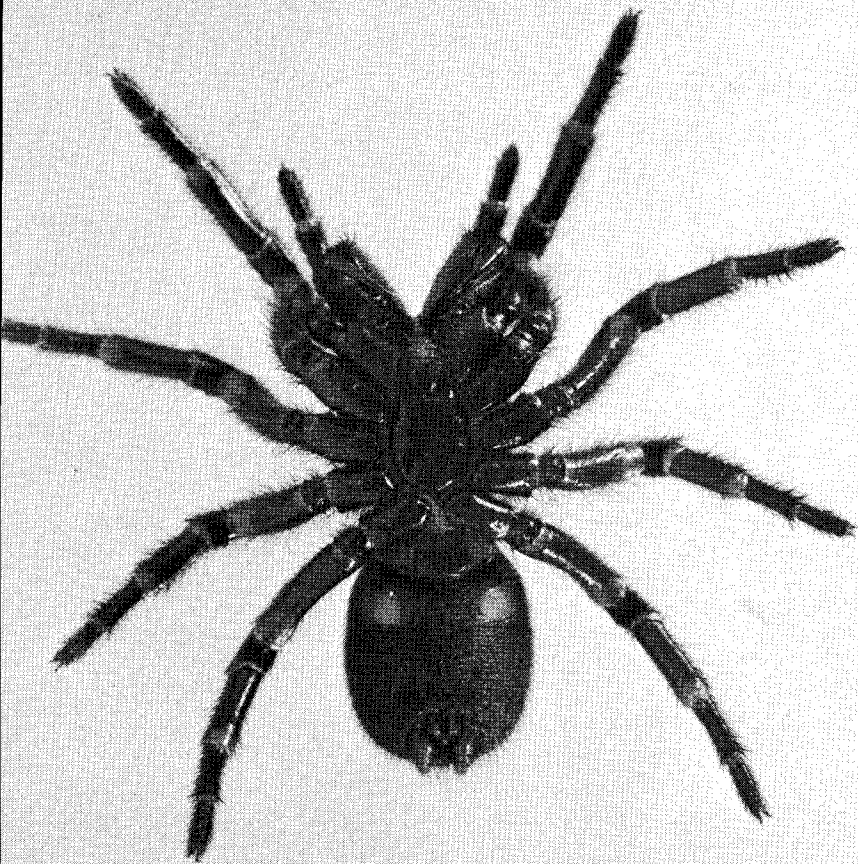
Humidity

The mean relative humidity at both 9.00 a.m. and 3.00 p.m. exceeds 50 per cent at all stations in all months of the year. Relative humidity is generally higher in the morning than in the afternoon, and higher in coastal regions than inland. Days of high temperature combined with uncomfortably high humidity are rare. In the east and south-east, warm dry winds from a west or north-west direction may occasionally have a relative humidity as low as 10 per cent.

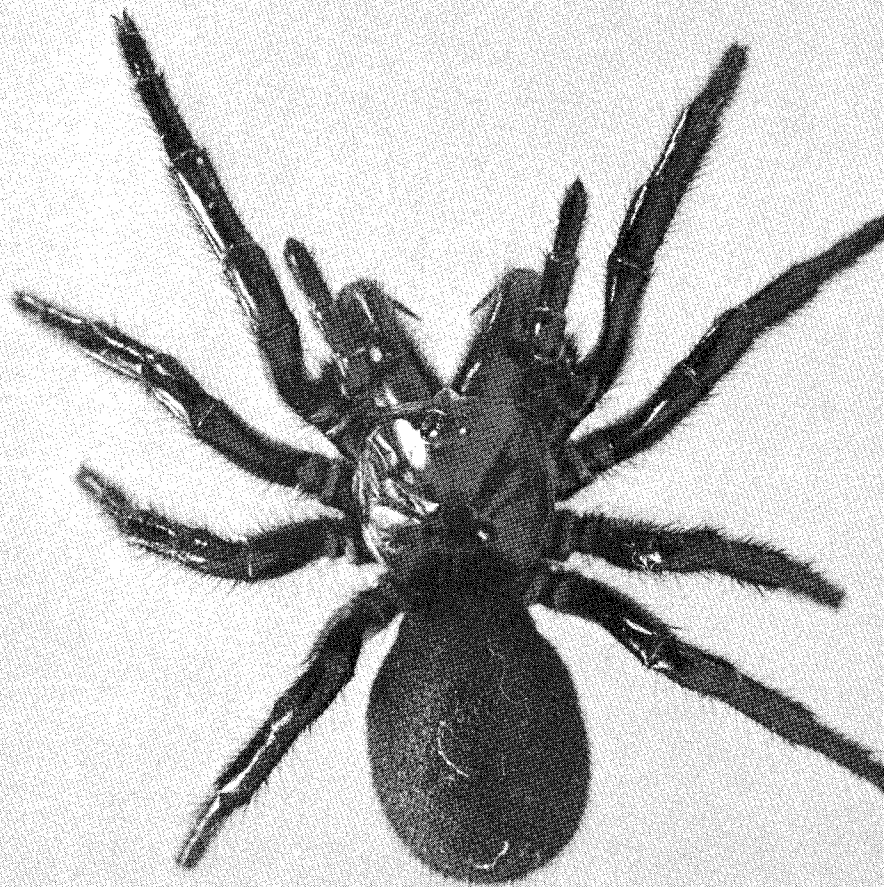
Droughts and Bushfires

Although Tasmania has the highest average rainfall of any state in Australia drought conditions are not unknown. Unlike the remainder of Australia droughts in this State tend to be highly localised and of reasonably short duration. The most severe effects are usually felt over a period of only a few months, but serious rainfall deficiencies can extend over a period of two or three years. Prior to 1972 the most severe long term droughts occurred during the periods 1888-1889, 1897-1898, 1918-1920, 1933-1934, 1945-1946, 1949-1952 and 1967-1969. During the 12 month period ended January 1973 record low rainfall was recorded in the Midlands, East Coast and Northern rainfall districts. All other rainfall districts experienced below normal rainfall during 1972. Some relief from the drought conditions was given by reasonable rainfalls during February 1973.

Serious bushfires occurred in 1898, 1915, 1946, 1951 and 1967. The bushfires of 7 February 1967 were the most severe in the State's history causing 62 deaths and damage to property estimated to be in excess of \$25m.



Ventral view of female
Atrax venenatus, Funnel-web spider

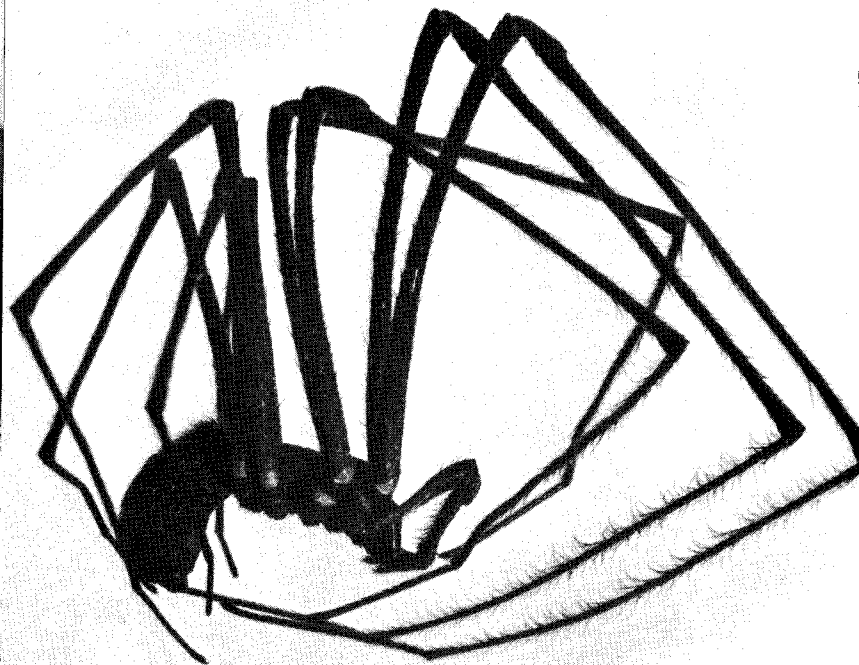


Dorsal view of female
[R. J. Verrall]

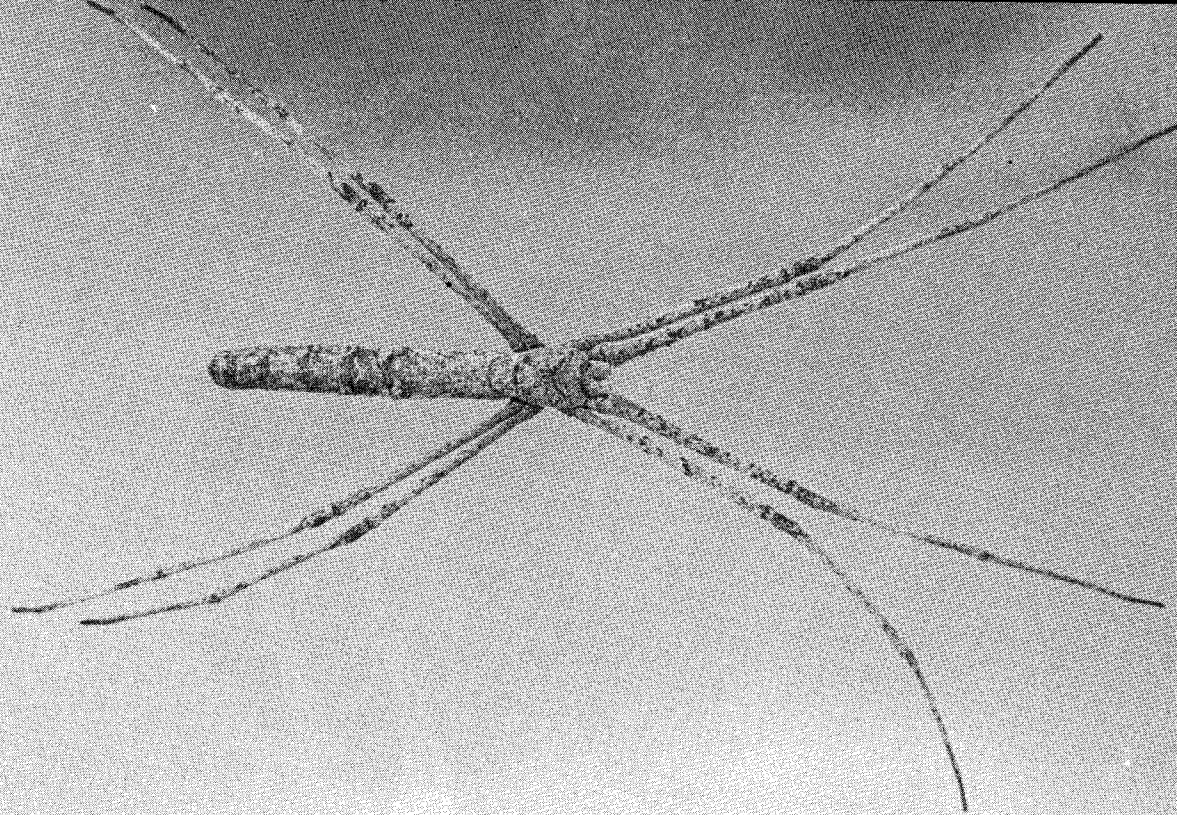


Atrax venenatus, Funnel-web spider, head region of female

[R. J. Verrall]



Hickmania troglodytes, Tasmanian Cave spider, lateral view of male
[R. J. Verrall]



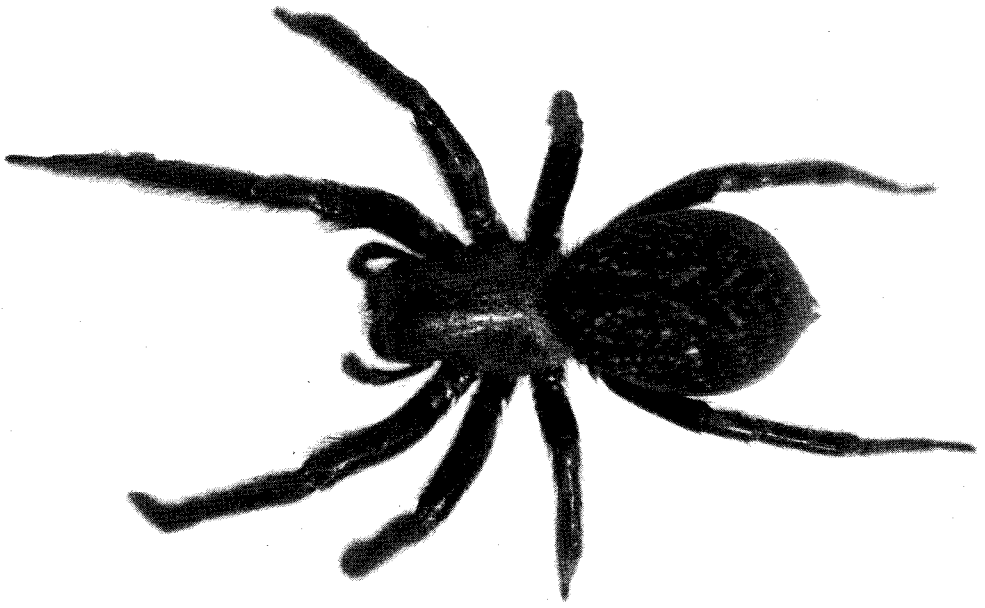
Dinopis subrufa, Net-casting or Ogre-faced spider, dorsal view of female

[R. J. Verrall]

Dinopis subrufa, Net-casting or Ogre-faced spider, head region of female

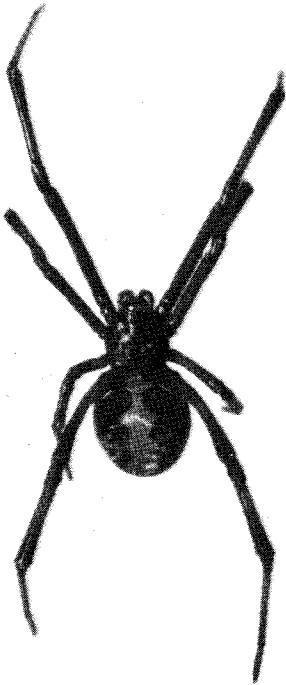
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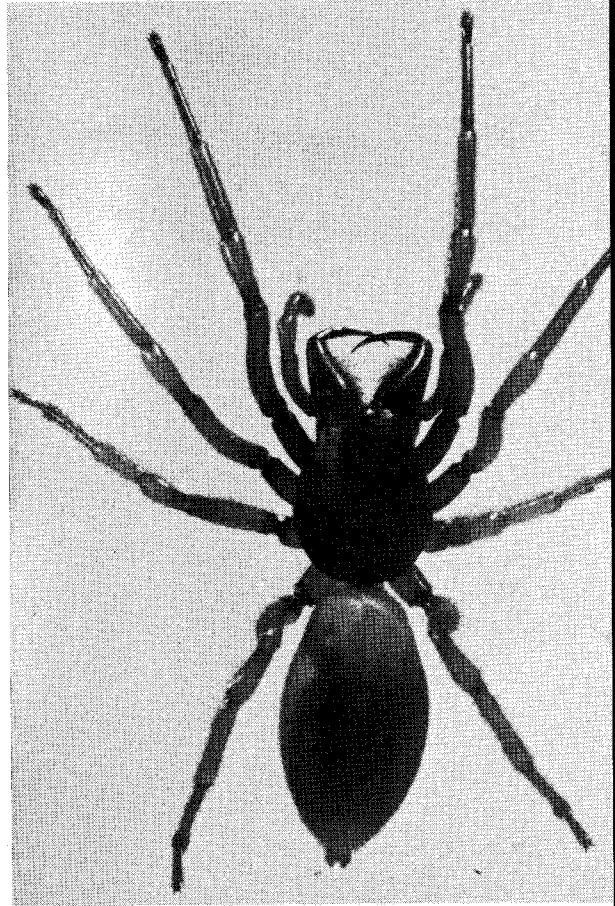


Ixauticus robustus, Black House spider, dorsal view of female

[R. J. Verrall]

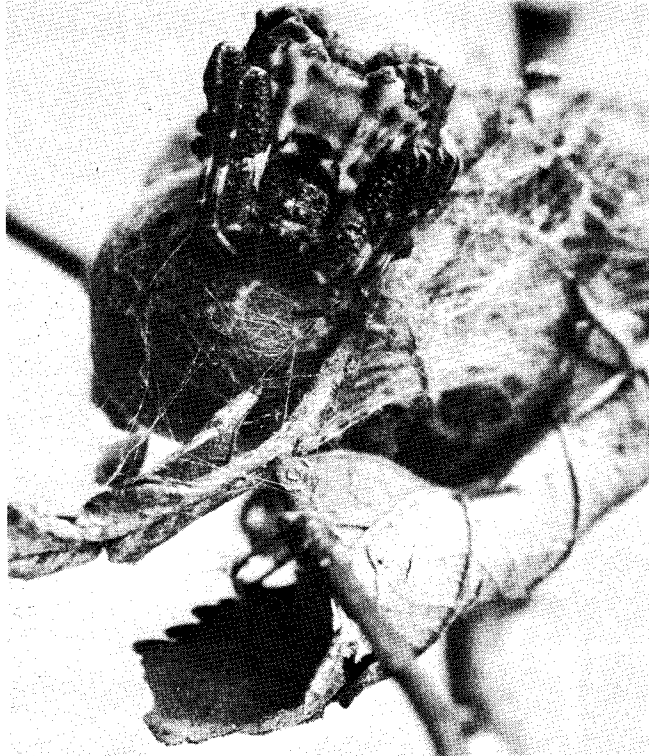


Latrodectus hasselti, Red-back spider, dorsal view of female



Dysdera crocata, European Garden Spider, dorsal view of female

[R. J. Verrall]

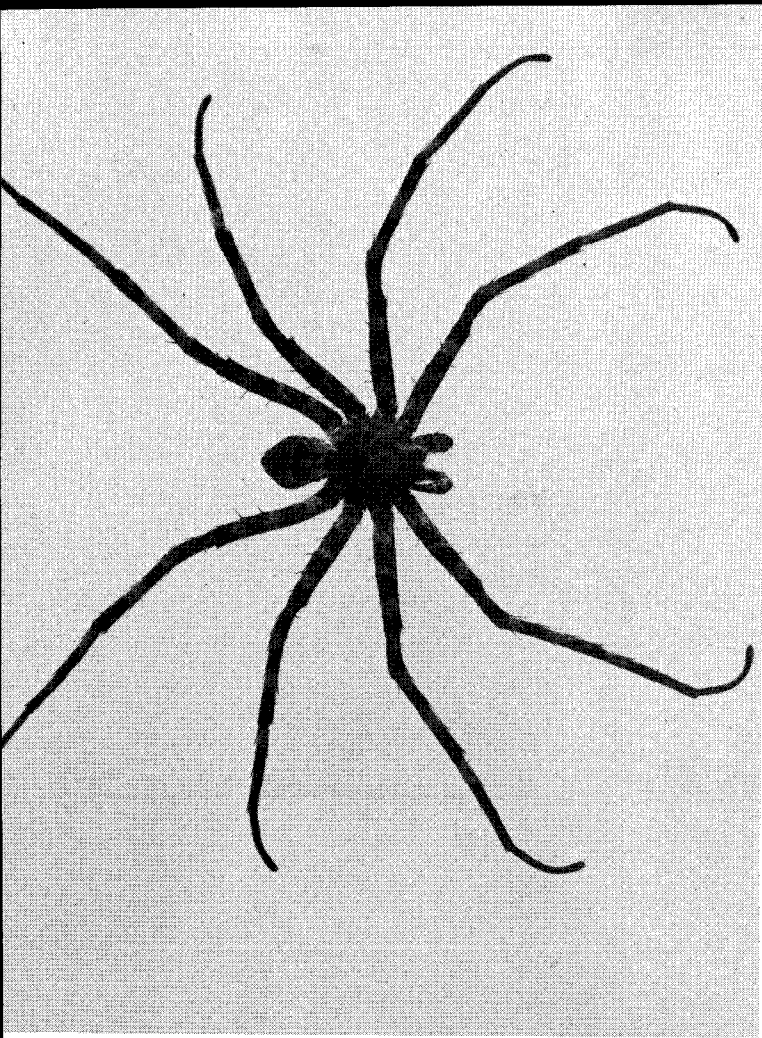


Celaenia kinbergi, Orchard or Bird-dropping spider, female
with egg sacs [R. J. Verrall]



Lycosa tasmanica, Tasmanian Wolf spider, anterior view of female

[R. J. Verrall]



Dolomedes australianus, Water spider, dorsal view of female



Olios diana, Shield spider, ventral view of female

[R. J. Verrall]

Evaporation

Evaporation depends mainly on wind strength, the moisture deficit of the airstream and on sunshine. The World Meteorological Organisation has asked for standardisation of measurement of evaporation by use of the Class 'A' pan (a galvanised pan, 1.22 metres in diameter and 25.4 centimetres deep) which gives higher figures for evaporation than those obtained from the containers previously used in Australia (Class 'A' pan figures should be multiplied by a factor of about 0.80 to obtain the average potential evapo-transpiration likely for Tasmanian crops). The last map gives details for mean average evaporation.

At Launceston Airport the annual evaporation is just under 1 500 mm due largely to the prevalence of winds coming from the Western Tiers, which become warmer and drier in their descent to the lower Midlands and Tamar areas, thus increasing evaporation. Monthly evaporation at Launceston Airport has ranged as high as 270 mm in summer but drops to between 25 and 40 mm in winter. This area of high evaporation extends southward to the lower Derwent and Huon areas. The lowest evaporation rate occurs in the Central Plateau, West Coast Ranges and south-west areas where annual evaporation may fall to less than 750 mm. This is due to the high moisture content of the prevailing westerlies and the high average cloud cover. In these areas the monthly evaporation rate may range from about 125 mm in January to only 12 mm in June and July.

Another area of lower evaporation (below 1 000 mm a year) is located in the North-East Highlands.

Sunshine

The average number of hours of sunshine a year ranges from about 2 500 hours in the northern Midlands to less than 1 750 hours on the west coast and western highlands, this area having the least amount of sunshine in Australia. Hobart averages 2 100 hours per year and Launceston around 2 400.

In January, daily averages of sunshine range from nine hours per day between the Midlands and Launceston to six hours per day on the west and south coasts. In mid-winter, average daily sunshine is down to a maximum of three hours on the east coast and to considerably less on the west coast and highlands.

The Climate of Hobart

Temperatures: Mean maximum temperature exceeds 21°C in January and February. On average there are two or three days per year with maximum temperatures greater than 32°C. Only once, in February 1968, have three successive days over 32°C been recorded in Hobart. Minimum temperatures below -1°C are rare.

Rainfall: There is a strong gradient of rainfall, immediately west of Hobart suburbs, caused by the bulk of Mt Wellington. On the south-eastern slopes of the mountain the annual rainfall reaches 1 400 mm (at The Springs and The Gap) while at Fern Tree the annual average is 1 140 mm. The rainfall decreases to about 600 mm in the city area, the annual average being 634 mm at the Regional Office of the Bureau of Meteorology. Some eastern shore suburbs receive as little as 500 mm of rain per annum.

Monthly totals are fairly uniform. The wettest 12 months on record at the Bureau's Hobart Office yielded 1 100 mm (to December 1916) and the driest, 320 mm (to November 1943).

Relative Humidity: Highest humidity is at the time of lowest temperature, in the early morning during winter. As temperatures rise to 3.00 p.m., humidity decreases by 15-20 per cent. The seasonal variation is not great, although the

average humidity during the winter months is 70 to 75 per cent and during the summer months 58 per cent. Periods of high humidity combined with high temperatures are rare.

Fog: Fogs occur in the city about four times per year, in the cooler months, but are more frequent over and near the Derwent River, down which they are often carried on a light north-west wind. Fog frequency is far less than either that of Launceston or Melbourne.

Wind: The main wind direction is north-west, induced by the orientation of the Derwent Valley. Next in importance is the sea-breeze (from south or south-east) during summer months.

The strongest wind gust experienced in Hobart was 149 km/h recorded during a storm in September 1965.

Snow and Hail: Snow below 300 metres occurs, on the average, less than once per year. Falls lying in the centre of the city, almost at sea level, have occasionally been recorded, the last being in September 1970. Snow generally lies on Mt Wellington during winter and early spring months, but it is rare between November and March. Hail occurs about four times a year, mainly between September and November.

Frost: The average annual frequency of days of frost is 29, mostly from June to August. None has been recorded in January. Cold air drainage is found in the hilly suburbs and frosts are common on the valley floors.

Sunshine and Cloud: No marked seasonal variation of cloud amount occurs but a strong dependence on time of day is evident. During April to September cloud cover is greater in the afternoon and from October to March it is greater in the morning.

A clear-cut seasonal variation in monthly average hours of sunshine also occurs with amounts varying from 231 hours in January to 111 hours in June.

Climatic Data: The next table gives the main climatic data for Hobart during the year 1976 on a monthly basis:

Hobart Weather in 1976

Month	Shade temperature				Mean daily hours of sunshine	Rainfall	
	Mean maxima	Mean minima	Extremes			1976	Long-term average
			Maximum	Minimum	1976			Long-term average
	°C	°C	°C	°C	hours	mm	mm
January ..	22.5	12.8	40.8	7.7	8.0	75	49
February ..	21.5	13.2	28.3	8.2	7.1	6	41
March ..	19.7	11.8	27.0	7.0	5.4	47	47
April ..	18.5	10.0	27.4	3.7	5.8	18	55
May ..	15.3	7.0	21.1	2.4	4.8	28	49
June ..	12.3	5.8	17.1	1.5	3.0	41	59
July ..	12.2	3.9	17.2	-0.3	5.1	30	54
August ..	11.1	4.6	17.3	1.0	4.4	148	51
September ..	13.8	6.3	22.8	2.7	4.3	46	52
October ..	13.9	7.1	19.2	4.2	4.1	69	64
November ..	16.7	9.8	31.1	6.2	4.4	85	56
December ..	19.9	10.9	34.2	4.7	6.9	70	57
Total for year	..	..	..	..	..	663	634

The Climate of Launceston

Being over 50 km from the coast, Launceston exhibits a slight continental effect—greater seasonal and daily variations of temperature and lower rainfall as compared with stations on the coast.

Temperature: Average maximum temperature exceeds 24°C in January and February, 21°C in December and March, and 13°C in June and July. Average minimum is about 11°C in summer, falling below 4°C in winter. Freezing temperatures are common during winter mornings, the lowest recorded being -6°C. Up to 50 frost days are to be expected in a year, mostly from May to August. Light frosts may occur in summer.

Rainfall: The annual average is 719 mm. The wettest month is July (83 mm) while February and March, the driest months, each receive less than half this amount. The wettest month on record is August 1936 (254 mm). Annual totals range from 467 mm (1908) to 1 057 mm (1946). Some severe thunderstorms are experienced. Snow does not settle in Launceston, but falls occur on surrounding hills.

Relative Humidity: Seasonal and daily variations are similar to those for Hobart but the daily readings are 5 to 10 per cent higher.

Fog: Occasions of high humidity, associated with moist north-east airstreams, are relatively frequent. Fog occurrence averages more than 30 days a year, mostly between May and August.

Winds: The NW-SE orientation of the Tamar Valley has a marked effect on surface winds, which conform mainly to these directions. The north-west wind is often reinforced in the afternoon by a sea-breeze from much the same direction. Strong winds are most common during the colder half of the year and severe squalls can occur in association with thunderstorms.

Rainfall Statistics

Meteorological Districts

Tasmania is divided into nine meteorological districts (not to be confused with statistical divisions) with fairly well-defined land use patterns appropriate to each. The following table shows rainfall totals of each district for the past 10 years:

Rainfall of Tasmania in Districts
(Millimetres)

Period	Northern	King Island	Central Plateau	Midlands
	Crops, dairying and mixed farming		Grazing (mainly sheep)	
1967	657	754	768	353
1968	1 120	1 069	1 254	467
1969	972	924	1 111	598
1970	1 074	957	1 373	721
1971	1 218	1 184	1 160	645
1972	636	746	877	351
1973	1 154	1 031	1 137	611
1974	1 192	969	1 041	672
1975	1 318	1 265	1 299	715
1976	839	1 095	905	519
District average (a) ..	1 008	950	987	556

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Rainfall of Tasmania in Districts—continued
(Millimetres)

Period	Derwent Valley	South East	East Coast	West Coast	Flinders Island
	Fruit growing, grazing, forestry		Dairy farming	Mining	Grazing
1967	512	641	573	1 838	630
1968	738	725	560	3 168	673
1969	735	881	1 024	2 423	814
1970	826	989	1 228	2 533	1 023
1971	891	945	1 021	2 460	950
1972	610	568	497	2 122	583
1973	775	786	779	2 605	871
1974	734	868	1 071	2 260	906
1975	931	1 036	949	2 814	717
1976	618	888	831	2 306	699
District average (a)	683	759	831	2 334	745

(a) Long-term annual average based on 64 years of record.

Rainfall at Selected Stations and Rainfall Index by Districts

The table below shows the annual rainfall for selected stations over the last five years.

Annual Rainfall at Representative Stations
(Millimetres)

Station	1972	1973	1974	1975	1976	Long-term average(a)
Avoca	410	583	735	875	571	566
Beaconsfield	679	1 305	1 271	1 328	833	965
Burnie (APPM)	670	1 260	1 214	1 472	866	1 031
Campbell Town	346	613	599	725	494	549
Cradle Valley	2 426	3 352	2 984	3 504	2 641	2 803
Cressy Research	416	835	825	880	485	659
Deloraine (East)	641	1 386	1 241	1 429	873	1 220
Franklin	776	817	941	1 015	913	817
Hobart (Weather Bureau)	451	605	696	828	663	633
Hobart (Airport)	381	557	655	735	622	576
Kettering	606	777	921	1 033	1 058	893
Launceston (Airport)	409	850	873	820	520	724
Lilydale	641	1 228	1 202	1 138	960	980
Lymington	602	789	840	1 166	n.a.	801
Maydena	1 034	1 308	1 207	1 582	1 106	1 242
New Norfolk	409	547	559	770	516	561
Oatlands	397	609	610	675	543	570
Queenstown	2 205	2 734	2 400	2 782	2 486	2 538
Ringarooma	899	1 487	1 528	1 496	1 148	1 235
Savage River	1 678	2 068	1 886	2 311	1 974	2 031
Smithton	873	1 345	1 223	1 413	1 045	1 110
Springfield South	n.a.	n.a.	n.a.	1 567	n.a.	1 271
St Helens	504	787	1 016	938	856	787
St Marys	536	1 023	1 909	1 372	1 150	1 037
Swansea	364	600	830	627	592	622
Triabunna	422	658	918	819	724	667
Ulverstone	649	1 270	1 214	1 361	771	976

(a) Number of years of record used to calculate the long-term average varies from station to station.

The next table gives details of a rainfall index for meteorological districts by month for 1976. The index shows the actual rainfall for a district expressed as a percentage of 'normal' rainfall (where 'normal' rainfall or the 'district

average' is the mean for the 64-year period 1913-1976, i.e. the long-term average based on 64 years of record—details relating to annual rainfall and annual district average (normal) rainfall are shown in an earlier table.

Rainfall Index by Districts, 1976

(Index showing actual rainfall for each month expressed as a percentage of normal (a) rainfall)

Period	Meteorological district							
	Northern	King Island	Central Plateau	Midlands	Derwent Valley	South-east	East Coast	West Coast
January ..	115	52	88	137	90	201	125	101
February ..	55	52	16	10	11	22	33	35
March ..	122	151	82	144	89	118	116	99
April ..	47	96	73	27	70	67	32	126
May ..	85	125	95	37	66	75	31	127
June ..	73	97	98	73	80	97	96	104
July ..	49	75	60	30	62	80	25	96
August ..	104	121	112	140	136	172	115	104
September ..	65	59	52	59	56	141	112	47
October ..	56	191	101	94	79	106	194	71
November ..	114	196	118	218	140	176	181	42
December ..	170	180	180	139	184	146	147	236
1976 ..	83	115	91	93	90	116	100	98

(a) Normal rainfall is the mean for the 64-year period 1913-1976.

Seasonal Temperatures

The mean temperature for any locality can give a false impression, e.g. a mean temperature of 25°C based on a maximum of 50°C and a minimum of 0°C, all in the one day. A better way of examining a locality's climate is to take the maximum temperature each day and average these readings for each season; similarly, to take the minimum temperature each day and average these readings for each season. These mean maxima and mean minima then give an indication of the daily variation that may be expected. The following table shows the mean maximum and mean minimum temperatures for nine selected stations in summer, autumn, winter and spring.

Temperatures at Selected Stations, 1976 (°C)

Station	Maximum temperatures		Minimum temperatures		Mean temperatures	
	Mean for season (a)	Departure from normal	Mean for season (b)	Departure from normal	Mean for season	Departure from normal
SUMMER (December to February)						
Hobart	21.3	+0.3	12.2	+0.9	16.8	+0.6
Launceston	23.0	-0.9	10.4	-0.8	16.7	-0.9
Cape Bruny	18.4	+0.7	12.0	+1.2	15.2	+1.0
Devonport	20.1	-1.0	11.3	-0.2	15.7	-0.6
Maydena	20.7	-0.3	8.1	+0.1	14.4	+0.4
Oatlands	21.0	-1.1	8.8	+0.9	14.9	+0.1
St Helens	23.3	+1.4	11.7	+0.9	17.5	+1.2
Savage River	18.0	-0.9	9.3	-0.1	13.7	-0.5
Zeehan	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>

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Temperatures at Selected Stations, 1976—continued
(°C)

Station	Maximum temperatures		Minimum temperatures		Mean temperatures	
	Mean for season (a)	Departure from normal	Mean for season (b)	Departure from normal	Mean for season	Departure from normal
AUTUMN (March to May)						
Hobart	17.8	+0.7	9.6	+0.9	13.7	+0.8
Launceston	19.1	+0.1	7.3	..	13.2	-0.1
Cape Bruny	16.0	+0.8	10.2	+0.8	13.1	+0.8
Devonport	17.8	+0.2	8.9	..	13.5	+0.1
Maydena	16.7	+1.0	5.8	+0.6	11.3	+0.8
Oatlands	15.5	-0.3	5.5	+0.5	10.5	+0.1
St Helens	18.4	..	8.2	+0.7	13.3	+0.3
Savage River	<i>n.a.</i>	<i>n.a.</i>	5.4	-2.0	<i>n.a.</i>	<i>n.a.</i>
Zeehan	16.6	+0.8	7.4	+0.4	12.0	+0.6
WINTER (June to August)						
Hobart	11.9	-0.1	4.7	-0.1	13.3	-0.1
Launceston	12.6	-0.3	1.6	-0.8	7.1	-0.6
Cape Bruny	11.0	-0.3	6.2	+0.1	8.6	+0.4
Devonport	12.5	-0.3	3.6	-0.9	8.1	-0.6
Maydena	10.0	-0.2	1.6	+0.1	5.8	-0.1
Oatlands	9.3	-1.0	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
St Helens	13.9	+0.3	2.9	+0.3	8.4	+0.3
Savage River	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Zeehan	11.0	-0.2	8.0	-0.6	7.0	-0.4
SPRING (September to November)						
Hobart	14.8	-1.9	7.7	+0.1	11.3	-0.9
Launceston	16.2	-1.6	5.8	-1.2	11.0	-1.4
Cape Bruny	13.5	-1.3	8.2	+0.4	10.9	-0.5
Devonport	15.3	-1.3	6.7	-0.5	11.0	-0.9
Maydena	14.7	-0.2	4.8	+0.7	9.8	+0.3
Oatlands	13.1	-2.4	4.3	..	8.7	-1.2
St Helens	17.1	-0.4	7.6	+1.0	12.4	+0.3
Savage River	12.8	-0.2	5.6	+0.3	9.2	+0.1
Zeehan	14.7	-0.2	5.2	-0.6	10.0	-0.4

(a) Average of maximum daily temperatures for season.

(b) Average of minimum daily temperatures for season.

ENVIRONMENTAL CONTROL

Department of the Environment

Established in October 1972, the Department of the Environment is headed by a Director of Environmental Control who is responsible to the Minister for the Environment. At the beginning of 1977 the Department had a staff of 29 persons to carry out the task of environment protection. The staff included a number of scientific experts who were responsible for particular aspects of pollution control and assessment—chemists, noise control, research, air and water pollution officers and a waste management officer.

The *Environment Protection Act 1973* gives the Director the general duties of: (i) protecting the State's environment; (ii) ensuring the control or prevention of any act or emission which causes or may lead to pollution; and (iii) co-ordinating

all necessary activities (government or private) to protect, restore or improve Tasmania's environment. In addition to the general duties the Act also conferred the following more specific functions on the Director: (i) consider means and initiate steps for the protection of the environment and for the prevention, control, abatement or mitigation of pollution; (ii) carry out investigations into environmental protection problems; (iii) obtain advice from experts in the field of environmental protection; (iv) review progress made in attaining objectives of the Act and publicise steps taken to protect the environment; (v) advise on pollution standards and methods of sampling and testing for pollutants; and (vi) promote and co-ordinate planning projects for environmental protection.

Coverage of the Act: In the case of inconsistencies the *Environment Protection Act 1973* prevails over the provisions of all other Acts with two exceptions: (i) *Oil Pollution Act 1961*; and (ii) *Public Health Act 1962*. Since provisions of the *Environment Protection Act* would intrude into various sectors of existing legislation, the *Statute Law Revision (Environment Protection) Act 1973* was introduced concurrently. The effect of this statute was to amend the Criminal Code, the *Local Government Act 1962*, the *Mining Act 1929*, the *River Pollution Act 1881*, the *Hydro-Electric Commission Act 1944* and the *Water Act 1957* to conform with the *Environment Protection Act 1973*.

Staff of the Department of the Environment continually visit most areas of Tasmania either monitoring or investigating complaints and pollution problems. Departmental officers have attended interstate seminars and conferences and visited other environment protection authorities for exchange of information. The Department participates in the work of the Australian Environment Council and has staff on a number of the Council's committees. In addition the Department is represented on committees of The National Health and Medical Council, The Australian Transport Advisory Council, Australian Water Resources Council and The Keep Australia Beautiful Council. The Department is also represented on State Government inter-departmental committees which deal with environmental matters. Environmental seminars and lectures have been organised by the Department and special papers written dealing with the environment.

Environment Protection Advisory Council

The 1973 legislation also provided for the creation of the Environment Protection Advisory Council. Under the chairmanship of the Director of Environmental Control the Council has members drawn from government and private sectors and representing a number of diverse interests; e.g. the mining, secondary rural and forestry industries, conservation groups, Hydro-Electric Commission, trade unions, public health, etc. The Council's task is to advise the Minister and make recommendations to the Government on environmental matters. The Council is empowered to appoint committees to investigate specific subjects. Sub-committees appointed are—Noise Sub-committee, Waste Sub-committee, Air Sub-committee and the Water Sub-committee. As a result, regulations covering all the above pollution subjects have been promulgated.

An Intensive Animal Husbandry Committee was set up in August 1975 to deal with pollution problems posed by this industry. At present the intensive animal husbandry industry throughout the State is being investigated to allow recommendations to be made to the Council for the establishment of guidelines to control pollution problems. These guidelines, to be issued to operators and local government, will set out design and operation procedures to overcome such problems in the industry.

Environmental Impact Studies

The State Government has adopted a policy that requires public authorities to undertake environmental impact studies before proceeding with any development which may have a significant effect upon the State's environment. Responsibility for ensuring that such studies are performed rests with the decision-making authority. Co-ordination and evaluation of environmental impact studies are performed by the Director of Environmental Control.

Scope of an environmental impact study includes:

- (i) A statement of the major objective of the proposed project.
- (ii) An analysis of the technological likelihood of achieving the objective.
- (iii) A statement of alternative practical plans for achieving the objective.
- (iv) An outline of existing characteristics of the environment prior to implementation of the development project.
- (v) Separate reports on alternative practical engineering plans for achieving the goal.
- (vi) An assessment of the probable effect of the project upon the environment.

Such a study is to be used by the proposing body in determining environmental safeguards. For the Director of Environmental Control a study will provide a basis for review of the safeguards and for making recommendations for further protective measures.

To assist with co-ordination and evaluation of environmental impact studies, the Government has established an Environmental Impact Study Assessment Group, comprising eight specialists in various fields related to the environment. The group gives broad direction to impact studies and provides advice and assessment services to the Director of Environmental Control and developers.

SPIDERS—MYTHS AND REALITIES

(Contributed by Elizabeth Turner, Tasmanian Museum and Art Gallery, Hobart.)

In the ancient days of Greece there lived a beautiful girl named Arachne who boasted to everyone that her weaving and embroidery were more skilled than those of Athene, goddess of wisdom and patroness of the arts. Athene, incensed by this claim, descended from Mount Olympus disguised as an old woman and warned Arachne not to anger the gods. However, Arachne retorted that she would challenge Athene, whereupon the goddess threw off her disguise and set up her loom. After their work was completed Arachne saw that she was beaten and tried to hang herself. However, Athene changed her suspended body into a spider, condemned to spin and weave forever.

Scientists have perpetuated this ancient Greek story of the origin of the spider by naming the animal group to which it belongs the *Arachnida*.

Introduction

Few animals in the world evoke such fascination and horror in man as do spiders. These beautifully constructed animals are often condemned and dispatched accordingly. The usual reasons given for these displays of violence by man are that spiders are hairy and run at disconcerting speed, and the suspicion that they will bite on the slightest provocation. Few people stop to consider their beautiful body patterns, intricate webs and general behaviour, all devised to cope with the law of 'kill or be killed'.

There are two main groups of spiders in Tasmania. The smaller one, called the Orthognatha, contains the mygalomorph spiders, such as the Trapdoor and Funnel-web families. Most other spiders belong to the Labidognatha, the true spiders. One of these, the Tasmanian Cave spider, is placed in a subgroup apart from the others.

External Anatomy

The body of a spider is divided into two main parts, the cephalothorax or prosoma in front and the abdomen or opisthosoma behind this.

The cephalothorax bears the eyes, mouthparts and legs, while the abdomen has the reproductive organs, respiratory openings and the spinning apparatus, or spinnerets.

Most spiders in Tasmania have eight eyes, though some have six. These are placed at the front, or anterior, end of the cephalothorax and vary in size, position and degrees of vision. The number and arrangement of the eyes is a key factor in the identification of species. Below the eyes are the chelicerae, which terminate in the fangs. These are used for digging, defence and the capture of prey. Trapdoor and Funnel-web spiders have fangs which point backwards; such chelicerae are called paraxial. True spiders, however, have fangs which move towards each other like pincers; these chelicerae are termed diaxial.

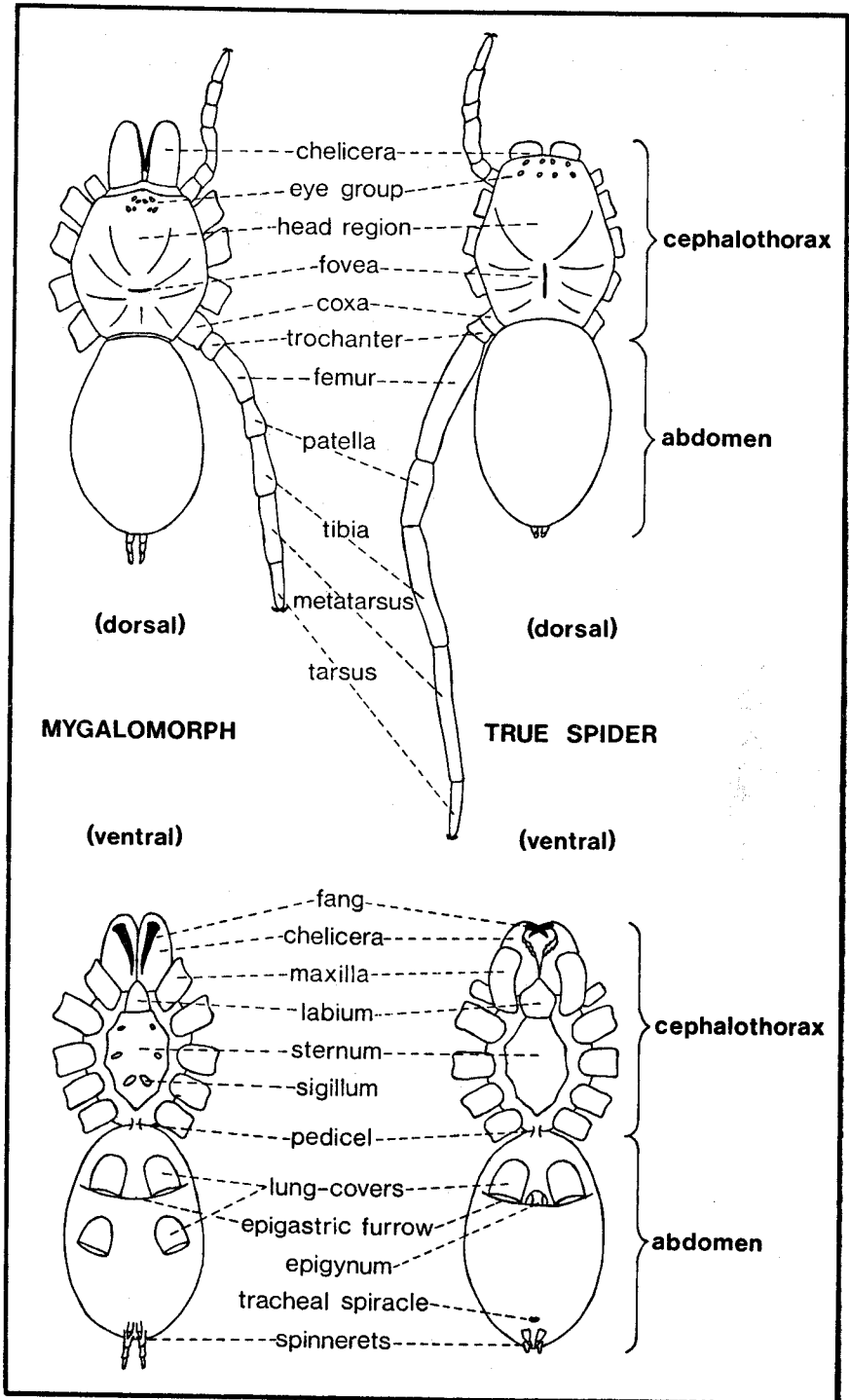
Behind the chelicerae there are the two pedipalps, used for touching and for holding and manipulating food. The female's pedipalps may also produce a male-luring scent during the mating season. In the male the last part of each pedipalp is a genital organ. The construction of these organs is complicated and varies with different species. The sperm fluid is produced by abdominal glands and then transferred to the palpal organ, which is used to insert the fluid into the female's reproductive aperture. The basal parts of the palps form the maxillae; these and the labium (lower lip) make up the basic mouthparts.

The sternum is a shield-shaped plate on the ventral (under) surface of the cephalothorax. It is often hollowed out at the margins to receive the four pairs of legs. Each leg has seven movable parts, the coxa, trochanter, femur, patella, tibia, metatarsus and tarsus. The arrangement of bristles and spines on the legs is often used for the identification of species. Some legs are laterigrade, which means set to run sideways (as in the Huntsman and Crab spiders) while other legs are prograde, set to run forwards. The Jumping spiders can jump several inches as well as run swiftly forward. Regeneration of severed limbs may occur but the new ones never match their predecessors in length.

The abdomen is joined to the cephalothorax by a narrow pedicel, or waist. On the ventral surface of the abdomen there is a groove, called the epigastric furrow. Near this, in the females of true spiders, there is a small plate, the epigynum, which marks the reproductive aperture; it is useful for the identification of species.

Most spiders breathe with organs called book-lungs. There is usually only one pair of these and the lung-covers can be seen above the epigastric furrow. However, mygalomorphs and Cave spiders have two pairs and the four lung-covers are an easily recognisable feature of these animals. Spiders with one pair of lungs usually have other respiratory organs called tracheae; the openings of these are named spiracles and are found above the spinnerets.

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EXTERNAL ANATOMY OF A SPIDER



In most spiders the spinnerets are situated near the posterior end of the abdomen. There are usually three pairs, although only two pairs can easily be seen. Mygalomorphs may have one, two or three pairs of spinnerets. Several distinct kinds of silk are produced by glands and secreted through tiny tubules in the tips of the spinnerets.

Silk and the Spider

Egg-sacs

All spiders lay eggs and spin silk to cover them. The Daddy-long-legs spider uses only a few threads to hold her eggs together, but most spiders make an egg-sac to hold their eggs. These sacs can range from the fluffy silk balls of the Red-back and Orb-weavers, or the attached-to-a-surface construction of the Huntsman, to the complicated purse-shaped egg-sac of the Shield and Football spiders. There may be only one egg-sac made, or ten or more as with the Orchard spider.

Transport

When the young spiders emerge they are still rather under-developed, with little hair or pigmentation. Usually they cluster in a group for a while before dispersing. In some species the young spiders wander away and settle in the nearest safe place. However, some use their silk for dramatic take-offs, called aerial ballooning. In this case the young spiders climb to a high point and, turning their abdomens upwards, secrete fine threads of silk which are caught by the wind. Then the spiders let go their hold and become airborne, often being carried for great distances.

The majority of spiders produce a drag line of silk and attach it behind them wherever they go. This enables them to retrace their steps or climb back to a safe place. To bridge a gap a spider tilts its abdomen and emits a long thread of silk which blows away and attaches itself to another object, usually higher up. Then the spider secures its own end and runs across the silken line. Coming down is easy—the animal just attaches the thread firmly and drops. Braking is achieved by wrapping a claw of a leg around the thread.

Moulting

Moulting occurs several times during the life of a spider and, as this is an extremely vulnerable time, a safe place is needed. Several species make silken chambers or retreats in which to cast their skins without danger. The male and female organs do not develop fully until after the final moult. True spiders live for only one to two years but mygalomorphs take several years to mature and may live for seven years or more.

The Spider at Home

Home for a spider takes many forms. The best known of these is the classical web of the Orb-weaver. After supporting lines have been anchored to solid objects, the framework of the snare is constructed. This consists of spokes, radiating from a central hub, and joined by a spiral thread. When spinning the latter, the spider gauges the distance between successive loops of the spiral by running one leg along the loop just completed. If she makes a mistake between two spokes, she will usually repeat that mistake in the laps which follow. The first spiral to be laid down is temporary and made of silk which is not sticky. The spider uses this as a pathway on which to walk while she places a second spiral, of softer, sticky silk, which will trap any insects which touch it. As she spins the second spiral she removes the first. Guy lines between the edge of the web and nearby objects keep the snare taut.

Some spiders remake their webs every day while others have more permanent retreats. The leaf-curling spider turns a long, thin leaf back on itself, sews up one side with silk and retains the other as a door, either open or temporarily sewn up, depending on the spider's activities. Several other species use this method for protecting their egg-sacs.

Most of the mygalomorphs and some true spiders, e.g. the Wolf spider, make burrows in the ground and line them with silk. In the case of the Funnel-web, a silken tube is extended outwards from the burrow's entrance. Silk threads, radiating from the mouth of the tube, form trip lines; insects and other spiders are detected and caught when they stumble over these. Wolf spiders, however, rely on vibration, vision and speed; they make extremely fast dashes from the entrance of the burrow to catch unsuspecting prey. Some Trapdoor and Wolf spiders construct beautiful lids for their burrows. These are pads of silk with debris adhering to the top and are so tightly fitting that detection is almost impossible.

The Ogre-faced or Net-casting spider, *Dinopis subruja*, makes a rectangular net of silk to throw over passing prey. The Water spider, however, does not rely on a web to obtain food. Instead she runs lightly over the water surface film to catch insects or dives down to seize aquatic beetles, often staying submerged for some time.

Feeding

The majority of spiders have poison glands and, after capture of the prey, they immobilize it by biting with the fangs and injecting venom. The juices are then sucked out by the spider, which cannot consume solid food. Red-backs wrap their victim in silk and then drain it. Wolf spiders mash the food with their chelicerae before sucking, leaving a pulverized skeleton behind. Usually spiders feed on the captured prey immediately, but some Orb-weavers wrap an insect in a cocoon of silk and keep it for later enjoyment. One such spider was seen to catch four large moths within 15 minutes, wrapping up each one hurriedly before dashing off to the next entangled victim.

Courtship and Mating

The spider's silk may be used for mating purposes. Most male spiders spin a small, dense web onto which they secrete the sperm fluid. From here it is sucked into the palpal organs. As a swift escape after mating is often advisable for a male spider, some crafty methods have been developed to cope with the problem. In some species the male leaps onto the female, swiftly tying her down with silken threads; in others he catches an insect, wraps it with silk and presents it to the female, no doubt hoping to lessen her interest in treating her suitor as a wedding breakfast.

A female must be able to recognize a male of her own species. This may involve odour, markings or behaviour. A Wolf spider may announce his presence and intentions by waving his front legs to and fro in a semaphore fashion, often showing reddish-tan patches on the undersides of his legs. If this performance is not successful he may end up as a pre-nuptial dinner, and if successful, a post-nuptial one. However, the practice of female killing male is not universal; many male spiders die of exhaustion or malnutrition.

Often male spiders are smaller than their females. Some have bright markings to gain the notice of the prospective bride. The best examples of this are the beautifully marked Jumping spiders, which display their colours to the best advan-

tage by performing intricate and athletic courting dances. The excited, love-struck male cavorts and sways and is sometimes joined by the female in a touching 'pas de deux'. Unhappily, the chances are that he will not survive the union.

Not all spiders, however, have cannibalistic tendencies. A pair of Huntsmen were once observed to mate, the female to produce an egg-sac and the young spiders to emerge, all tended for several months by the happily-suited parents. A pair of Jumping spiders have also been kept together for some time with no ill consequences, even during mating.

Mating itself may take characteristic forms in different species. The male's approach is generally governed by the need for safety and a swift retreat. The female is often reduced to a state of trance by the extremely fast 'dabbling' of his palps. Their light, rapid and rhythmic touches try to induce in her a state of subdued submission or quivering acceptancy. On one occasion two mating Funnel-webs were observed for some time, during which the male made repeated forward dashes to touch the female rhythmically with his palps until she seemed less aggressive. Often, however, just as success seemed certain, she suddenly reared, he darted back, and the performance started all over again. Finally she tilted sideways. Then, holding her legs away from himself with his own, trying to keep the 16 legs untangled and to stay well clear of her fangs, he inserted the sperm fluid. Sadly he did not escape.

Two male Orb-weavers were noticed, under the eaves of a house one evening, taking up position on either side of the web of a large female. Both displayed no interest in another female two metres away, in her own web. The two males tweaked the guy lines of the first web until the object of their desire made her choice. The rejected, but possibly more fortunate, suitor remained at the edge of the web, motionless, while the chosen one crept to the edge of the snare itself. Frantically waving his palps and front legs, he cautiously approached the female. After a while she ran out towards him but his courage failed and he raced for cover. This went on for some time until, during a hasty retreat, he lost his grip and fell to the ground. By the time he had hauled himself back to the edge of the web she was upside-down in the middle, and so the performance started all over again. During this time the other male made no advances, even when his rival fell from the arena. Whether the latter survived the night was not known.

Survival

Enemies

Many hundreds of eggs may be laid by a spider each year. The number varies with the species, the Daddy-long-legs laying a few dozen and the Orchard spider up to 2000! The expected population explosion is counteracted by natural food chains. Most young spiders fall victim to bigger animals. The survivors, in turn, eat smaller animals and often each other.

Birds are the dominant predators of spiders, followed by lizards, frogs, bandicoots and the domestic cat. Centipedes and scorpions claim their share and so do some wasps, mainly the sand-wasps and mason-wasps. These insects sting and paralyse spiders, particularly small Orb-weavers, and stow them away in nursery cells. The wasp lays an egg on the abdomen of the spider and the hatched larva feeds on the immobilized victim until it is ready to pupate. Other wasps, flies and lacewings parasitize spiders' eggs by laying their own eggs in the spiders' egg-sacs. The larvae eat the host's eggs and, after pupating within the egg-sac, finally emerge as adults. A spider-wasp has been seen to haul an adult Shield spider up a vertical concrete wall, and another to drag a large Wolf spider, twice its size, across a road.

Spiders may be hosts to parasitic worms which eventually kill them. They are also prone to disease and fungal infection.

Camouflage

To survive some of the aforementioned hazards, most spiders have evolved shapes and colour patterns which disguise them. One of the best examples of this is the Ogre-faced or Net-casting spider, which so resembles a grey twig that it is almost indiscernible. Some Crab spiders merge completely against the tree bark on which they live. *Dolophones*, an Orb-weaver, wraps its abdomen around a twig so that it appears to be a knot of wood. Flower and Crab spiders may look like leaves or flowers while the Orchard spider is so similar to a bird-dropping that it is also known by that name.

Conspicuous colour may or may not mean a poisonous spider. The Red-back has a bright red stripe on the dorsal and ventral surfaces of the abdomen—a clear warning! However, the Red and Black spider, *Nicodamus bicolor*, with a blue-black abdomen and red legs and cephalothorax, is not known to be harmful so its colouring is probably a bluff. This may also be the case with some brightly-coloured Orb-weavers and Crab spiders. Most black spiders found in Tasmania are venomous to some extent.

Behaviour

Behaviour is an important part of defence. Many people will have seen the Daddy-long-legs rapidly vibrate itself when disturbed. This is thought to upset a bird's focus. When threatened some spiders feign death, drawing their legs tightly over the body, while others defend themselves or their egg-sacs with aggressive stances. The Wolf and Football spiders wave the front pair of legs, showing coloured markings underneath. However, no displays of defence are as impressive as that of the Funnel-web. The males, in particular, become aggressive at the slightest provocation, rearing back on the hind legs and dancing about while the front legs are held high in the air; they may even fall over backwards in their excitement. Droplets of venom run down to the tips of the fangs, to be clearly seen by the observer. The spider will strike repeatedly at whatever disturbs it.

Bites and Treatment

Almost all spiders can bite! However, in Tasmania, only a few are known to harm man. The most dangerous of these is the Red-back spider, *Latrodectus hasselti*. There are several species of Funnel-web and Trapdoor spiders in Tasmania, but little is known about the venom of most of them. The Red-back and the common Tasmanian Funnel-web, *Atrax venenatus*, are covered in more detail below.

The other potentially harmful species are the Black House spider, *Ixeuticus robustus*; the White-tailed House spider, *Lampona cylindrata*; the European Garden spider, *Dysdera crocata*; and the common Trapdoor, *Arbanitis tasmanica*. The Football spider, *Olios patellatus*, and Shield spider, *Olios diana*, are both capable of producing a painful, swollen wound. This can ulcerate, but it is not certain whether the cause is the venom or bacteria. As most spiders eat insects, they can carry bacteria on the fangs. With this in mind, no spider should be handled—even the most harmless-looking!

Whenever a bite occurs, the area bitten should be washed with disinfectant and the patient kept under observation for a few hours. As some people are allergic to invertebrate animal saliva, a reaction may occur. If drowsiness, vomiting, chills or

sweating begin, medical attention should be sought. Whenever possible, the spider responsible should be collected undamaged and taken with the patient to the medical centre for positive identification.

The Red-back Spider

The bite of the female Red-back spider is considered to be more serious than that of the Tasmanian Funnel-web. Although usually defensive, the Red-back may attack if it is threatened. The mark of the bite is very small and its site is more easily located by local inflammation. Profuse sweating, shivering and muscular weakness are the usual symptoms of a serious reaction. A rash often occurs during recovery. No deaths attributed to the Red-back have been recorded in Tasmania, but its bite can be serious and medical attention should be sought immediately. Young children and old or infirm adults are most prone to harmful effects if bitten. An antivenene is available and is effective for up to 80 hours after a bite.

Treatment of Bites: If the bite is on a limb, tie a wide constrictive bandage around a single-boned part (upper arm or thigh) above the wound—between it and the heart. The bandage should be firm but not uncomfortably tight, or it may do more harm than good. It should be released for 5 to 10 seconds every 30 minutes and discarded after four hours. In all cases, bites should be washed thoroughly and the patient kept still. Treatment for initial shock—keeping the patient warm and calm and loosening clothing—may be necessary.

The best protection against bites is caution; do not put bare hands into concealed places unless you know they are safe. If Red-back spiders close to a home are causing concern, their numbers can be decreased by removing likely shelter, such as tins, pieces of wood and rubbish heaps. The best time to search for the spiders is in October or November each year, when nesting begins. During the clean-up, gloves and shoes should be worn for protection. If necessary, spiders can be killed by pouring kerosene or boiling water into their nests.

The Funnel-web Spider

The Funnel-web strikes its victim with a downward action. Symptoms of the bite are severe pain which may be followed by profuse sweating and consequent dehydration. No deaths have been known to occur from a Tasmanian Funnel-web bite but, nevertheless, prompt medical attention is advisable.

Treatment of Bites: Treatment for the bite is the same as for that of the Red-back; however, an antivenene for Funnel-web venom has not yet been produced.

To decrease Funnel-web numbers close to a home, remove likely shelter, such as rocks, logs and undergrowth, especially near creeks and drains. The best time to do this is in October or November, before the males begin to wander. Again protective clothing should be worn during a clean-up.

Some Tasmanian Spiders

In the House

The main place for confrontation between human and spider is the house. The spiders seem intent on enveloping everything in long, clinging threads, while the householder persists in knocking them down with brooms or sucking them up with the vacuum cleaner. An unexpected meeting with a spider usually results in a surge of adrenalin which enables one to achieve otherwise difficult feats, such as leaping out of bed in a single bound!

The Black House spider: Within domestic walls, one species reigns supreme—the Black House spider, *Ixeuticus robustus*. A very successful adaptor to man's environment, *Ixeuticus* can be found in the folds of curtains, behind beds, inside furniture and especially in the corners of windows and doors in sheds, garages and outside toilets. The funnel-shaped entrance to its web often causes it to be mistaken for a Funnel-web spider. The web is usually dirty and untidy but it is a waste of time to remove it unless the maker is removed as well. The spider is black except for tiny flecks of white on the abdomen; the body length of the female can reach 18 mm. Flies make up the main diet, supplemented by the occasional moth, beetle or anything else which blunders into the web. Carcasses are generally dropped to the ground, to the wrath of the householder. The bite is usually painful and may produce swelling and a general feeling of being unwell. Some people react strongly, in which case medical attention should be sought.

White-tailed House spider: Another 'biter', usually found lurking on the floor, is the White-tailed House spider, *Lampona cylindrata*, whose bite is similar to that of the Black House spider. It is black with a white tip to the abdomen and is more elongated than most house species. Body length of the female is about 13 mm. Its favourite food is the Black House spider.

The Huntsman spider: Erroneously called the 'Tarantula', the Huntsman, *Delena cancerides*, is probably the most familiar of all the house-living spiders. Its scuttling, sideways dash, hairy body and large size combine to make its presence usually unwelcome. Though naturally living under the bark of trees, it also occurs in sheds, garages and houses, especially in narrow spaces, such as behind pictures on the wall. The female makes an egg-sac, containing up to 200 eggs, and guards both it and the young spiders when they emerge. The young Huntsmen may pass through several moults before they eventually leave the mother. Several dozen Huntsmen have been seen living together under a piece of bark two feet square. Flies, moths and beetles are the main sources of food. The spider will bite if annoyed but usually a small, sore spot is the only reaction. However, there is still the risk of bacterial infection.

The Daddy-long-legs spider: The curse of cupboards, pantries and corners of ceilings is the Daddy-long-legs, *Pholcus phalangioides*. (The name 'Daddy-long-legs' is also used for some harvestmen and crane flies.) Spinning haphazard webs in awkward places it hangs, often upside down, waiting for unsuspecting prey to become entangled. When a victim is snared the spider moves rapidly to bind it round and round, using the hind pair of legs to guide the issuing silk and wrap it around the victim's body. The resulting 'mummy' is then consumed at leisure. The bite of the Daddy-long-legs is felt merely as a pin-prick, which rarely has any after-effects.

Garden Spiders

As with the house, the domestic garden has been adopted by scores of spider species, many of which have benefitted greatly from man's interference in their natural environment. Orb-weavers under the eaves feast on moths and other insects attracted to electric lights. *Ixeuticus* makes use of fences and brick walls while the Orchard spider favours introduced fruit trees. *Tetragnatha valida*, an Orb-weaver whose web is usually suspended over water, has been found living on a clothesline.

There are too many garden-dwelling spiders for them all to be mentioned here, so only a few examples will be given.

The Red-back spider: It comes as a shock to most Tasmanians to find that the Red-back, *Latrodectus hasselti*, is very common in many parts of the State. In

Hobart it is particularly prevalent in the eastern and northern suburbs as it prefers dry and sunny, lightly timbered areas. In the garden it nests under stones, wood, rubbish-heaps, tins and in the earth around house foundations. Therefore, keeping a garden clear of these nesting sites will deter the spider. The female is satiny-black with a red stripe down the middle of the pea-sized abdomen, on both the dorsal and ventral surfaces. The bite of a female is serious and has been dealt with earlier in this article. The males are small and harmless.

Shield and Football spiders: These close relatives of the Huntsman sometimes enter houses, but are usually found in the garden. Both give painful bites which must be well disinfected, as ulceration often occurs. Sometimes medical attention is needed. The Shield spider, *Olios diana*, is the size of a small Huntsman and is orange-tan in colour with tiny white spots over the eyes and on the insides of the legs. On the ventral surface of the abdomen there is a black and white 'shield' marking. The Football spider, *Olios patellatus*, is so named because of the football-shaped abdomen and stripes on the inside of the legs, giving it the appearance of wearing football socks. The female has black and orange stripes and the male black and silver. The females can be very aggressive when swollen with eggs or guarding young.

Wolf spiders: The two common Wolf spiders, *Lycosa tasmanica* and *Lycosa simsoni*, are often victims of mis-identification and killed unnecessarily. The former is sometimes mistaken for the Funnel-web and the latter for the Trapdoor. The reason for this is that both live in burrows in the ground, with *L. simsoni* building a neat trapdoor to seal off the entrance. However, these Wolf spiders are relatively harmless, although a bite should be washed thoroughly as a precaution against bacteria. In fact, Wolf spiders are beneficial to the garden as they prey on many insect pests. They have keen eyesight and can spot a passing potential meal from some distance. Relying on their swift speed they dash out, seize the victim between their fangs and race back to their burrows. *Lycosa tasmanica* is grey-brown with a star-pattern on the cephalothorax, while *Lycosa simsoni* is sandy-fawn. The body length of the females of both species can exceed 20 mm.

A Wolf spider's greyish-green egg-sac is attached to the spinnerets and carried around by the female. On fine days she can be seen resting at the entrance of her burrow, sunning the egg-sac. At this stage she can be very defensive. After hatching, the young spiders ride on top of the mother for a week or so before dispersing. Any baby thoughtless enough to cover her eyes is swiftly brushed off by her palps.

Wolf spiders prefer dry, sunny areas, but some species are found in rain-forest and alpine habitats.

Orb-weavers: Four species of Orb-weavers are common in gardens, while several others are occasional inhabitants. The Enamelled Orb-weaver, *Araneus bradleyi*, hangs upside down in the middle of her web and displays beautiful red, green, white and yellow glossy patterns on the dorsal surface of her abdomen. *Araneus pustulosus* and *Araneus heroine* both build webs on shrubs and under eaves. Their bodies are noticeably hairy and have a well-marked leaf pattern, or folium, on the dorsal surface of the abdomen. *Araneus brisbanae* is the favourite prey of the mason-wasp. Most *Araneus* species have two yellow markings on the ventral surface of the abdomen. None of the Orb-weavers in Tasmania is known to be harmful to man.

Orchard spider: Perhaps the most unusual-looking spider found in the garden is the Orchard, Death's-head or Bird-dropping spider, *Celaenia kinbergi*. The wrinkled and mottled appearance of the abdomen give this species its apt common

names. The female is almost undetectable as she sits on her brown egg-sacs, usually in a fruit tree or an ornamental *Prunus*. The number of egg-sacs may range from 2 to 13 and each may produce up to 200 young spiders. Very few of those which emerge will survive to maturity. During the day one could presume the mother to be dead as she sits motionless on the egg-sacs. Even poking with a twig will, at the most, produce only a wave of a leg. However, at night she becomes active and hangs by a thread to capture moths fluttering near her. The bite is not known to be harmful.

Two other garden spiders are noteworthy. *Miturga agelenina*, a sac spider, has a body length of 18-20 mm and lives in a white silken nest in shrubs and long grasses. The body is mainly brown with two dark brown stripes, one on each side of the cephalothorax. The bite can be painful and a sore spot may result. This species can be an accurate weather forecaster. One female in a garden was observed each morning for a month and during this time she was never wrong. If the entrance to the web was open the weather would be fine for the day's duration. On sunny days she even built a small 'patio' on which to bask. However, if the web was sealed off, it was almost certain that rain would fall before evening.

The other species is *Dysdera crocata*, the European Garden spider, which has been introduced to Tasmania. It has a light tan abdomen, reddish brown cephalothorax and legs, and large chelicerae. The female's body length is about 14 mm. The bite may have harmful results and if a reaction occurs, medical attention should be sought. The spider lives under stones, in rubbish heaps and in soil, so gloves should always be worn when gardening. Its favourite food seems to be woodlice.

The Bush Spiders

Some Tasmanian spiders are never or rarely found in gardens, and some mainly live in the bush but sometimes stray into gardens on the outskirts of suburbs.

The Funnel-web spider: Tasmania has at least seven 'funnel-web' species, the most common of which is the Tasmanian Funnel-web, *Atrax venenatus*. It is found in most parts of the State and is very common in gullies in Hobart's western and southern suburbs. *Atrax* needs to live in damp areas, so it is found mainly under stones and undergrowth along creek banks and drainage systems. If a garden is near such places and Funnel-web spiders are causing concern, it is probably wise to put on protective clothing and make a search. The best way to discourage their presence is to remove their nesting sites. The female *Atrax* can measure over 25 mm in body length. She rarely strays from her silk-lined burrow, but the more toxic male wanders for some distance during the warmer months in search of a female and sometimes is found inside a house, often on a cold concrete or vinyl-covered floor. The shiny black colour, large size and extremely aggressive behaviour make it easily recognizable. The bite is serious and has been dealt with earlier in this article.

The Trapdoor spider: There are several species of Trapdoors in Tasmania, the most common of which is *Arbanitis tasmanica*, a large, brown, hairy spider. The female has short, thick legs and a slow, ponderous movement. The male is long-legged and has a more streamlined appearance. Once common around Hobart, they seem to be found less frequently now. The bite is probably not as serious as that of the Funnel-web, but the same action should be taken.

The Water spider: A shy, but not uncommon, animal is the water spider, *Dolomedes australianus*, whose fourth pair of legs may reach 75 mm in length. It lives beside creeks and streams, running lightly over the surface film of the water to catch insects and occasionally diving below to capture water beetles and aquatic

larvae. If disturbed while resting on a nearby log or stone, *Dolomedes* will quickly dive into the water to escape—it can stay submerged for nearly half an hour. Body hairs trap bubbles of air which enable the spider to breathe under water. The female carries her egg-sac between her chelicerae. Young spiders, emerging from the egg-sac, live in a nursery web beside the water for a while before dispersing. When guarding them the mother is reported to be aggressive but the effects of a bite do not seem to be harmful.

The Sun spider: Walkers in the coastal areas of eastern and north-eastern Tasmania may have to push their way through large threads of silk stretched between bushes. These are the webs of the Sun spider, *Gasteracantha minax*, an Orb-weaver. Its dark-coloured abdomen bears six spines and has a yellow pattern which often takes the form of an interrupted, five-pointed star. This spider is not harmful.

The Black and Red spider: Because of its colour combination the Black and Red spider, *Nicodamus bicolor*, is often mistaken for the Red-back spider. It is small with a blue-black satiny abdomen and bright red legs and cephalothorax. The females tend to become gregarious during the egg-laying period and six or more may spin their egg-sacs beside each other. *Nicodamus* likes semi-moist areas under stones, logs or inside rolled bark. Its bite is not known to be harmful.

The Bark Dwellers: Various spiders live under the bark of trees. The Huntsman and the Black House spider occur in crevices, as do the Jumping spiders, the White-tailed House spider, the Shield and Football spiders and many others. The best examples of camouflage amongst the bark-dwellers, however, are the Crab spiders of genus *Stephanopis*. The dorsal surfaces of these spiders are covered with raised ridges, wrinkles and coarse tubercles which, together with intricate colour patterns, blend the animals perfectly into the surrounding bark.

The Cave Spider

Perhaps the most scientifically interesting of all Tasmanian spiders is the Cave spider, *Hickmania troglodytes*. It belongs to a very small family in which there are only five species in the world. Tasmania has the only true Cave spiders in Australia. Largest of all our spiders, its front legs can measure nearly 100 mm in length. It lives in caves, adits or any damp cavities large enough in which to spin its web, which may be 120 cm wide. One specimen of *Hickmania* was found recently in the shower-recess in the bathroom of a house at Longley. The bite is not known to be harmful but it should be treated with caution.

Conclusion

Spiders form a valuable link in food chains. They are eaten by a wide variety of other animals and, in turn, will eat most animals smaller than themselves. Very often they will eat each other and this also helps to keep the world's spider population in balance. Man has endangered some species by invading their natural habitat, although others have thrived on man's establishments. However, it is the more specialized spiders which are threatened, such as those adapted to living on native flora, looking like the foliage and preying on the animals attracted to it. As with many native animals, the habitats which suit them are changed as man takes over more of the natural environment.

In future, instead of stamping hurriedly on a spider, pause to think about its importance as a natural controller, its habits and intricate way of life—and let it go on its way unharmed!

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Chapter 3

GOVERNMENT AND ADMINISTRATION

Introduction

Government in Tasmania is exercised at three levels:

- (i) The Federal Government, with authority based on a written constitution, and centred in Canberra.
- (ii) The State, with residual powers, and centred in Hobart.
- (iii) The cities and municipalities, with authority derived from State acts, and operating in 49 sub-divisions of the State.

This chapter deals primarily with the State Government and with Tasmanian representation in the Federal Parliament. The administration of the cities and municipalities is described in Chapter 4, 'Local Government'. A more detailed outline of the Tasmanian system of government is included in the 1976 and earlier editions of the *Year Book*.

TASMANIAN REPRESENTATION IN FEDERAL PARLIAMENT

The Federal Parliament consists of the Queen, a Senate and a House of Representatives. The Queen is represented in Australia by the Governor-General.

The House of Representatives

Representation in the House of Representatives is based upon the general principle of having, as nearly as practicable, electorates with equal numbers of electors. This is only possible if regular electoral redistributions are implemented. The following table indicates the state of the House of Representatives at the elections immediately following electoral redistribution and/or passage of legislation creating additional electorates:

Membership: House of Representatives

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T. (a)	A.C.T. (b)	Total
1948	28	20	10	6	5	5	1	..	75
1949 (c) ..	47	33	18	10	8	5	1	1	123
1955 (c) ..	46	33	18	11	9	5	1	1	124
1969 (c) ..	45	34	18	12	9	5	1	1	125
1974	45	34	18	12	10	5	1	2	127

(a) Representative in House since 1922; full voting rights granted 1969.

(b) Representative in House since 1949; full voting rights granted 1966.

(c) Election following an electoral redistribution.

Elections for the House of Representatives

Australia is currently divided into 127 single-member electorates and electors are required to cast a vote for every candidate standing within the electorate in order of their preference. Election of members is carried out in accordance with the principles of the absolute majority through use of the alternative vote (see 'Elections for Legislative Council' for a description of similar electoral principles). If a vacancy occurs in the House of Representatives, it is filled by holding a by-election in the electorate concerned. Elections for the House of Representatives must be held at least every three years.

The following table lists the Tasmanian members of the House of Representatives elected on 13 December 1975, together with the party affiliation and electorate of each member:

House of Representatives: Tasmanian Members

Member	Party affiliation	Electoral division
Burr, M. A.	Liberal	Wilmot
Goodluck, B. J.	Liberal	Franklin
Groom, R. J.	Liberal	Braddon
Hodgman, M.	Liberal	Denison
Newman, K. E. (a)	Liberal	Bass

(a) Federal Minister for the Environment, Housing and Community Development.

The Senate

In the Senate, each state is represented by ten senators and, in addition, the Australian Capital Territory and the Northern Territory have been represented by two senators each since the election of 13 December 1975. Each senator's term is normally six years, as half the senate seats come up for election every three years. However, in the case of a double dissolution of both Houses, half the Senators are elected for a six-year term (the first five elected in each state) and half for a three-year term.

In Senate elections each state is an electorate. Electors are required to cast a vote for every candidate standing within the state in order of their preference, and election of members is carried out in accordance with the principles of proportional representation by the single transferable vote (see 'Elections for House of Assembly' in the 1971 *Year Book* for a description of similar electoral principles).

The following table lists the senators for Tasmania elected on 13 December 1975 together with party affiliation and year of retirement:

Senate: Tasmanian Members

Senator	Party affiliation	Retires in year
Archer, B. R.	Liberal	1978
Devitt, D. M.	A.L.P.	1978
Grimes, Dr D. J.	A.L.P.	1978
Harradine, R. W. B.	Independent	1981
O'Byrne, J. H.	A.L.P.	1981
Rae, P. E.	Liberal	1981
Townley, M.	Liberal	1981
Walters, M. S. (Mrs)	Liberal	1978
Wriedt, K. S.	A.L.P.	1981
Wright, R. C.	Liberal	1978

If a vacancy occurs in the Senate, the appropriate state government nominates a replacement who sits until the next general election (either for the House of Representatives or for the Senate), when an election is held to fill the vacancy. If a senator fills such a vacancy through an election held at the same time as an election for the House of Representatives, his term will be the same as if the vacating member's term were to run its full course. If the vacant seat is contested at an ordinary Senate election, then six, instead of the normal five candidates, will be elected in the state affected and the senator last elected will fill the vacancy for a term shorter than the full six years.

THE TASMANIAN GOVERNMENT

Division of Power

Under the *Commonwealth of Australia Act 1900*, the State of Tasmania surrendered part of its sovereignty and it was possible, at that point in time, to classify the totality of powers to be vested in the Federal Government and the State as follows:

- (i) Exclusive powers to be exercised by the Federal Government alone.
- (ii) Concurrent powers to be exercised both by the Federal Government and the State (subject to the supremacy of Federal Government law in cases of inconsistency).
- (iii) Residual powers to be exercised by the State.

Since federation there have been considerable changes in functions actually performed by the two governments due to constitutional amendments and to inter-governmental agreements affecting function. It will suffice, therefore, to list the main fields of activity of the Federal Government today:

Foreign affairs and diplomatic representation; maintenance of the armed forces; customs and excise; posts and telegraphs; control of broadcasting and television; control of civil aviation; repatriation of ex-serviceman; immigration; industrial arbitration for national industries; control of coinage and currency; overseas trade promotion; employment service; age, invalid and widows' pensions; national health benefits; federal territories and overseas dependencies; census and statistics; meteorological service; federal courts and police; control of banking; collection of sales and income taxes; housing assistance and defence service homes; scientific and industrial research, management of state and national debt; lighthouses and navigation; Australian territorial sea and sea-bed. (For a more detailed treatment of this subject, the *Constitution* in Chapter 1 of the *Year Book of Australia* is recommended.)

The departments, authorities, etc. of the Tasmanian Government are listed in a later section of this chapter headed 'The Present System of Government.'

The State Governor

Tasmania follows British tradition and accepts as its Queen, Elizabeth the Second. Her Majesty appoints the Governor who acts as head of state, generally for a five-year term. The relationship existing between the Queen and the British Parliament is broadly the same as that existing between the Governor and the Tasmanian Parliament. For details relating to the Governor's powers and functions, see the 1976 and earlier editions of the *Year Book*.

Until the succession of Sir Stanley Burbury, KBE on 5 December 1973, Tasmanian governors came from the United Kingdom since the first settlement, although in some other states and the Commonwealth, Australians had been appointed to vice-regal offices. Sir Stanley was sworn in on 5 December 1973, succeeding Lt-General Sir Edric Bastyan, a former Governor of South Australia.

The next table shows the succession of governors from 1930. Administrators and lieutenant-governors (who act in place of the Governor in the event of his death, incapacity, removal or absence from the State) are only included where necessary, to maintain a continuous time series (i.e. short periods of relief during a governorship are excluded). A complete list from 1803 is included in the 1976 *Year Book*.

Succession of Governors, Acting Governors, Administrators, etc. from 1930

Name	Designation	Period
Sir James O'Grady, KCMG	Governor	23.12.24 - 23.12.30
Sir Herbert Nicholls, KCMG	Lieutenant-Governor	23.12.30 - 4. 8.33
Sir Ernest Clark, GCMG, KCB, CBE	Governor	4. 8.33 - 4. 8.45
Sir John Morris	Administrator	4. 8.45 - 24.12.45
Admiral Sir Hugh Binney, KCB, KCMG, DSO	Governor	24.12.45 - 8. 5.51
Sir John Morris, KCMG	Administrator	8. 5.51 - 22. 8.51
Rt Hon. Sir Ronald Cross, Bart, KCMG, KCVO	Governor	22. 8.51 - 4. 6.58
Hon. Sir Stanley Burbury, KBE	Administrator	4. 6.58 - 21.10.59
Rt Hon. the Lord Rowallan, KT, KBE, MC	Governor	21.10.59 - 25. 3.63
Hon. Sir Stanley Burbury, KBE	Administrator	25. 3.63 - 24. 9.63
Lt-General Sir Charles Gairdner, KCMG, KCVO, KBE, CB	Governor	24. 9.63 - 11. 7.68
Hon. Sir Stanley Burbury, KBE	Administrator	11. 7.68 - 2.12.68
Lt-General Sir Édric Bastyan, KCMG, KCVO, KBE, CB	Governor	2.12.68 - 30.11.73
Hon. Mr Justice Green	Administrator	30.11.73 - 5.12.73
Hon. Sir Stanley Burbury, KBE	Governor	5.12.73 -

The Cabinet and Executive Government

General

In Tasmania, as in the other states and the Federal Government, executive government is based on the system which was evolved in Britain in the 18th century, and which is generally known as 'Cabinet', or 'responsible' government. Its essence is that the head of the state (in Tasmania, the Governor representing Her Majesty the Queen) should perform governmental acts on the advice of his ministers; that he should choose his 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 country; 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 the government at all. In law, the executive power of the State is exercised by the Governor who is advised by the Executive Council which he himself has appointed and which meets for certain formal purposes. The whole policy of a ministry is, in practice, determined by the ministers of the Crown, meeting without the Governor under the chairmanship of the Premier, and this body is known as the Cabinet.

The Appointment of Ministers

Legally, ministers hold office during the pleasure of the Governor. In practice, however, the discretion of the head of state in the choice of ministers is limited by the conventions on which the Cabinet system rests. When a ministry resigns, the Governor's custom is to send for the leader of the party which commands a

majority in the lower house, and to commission him as Premier, to 'form a ministry'—that is, to nominate other persons to be appointed as ministers of the Crown and to serve as his colleagues in the Cabinet.

The *Constitution Act* 1854 defined the Parliament of Tasmania as 'the Governor and the Legislative Council and House of Assembly together'. Although no legal requirements enforce it, the selection of all ministers of the Crown from Parliament stems from the British tradition and sharply contrasts with the American system which requires its ministers not to be members of Congress.

At 30 March 1977 the ministry, led by the Hon. W. A. Neilson, was:

Ministry at 30 March 1977

Name	House	Responsibility (a)
The Hon. W. A. Neilson	Assembly	Premier, Treasurer, Planning and Development
The Hon. D. A. Lowe	Assembly	Deputy Premier, Health, Industrial Relations
The Hon. B. K. Miller	Legislative Council	Attorney-General, Police, Emergency Services
The Hon. N. L. C. Batt	Assembly	Education, Recreation, Arts
The Hon. M. T. C. Barnard	Assembly	Tourism, the Environment, Racing and Gaming, Licensing.
The Hon. D. G. Chisholm	Assembly	Resources and Energy, Mines, Lands, Water Supplies, H.E.C.
The Hon. D. J. Baldock	Assembly	Main Roads, Transport, Local Government
The Hon. E. W. Barnard	Assembly	Primary Industry
The Hon. H. N. Holgate	Assembly	Housing, Construction
The Hon. M. R. Polley	Assembly	Social Welfare, Child Care

(a) See section 'The Present System of Government' later in chapter for more detailed statement of responsibility.

Premiers

The following lists Premiers of Tasmania from 1930 (a complete list from 1856 is included in the 1976 *Year Book*):

Premiers from 1930

Name of Premier	Term of office		Duration of office (months)
	From	To	
J. C. McPhee	15. 6.28	15. 3.34	69
Sir Walter Lee	15. 3.34	22. 6.34	3
A. G. Ogilvie (a)	22. 6.34	10. 6.39	60
E. Dwyer Gray	11. 6.39	18.12.39	6
R. Cosgrove	18.12.39	18.12.47	96
E. Brooker	18.12.47	25. 2.48	2
R. Cosgrove	25. 2.48	26. 8.58	126
E. E. Reece	26. 8.58	26. 5.69	129
W. A. Bethune	26. 5.69	3. 5.72	35
E. E. Reece	3. 5.72	31. 3.75	35
W. A. Neilson	31. 3.75		

(a) Tasmania had an unbroken succession of Labor premiers, starting with the Ogilvie Ministry (1934) until the resignation of the Reece government (following electoral defeat) on 26 May 1969.

The House of Assembly

The Tasmanian Lower House comprises 35 members elected from five seven-member electorates. The *Constitution Act* 1972 provided that the Assembly chosen at the elections held on 22 April 1972 would continue in office for a maximum term

of five years, and that thereafter the term for the House of Assembly would be four years. This Assembly was dissolved after four years and 7 months and elections were held on 11 December 1976. (See the 1976 *Year Book* for terms applying prior to 1972.)

Elections for the House of Assembly

Elections for the House of Assembly are conducted under a system which can be classified as proportional representation by the single transferable vote (commonly known as the Hare-Clark system).

The essential features of the system are as follows:

- (i) For an elector to cast a valid vote, he must express at least seven preferences.
- (ii) Party groups are identified on ballot papers, with ungrouped candidates listed together on the right of the ballot paper. Candidates' positions within groups are selected by a draw.
- (iii) To secure election, candidates must secure a quota in accordance with the Droop formula (i.e. the total first-preference votes in the constituency divided by eight, plus one vote).
- (iv) Should a candidate secure an exact quota on first preferences, his voting papers are set aside as finally dealt with.
- (v) If the first successful candidate secures a surplus above the quota, then all his voting papers are re-examined to determine which candidates should secure the second preferences.
- (vi) The second preferences are first adjusted by multiplying them by a fraction called the transfer value. The transfer value is calculated by dividing the successful candidate's surplus first-preference votes by his total first preferences. The second-preference votes, adjusted in this way, are now transferred to other candidates.
- (vii) When repetition of the above process results in a position where no further candidates can reach a quota, the candidate who is lowest on the poll is excluded and the preferences shown on his voting papers transferred to the remaining candidates.

The above processes are repeated until seven candidates have been elected. As might be expected, the counting of votes, calculation of transfer values and the transferring of votes are time-consuming operations and a week may elapse before the declaration of a poll.

Advantages of the Hare-Clark System: The major advantage claimed for the system is that the composition of the House of Assembly tends to faithfully reflect the wishes of the electors viewed on a state basis, and that a party with a minority of first preferences is most unlikely to obtain a majority of seats, as sometimes occurs in systems with single-member constituencies. By way of example, South Australia, using single-member electorates has sometimes been governed by parties receiving a minority of votes but a majority of seats; other Australian states have had similar experiences.

The House of Assembly elections held on 11 December 1976 resulted in the re-election of the Neilson-led Labor Government. The Government's majority was reduced from seven seats to one, with the A.L.P. holding 18 seats and the Liberal Party 17. Two ministers in the previous administration lost their seats while 13 new members were elected. For the whole State, first preference votes cast, by party, were as follows: A.L.P., 123 386 (50.48%); Liberal Party, 104 613 (42.80%); U.T.G., 5 183 (2.12%); Workers Party, 524 (0.21%); Socialist Workers Party, 123 (0.05%); ungrouped, 1 301 (0.53%); informal, 9 294 (3.80%); total, 244 424 (100.00%).

The next table shows the results of House of Assembly elections by parties from 1941:

Representation of Parties for the Whole State, 1941-1976

House of Assembly

Election Year	Labor		Liberal		Other (a)	
	Proportionate share (b)	Seats won	Proportionate share (b)	Seats won	Proportionate share (b)	Seats won
1941	18.78	20	10.98	10	0.24	..
1946	15.29	16	10.27	12	4.44	2
1948	14.82	15	11.35	12	3.83	3
1950	14.59	15	14.27	14	1.14	1
1955	15.79	15	13.60	15	0.61	..
1956	15.08	15	13.08	15	1.84	..
1959 (c) ..	15.58	17	14.37	16	5.05	2
1964	17.97	19	13.47	16	3.56	..
1969	15.91	17	14.68	17	4.41	1
1972	19.22	21	13.43	14	2.35	..
1976	18.37	18	15.57	17	1.06	..

(a) Independents and minority parties.

(b) State treated as single electorate and proportionate share of seats calculated on basis of first preference votes cast for parties.

(c) 35 members elected as from 1959.

Votes Recorded at Assembly Elections

Voting in general elections since 1955 is shown in the following table:

House of Assembly Elections Since 1955

Year of election	Electors on roll	Votes recorded		Informal votes	
		Number	As percentage of enrolled electors	Number	Percentage of total votes recorded
1955	173 165	162 637	93.9	6 158	3.8
1956	174 632	166 293	95.2	6 968	4.2
1959	180 344	170 559	94.6	9 816	5.8
1964	193 418	184 571	95.5	7 980	4.3
1969	210 268	198 571	94.4	9 248	4.7
1972	216 846	205 803	94.9	7 533	3.7
1976	258 550	244 424	94.5	9 294	3.8

The percentage of informal votes in the previous table is not particularly high, even though the voting papers for six or seven-member electorates are necessarily more complicated than those for single-member electorates. At elections prior to 1976 voters were required to mark at least three candidates in order of preference. However, an amendment to the *Electoral Act* made prior to that election required voters to mark at least seven candidates in order of preference. This change has not affected the percentage of informal votes.

Constituencies of House of Assembly

The five constituencies for the House of Assembly are identified with the five electoral divisions electing members to the federal House of Representatives. The next table and map show composition and extent of each electorate.

Enrolments by Electorate (a)

Electorate	Enrolments					
	Old boundaries	New boundaries				
		31 May 1968	31 May 1968 (b)	30 June		
	1973 (c)			1974	1975	1976
Bass	40 139	40 139	42 949	46 843	46 727	47 338
Braddon ..	41 803	41 803	48 407	51 685	52 652	54 500
Denison ..	35 353	42 917	47 505	52 192	50 516	52 278
Franklin ..	49 026	37 203	44 782	49 202	49 470	50 900
Wilmot ..	37 103	41 362	45 040	48 732	49 697	51 264
Total ..	203 424	203 424	228 683	248 654	249 062	256 280

(a) Electoral boundaries were changed for the divisions of Denison, Wilmot and Franklin in 1968.

(b) Although boundary changes did not become effective until 25 November 1968 the enrolment figures at 31 May 1968 show the immediate effect of the changes.

(c) Voting age lowered to 18 years in mid-1973.

By-Elections

In the case of a vacancy occurring in the House of Assembly, there is provision for the Chief Electoral Officer to publicly invite nominations from candidates who were unsuccessful at the last general election in the constituency which elected the vacating member. If one nomination only is received the consenting candidate is declared elected and the Governor notified to this effect.

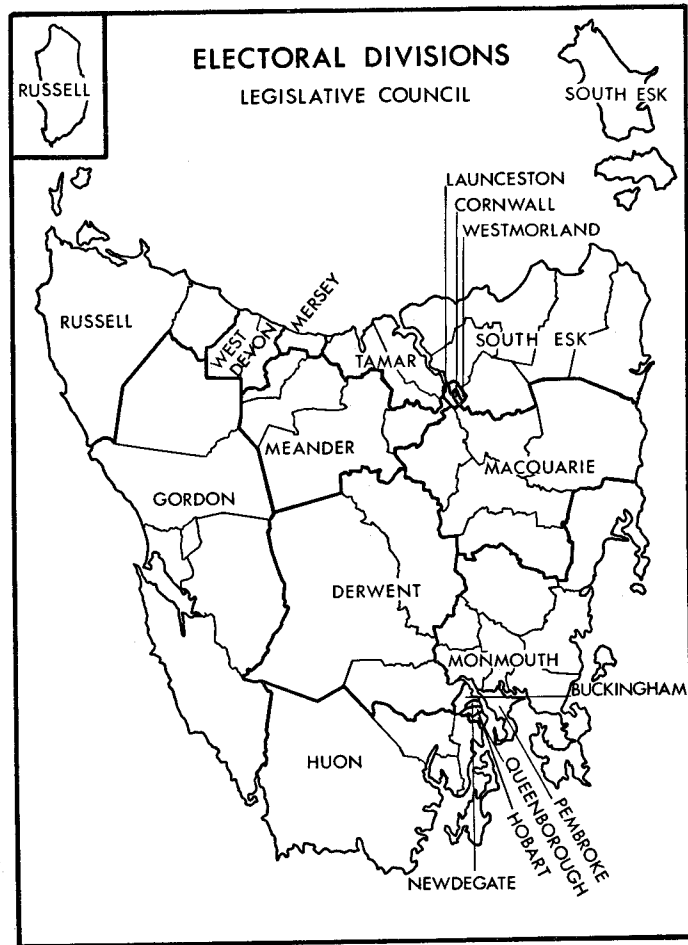
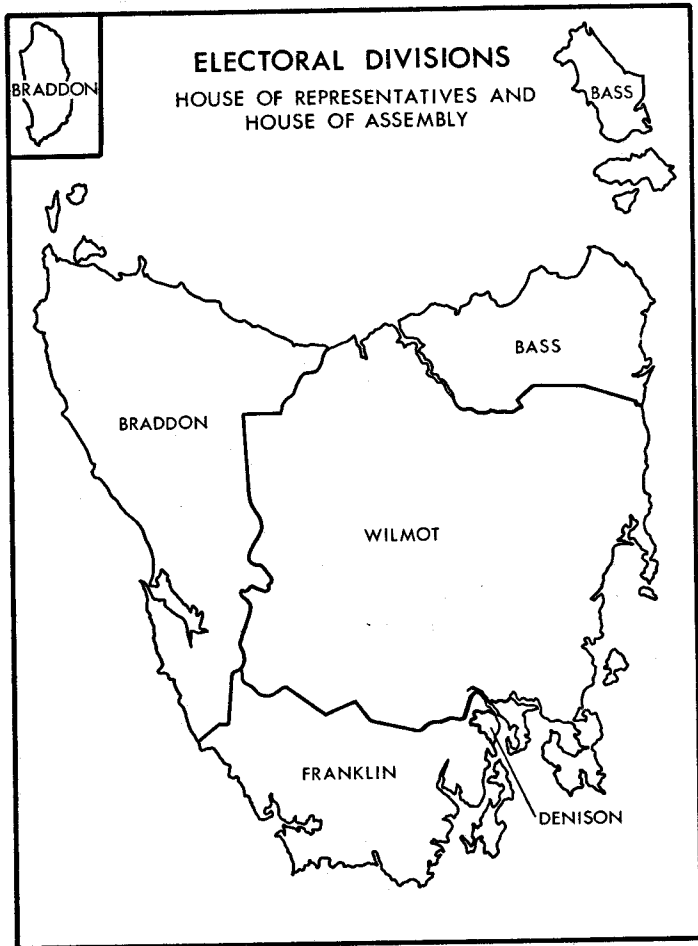
If more than one such nomination is received, the Chief Electoral Officer is required to examine the voting papers counted for the vacating member at the last general election. In the simple case—where the vacating member obtained a surplus of first preference votes above the quota—this can be confined to voting papers expressing that first preference. In the more difficult case—where the vacating member did not obtain a quota on first choices—it is necessary to take into account not only original first-choice papers but also all voting papers representing votes transferred to the vacating member.

The vacating member's voting papers, as defined above, are examined and all his votes are transferred to the consenting candidates according to the preferences expressed thereon. Second preferences derived from first-choice votes of the vacating member have a transfer value of one, but from votes he obtained by transfer, only the value at which he obtained them. For the purpose of the count, first-choice votes received by the consenting candidates at the general election are not relevant—the selection is based on preferences as revealed by the voting papers of the vacating member.

When the number of votes in favour of each consenting candidate has been ascertained, the final selection is by the method of the absolute majority through the alternative vote. If no nominations are received from candidates unsuccessful at the last general election, then an election is held to fill the vacancy.

House of Assembly, Members

The following table shows members of the House of Assembly and their party allegiance following the election of 11 December 1976:



Members of the House of Assembly Elected on 11 December 1976

Electoral Division	Member's name	Party affiliation
Bass	Barnard, The Hon. Michael Thomas Claude Beattie, Eric William Bushby, Maxwell Holmes Holgate, The Hon. Harold Norman James, Gillian Hilma Mooney, Laurence James Robson, Neil Maxwell	A.L.P. Liberal Liberal A.L.P. A.L.P. Liberal Liberal
Braddon	Bonney, Raymond Claude Chisholm, The Hon. Geoffrey Donald Cornish, Ronald Coughlan, John Anthony (a) Davies, The Hon. Ronald Glen (b) Field, Michael Walter Groom, Francis Roger	Liberal A.L.P. Liberal A.L.P. A.L.P. A.L.P. Liberal
Denison	Amos, Dr Julian John Baker, Robert Wilfred Batt, The Hon. Neil Leonard Charles Bingham, The Hon. Eardley Max (c) Green, John Edward Mather, Robert Robinson, Maxwell Keith	A.L.P. Liberal A.L.P. Liberal A.L.P. Liberal Liberal
Franklin	Barnard, The Hon. Eric Walter Beattie, John Maxwell Gilmore, Stephen Bernard Lowe, The Hon. Douglas Ackley (d) Neilson, The Hon. William Arthur (e) Pearsall, Geoffrey Allan Sherry, Raymond Henry	A.L.P. Liberal Liberal A.L.P. A.L.P. Liberal A.L.P.
Wilmot	Aulich, Terrance Gordon Baldock, The Hon. Darrel John Braid, Ian Maxwell Gray, Robin Trevor Lohrey, Andrew Barnard Page, Graeme Reginald Polley, The Hon. Michael Ronald	A.L.P. A.L.P. Liberal Liberal A.L.P. Liberal A.L.P.

(a) Chairman of Committees.

(b) Speaker.

(c) Leader of the Opposition.

(d) Deputy Premier.

(e) Premier.

Dissolution of House of Assembly

The Governor may dissolve the House of Assembly whenever he considers it desirable but he has no power to dissolve the Legislative Council. In effect then, the Legislative Council is a perpetual body except that approximately one-sixth of its seats fall vacant annually. As there is no provision for a double dissolution the Legislative Council, by rejection of a Supply Bill, can force the House of Assembly to seek a dissolution without itself needing to face the electorate. This last occurred in 1948.

In practice, the Governor considers dissolving the House of Assembly only when requested to do so by his ministers. In recent years the House of Assembly has been dissolved three times; in 1950, 1956 and again in 1972.

Sessions of Parliament

Parliament is required to sit every year and, having risen, must sit again before 12 months have elapsed. When the House of Assembly is dissolved and a general election held, the Governor is required to call parliament together within 90 days of the dissolution, subject to a discretionary extension of a further 30 days.

The Legislative Council

Annual Fractional Elections

For the purpose of electing members of the Legislative Council, the State is divided into 19 single-member constituencies. Each member, when elected, holds office for six years and Council elections are held every year to elect three members; every sixth year four members are elected. There are no general elections for the Legislative Council.

Preferential Voting

Candidates appear on the voting paper in alphabetical order and are not grouped to show party allegiance as in voting papers for the House of Assembly. If there are two candidates, the voter need only vote for one. If there are three or more candidates, the voter must indicate at least three preferences to record a valid vote.

If any candidate secures first-preference votes exceeding half the total first preferences, he is declared elected. If no candidate satisfies this condition, then the candidate with the least votes is excluded and the second preferences shown on his voting papers are transferred to other candidates, the transfer value of each such second preference being equal to one. If no candidate then has the required majority, the process of exclusion is repeated until such time as one candidate secures the majority.

The method of counting is identical with that used in elections for the federal House of Representatives and is termed preferential. The full description is election by absolute majority through use of the alternative vote.

By-Elections

In the case of a vacancy occurring in the Legislative Council, a writ is issued directing that an election be held to fill the vacancy. There is no provision for a re-count of voting papers of the vacating member as for the House of Assembly.

Status of Legislative Council

The Legislative Council has the tradition of being a non-party house; in 1977 the composition of the house was 17 independents and two Labor Party representatives. The leader for the Government in the Legislative Council cannot rely upon a vote taken on party lines to ensure the passage of any government bill. It is the ability to command a majority in the House of Assembly which gives a party the right to form the government of the day and which ensures the passage of government legislation through the lower house; no such certainty exists in the passage of bills through the upper house.

Following conflict between the two Houses of Parliament over a money bill during 1924 and 1925, the *Constitutional Amendment Act 1926* was passed. This Act defined the relations between the two Houses, especially with regard to the passing of money bills. The following current principles are found in the Act:

- (i) the Legislative Council retains the right to reject any bill, including a money bill;
- (ii) the Council is specifically prevented from amending bills to raise revenue for the ordinary annual services of the Government and bills imposing land and income tax;
- (iii) it can suggest to the House of Assembly that amendments be made but the adoption or rejection of such amendments is at the discretion of the Assembly; and
- (iv) the operation of such bills is restricted to a period of one year.

Apart from the above specific exceptions, the Council retains the right to amend money bills, e.g. those dealing with loan funds or probate. The House of Assembly is given the sole right to initiate bills for the raising of revenue and the imposition of taxes. Finally, the powers of the two houses are declared equal in all matters except for these specific exceptions.

Boundaries, Legislative Council Divisions

Late in 1967, the *Constitution Act 1934* was amended to change the boundaries of the Legislative Council divisions, the new boundaries being used for the first time in 1969. The following table shows the number of electors in each division before and after redistribution:

Legislative Council: Effect of Changed Boundaries on Number of Electors in each Division

Division (a)	Before redistribution	After redistribution (b)				
		31 May 1968	30 Sept. 1968	30 June		
				1974	1975	1976
Buckingham (H)	11 450	10 227	15 446	14 791	14 940	
Cornwall (L)	6 556	9 499	12 186	12 534	11 908	
Derwent (R)	13 370	6 078	7 319	7 081	6 985	
Gordon (S)	4 039	3 731	5 391	5 586	6 304	
Hobart (H)	4 565	10 091	13 860	13 932	13 897	
Huon (R)	9 141	7 776	10 590	11 035	11 444	
Launceston (L)	2 826	8 998	11 537	11 416	14 284	
Macquarie (R)	7 107	5 819	7 655	7 380	7 433	
Meander (R)	5 639	7 151	7 639	7 996	7 938	
Mersey (DU)	11 023	11 037	15 467	15 495	15 551	
Monmouth (R)	3 491	6 313	7 952	10 019	10 422	
Newdegate (H)	7 867	11 822	14 999	16 761	17 259	
Pembroke (H)	17 214	13 347	19 283	19 363	19 607	
Queenborough (H)	7 824	9 495	12 933	12 712	12 694	
Russell (R)	8 189	8 268	9 973	12 137	12 253	
South Esk (R)	9 517	7 263	10 463	10 162	10 206	
Tamar (R)	8 183	6 182	8 890	8 935	9 080	
West Devon (BP)	9 249	9 438	13 044	12 990	13 271	
Westmorland (L)	13 270	8 290	10 935	11 045	11 385	
Total	160 520	160 825	215 562	221 370	226 861	

(a) (H) = Hobart and suburban; (L) = Launceston and suburban; (BP) = Burnie and Penguin municipalities; (DU) = Parts of Devonport and Ulverstone municipalities; (R) = rural; (S) = special.

(b) Franchise widened from 1 July 1969; voting age lowered to 18 in mid-1973.

Legislative Council Members

The next table shows members of the Legislative Council (following the elections held in four Divisions on 28 May 1977 at which the four sitting members were returned), the electoral division which they represent and the year in which each will retire from the Council:

Members of the Legislative Council, June 1977

Electoral Division	Member's name	Year of retirement
Buckingham	Lowrie, The Hon. Kenneth Francis	1980
Cornwall	King, The Hon. Frank Barnard	1978
Derwent	Dixon, The Hon. Joseph Henry (a)	1979
Gordon	Broadby, The Hon. Albert James	1982
Hobart	Venn, The Hon. Kathleen J. (b)	1982
Huon	Hodgman, The Hon. Peter	1978
Launceston	Shipp, The Hon. Raymond William	1982
Macquarie	Shaw, The Hon. George Arthur	1980
Meander	Coates, The Hon. Jeffrey Allan	1983
Mersey	Braid, The Hon. Henry William	1978
Monmouth	Bisdee, The Hon. Louis Fenn	1981
Newdegate	Miller, The Hon. Brian Kirkwall (b) (c)	1981
Pembroke	McKay, The Hon. Eric Charles	1983
Queenborough	Hodgman, The Hon. William Clark	1983
Russell	Fenton, The Hon. Charles Balfour Marcus (d)	1981
South Esk	Carins, The Hon. Lloyd Horton, O.B.E.	1980
Tamar	Hitchcock, The Hon. Daniel	1979
West Devon	Young, The Hon. William Thompson	1983
Westmorland	Gregory, The Hon. Oliver Harold	1979

(a) Chairman of Committees.

(b) Endorsed by the Australian Labor Party; other members are independents.

(c) Leader for the Government in the Legislative Council; Attorney-General and Minister for Police Road Safety and Consumer Affairs.

(d) President.

Qualifications of Electors and Members

Qualifications of Electors, State Elections

An elector for both the House of Assembly and the Legislative Council is any person, aged at least 18 years, male or female, who has lived in the State for six months continuously, who is natural-born or a naturalised subject of the Queen and whose name is on the electoral roll for an electoral division. (Legislation reducing the voting age to 18 years passed both houses of parliament in mid-1973.) Voting has been compulsory since the *Electoral Act* 1928. Special qualifications which had previously been required for electors of the Legislative Council were abolished on 1 July 1969 following amendments to the *Constitution Act* 1934 and the *Electoral Act* 1907.

Qualifications of Members, State Parliament

House of Assembly: To be eligible for election as a member of the House of Assembly, a candidate must comply with the following conditions: he must either be an elector or be qualified to be an elector for the House of Assembly and resident in Tasmania for five years at any one time or resident for two years immediately preceding the election.

Legislative Council: A candidate for the Legislative Council must be an elector or have the qualifications of an elector for the Council; in addition he must meet the residential restrictions imposed on candidates for the House of Assembly.

Persons of unsound mind or in prison under any conviction are barred from voting at elections for either house or from being elected to either house. No person shall be a member of both houses at the one time.

Salaries of Members of Parliament

Under provisions of the *Parliamentary Salaries and Allowances Act* 1973, a basic rate of pay to members is calculated annually. This basic rate is set as the 'interstate average' of the rates payable to ordinary 'back bench' members of the

Legislative Assemblies of New South Wales, Victoria, Queensland and Western Australia and the House of Assembly of South Australia. Calculation of the interstate average is the responsibility of the 'salaries committee' comprising the Government Statistician, Clerk of the Legislative Council and Clerk of the House of Assembly. The committee is required to meet as soon as practical after 15 June each year and make the necessary calculation. A report on the method adopted to make the calculation and the interstate-average is then forwarded to the Auditor-General who may accept the calculation or himself make a calculation replacing that of the salaries committee. Having either accepted the salaries committee's calculation or substituted one of his own, the Auditor-General is required to publish in the *Government Gazette* the appropriate interstate average which then becomes the basic salary for payment of parliamentary salaries and allowances. The basic rate applicable from 1 July 1977 was \$20 625.

Additional amounts, as shown in the next table, are payable to the Premier, Deputy Premier, Ministers of the Crown, Leader of the Opposition and other officers of parliament. The extra salaries payable are all related to the basic salary.

Special Rates Payable in Addition to the Basic Salary (a)
(Per Cent)

Particulars	Additional salary payable as proportion of basic salary (b)	Particulars	Additional salary payable as proportion of basic salary (b)
Cabinet—		House of Assembly—	
Premier	125	Speaker	33½
Deputy Premier	85	Chairman of Committees	20
Ministerial office	70	Leader of the Opposition	70
Legislative Council—		Deputy Leader of the Opposition	17
President	33½	Government Whip	6
Leader for the Government	70	Opposition Whip	6
Chairman of Committees	20		
Deputy Leader for the Government	11		

(a) The basic salary was set at \$18,975 in 1976 and raised to \$20 625 from July 1977.

(b) Salary in excess of basic rate (e.g. the Premier receives basic rate + 1.25 × basic rate).

Electoral Allowances Payable as a Proportion of the Basic Salary (a)
(Per Cent)

Electoral division	Proportion of basic salary payable	Electoral division	Proportion of basic salary payable
Legislative Council—		Legislative Council— <i>continued</i>	
Buckingham	13	Queenborough	11
Cornwall	12	Russell	26
Derwent	18½	South Esk	26
Gordon	26	Tamar	18½
Hobart	11	West Devon	17
Huon	18½	Westmorland	14
Launceston	12	House of Assembly—	
Macquarie	20	Bass	26
Meander	22	Braddon	30
Mersey	17	Denison	15
Monmouth	24	Franklin	21
Newdegate	11	Wilmot	35
Pembroke	13		

(a) The basic salary was set at \$20 625 in July 1977.

Allowances Payable to Members: Electoral allowances, and entertainment allowances are calculated as a proportion of the base rate. Travel allowances are related to rates payable to permanent heads of State Government Departments. The last table shows the electoral allowances payable as a proportion of the basic salary.

The Present System of Government

The system of responsible government in Tasmania requires that the executive power of the State shall be exercised by the Cabinet; in exercising this power, the ministers of the Cabinet are held responsible for the actions and administration of government departments and other governmental authorities which have been created for three basic purposes: (i) to put into practice the laws made by parliament; (ii) to give effect to the decisions of the ministry; and (iii) to advise the ministry on matters of policy.

The next section lists the Departments and authorities at 30 September 1977 under the various ministers but the allocation of responsibility is subject to change and Cabinet has the power to vary it at any time. A detailed account of the work of the various departments and authorities appeared in the first two issues of the *Year Book* series.

Premier, Treasurer, Planning and Development

Premier's Dept Treasury Dept Town and Country Planning Tasmanian Film Corporation Government House	Agent-General's Office Audit Dept Dept of Planning and Development Electoral Dept Immigration
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Deputy-Premier, Minister for Industrial Relations and Health

Public Service Board Dept Dept of Labour and Industry Public Service Arbitrator	Mental Health Services Commission Dept of Health Services Apprenticeship Commission
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Attorney-General, Minister for Police, and Emergency Services

Attorney-General's Dept Solicitor-General's Dept Supreme Court and Sheriff's Dept Magisterial and Court of Requests Dept Parliamentary Counsel's Dept Public Trust Office Law Reform Commission Consumer Affairs Council	Registrar-General's Dept Police Dept Prisons Dept Road Safety Fire Brigades Commission Rural Fires Board State Emergency Service
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Minister for Education, Recreation and the Arts

Adult Education Board Education Dept National Parks and Wildlife Service The National Estate	State Library Museum Federal Affairs
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Minister for Tourism and the Environment

Dept of Tourism Dept of the Environment Licensing Court	Racing and Gaming Commission Totalisator Agency Board
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*Government and Administration***Minister for Primary Industry**

Dept of Agriculture
Inland Fisheries Commission
Forestry Department

Sea Fisheries Division
Agricultural Bank of Tasmania
Tasmanian Grain Elevators Board

Minister for Main Roads, Transport and Local Government

Transport Commission
Metropolitan Transport Trust

Dept of Main Roads
Local Government Office

Minister for Resources and Energy

Rivers and Water Supply Commission
Lands Dept
Metropolitan Water Board

Hydro-Electric Commission
Dept of Mines

Minister for Housing and Construction

Supply and Tender Dept

Dept of Housing and Construction

Minister for Social Welfare and Child Care

Government Printing Office
Tasmanian Government Insurance Office

Social Welfare Dept

ACTS OF STATE PARLIAMENT**Summary of State Acts, 1976**

The examples below illustrate the interpretation of the notations used in the following list of Acts:

(A 1952)—An Act to amend an Act of the same title passed in 1952.

(A Audit Act 1952)—An Act to amend an Act of this title passed in 1952.

(R 1952)—An Act to repeal an Act of the same title passed in 1952.

(R Audit Act 1952)—An Act to repeal an Act of this title passed in 1952.

(P 1952)—An Act to be incorporated and to be read as one with the Principal Act passed in 1952.

(P Audit Act 1952)—An Act to be incorporated and to be read as one with the Principal Act of this title passed in 1952.

(RS 1952)—An Act to repeal an Act of the same title passed in 1952 and to substitute new legislation.

(RS Audit Act 1952)—An Act to repeal an Act of this title passed in 1952 and to substitute new legislation.

State Acts, 1976

Number	Short title and summary
1	Therapeutic Goods and Cosmetics—provisions to regulate the manufacture, distribution labelling, and advertising of therapeutic goods and certain articles of food; to make provision with respect to standards for therapeutic goods and cosmetics.
2	Tasmanian Museum (A1950)—allowed for disposal of the remains of Truganini.
3	Fruit Processors Financial Assistance—allowed the Agricultural Bank to make loans to certain raspberry growers during the 1975-76 season.
4	Wheat Industry Stabilisation (A1974)—provisions relating to the marketing of wheat and wheat products.

Number	Short title and summary
5	Tourism Development (A1970)—amendment of the name of the Department of Tourism and Immigration to the Department of Tourism.
6	Savings Banks (A1917)—extended the lending facilities of Savings Banks to depositors without security.
7	Payroll Tax (A1971)—miscellaneous amendments.
8	Loan Fund Supply—provision of \$38 000 000 in Loan Funds for the 1976-77 financial year.
9	Consolidated Revenue Fund Supply—provision of \$94 040 000 in Consolidated Revenue Funds for the 1976-77 financial year.
10	Beef Industry Committee (A1975)—extended the period of operation of the Principal Act to 31 December 1976.
11	Tasmanian Trotting Control Board (R Tasmanian Trotting Association Acts 1961, 1964, 1974)—made provision for a trotting control board to regulate that sport in Tasmania.
12	Psychologists Registration—required the registration of psychologists; regulation of the practice of psychology; and provisions barring unqualified persons from practising psychology.
13	Commercial and Inquiry Agents (A1974)—miscellaneous amendments.
14	Evidence (A1910)—miscellaneous amendments.
15	Justices (A1959, Promissory Oaths Act 1869)—miscellaneous amendments.
16	Public Health (A1962)—miscellaneous amendments.
17	Straits Islands Shipping Services Subsidies (A1948)—extended provisions of the Act regarding subsidies paid for livestock.
18	Marine (RS1921, 1925, 1926, (No. 2) 1926, 1928, 1930, 1935, (No. 2) 1935, 1941, 1943, 1944, 1945, 1946, 1947, 1948, 1950, 1953, (No. 2) 1953, 1954, 1955, 1957, 1958, 1959, 1960, 1963, 1964, (No. 2) 1964, 1966, (No. 2) 1966, 1967, 1968, 1970, (No. 2) 1970, 1974, (No. 2) 1974, Ulverstone Harbour Trust Dissolution Act 1962, Smithton Harbour Dissolution Act 1972.)—amendment and consolidation of law with respect to the Navigation and Survey Authority of Tasmania and Marine Boards, for the regulation of navigation in Tasmanian waters.
19	Financial Agreement (Variation) (A Artificial Breeding Act 1964, Government Printing Office Act 1949, Grain Reserve Act 1950, Hydro-Electric Commission Act 1944, Metropolitan Water Act 1961, North Esk Regional Water Act 1960, Southern Regional Water Act 1960, West Tamar Water Act 1960.)—to approve a Federal-State agreement in relation to sinking fund contributions paid by the states.
20	Education (A1932)—provided for granting of public transport concession passes to children from non-state schools.
21	Public Health (No 2) (A1962)—amendments in respect of the food and drugs section of the principal Act.
22	General Jones Pty Ltd Loan and Guarantee—authorised a Government loan to that Company to expand the frozen vegetable industry in the north-west.
23	King Island Dairy Products Co-operative Society Limited Loan Guarantee—authorised the Treasurer to guarantee the repayment of a loan to that Company.
24	Dangerous Goods (RS Explosives Act 1916, 1963, 1971, Inflammable Liquids Act 1929, 1963, 1965, 1970)—provided new regulations for the manufacture, keeping, conveyance, use and sale of explosives, inflammable liquids and other dangerous goods.
25	Fire Brigades (A1945)—amendment of the areas of fire districts.
26	Weights and Measures (A1934)—amendments regarding use of units of weights and measures.
27	Lending of Money (A1915)—amendments to cover the use of bank cards.
28	Crown Lands (RS 1935, 1963, (No. 2) 1963, 1965) (A Abandoned Lands Act 1973, Boundary Fences Act 1908, Closer Settlement Act 1957, Education Act 1932, Evidence Act 1910, Flood Relief Act 1960, Forestry Act 1920, Highways Act 1951, Homes Act 1935, Hospitals Act 1918, Hydro-Electric Commission Act 1944, Industrial Development Act 1954, Lands Resumption Act 1957, Launceston Corporation Act 1963, Litter Act 1973, Local Government Act 1962, Mining Act 1929, Noxious Weeds Act 1964, Pulpwood Products Industry (Eastern and Central Tasmania) Act 1968, Railway Clauses Consolidation Act 1901, Railway Management Act 1935, Roads and Jetties Act 1935, Rural Fires Act 1967, Rural Reconstruction Act 1971, State Advances Act 1935, State Sinking Fund Act 1929, Survey Co-ordination Act 1944, Vermin Destruction Act 1950, War Service Land Settlement Act 1950)—made new provisions with respect to management, sale and disposal of Crown lands.
29	Emergency Services—provided for the setting up of bodies concerned with the protection of life and property at times of disasters and related provisions.
30	Criminal Process (Identification and Search Procedures) (A Prison Act 1868)—extended police powers in respect of examination and searching of persons taken into custody.

Number	Short title and summary
31	Consumer Affairs (A Consumer Protection Act 1970)—extended provisions relating to the protection of consumers.
32	Criminal Injuries Compensation—provided for payment of compensation in certain cases to persons suffering as a result of criminal conduct of others.
33	Road Safety (Alcohol and Drugs) (A1970)—restricted the granting of drivers' licences for persons previously disqualified under the Principal Act.
34	Offshore Waters Jurisdiction—extended provisions under State law relating to certain offshore waters.
35	Plumbers Registration (A1951)—miscellaneous amendments.
36	Police Offences (Contraceptives) (Repeal) (R1941)—repealed certain restrictions on the sale and advertising of contraceptives.
37	Traffic (A1925, 1972)—miscellaneous amendments.
38	Wrest Point Casino (Tax Remission) (A1975)—extended the time period covered by the Principal Act by one year.
39	Hobart Corporation (A1963)—miscellaneous amendments.
40	State Grants Commission—provided for the establishment of the State Grants Commission; provisions relating to payments of grants to municipalities.
41	Parliamentary Superannuation (A1973)—miscellaneous amendments.
42	Loan Fund Appropriation—provision of \$91 064 530 from Loan Fund moneys for expenditure in 1976-77.
43	Consolidated Revenue Fund Appropriation—provision of \$196 013 000 from Consolidated Revenue Funds for 1976-77.
44	Hire Purchase (A1959)—miscellaneous amendments.
45	Fisheries (A (No. 2) 1974)—repealed the expiry date given in the Principal Act.
46	Hydro-Electric Commission (A1944)—repeal of certain sections.
47	Entertainments Tax (Repeal) (R1953, 1960, 1963, 1967)—repealed the imposition of entertainments tax.
48	Hydro-Electric Commission (Contributions) (A1971)—miscellaneous amendments.
49	Pensioners (Heating Allowances) (A1971)—increased the amounts to be paid to pensioners; and raised the maximum income allowed to qualify for benefit.
50	Consolidated Revenue Fund Supplementary Appropriation—provision of a further \$13 461 018 from funds for 1975-76.
51	Dairy Produce (A1932)—miscellaneous amendments regarding registration of dairies.
52	Vermin Destruction (A1950)—miscellaneous amendments.
53	Launceston Gas Company Loan Guarantee and Subsidy—authorised the Treasurer to guarantee certain loans made to that Company, to pay the interest on the loans and pay subsidies to the Company.
54	Consolidated Revenue Fund Appropriation (No. 2)—provision of further funds for 1976-77.
55	Trustees (A1898)—miscellaneous amendments.
56	Real Property (A1862, 1886)—allowed photocopies or transparencies to be used for records.
57	Acts Interpretation (A1931)—defined, for Tasmania, the various regions of the State (in line with regions currently used by the Bureau of Statistics).
58	Litter (A1973)—miscellaneous amendments.
59	Valuers Registration (A1974)—allowed for a code of ethics to be laid down for valuers.
60	Land Tax (P Land and Income Taxation Act 1910)—set land tax rates for the 1976-77 financial year.
61	State Loans and Loan Guarantees—provisions facilitating the making of State loans to certain organisations; provided for the State to guarantee loans made to such organisations.
62	Chief Secretary (Statutory References)—amended references in certain acts to read 'Minister' in lieu of 'Chief Secretary'.
63	Hydro-Electric (Power Development) (A1967)—raised the limit on expenditure allowable on construction work.
64	Payroll Tax (No. 2) (A1971)—various amendments.
65	Evidence (No. 2) (A1910)—various amendments concerned with the use made of copies of documents.
66	School Dental Therapy Service (A School Dental Nursing Service Act 1965)—various amendments.
67	Criminal Code (A Coroners Act 1957, Road Safety (Alcohol and Drugs) Act 1970, Criminal Code)—various amendments.
68	Public Service (A1973)—various amendments.
69	Wrest Point Casino (Further Agreement) (A Wrest Point Casino Licence and Development Act 1968)—various amendments.

State Acts, 1976—continued

Number	Short title and summary
70	Governor's Salary (A1951)—increased the salaries of the Governor and Administrator.
71	Public Holidays (Royal Visit)—provided for proclamation of public holidays during the visit of the Royal family.
72	Apple Industry (Assistance) (A1974)—allowed further payments to apple growers.
73	Industrial Relations (R Master and Servant Act 1856) (A1975)—miscellaneous amendments.
74	Land and Income Taxation (A1910)—various amendments.
75	Criminal Proceedings (Special Defence Costs)—provided for payment by the Crown of costs incurred by three police officers charged with, but found not guilty of, offences in relation to their duties.
76	Forestry (Australian Paper Manufacturers Limited) (A Forestry Act 1954)—implementation of an agreement made with that Company to vary its rights held by special licence under the Principal Act.
77	Hospitals (A1918)—various amendments.
78	Fruitgrowing Industry Reconstruction Agreement (A1972)—various amendments in respect of financial assistance to growers for removal of trees.
79	Deceased Persons' Estate Duties (A1931)—various amendments.
80	Poisons (A1971)—various amendments.
81	Public Authorities' Land Acquisition Act (A1949)—various amendments to compensation payment provisions in the Principal Act.
82	Lands Resumption (A1957)—various amendments to compensation payment provisions in the Principal Act.
83	Consolidated Revenue Fund Appropriation (No. 3)—granting of \$2 000 000 for unemployment relief purposes.
84	Industrial Development (A1954)—increased the maximum amount allowed to be made as a loan guaranteed by the State for the establishment of new industry.
85	Racing and Gaming (A1952, 1961)—various amendments.
86	Audit (A1918)—various amendments.
87	Police Regulation (A1898)—various amendments concerned with police officers punishable under another Act being punishable under the Principal Act.
88	Legal Practitioners (A1959)—various amendments.
89	Carbide Industry—approved an agreement made for the State to make and guarantee loans to provide for the continuation of the Electrona carbide works.
90	Rural Fires (A1967)—various amendments.
91	Emu Bay Railway—relieved the Emu Bay Railway Co. Ltd of obligations to act as a common carrier.
92	Hire Purchase (No. 2) (A1959)—allowed the Governor to make regulations for the purpose of the Principal Act.
93	Retirement Benefits (A1970)—various amendments regarding rights of a contributor to a pension if that person retires before age 65; the date for expiration of this Act set as 30 June 1978.
94	Superannuation (A1938)—various amendments regarding a contributor's right to a pension; the date of expiration of this Act set as 30 June 1978.
95	Long Service Leave (R1960, 1961, 1963, (No. 2) 1963, 1964, 1965, 1966, 1968, 1972, 1973, Stevedoring Industry Long Service Leave Act 1960)—granting of long service leave to employees.
96	Traffic (No. 2) (A1925, Police Offences Act 1935, Road Safety (Alcohol and Drugs) Act 1970, the Criminal Code)—miscellaneous amendments.
97	State Employees (Long-Service Leave) (A1950)—various amendments.
98	Rural Reconstruction (A1971)—extended the period to which provisions of the Principal Act applied to 30 June 1977.
99	Pensioners' Rate Remissions Assistance (A1974)—extended certain provisions of the Act to include members of the Forces or returned soldiers.
100	Local Government (Movable Dwelling Units) (A Local Government Act 1962)—amendments in respect of voting rights for residents of movable dwellings; other miscellaneous amendments.
101	Homes (Movable Dwelling Units) (A Homes Act 1935, Stamp Duties Act 1931)—miscellaneous amendments.
102	Land Valuation (Movable Dwelling Units) (A Land Valuation Act 1971)—excluded the value of movable dwellings, situated on a piece of land, from being included when land value, capital value and assessed annual value of that land is assessed.
103	War Service Land Settlement (A1950)—amendments regarding disposal of land granted to companies under the Principal Act.
104	Criminal Code (No. 2) (A Criminal Code)—amendments dealing with the hearing of rape cases.

Number	Short title and summary
105	Export Packers Ltd Loan Guarantee—provided for the State to guarantee a loan made to that Company.
106	Evidence (No. 3) (A1910)—amendments dealing with examination of alleged victims of rape cases and publication of details of such cases.
107	Costs in Criminal Cases—regulations regarding payment of costs incurred by successful defendants.
108	Commonwealth and State Hospital Services Agreement—approved an agreement made between the Federal and State Governments with regard to the provision of hospital services.
109	North-West Regional Water—made provisions for the supply of water to certain north-western municipalities.
110	Payroll Tax (Supplemental Provisions) (P Payroll Tax Act 1971)—miscellaneous amendments.
111	Stock (A1975)—extended the Principal Act indefinitely.
112	Electoral (A1907)—increased allowable electoral expenses of candidates.
113	Dairy Industry (R Milk Act 1947, 1962, 1963, 1965, Dairy Products Marketing Act 1957, 1973)—provisions relating to the control of the dairy industry, production and disposal of milk and dairy produce.
114	National Parks and Wildlife Act (A1970)—amendment regarding expiry date.
115	Stamp Duties (A1931)—miscellaneous amendments.
116	Local Government (Planning Schemes) (A Local Government Act 1962)—amendments regarding suspension of planning schemes pending alterations.
117	Licensing Act (RS1932, (No. 3) 1937, 1947, 1952, 1958, 1962, 1963, 1967, (No. 2) 1967, (No. 3) 1967, 1969, 1972, 1973, (No. 2) 1973, Licensing (Fees) Act 1965, Licensing (Trading Hours) Act 1975) (A Coroners Act 1957, Fire Brigades Act 1945, Hydro-Electric Commission Act 1944, Local Government Act 1962, Police Offences Act 1935, Tourism Development Act 1970)—fresh provisions for the regulation of the sale of intoxicating liquor.

Chapter 4

LOCAL GOVERNMENT

GENERAL

Historical

Introduction

In Tasmania, the functions of local government are more restricted than in some other countries as the State Government takes direct responsibility for important services such as the police, education, housing, public transport, etc. This peculiarity is not confined to Tasmania and is encountered in the other Australian states, where central control is exercised over functions often delegated to local government authorities in overseas countries; the origin of this tendency probably lies in early colonial history when the continent was virtually empty but the apparatus of government existed at each of the new coastal settlements (Sydney, Hobart, Perth, Melbourne, Adelaide and Brisbane, in order of age). In the Australian situation strong central administrations came first. Local Government was a much later growth, the initiative for its creation often coming from the central administration itself in the respective colonies.

The first division of Tasmania into local administrative districts occurred in 1827 when the Colony was split into nine police districts; each district was under the control of a magistrate whose functions were primarily disciplinary and connected with administering the convict system. From then, the development of local government in Tasmania followed three distinct phases as outlined below.

Hobart and Launceston

From 1835 to 1857 several acts were passed relating to the local government of Hobart and Launceston—Hobart Town was granted elected commissioners in 1846, and under an Act of 1852, both Hobart and Launceston were given elected municipal councils. In 1857 the City of Hobart was incorporated, as was the Town of Launceston one year later. Launceston was proclaimed a city in 1888. For the next 76 years these were the only two cities in the State, but in 1964 the number was increased to three when Glenorchy was granted city status.

The form of local government in Hobart and Launceston is governed by separate corporation acts for each authority; in the case of Glenorchy, however, its operation as a city is provided for in the *Local Government Act 1962*.

Rest of State before 1906

The first step towards the creation of rural municipalities came with the *Rural Municipalities Act 1858*. Between 1860 and 1863, 16 municipalities had been proclaimed but the nine police districts were also retained under magisterial control. The Act of 1858 was repealed in 1865 and a new *Rural Municipalities Act* became law. The State was then divided into thirty municipal districts with

defined boundaries. However, only 19 of these actually had councils. One more district was added in 1880. The City of Hobart and the Town of Launceston were exempted from the Act.

By 1906 there were, in addition to the city councils for Hobart and Launceston and the municipal district councils, many boards and trusts in Tasmania created for specific local government purposes. These had been formed in respect of water, drainage, roads, rabbits, health, fruit, recreation grounds, schools, works and other matters. There were in existence 105 road trusts, 19 rural municipalities, 23 town boards and 2 city councils; a total of 149 local authorities.

Rest of State after 1906

The *Local Government Act 1906* abolished all rural municipalities, town boards, water trusts, main road districts, etc. and replaced them with municipalities which took over the administration of all the local government functions previously administered by the numerous local bodies. Section 10 of the Act provided that a commission should divide the State into not more than 60 districts to be later proclaimed municipalities. The commission reported in 1907 and recommended that the State be divided into 50 municipalities. These did not include the cities of Hobart and Launceston which were governed respectively by the *Hobart Corporation Act 1893* and the *Launceston Corporation Act 1894*. The above recommendations were carried into effect by proclamation of the 50 municipalities. Subsequently, three of the municipalities were amalgamated—Queenborough and New Town with Hobart, and Invermay with Launceston. Since Glenorchy became a city in 1964 no other changes have taken place. Hence, there are 46 municipalities and three cities in existence at the present time. Apart from the enlargement of Hobart and Launceston caused by the above amalgamations, the boundaries are still substantially the same as those proclaimed in 1907, although there have been numerous relatively minor boundary changes since then.

Inquiries into Local Government

Royal Commission 1938

A Royal Commission was set up in December 1938 to inquire into and report upon certain aspects of local government in Tasmania. It issued its report on 11 August 1939. Recommendations covered administration and finance, the bases of valuation and assessment, the best form of local government, the number of municipal bodies, wards, the system of rating and co-ordination between municipal and State governments. One of the specific recommendations was that the number of municipal bodies should be reduced to two cities, three urban municipalities and thirty-four rural municipalities. However, this recommendation was not implemented.

Select Committee 1960

On 16 November 1960, a select committee of the House of Assembly was appointed to inquire into and report on local government. One of its terms of reference was 'whether amalgamation of certain municipalities would be of advantage to local government administration by creating greater efficiency and cutting down administrative costs'. It made its report on 1 August 1961. In relation to the above term of reference, the Committee recommended that it was essential that there be a reduction in the number of municipalities in Tasmania and that to achieve this all boundaries should be reassessed as a matter of urgency by qualified experts, having regard to geographic, economic and population conditions. It

further stated that it believed that a reduction in municipalities by approximately half would be the eventual means of creating greater efficiency within the municipalities and would cut administration costs.

Municipal Commission 1962

In 1962 the *Local Government Act* was passed; this statute repealed the *Local Government Act* 1906 and other legislation relating to local government and consolidated the legislation in one Act. The 1962 Act also included provision for establishment of a Municipal Commission to inquire into and report on local government administration in Tasmania. In 1965 the Commission submitted its report recommending numerous amalgamations and boundary changes. If the changes had been put into effect there would have been two cities and 18 other municipalities. However, as a result of protracted litigation the State Government decided to amend the provisions of the 1962 Act under which the Commission was constituted, the 1965 report was not acted upon and the Commission was disbanded in March 1971.

Municipal Commission 1972

In 1971 amendments were made to the *Local Government Act* 1962 in relation to appointment, functions and powers of a new Municipal Commission. The new Municipal Commission was appointed on 31 May 1972. The terms of reference given to the Commission included investigation of whether there should be creation, abolition, amalgamation or partitioning of any municipality. The Commission presented its completed report to the Minister for Local Government on 28 March 1974. The main recommendations made in the Report are summarised below (a more detailed account of the Report is contained in the 1975 *Year Book*).

Recommendations: Extensive amalgamations and boundary re-arrangements of municipalities were recommended. If implemented, the latter proposals would have reduced the number of local government authorities by 14 (from 49 to 35) and extended the boundaries of Launceston City to incorporate most of the urban development around Launceston. The Commission reached the conclusion that the pattern of municipal boundaries in Tasmania was such that there must be some wasteful expenditure and a lower level of efficiency than would be obtained by some re-arrangement of the boundaries.

Release of the recommendations of the Municipal Commission caused an immediate unfavourable reaction in most of the municipalities affected by the proposed boundary changes. In August 1974, the State Parliamentary Labor Party met to consider the Commission's Report and decided that it should not be acted upon. As a result, the Report was not placed before Parliament for consideration.

Local Government—Present Organisation

Authority and Functions

The authority for, and the forms of, local government are prescribed entirely by State legislation which has largely been consolidated in the *Local Government Act* 1962. Hobart and Launceston cities operate under separate corporation acts but the other authorities, including the City of Glenorchy, operate under the Act of 1962.

The functions of the municipalities are set out in broad general terms in Section 176 of the *Local Government Act* as:

'A Municipality: (a) may for the welfare and good government of its district and the inhabitants thereof: (i) make by-laws; (ii) undertake, make and maintain works, buildings and services; and (iii) order and dispose the common affairs of its members; and (b) shall cause the Queen's peace to be kept and maintained within its districts.'

Particular authority is given by Section 180 for a council clerk to be a deputy clerk of the peace, registrar of the court of general sessions and clerk of petty sessions in his municipality.

In addition, by certain acts, the municipalities are given specific responsibilities, e.g. *Health Act*, *Local Courts Act*, etc.

Administration of Justice

This responsibility of the municipality to administer the lower courts of justice is confined to Tasmania. It would appear to be a carry-over from the very early days of local government when the municipality was also required to provide the police force. In all other states the administration is in the hands of a state department. The practice here would now appear to be continued by reasons of expediency. (It should be noted that the process of removing this function from the municipalities has already commenced and the lower courts in the cities of Hobart, Launceston and Glenorchy and the municipalities of Burnie, Clarence, Kingborough and St Leonards are administered by the State. It should also be noted that where municipalities administer the courts, they receive all fines into their revenue and in some instances the council clerks receive additional salary for this court work.)

Population

The population of Tasmania's local government areas at 30 June 1976 ranged from as low as 320 in Bruny Municipality to a high of 50 570 for the City of Hobart. Of the 49 local government areas in the State, eight had populations of under 1 000 (see Chapter 6, Demography, for further details).

Electors

Persons eligible to vote in local government elections consist of owners or occupiers of rateable land who are naturalised British subjects over the age of 18 years. The former categories of spouse elector and ex-serviceman elector have been abolished and are now termed residence-electors and, where formerly enrolled continue to be included in the Electoral Index. To qualify as a residence-elector, a person must have lived in a municipality for a period of at least six months and be enrolled as an elector for the Legislative Council or House of Assembly in respect of a division or subdivision that includes the whole or a part of that municipality.

In 1972 the *Local Government Act 1962* was amended and plural voting abolished; an elector may now exercise, at the most, three votes—one in his own right and two on behalf of other persons.

In no Australian state are unnaturalised aliens, who are owner-occupiers, eligible to vote at local government elections; Tasmania is the only state with a provision for aliens to have another person vote on their behalf.

Councillors

A councillor must be an elector of, and either reside, or carry on business, in the municipality and is subject to disqualification for certain breaches of conduct. The term of office is three years and one-third of the council retires each year.

Councils may comprise six, nine, 12 or 15 councillors. The warden, deputy warden and treasurer are elected by the council members on an annual basis. (The electors of the City of Hobart elect the Lord Mayor and in Launceston and Glenorchy the electors elect the Mayor.) The office of warden is comparable with that of the mayor of a city or the president of a shire in other states.

Government Intervention

For any of a number of reasons, the Minister administering the *Local Government Act* may consider it necessary to recommend suspension of the elected councillors and the appointment of a commission, or in certain cases an administrator, to carry on municipal government in a particular municipality.

Cities, Municipalities and Towns

In Tasmania there are only two categories of local government; a municipality or a city. The Act provides for the establishment of towns and indicates requirements before such towns are proclaimed but these are not municipal administrative units. Generally an area is proclaimed as a town to bring into action certain provisions relating to rating and building requirements. Before a municipality can petition for a town to become a city, the town must have had, for five years before the petition, an average population of not less than 20 000.

Other than this population requirement for a city there are no provisions, such as exist in some of the other states, for enlarging or diminishing the status of municipalities to accord with increasing or decreasing population.

FINANCE

Introduction

For local government purposes Tasmania is divided into 49 areas, comprising 46 municipalities and the Cities of Hobart, Launceston and Glenorchy. There are no unincorporated areas.

Local government finance statistics in Tasmania are compiled by the Australian Bureau of Statistics from annual local government accounts. Each local government area is required to submit its accounts annually to the Auditor-General in pursuance of section 329 of the *Local Government Act 1962*; copies of these accounts are also made available to the Bureau.

Accounts are compiled by all municipalities except Kingborough on a cash receipts and payments basis, and two basic types of accounts are distinguished, namely revenue and loan accounts. The Cities of Hobart, Glenorchy and Launceston and the Municipality of Kingborough submit accounts on an income and expenditure basis but they are analysed to show cash receipts and payments to assist comparison with other local government areas.

The term 'local government' is employed only in relation to the municipalities and city corporations. Details of semi-government authorities concerned with water supply appear in a later section of this chapter; such authorities provide bulk water but reticulation and sale to householders remain local government functions. Since 1961 the Metropolitan Water Board has incurred loan debts which, under earlier arrangements, would have been entered as the water loan debts of Hobart, Glenorchy, Clarence and Kingborough local government authorities.

Business Undertakings

The classification 'business undertakings' is used in Australian local government finance statistics to include municipal tram and bus services, municipal electricity supply (generation or distribution), municipal water and sewerage

schemes, municipal abattoirs, etc. In Tasmanian local government finance statistics, electricity supply ceased to appear as from 1948-49 (the Hydro-Electric Commission is now the sole supplier). Municipal tram and bus services ceased to appear as an item in 1955-56. The Metropolitan Transport Trust acquired the city transport services operating in Hobart, Launceston and Burnie some years ago. Consequently, the only activities under the heading of municipal 'business undertakings' in current Tasmanian statistics relate to water supply, sewerage and abattoirs.

Sources of Revenue

There are four main sources of local government revenue. These comprise rates, government grants, and charges for business undertakings and services.

Under the *Local Government Act* 1962, rates may be based on assessed annual value (i.e. the gross annual income, at the time of valuation, that the person owning the land might obtain by letting the land and its appurtenances to a tenant), unimproved value (i.e. value of land only), the capital value (i.e. value of land plus improvements), or upon a composite value incorporating the unimproved value plus some arbitrary proportion of the value of improvements.

In Tasmania, it has been usual for rates to be based on annual values despite isolated and unsuccessful campaigns in favour of taxing on unimproved value only. In estimating annual value, the valuer is taking into account not only the land but also the improvements (e.g. buildings) so there is, in fact, a close relationship between movements in the total capital value of any property and movements in its assessed annual value. The *Land Valuation Act* 1971 consolidated and amended the law relating to land valuation.

System of Valuation

The valuation of property is carried out by a State Government authority, the Land Valuation Branch; its valuations form the basis of two distinct taxes: (i) land tax collected by the State; and (ii) rates collected by local government authorities on the basis of assessed annual values.

Until 1975-76, land tax was based on the unimproved value of land. The *Land Valuation Act* 1971 set up the mechanism by which the basis could be changed to 'land value', being the capital value of the land in its present state but excluding the value of buildings and other artificially established improvements. For a complete definition of 'land value', reference should be made to the Act.

Since it is impossible to completely revalue all properties within the State in the course of a single year, revaluation is carried out on a rotational basis, e.g. St Leonards, New Norfolk and Lilydale were valued in 1971 and again in 1976.

Tasmania is the only state which uses the *assessed annual value* system of rating properties in all local government areas. In New South Wales and Queensland, site value rating is used almost exclusively and the majority of all local government authorities in Australia make use of the site value of property in determining at least part of their rates. Under site value rating, rates are based on the site (unimproved land) value of properties only, whereas under the assessed annual value system of rating, rates are based on a notional earning capacity of properties.

The following table shows the total value of all properties in the State and gives individual details for local government authorities with a total capital value exceeding \$25m at 1 July 1976:

Value of Properties: Principal Local Government Authorities at 1 July
(\$ Million)

Local government authority	Year of revaluation (a)	Total capital value		Assessed annual value		Unimproved value	Land value
		1975	1976	1975	1976	1976	1976
Hobart	1974	523.66	543.17	36.63	38.13	166.72	169.94
Launceston ..	1975	295.62	302.16	24.23	24.64	97.19	97.41
Clarence .. .	1974	262.08	269.23	16.03	16.47	81.91	83.82
Glenorchy .. .	1973	219.81	224.89	16.56	16.89	58.63	59.24
Burnie .. .	1975	153.74	159.09	9.60	9.98	49.74	59.99
St Leonards ..	1976	62.27	131.18	4.33	8.94	29.97	32.74
Devonport .. .	1972	114.94	122.01	7.19	7.54	37.32	39.75
New Norfolk ..	1976	50.36	97.68	2.73	5.34	14.93	18.22
Kingborough ..	1972	67.24	72.22	4.15	4.48	19.27	20.42
Lilydale .. .	1976	28.20	69.60	1.86	4.47	17.94	20.73
Beaconsfield ..	1974	67.35	69.56	4.19	4.31	16.14	20.48
Ulverstone .. .	1974	61.37	64.12	3.48	3.63	15.22	23.43
Latrobe .. .	1976	31.07	53.75	1.60	2.80	13.35	20.96
Wynyard .. .	1972	48.11	49.42	2.75	2.81	10.54	16.97
Circular Head ..	1973	46.28	46.77	2.37	2.40	8.24	20.35
Deloraine .. .	1976	25.32	41.33	1.24	1.97	5.87	16.70
George Town ..	1972	36.34	37.88	2.30	2.40	5.93	7.21
Longford .. .	1974	32.20	32.51	1.74	1.76	6.20	14.17
Oatlands .. .	1976	21.57	32.18	0.90	1.36	5.82	14.63
Westbury .. .	1973	28.42	29.19	1.48	1.53	5.18	11.07
Huon .. .	1975	26.51	26.78	1.27	1.29	6.30	8.61
King Island ..	1976	15.98	26.43	0.78	1.30	6.19	12.59
Remaining municipalities ..	..	351.71	401.36	18.06	20.92	85.07	142.65
Total Tasmania	..	2 570.15	2 902.51	165.47	185.36	763.67	932.08

(a) Latest revaluation effective from 1 July of year shown.

The table that follows shows the value of property in Tasmania over the last 10 years:

Total Property Valuation in All Local Government Areas at 1 July
(\$ Million)

Year	Total capital value	Unimproved value	Assessed annual value	Year	Total capital value	Unimproved value	Assessed annual value	Land value
1967 ..	1 350.74	350.81	79.34	1972 ..	1 874.17	483.44	114.86	} n.a. 932.08
1968 ..	1 452.38	374.49	86.35	1973 ..	1 995.91	511.39	124.61	
1969 ..	1 571.96	411.72	95.57	1974 ..	2 317.03	619.19	147.41	
1970 ..	1 691.37	441.88	102.98	1975 ..	2 570.15	696.26	165.47	
1971 ..	1 768.07	454.47	107.78	1976 ..	2 902.51	763.67	185.36	

Rates

Revenue for local government authorities in Tasmania is derived principally from rates levied at so much in the dollar on the assessed annual value. Receipts from rates have not for sometime met the expense of the increasing range and cost of the services supplied. Government grants are a recognised means of increasing the revenue of municipalities.

Grants to Local Government

Background

In recent years, major developments have occurred in relation to the finances of local government in Australia. The combination of rate structures reaching 'saturation' levels and rising costs of operation, together with increased responsibilities for facilities in areas such as recreation, health, roads, water and sewerage, etc., has led local government throughout Australia to press for general revenue grants from governments to supplement revenue raised from rates. This demand has arisen despite the increasing assistance given in the form of specific purpose grants from both state and Federal Governments.

The initial major change in local government financial operations came in 1973, when the Federal Government amended the *Commonwealth Grants Commission Act* to enable the Commission to recommend equalisation grants to local government. Procedures were thereby created which provided direct access by local government to the financial resources of the Federal Government. For 1974-75 and 1975-76, the amounts recommended by the Grants Commission for Tasmanian authorities were \$1 669 000 and \$2 292 000 respectively; these were general purpose grants to which no conditions were attached.

Following the December 1975 Federal Elections, a round of Premiers' Conferences was held early in 1976, at which details were announced for a revised scheme of assistance to local government. Under this scheme, a fixed percentage of federal personal income tax is set aside for distribution through the state governments to local government, the money to be allocated according to two distinct assessments:

- (i) a per capita grant to each local government body; and
- (ii) an equalisation grant to be distributed to municipalities through State Grants Commissions.

With the establishment of this scheme, the responsibility for recommendation of equalisation grants to local government was transferred from the Commonwealth Grants Commission to the control of State Grants Commissions, which were to be established by legislation. In Tasmania, the *State Grants Commission Act* received Royal Assent in June 1976, and a Commission comprising three members was established. This Commission's initial annual report to the Treasurer (as required under the Act) was tabled in the latter part of 1976.

Conditions of Operation

For 1976-77, the Federal Government allocated \$140m to the states for distribution to local government. This figure was related to personal income tax collections in 1975-76 to derive a percentage figure of 1.52 per cent. In future years this percentage figure will be applied to the amount of personal income tax collected in the immediately preceding year in order to determine the amount of general purpose assistance to be allocated for distribution to local government.

The distribution of the amount of \$140m between the states was made on a percentage basis recommended by the Commonwealth Grants Commission. The following state percentages and amounts were derived under the formula determined by that Commission:

Federal Grants to Local Government, 1976-77

State	Percentage of total	Amount of grant (\$'000)
New South Wales	36.6345	51 289
Victoria	25.2845	35 398
Queensland	17.3016	24 222
South Australia	8.5178	11 925
Western Australia	9.4015	13 162
Tasmania	2.8601	4 004
Total	100.0000	140 000

A condition under the new scheme is that each state distribute not less than 30 per cent of its annual allocation to all local government authorities on primarily a population basis, but account may also be taken of the area of the authority, population density or any similar factor approved by the Federal Government. The remainder of a state's grant is placed under the control of the State Grants Commission for distribution to local government authorities according to the principle of relative financial need.

For 1976-77, the Tasmanian Government determined that, of its total allocation of \$4.0m, the proportion to be distributed on a per capita basis would be 30 per cent, or \$1.2m, and the balance (\$2.8m) would be placed under the control of the State Grants Commission for the making of equalisation grants to municipalities.

Principles for Determining Equalisation Grants

The functions of the State Grants Commission are largely covered by Section 9 of the Act, which sets down certain broad principles to be followed. The fundamental guideline for the determination of grants is set out in Section 9 (2) (d) of the Act, which requires the Commission to ensure that, as far as possible, the grant recommended for a municipality will be an amount which, providing it makes a reasonable rating effort, will enable it to provide services at about the same standard as other municipalities of a similar type. This is viewed as the principle of relative financial need. In determining the grants necessary to equalise the fiscal capacity of municipalities, the Commission has adopted the principle that a grant must basically reflect differences between:

- (i) the revenue-raising capacity of municipalities; and
- (ii) the relative cost of providing services (expenditure differentials).

The Commission has adopted methods to identify and measure those factors which affect relative rateable capacity and the cost of functioning at a given standard. To the extent to which a municipality is below the standard or faced with higher costs, a prima facie case exists for an equalisation component.

The two components of a grant, namely, the revenue and expenditure differentials, are regarded by the Commission as having equal weights. The allocation of grants for 1976-77 was decided upon the following basis: if the total funds of \$4m were considered to be a part of the one distribution, the Commission would allocate \$2m each for revenue and expenditure disability distributions, however, the per capita amount of \$1.2m is excluded from the amount to be distributed by the Commission, and this component is regarded as being of a revenue nature; this meant that the allocation of grants would be as follows:

	\$
(i) revenue disabilities	800 000
(ii) expenditure disabilities	2 002 000
	Total 2 802 000

The Commonwealth Grants Commission's only role under the new scheme is to advise of the appropriate percentage distribution of federal personal income tax between the states, and, in the initial period, to provide advice to the state bodies on methods for calculating grants to municipalities.

Financial Assistance by Grants Commissions

The following table provides details of financial assistance to Tasmanian municipalities from distributions under the Commonwealth Grants Commission for 1974-75 and 1975-76, and those under the new scheme for 1976-77:

Federal Government Financial Assistance to Local Government in Tasmania (a)

Local government area	Commonwealth Grants Commission (b)				Revised scheme (c)			
	1974-75		1975-76		1976-77			
	Amount	Per head of population (d)	Amount	Per head of population (d)	Per capita grant	Equalisation grant	Total grant	Per head of population (d)
	(\$'000)	(\$)	(\$'000)	(\$)	(\$'000)	(\$'000)	(\$'000)	(\$)
Hobart .. ..	..	..	105	2.06	156	108	264	5.21
Glenorchy	106	2.48	200	4.69	131	199	330	7.76
Clarence	220	5.46	262	6.31	124	308	432	10.20
Brighton	15	4.30	28	6.71	11	40	51	10.19
Kingborough	46	3.72	76	5.74	38	91	129	9.29
New Norfolk	66	6.32	66	6.39	32	69	101	9.82
Sorell	26	6.50	50	11.90	12	63	75	17.21
Bothwell	4	4.82	9	10.71	2	16	18	21.62
Bruny	4	12.50	5	15.63	1	10	11	33.84
Esperance	17	5.20	22	6.92	9	28	37	11.74
Glamorgan .. ..	..	..	11	8.46	3	17	20	15.41
Green Ponds	6	6.82	7	7.95	2	17	19	22.37
Hamilton	13	3.44	34	9.04	11	49	60	16.99
Huon	24	4.97	32	6.60	13	50	63	12.88
Oatlands	10	4.57	13	5.91	6	24	30	13.49
Port Cygnet	12	5.83	15	7.28	5	26	31	15.24
Richmond	13	7.98	17	10.12	5	25	30	17.53
Spring Bay .. ..	..	..	18	10.59	5	28	33	18.75
Tasman	5	5.05	8	8.16	3	18	21	22.00
Launceston	130	3.82	138	4.12	101	110	211	6.38
Beaconsfield	50	4.27	70	5.73	36	75	111	8.83
Deloraine	30	6.22	37	7.68	14	43	57	11.83
Evandale	11	7.33	13	8.33	4	22	26	16.44
George Town	50	7.81	42	6.29	19	51	70	10.35
Lilydale	42	4.86	64	7.30	26	77	103	11.68
Longford	18	3.40	23	4.28	15	26	41	7.49
St Leonards	87	5.01	94	5.26	53	114	167	9.08
Westbury	19	3.59	30	5.55	15	33	48	8.61
Campbell Town	9	5.52	14	8.64	5	19	24	14.58
Fingal	27	8.54	32	10.39	9	39	48	16.54
Flinders	7	7.14	17	17.35	3	30	33	33.51
Portland	11	6.88	16	9.70	4	22	26	16.03
Ringarooma	22	9.24	30	12.99	7	35	42	18.57
Ross .. ..	..	..	5	9.09	1	12	13	24.51
Scottsdale	24	6.25	26	6.63	11	27	38	9.50
Burnie	94	4.73	100	5.05	61	139	200	10.21
Circular Head	56	7.11	80	10.19	24	95	119	15.30

Federal Government Financial Assistance to Local Government in Tasmania (a)—continued

Local government area	Commonwealth Grants Commission (b)				Revised scheme (c)			
	1974-75		1975-76		1976-77			
	Amount	Per head of population (d)	Amount	Per head of population (d)	Per capita grant	Equalisation grant	Total grant	Per head of population (d)
	(\$'000)	(\$)	(\$'000)	(\$)	(\$'000)	(\$'000)	(\$'000)	(\$)
Devonport	95	4.58	100	4.68	65	136	201	9.33
Kentish	23	4.97	30	6.54	13	41	54	13.08
King Island	30	10.83	32	11.59	9	43	52	18.77
Latrobe	22	4.13	28	5.10	16	33	49	8.72
Penguin	13	2.63	22	4.41	15	36	51	10.09
Ulverstone	56	4.74	63	5.26	35	84	119	9.75
Wynyard	54	4.85	60	5.22	33	82	115	9.87
Gormanston	4	9.30	5	12.20	1	10	11	27.82
Queenstown	45	9.13	63	12.91	15	74	89	18.90
Strahan	4	8.89	5	11.36	1	14	15	34.65
Waratah	11	5.53	20	9.80	6	31	37	17.99
Zeehan	38	7.36	55	10.60	14	63	77	14.75
Tasmania	1 669	4.17	2 292	5.66	1 202	2 802	4 004	9.83

(a) Excludes grants under the Regional Employment Development scheme and grants for specific purposes.

(b) Comprises equalisation grants as determined by the Commonwealth Grants Commission.

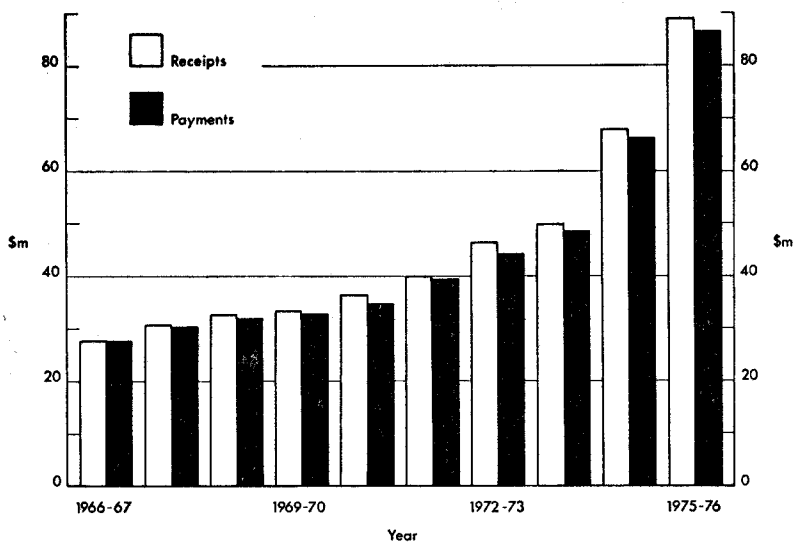
(c) Comprises: (i) grants to municipalities on a proportion of population basis; and (ii) equalisation grants as determined by the State Grants Commission.

(d) Figures are based on the populations of the municipalities at the beginning of each year.

Total Receipts and Payments

The following graph summarises receipts and payments over a ten-year period:

Local Government Authorities: Total Receipts and Payments



The following table shows total receipts and payments of the Tasmanian municipalities and cities for recent years.

Local Government Authorities
Total Receipts and Payments: All Funds
 (\$'000)

Year	Receipts			Payments			Surplus (+) or deficit (-)
	Revenue accounts (a)	Loan accounts (b)	Total	Revenue accounts	Loan accounts	Total	
1969-70	25 914	7 469	33 383	24 816	7 972	32 788	+ 595
1970-71	28 236	8 164	36 400	27 195	7 494	34 689	+1 711
1971-72	31 505	8 574	40 079	30 985	8 504	39 488	+ 591
1972-73	37 000	9 473	46 473	34 552	9 668	44 220	+2 253
1973-74 r	40 376	9 521	49 897	39 641	8 803	48 444	+1 453
1974-75 r	53 861	13 994	67 855	53 596	12 677	66 273	+1 582
1975-76	70 493	18 435	88 928	67 106	19 368	86 475	+2 453

(a) Includes grants from the Metropolitan Water Board to cover working expenses.

(b) Includes loan raisings, sales, capital grants received, etc.

Total Receipts: The following table highlights the various avenues available for funding Tasmanian local government activities:

Composition of Total Receipts of Tasmanian Municipalities
 (\$'000)

Source	1973-74 r		1974-75 r		1975-76	
	Amount	Per cent of total	Amount	Per cent of total	Amount	Per cent of total
Rates and licences—						
Ordinary services ..	16 978	34.0	22 330	32.9	27 157	30.5
Business undertakings ..	8 648	17.3	10 197	15.0	12 529	14.1
Total	25 626	51.4	32 527	47.9	39 686	44.6
Grants (a)—						
General purpose ..	..	..	1 669	2.5	2 292	2.6
Specific purpose—						
Ordinary services ..	3 503	7.0	7 309	10.8	12 703	14.3
Business undertakings	2 472	5.0	3 430	5.1	4 093	4.6
Total specific purpose	5 975	12.0	10 739	15.8	16 796	18.9
Total all grants ..	5 975	12.0	12 408	18.3	19 088	21.5
Revenue Fund receipts (b)—						
Ordinary services ..	7 156	14.3	7 947	11.7	10 194	11.5
Business undertakings ..	2 369	4.7	2 438	3.6	3 262	3.7
Total	9 526	19.1	10 385	15.3	13 456	15.1
Loan Fund receipts—						
Loans	8 490	17.0	12 260	18.1	15 870	17.8
Other receipts (c) ..	280	0.6	275	0.4	829	0.9
Total	8 770	17.6	12 535	18.5	16 699	18.8
Total receipts	49 897	100.0	67 855	100.0	88 928	100.0

(a) Comprises all grants; i.e. grants for recurrent and capital purposes.

(b) Excludes rates and grants which are shown separately.

(c) Comprises sales of materials credited to loan funds, recoveries of capital expenditure, etc. but excludes capital grants which are included in the total grants figures.

Rate Collections

The following table shows details of the rates collected in Tasmania for the latest three-year period available:

Rates Received (a) by Local Government Authorities
(\$'000)

Rate	1973-74 r	1974-75	1975-76
Ordinary services (b)—			
General	7 969	10 712	13 427
Street lighting	226	230	290
Road	5 197	6 790	7 939
Health	502	r 614	249
Sanitary and garbage	390	r 527	673
Recreation and reserves	1 205	1 649	712
Halls and community centres	113	106	467
Library	191	225	296
Fire brigade	247	374	2 024
Drainage	187	219	108
Other	111	r 168	208
Total	16 336	21 613	26 395
Business undertakings—			
Water	4 883	5 668	6 986
Sewerage	3 765	4 528	5 543
Total	8 648	10 197	12 529
Grand total	24 984	31 810	38 924
Percentage increase (c)	9.6	r 27.3	22.4

(a) Net of refunds.

(b) Where a single consolidated rate has been charged (e.g. Hobart and Launceston), the collection has been dissected between 'ordinary' and the two 'business undertakings' components but the 'ordinary' component has been entered, without further analysis as 'general'.

(c) Over previous year.

Revenue of Local Government Authorities

The biggest proportion of local government revenue fund receipts comes from rates (55 per cent in 1975-76) which are direct charges on owners of property.

After rates, the next most important sources of revenue fund receipts are: (i) government and semi-government grants; and (ii) charges for public works and services. The next table shows the total annual revenue fund receipts by all municipalities and cities, for a three-year period, classified according to source.

Local Government Authorities
Revenue Fund Receipts: Ordinary Services and Business Undertakings
Classified According to Source
(\$'000)

Source of receipts	1973-74 r	1974-75 r	1975-76
Ordinary services—			
Rates	16 336	21 613	26 395
Licences	641	717	762
Total rates and licences	16 978	22 330	27 157

Local Government Authorities
Revenue Fund Receipts: Ordinary Services and Business Undertakings
Classified According to Source—continued
 (\$'000)

Source of receipts	1973-74 r	1974-75 r	1975-76
Public works and services—			
Reserves, parks, etc.	650	718	881
Halls	168	112	160
Caravan parks	100	154	170
Cemeteries and crematoria	207	286	371
Other council properties	559	670	908
Private and other works	756	1 203	2 221
Parking	975	1 215	1 378
Other services	597	740	1 140
Total	4 012	5 099	7 230
Government and semi-government grants—			
Roads	2 327	3 119	4 281
Grants Commission . . . . .	..	1 669	2 292
Other (a)	896	3 601	7 865
Total	3 223	8 389	14 437
Other receipts (b)	3 145	2 849	2 964
Total ordinary services	27 357	38 667	51 787
Business undertakings—			
Water supply—			
Rates	4 883	5 668	6 986
Government and semi-government grants	1 784	2 189	2 436
Other	842	777	1 001
Total	7 510	8 634	10 422
Sewerage—			
Rates	3 765	4 528	5 543
Government and semi-government grants	217	371	479
Other	327	312	480
Total	4 309	5 211	6 502
Abattoirs (c)	1 201	1 349	1 781
Total business undertakings	13 019	15 194	18 706
Grand total	40 376	53 861	70 493
Percentage increase (d)	9.1	33.4	30.9

(a) Includes unemployment grants.

(b) Includes additions to sinking funds, interest earnings, net deposits, donations and tolls.

(c) Comprises fees charged, sales of products, etc.

(d) Over previous year.

Revenue Receipts, Summary

The preceding table does not show combined figures for all rates or government grants; totals for these items are included in the summary table which follows. For 1975-76, the percentage contributions of these items to total revenue receipts were as follows: rates, 55.2; government and semi-government grants, 24.6; ordinary services, 10.3; business undertakings, 4.6; licences, 1.1; and other receipts, 4.2 per cent.

Revenue Fund Receipts: Ordinary and Business Undertakings
('\$000)

Year	Rates (net)	Licences	Govt and semi-govt grants	Business under- takings (a)	Ordinary services (a)	Other receipts	Total receipts
1970-71	18 533	175	4 003	1 541	2 963	1 021	28 236
1971-72	20 257	479	4 989	1 706	2 877	1 198	31 505
1972-73	22 790	581	6 931	2 112	3 002	1 585	37 000
1973-74 r .. .	24 984	641	5 224	2 370	4 012	3 145	40 376
1974-75 r .. .	31 810	717	10 949	2 438	5 099	2 849	53 861
1975-76	38 924	762	17 352	3 262	7 230	2 964	70 493

(a) Excludes rates and grants which are shown separately.

Revenue Fund Payments by Local Government Authorities

The following table shows annual payments by local government authorities from revenue funds:

Local Government Authorities
Revenue Fund Payments: Ordinary Services and Business Undertakings
Classified According to Service
('\$000)

Payments for—	1973-74 r	1974-75 r	1975-76
Ordinary services—			
General administration	3 604	4 831	5 797
Loan charges—Interest	2 694	3 200	3 763
Redemption	2 089	2 257	2 447
Sinking fund contributions ..	195	197	223
Total	4 978	5 654	6 433
Public works and services—			
Recreational facilities and reserves ..	2 429	4 889	6 524
Halls and community centres	409	608	817
Roads, bridges and street construction ..	8 336	11 964	14 798
Garbage, sanitary, etc.	1 067	1 563	1 916
Health and welfare	600	830	1 077
Street lighting	523	597	646
Parking	485	715	898
Private and other works	539	919	1 629
Other	1 095	1 435	2 085
Total	15 482	23 521	30 390
Grants	967	1 341	1 571
Other payments	1 652	2 595	3 772
Total ordinary services	26 682	37 942	47 963
Business undertakings—			
Water supply—			
Loan charges—Interest	901	929	989
Redemption	797	911	709
Sinking fund contributions	26	27	29
Total	1 724	1 866	1 727
Other payments (a)	5 847	7 227	9 011
Total water supply	7 570	9 093	10 738

Local Government Authorities
Revenue Fund Payments: Ordinary Services and Business Undertakings
Classified According to Service—continued
 (\$'000)

Payments for—	1973-74 <i>r</i>	1974-75 <i>r</i>	1975-76
Sewerage—			
Loan charges—Interest	1 664	1 797	2 317
Redemption	747	858	871
Sinking fund contributions	66	73	90
Total	2 476	2 728	3 278
Other payments (<i>b</i>)	1 916	2 539	3 517
Total sewerage	4 391	5 267	6 795
Abattoirs—			
Loan charges—Interest	49	52	62
Redemption	28	28	30
Sinking fund contributions	10	10	12
Total	87	91	104
Other payments (<i>b</i>)	911	1 203	1 506
Total abattoirs	998	1 294	1 610
Total business undertakings ..	12 959	15 654	19 144
Grand total	39 641	53 596	67 106
Percentage increase (<i>c</i>) ..	14.7	35.2	25.2

(*a*) Comprises grants paid to semi-government authorities (principally the Metropolitan Water Board), working expenses, capital expenditure out of revenue fund and sundry payments.

(*b*) Comprises working expenses, capital expenditure out of revenue fund and sundry payments.

(*c*) Over previous year.

Launceston, Burnie, Devonport and Campbell Town operate municipal abattoirs; other abattoirs in Tasmania are operated by the private sector.

The next table gives a summary of local government revenue fund payments:

Revenue Fund Payments: Ordinary Services and Business Undertakings
 (\$'000)

Year	Adminis- tration (<i>a</i>)	Loan charges			Other payments			Total
		Interest (<i>b</i>)	Redemp- tion (<i>c</i>)	Sinking fund contribu- tions	Business under- takings	Roads, streets, bridges	Other	
1970-71 ..	2 544	4 149	3 059	256	5 989	5 551	5 648	27 195
1971-72 ..	2 798	4 548	3 106	269	6 434	7 096	6 735	30 985
1972-73 ..	3 074	4 918	3 322	281	7 253	8 042	7 664	34 552
1973-74 <i>r</i> ..	3 604	5 307	3 660	297	8 673	8 336	9 765	39 641
1974-75 <i>r</i> ..	4 831	5 977	4 055	308	10 969	11 964	15 493	53 596
1975-76 ..	5 797	7 131	4 057	354	14 035	14 798	20 934	67 106

(*a*) Administration charged to ordinary services only; includes interest on bank overdraft for 1970-71.

(*b*) From 1971-72 figures for interest include interest paid on bank overdraft and are not directly comparable with earlier years.

(*c*) Includes redemption from sinking fund.

From the previous table it can be seen that over a six-year period, loan debt charges as a percentage of total payments have fallen from 27.4 per cent to 17.2 per cent.

The Beaconsfield Municipality is served by the West Tamar Water Supply Scheme, which the Municipality maintains and manages as agent for the Rivers and Water Supply Commission. All debt in the municipality in respect of water supply became the responsibility of the Commission on 1 July 1960; interest and principal repayments to the Commission on loans raised for the purpose of this water supply have been included in 'Water supply—Other payments' in the first table in this sub-section.

Loan Receipts, Payments and Debt

At 30 June 1976 the aggregate loan debt of all local government authorities was \$109 654 600, of which only \$4 453 600 (i.e. 4.1 per cent) was in respect of debt due to the State Government. The principal Tasmanian sources of loans for local government authorities are banks, superannuation and various trust funds, and insurance companies. The Cities of Hobart and Launceston also raise loans by public issues.

The next table shows the loan account receipts of all local government authorities:

Local Government Authorities: Loan Account Receipts
(\$'000)

Particulars	1971-72	1972-73	1973-74	1974-75	1975-76
Loan raisings for—					
Sewerage	2 418	3 070	2 590	4 871	6 607
Road, street and bridge construction	2 025	2 065	2 564	2 449	3 277
Water supply	618	574	766	831	1 236
Recreational facilities	823	614	830	712	1 392
Other	1 377	1 829	1 823	3 397	3 358
Total raisings	7 260	8 151	8 574	12 260	15 870
Government and semi-government grants	900	917	668	1 459	1 736
Other receipts (a)	414	405	279	274	829
Total receipts	8 574	9 473	9 521	13 994	18 435

(a) Includes recoveries of capital expenditure, sales of materials credited to loan funds, contributions from the private sector credited to loan funds, etc.

The next table shows details of payments from the loan accounts of all local government authorities:

Local Government Authorities: Payments from Loan Accounts
Classified According to Purpose
(\$'000)

Purpose	1971-72	1972-73	1973-74	1974-75 r	1975-76
Water	1 587	1 118	1 145	1 041	2 112
Sewerage	2 609	3 389	r 2 487	4 229	7 596
Drainage	336	432	351	448	460
Road, street and bridge construction	1 971	2 179	2 462	2 751	3 469
Recreational facilities	879	681	1 108	1 018	1 871
Halls and community centres	144	132	377	968	1 682
Other	977	1 737	r 873	2 224	2 179
Total	8 504	9 668	r 8 803	12 677	19 368
Percentage increase (a)	13.5	13.7	r - 8.9	44.0	52.8

(a) Over previous year.

The amount that any local government authority can raise is governed by:

- (i) the difficulty in finding willing lenders;
- (ii) the fact that the approval of the State Treasury is required; and
- (iii) the ability of an authority to repay its debt: the *Local Government Act 1962* restricts the total indebtedness of an authority to ten times its average annual income for the preceding three financial years. With the present level of interest rates, such a level of indebtedness is obviously not practicable.

The following table shows, in summary form, loan raisings, loan debt and sinking funds:

Local Government Authorities: Loan Raisings, Loan Debt and Sinking Funds
(\$'000)

Year	Loan raisings during financial year			Loan debt at 30 June			Total of sinking funds at 30 June (c)
	From State Government (a)	From other sources (b)	Total	To State Government	To other creditors	Total	
1970-71	179	6 784	6 964	1 052	74 826	75 878	2 162
1971-72	50	7 210	7 260	1 063	78 844	79 907	2 451
1972-73	78	8 074	8 151	1 130	83 652	84 781	2 788
1973-74	101	8 473	8 574	1 187	88 579	89 766	3 060
1974-75 r .. .	1 830	10 430	12 260	2 937	94 928	97 865	3 367
1975-76	1 574	14 297	15 870	4 454	105 201	109 655	3 766

(a) These advances were from the State Treasury direct, and exclude those from authorities such as the Housing Department and the Metropolitan Transport Trust.

(b) Includes advances from the Housing Department and the Metropolitan Transport Trust.

(c) Sinking funds maintained by municipalities and cities for debt redemption purposes.

Source of Loan Funds

It can be seen from the preceding table that the local government loan debt includes only a small liability in respect of advances made by the State Treasury. However, the proportion of total debt owed to the State Government has increased in recent years due to arrangements under the National Sewerage Program, whereby the Federal Government has made advances to the State. These funds have then been loaned by the State Government to local government authorities.

Debt owed to State authorities (but not directly to the Treasury) has also increased in recent years, principally due to co-operation between individual municipalities and the State Housing Department. In planning the establishment of large housing estates, the Housing Department has been concerned with the provision of certain essential services (e.g. water and sewerage); where such services have required capital expenditure by a municipality, the Department has made some loan funds available.

Instalment Debentures

Much of the debt of the municipalities is in the form of instalment debentures which involve equal periodic payments (usually half-yearly); such payments are allocated to redemption and interest in changing proportions as the loan approaches maturity.

Employees of Local Government Authorities

The following table shows total employees of local government authorities over a five-year period. The number of employees of individual authorities ranges from over 500 persons to as low as one person.

Local Government Authorities: Persons Employed (a) at 30 June

Particulars	1972	1973	1974	1975	1976 (b)
General administration—					
Males	537	529	543	558	479
Females	221	222	235	290	283
Persons	758	751	778	848	762
All other services—					
Males	2 442	2 152	1 957	2 807	1 956
Females	20	37	29	165	156
Persons	2 462	2 189	1 986	2 972	2 112
Total—					
Males	2 979	2 681	2 500	3 365	2 435
Females	241	259	264	455	439
Persons	3 220	2 940	2 764	3 820	2 874

(a) Comprises permanent and temporary employees, including persons employed on local government work programs financed by Federal Government unemployment relief grants; part-time employees are excluded.

(b) The reduction in the number of 'General administration' personnel is due to a reassessment of the distinction between administration and 'All other services' classifications. Figures for 1976 are not strictly comparable with earlier years.

WATER SUPPLY AND SEWERAGE

Water supply and sewerage were once exclusively the responsibility of the cities and municipalities; two semi-government authorities, the Metropolitan Water Board and the Rivers and Water Supply Commission, now operate bulk supply schemes, piping water for distribution by the local government authorities in the Hobart and Launceston areas, and directly to certain industrial consumers. These authorities and their functions are described below.

Metropolitan Water Board

The overall control of water supply in Hobart, Clarence, Glenorchy and Kingborough is vested in the Metropolitan Water Board, but the four local government authorities retain primary responsibility for reticulation and sale to consumers. The Board has a large pumping station and treatment plant at Bryn Estyn on the Derwent, pipeline capacity being 136 megalitres per day. Before the Board came into operation in 1962, the four metropolitan local government authorities had their own supply schemes (e.g. Hobart was supplied from Lake Fenton and Mount Wellington); these schemes still operate but the Board's pumping works based on the Derwent now give an assured supply.

The Board also controls the Southern Regional Water Supply Scheme which draws water from the Derwent at Lawitta to supply Hobart's eastern shore suburbs. On the eastern shore, the Board has now extended its service to the towns of Cambridge, Midway Point, Sorell, Seven Mile Beach, Lauderdale and Rokeby, while western shore extensions serve Margate, Snug and Howden.

Financial Relationship

Under the *Metropolitan Water Board Act 1961*, the four metropolitan local government authorities no longer borrow money for metropolitan water works, but are provided with the necessary capital by the Board which obtains its funds from private lenders and the State Loan Fund, the local authorities in turn being required to make revenue contributions to the Board. The effect of this arrange-

ment can be seen in State local government loan debt tables where the debt in respect of water shows only very minor annual increases; in effect, the expenditure of the four metropolitan local government authorities for water works undertaken since 1961 is reflected in the debt of the Board and not in debts of the municipalities. At 30 June 1976 the loan debt of the Board to the State Treasury was \$17.60m and to other lenders \$8.29m.

The financial relationship between the Board and the four metropolitan local government authorities is summarised in the following table:

Metropolitan Water Board: Income and Expenditure
('\$000)

Particulars	1971-72	1972-73	1973-74	1974-75	1975-76
INCOME					
Municipal contributions—					
Hobart	788	959	1 202	1 392	1 701
Glenorchy	504	595	717	806	953
Clarence	517	592	697	750	942
Kingborough	98	114	133	150	192
Special consumers	352	351	385	315	302
Direct earnings, Southern Regional Scheme	279	353	324	367	473
Other revenue	82	71	92	142	215
Total	2 620	3 035	3 550	3 921	4 778
EXPENDITURE					
Reimbursement of working expenses—					
Hobart	372	390	414	542	729
Glenorchy	267	270	299	406	483
Clarence	144	146	145	194	190
Kingborough	46	53	67	80	88
Bulk supply, operation costs	463	673	639	733	972
Administrative expenses	86	83	101	141	147
Interest	1 161	1 254	1 300	1 452	1 684
Depreciation	323	346	369	411	449
Total	2 862	3 216	3 334	3 960	4 742

The preceding table excludes capital contributions, these are shown in the next table:

Metropolitan Water Board: 'Capital Contributions to Southern Local Government Authorities
('\$000)

Particulars	1971-72	1972-73	1973-74	1974-75	1975-76
Hobart—					
Construction and improvement ..	317	244	183	202	382
Loan redemption and conversion ..	43	26	33	86	38
Total	359	270	215	288	420
Glenorchy—					
Construction and improvement ..	250	100	121	113	356
Loan redemption and conversion ..	153	124	155	178	43
Total	403	224	276	291	399
Clarence—					
Construction and improvement ..	261	50	44	69	42
Loan redemption and conversion ..	45	47	49	94	43
Total	306	97	94	163	85

**Metropolitan Water Board: Capital Contributions to Southern
Local Government Authorities—continued**
(\\$'000)

Particulars	1971-72	1972-73	1973-74	1974-75	1975-76
Kingborough—					
Construction and improvement ..	125	81	93	278	167
Loan redemption and conversion ..	12	13	13	52	23
Total	137	94	106	331	190
Total—					
Construction and improve- ment	953	475	441	662	947
Loan redemption and con- version	252	210	250	410	147
Grand total	1 205	685	691	1 073	1 094

The Board makes capital contributions to the four local government authorities for: (i) construction and improvement of their water works; and (ii) redemption of their water debt raised prior to creation of the Board. The Board finances these capital contributions by: (i) borrowing from the State Government; (ii) borrowing from the public; and (iii) application of internal funds, e.g. depreciation funds. The cost of servicing loans, raised by the Board to meet local government requirements, is met from revenue contributions by the four local government authorities.

Capital Expenditure

Funds raised by the Board for capital purposes in 1975-76 were \$1 460 000 made up of \$400 000 from State Loan Funds and \$1 060 000 from external borrowings. Capital expenditure during the year included: \$156 000 for boosting the Southern Regional Water Supply; \$110 000 and \$55 000, respectively, for standby pumps and an additional travelling screen at Bryn Estyn and \$947 000 for municipal reticulation systems.

Rivers and Water Supply Commission

Introduction

The *Water Act* 1957, proclaimed as from 1 September 1958, conferred on the Rivers and Water Supply Commission all powers which had been previously exercised by the Water, Sewerage and Drainage Board. The Commission exercises a general control over the utilisation of the State's water resources and has specific functions in relation to local government authority water, sewerage and drainage schemes. It also operates the North Esk Regional Water Supply, West Tamar Water Supply, Prosser River Supply, Togari Water Supply and Cressy-Longford Irrigation Scheme. (Details relating to the last two schemes appear in the chapter 'Land Use and Agriculture'.)

Relations with Local Government Authorities

The Commission examines all proposed municipal water supply and sewerage schemes before construction commences to ensure that the schemes are economically sound. (Schemes proposed by the three cities, Hobart, Launceston and Glenorchy are exempt from examination by the Commission.) If a scheme is considered to be beyond the financial resources of the local authority, the Commission may recommend to the Minister for Lands and Works that a subsidy be paid. Such assistance is payable where investigations show that the revenue which a council might reasonably be expected to raise from rates and other charges is not sufficient to meet the annual loan charges and expenditure on maintenance, operation and

administration. In determining the amount of financial assistance payable to any municipality, the Commission takes account of the maximum revenue which that municipality might reasonably be expected to raise from rates and other charges. An annual revenue requirement for each subsidised scheme is determined. This is reviewed from time to time to take account of increases in annual values and of the capacity of ratepayers to contribute to the annual costs of water and sewerage schemes.

Regional Schemes

North Esk Regional Water Supply: The scheme, managed by the Commission, serves portions of the municipalities of Evandale, George Town, Lilydale, St Leonards and Westbury. In addition the scheme provides water for industrial purposes to Bell Bay. Total income from the scheme during 1975-76 was \$615 700 which included sale of water to: (i) municipalities, \$386 000; (ii) industrial users, \$173 000, and (iii) wayside consumers, \$12 000. Total expenditure for the year amounted to \$590 000. At 30 June 1976, capital cost of the scheme amounted to \$5.3m. The new water treatment plant at Chimney Saddle, capable of handling 32 million cubic metres per day, was opened in November 1976.

West Tamar Water Supply: This scheme was partially completed by the Beaconsfield Municipality but under the *West Tamar Water Act 1960* was vested in the Rivers and Water Supply Commission. The Act provided that the scheme should be managed and maintained by the Beaconsfield Council as agent for the Commission. The level of charges is determined by the Commission; Beaconsfield Municipality collects revenue on behalf of the Commission and is reimbursed for expenditure incurred. The scheme serves the western shore of the Tamar located in the Beaconsfield Municipality. Total income from the scheme during 1975-76 was \$274 000 while expenses of the scheme were \$393 000. Capital cost of the scheme to 30 June 1976 was \$2.5m.

Prosser River Scheme: This scheme supplements the water supply for the town of Orford in the Spring Bay Municipality and also supplies water to the Triabunna woodchip plant. During the year the water supply was extended to Shelley Beach. Income for the year 1975-76 was \$14 000, while expenses amounted to \$45 000. Capital cost of the Prosser River Scheme to 30 June 1976 amounted to \$437 000.

PLANNING AUTHORITIES

Town and Country Planning

Introduction

Before the federal Labor Government took office in 1941, governments (both state and federal) had shown little interest in town planning legislation. The war-time federal Labor Government encouraged activity in this field and in the period 1944-45 four states, including Tasmania, passed legislation with provisions largely based on existing British and New Zealand planning statutes.

Passed in 1944, the *Tasmanian Town and Country Planning Act* applied only to areas which were proclaimed as a result of municipal requests. The Act created the position of Town and Country Planning Commissioner. In 1962 the *Town and Country Planning Act* was repealed and its provisions incorporated in Part XVIII of the *Local Government Act 1962* under which the powers of the Commissioner were broadened so that, with the approval of the Minister, he could require any municipality to prepare a planning scheme.

The Governor appoints the Commissioner for a period not exceeding five years. The Commissioner is also a member of the following bodies: the Building Regulations and Nomenclature Boards; and the Co-ordination of Mapping Committee.

The Town and Country Planning Commissioner's office exercises statutory power in its own right but as from 1 July 1977 will form part of the new Department of Planning and Development. The Commission consists of the Commissioner, the Deputy Commissioner and a small staff.

Functions

Briefly the function of the Commissioner is to approve municipal planning schemes and to certify that sub-division proposals are in accordance with the schemes and meet the other requirements as laid down in the *Local Government Act 1962*. Also the Commissioner may require: (i) any municipality to prepare a planning scheme; or (ii) two or more municipalities to co-operate in the preparation of a master planning scheme; he is empowered to specify the completion date for such schemes. If the municipality fails to comply with the Commissioner's requests, then the Commissioner may prepare a scheme, the municipality meeting all preparation costs. A municipality may voluntarily prepare a planning scheme and submit it to the Commissioner for approval. If a scheme, prepared for an area to which a master plan applies, is submitted to the Commissioner for approval then the Commissioner, before giving a decision, must consult the authority which prepared the master plan. The Commissioner is also empowered to deal with objections to any planning scheme, including master plans prepared by a master planning authority.

Legal Procedure for a Planning Scheme

After the Commissioner gives provisional approval to a planning scheme the municipality must make public the scheme and place a copy in the municipal office for public inspection. Following public notification a three month period is allowed for objections to the scheme by: (i) any owner or occupier of rateable property in the area affected; (ii) health officers as defined in the *Public Health Act 1962*; (iii) the municipality, but only if the scheme has been altered or prepared by the Commissioner. Objections are lodged with the municipality which then forwards the objections, together with a statement of its opinion on them, to the Commissioner for his consideration. The Commissioner hears all the objections except in such cases where he considers the objection sound and the municipality agrees with it. The municipality may request and be entitled to a formal hearing.

If, because of the number and magnitude of objections to a planning scheme, the Commissioner considers it should be substantially modified, he may: (i) recommend that the Minister reject it; (ii) direct that a specified part of the scheme be revised. In both of these cases another scheme or part scheme has to be prepared and submitted to the Commissioner for provisional approval.

After all objections have been dealt with and the necessary modifications made to the plan, the Commissioner, with the Minister's approval, approves and seals the scheme. The sealed scheme is then publicly notified, placed before both Houses of Parliament and recorded in the central plan register.

Scope of Plan

A town and country planning scheme may deal with the following planning matters: (i) all roads (public and private), streets, footpaths, building lines and land adjacent to foreshores; the plan should cover both alteration to existing roads, streets, etc. and proposed new roads, streets, etc.; (ii) positioning of buildings and

the general nature and design of buildings; (iii) preservation of land for afforestation, recreation and open spaces; (iv) preservation of objects of historical or natural interest; (v) sewerage and drainage; (vi) lighting and water supply systems; (vii) specification of the use to which areas may be put; (viii) provision of amenities; (ix) stages of development; (x) ancillary or consequential works.

Sub-division Approvals

Except where the Commissioner authorises a council to deal with sub-division plans, all such plans submitted to the council must be forwarded to the Commissioner for approval. (At any time, a council's power to authorise sub-division plans without reference to the Commissioner may be withdrawn by him.) When considering sub-division plans the Commissioner may: (i) call for an amendment that either the council requires or the Commissioner considers the principles of town and country planning demand; or (ii) refuse consent to the council approval. The Commissioner is to ensure that areas for public use are retained along sea and lake shores and rivers and rivulets.

Proposed State Planning Commission

Legislation to provide for the establishment of a State Planning Commission with responsibility for the preparation of a State Strategic Policy Plan with powers to effect a co-ordination of development was passed by the House of Assembly late in 1975, and early in 1976 was referred to a Select Committee by the Legislative Council.

Tasmanian State Strategy Plan

A draft report on the plan was tabled in Parliament in March 1977. A summary of recommendations made, together with brief details of the objectives and functioning of the task force are included in Chapter 18.

Southern Metropolitan Master Planning Authority

Introduction

The Southern Metropolitan Master Planning Authority is responsible for planning the development of an area best defined broadly as a triangle based on Pontville (Brighton Municipality), Snug (Kingborough Municipality) and Seven Mile Beach (Clarence Municipality), which includes the City of Glenorchy and also those parts of Brighton, Kingborough and Clarence Municipalities which are likely, in the future, to experience urban expansion because of their proximity to Hobart.

Representation and Finance

The *Local Government Act* 1962 prescribes that each city shall have the right to appoint three representatives, and each municipality two representatives, to the authority. The authority is empowered to make contracts, accept trusts of properties for town planning purposes, make by-laws for domestic purposes and obtain a town planning contribution based on the assessed annual value of all rateable property.

In March 1973 the Hobart City Council petitioned to withdraw from the authority. At a meeting of the authority in April it was decided to: (i) recommend to member councils that the authority be continued; and (ii) advise the Hobart City Council that the authority was prepared to continue to meet Hobart's mapping requirements, subject to a satisfactory financial arrangement being agreed to. Hobart withdrew from the Authority in August 1973.

Functions of the Authority

The main functions of the Authority are: (i) the technical and legal preparation of a master plan for the prescribed area (the detailed planning nevertheless remaining the responsibility of each constituent municipality or city); (ii) the conduct of surveys and studies to facilitate the preparation of the master plan; and (iii) preparation of maps of the developed and developing parts of the metropolitan area.

The Master Plan

The Master Plan 1962 was put up for statutory exhibition for a compulsory period of three months. Following objections the Authority withdrew the plan and the State Government decided to undertake a full transportation study, the results of which became available late in 1964. An interim 'Town Planning Policies Map 1964' was issued as a guide to member councils in their detailed planning and to other authorities concerned with development in the Southern Metropolitan Area.

Strategy Plan

In March 1975 the State Planning Co-ordinator issued a brief to the Authority for the preparation of a Hobart Metropolitan Area Strategy Plan. This Plan was developed in conjunction with the preparation of the State Strategy Plan and presented alternative growth form strategies and an assessment of their planning implications for the metropolitan area. For the purposes of this Plan the functional metropolitan area was considered to include urban parts of the City of Hobart and the municipalities of New Norfolk, Richmond and Sorell which are not within the area under the authority of the Southern Metropolitan Master Planning Authority. It was intended that the Strategy Plan would form the basis for a Regional Structure Plan as required by the proposed Planning and Development Act.

Tamar Regional Master Planning Authority

The Tamar Regional Master Planning Authority was established in September 1969, following a petition to the State Government by the City of Launceston and the Municipalities of Beaconsfield, George Town, Lilydale, Longford and St Leonards. Westbury and Evandale, two essentially rural municipalities, became members in April 1974 to complete the membership of the natural region.

The Authority consists of three representatives from the Launceston City Council and two from each of the member municipalities. Financial support is given by the constituent councils, in proportion to the annual value of rateable property.

Initially, a consortium of town planning consultants was engaged to produce a preliminary report which was completed in mid-1971. This report formed the basis for the Regional Plan for the area, which was prepared by the Authority's staff. The aim of the constituent councils in the preparation of the Regional Plan was the unified promotion and development of the Tamar Valley region. The Plan was prepared under three principal objectives—planning, environmental and promotional.

The planning objective proposed four principal divisions aligned north to south along the Tamar and South Esk Rivers:

- (i) *Northern Tamar*—centred on the port of Bell Bay with the principal theme being the development of industrial potential and port facilities.

- (ii) *Central Tamar*—extending from Moriarty Reach to Dilston; to be promoted as a recreation and tourist area with the preservation of the existing scenic landscape character.
- (iii) *Southern Tamar*—centred upon Launceston with provision for the retention and further development of the City as the commercial and service centre of the region.
- (iv) *Esk Valley*—rationalisation of transport links and industries, and the promotion of the area's intensive agricultural potential.

The major regional planning policies were completed in 1974, and adopted by the constituent councils. During 1975 the final adopted policies were compiled into a strategic planning policy and submitted for Government approval.

In 1977 the State Government introduced a dollar for dollar assistance plan for the Authority. In return for this assistance the Authority will be required to undertake planning studies and administer rural subdivision controls delegated to it by the Town and Country Planning Commissioner. The subdivision powers will be administered within the context of a guideline policy handed down to the Authority by the Commissioner.

North-West Master Planning Authority

This Authority was constituted in February 1971 in accordance with provisions of the *Local Government Act 1962*. The eight member municipalities are Latrobe, Kentish, Devonport, Ulverstone, Penguin, Burnie, Wynyard and Circular Head. Constituent councils each have two members on the Authority. Finance is obtained from member municipalities in proportion to the annual value of rateable property.

Approximately 9 000 square kilometres in area and containing a population of some 88 000, the Authority's sphere of jurisdiction includes two interstate airports, three marine board port facilities, substantial industrial establishments with international markets, nine principal towns with two approaching city-status, and prime soil districts supporting livestock and vegetable production.

The fundamental objective of the Authority is to foster, co-ordinate, and promote the development of the region along sound economic and environmental lines. Under State legislation, it has the responsibility to prepare a statutory master plan for the region.

A firm of planning consultants undertook a comprehensive survey of the region, and an Outline Development Report was published in October 1973. Since then, feedback from the constituent councils, the public, special interest groups, and a 10-week seminar on regional planning conducted by the Burnie Adult Education Board has begun to crystallize thoughts towards strategy programs for the north-west region.

An initial policy adopted by the Authority was to inhibit further linear expansion along the coast and to focus development inwards from the existing urban nodes, with the rural landscape in between serving as punctuating relief. This has been schematically illustrated in an Outline Development Strategy Map and Report released in November 1974. The Authority has also endorsed the concept of Burnie being the cultural and arts centre for the north-west and west coast of Tasmania as a regional complement to the major facilities provided in Launceston. In addition, concerted support has been accorded the unique and ambitious 9 000-hectare Dial Regional Sports/Recreation Complex now being implemented in the central location of Penguin.

Chapter 5

PUBLIC FINANCE

FEDERAL AND STATE GOVERNMENT

Change in Relationship Since 1901

Prior to the establishment of the Commonwealth in 1901, the individual states exercised complete autonomy with respect to their raising of revenue and the manner in which this was spent. Due to developments since Federation, the states now have only limited ability to raise the money required for revenue and capital purposes. State revenue is now supplemented by substantial grants from the Federal Government and the raising of loans is under the control of the Australian Loan Council, a body set up under Federal legislation. The emergence of the Federal Government as the dominating influence in the financial transactions of the state governments can be traced to three events:

- (i) Under the Constitution the states surrendered the right to levy customs and excise duties, which passed exclusively to the Federal Government.
- (ii) Under the 1927 Financial Agreement, the Australian Loan Council became the borrowing agent for the states.
- (iii) During World War II, under the uniform tax scheme, the Federal Government became the sole authority levying taxes upon the income of persons and companies. (Introduction of new federal-state income tax sharing arrangements has given each state the right to impose a surcharge or grant a rebate on personal income tax levied in its State.)

The result of these changed relationships can be summarised as follows:

- (i) the Federal Government, with two votes plus a casting vote as against one vote for each of the states, exercises a substantial degree of control over the Australian Loan Council and consequently, over public investment in government securities;
- (ii) to carry out functions for which their revenue is inadequate, the states have become heavily dependent on the Federal Government for general and specific grants. The Federal Government is therefore placed in a position to exercise a substantial degree of control over the ordinary public expenditure of the states.

Principal Activities of the States

The Federal Constitution lists the matters over which the Federal Parliament has power to legislate. Some of those powers are given exclusively to the Federal Government (e.g. defence, customs and excise) but, in many matters, the Federal and State governments have concurrent powers, federal law prevailing where there is conflict. Matters other than those listed in the Constitution remain the concern of the states. Principal government activity at state level embraces education, health and welfare services, the development of internal resources, land settlement, soil conservation, maintenance of law and order and the provision of public utility services such as roads, electricity, public transport and water supply. Such activities are undertaken either by state departments or by statutory and

local government bodies created under state legislation. Apart from charges for services (where charges can be levied) the most obvious form of revenue for the discharge of these functions is state taxation but the Federal Government exercises a practical monopoly over the more lucrative tax sources (e.g. customs and excise, income tax, sales tax). A responsibility therefore rests on the Federal Government to supplement state revenues.

Federal Government Payments To or For Tasmania

Summary of Federal Government Payments

In the following sections, the main forms of Federal Government assistance are described; the following table shows the total annual payments to Tasmania from the Federal Government Consolidated Revenue Fund:

Federal Government Payments To or For Tasmania
(\$'000)

Particulars	1973-74	1974-75	1975-76
GENERAL PURPOSE FUNDS			
Financial assistance grants (a)	92 451	140 204	156 816
Special grants (Section 96) (b)	8 650	.. .. .	.. .. .
Capital grants	20 549	25 977	30 372
Total	r 121 650	r 166 181	187 188
SPECIFIC PURPOSE PAYMENTS			
Revenue payments—			
Payments under financial agreement—			
Interest on State debt	534	534	534
Sinking fund on State debt	2 044	2 141	2 100
Debt charges assistance	3 180	3 975	.. .. .
Universities	6 415	12 274	13 658
Colleges of advanced education	3 959	6 888	7 011
Technical and further education	117	426	1 087
Schools	1 958	5 912	9 327
Pre-schools and child care	78	1 017	1 720
Public hospitals (Medibank) .. .. .	.. .. .	.. .. .	31 000
Community health	121	528	1 265
School dental scheme	818	1 239	1 547
Unemployment relief	647	1 103	700
Regional employment development scheme .. .. .	.. .. .	534	1 521
Tasman Bridge disaster .. .. .	.. .. .	456	1 400
Assistance for local government .. .. .	.. .. .	1 669	2 292
Other	r 2 340	r 4 446	5 294
Total revenue payments	22 211	r 43 142	80 456
Capital payments—			
Universities	694	1 279	2 589
Colleges of advanced education	292	2 969	5 313
Technical training	689	471	887
Schools	2 527	6 091	4 477
Pre-schools and child care	285	1 177	1 764
Hospitals	140	1 500	2 090
Housing advances	16 000	26 220	22 220
Roads	13 950	18 585	20 097
Sewerage .. .. .	.. .. .	2 221	1 984
Tasman Bridge disaster .. .. .	.. .. .	5 544	16 300
Assistance to primary industry	2 046	2 569	3 354
Other	r 1 586	r 4 964	7 043
Total capital payments	38 209	73 590	88 118
Total specific purposes payments	60 420	r 116 732	168 574

Federal Government Payments To or For Tasmania—continued
(\$'000)

Particulars	1973-74	1974-75	1975-76
GENERAL AND SPECIFIC PURPOSE PAYMENTS			
Total payments (c)	r 182 069	r 282 913	355 762
Percentage increase	r 25.6	r 55.4	25.8

(a) Includes special financial assistance grants: 1973-74, \$1 207 000; 1974-75, \$8 333 000; 1975-76, nil.

(b) Actual payments plus or minus adjustment.

(c) This total cannot be identified as such in state accounts since part is taken into Consolidated Revenue Fund, part into Loan Fund, and the balance into Trust and Special Funds.

Financial Assistance Grants

The *Federal States Grants (Income Tax Reimbursement) Act* 1942 provided for grants to the states as compensation for vacating the field of income tax. Various formulae have been employed to calculate each state's grant, the principles of the present system dating from 1959. These involved annually increasing the grant by taking account of three factors: (i) increased state population; (ii) increased average wages; and (iii) a 'betterment' multiplier. This 'betterment' multiplier was a constant 1.2 per cent from 1965-66 to 1970-71; since 1971-72 it has been 1.8 per cent. When determining the 1975-76 grant, a reduction was made because of the transfer of responsibility for the Tasmanian Government Railways to the Commonwealth.

The calculation of the Tasmanian grant for 1975-76 illustrates the application of the formula: (i) formula grant (1974-75), \$131 871 370; (ii) adjustment due to the transfer of the Tasmanian Government Railways, \$10 700 000; (iii) percentage increase in Tasmanian population in year 1975, 0.98765; (iv) percentage increase in wages per person employed (1975-76 over 1974-75), 16.87252; (v) betterment factor, 1.8 per cent.

Calculated grant (1975-76):

$$(\$131\,871\,370 - \$10\,700\,000) \times 1.0098765 \times 1.1687252 \times 1.018 = \$145\,588\,964$$

The Federal Government adjusted the calculated grant by adding a special financial assistance grant of \$11 227 496 giving a total of \$156 816 460.

The following shows the amounts received as financial assistance grants from 1958-59:

Financial Assistance Grants (a): Receipts by Tasmania
(\$)

Year	Amount	Year	Amount	Year	Amount
1958-59 ..	14 539 428	1964-65	29 297 286	1970-71	67 087 841
1959-60 ..	21 826 000	1965-66	32 130 632	1971-72	71 673 202
1960-61 ..	23 960 360	1966-67	34 772 852	1972-73	79 497 850
1961-62 ..	25 671 238	1967-68	37 968 098	1973-74	92 450 561
1962-63 ..	26 616 104	1968-69	42 208 983	1974-75	140 204 526
1963-64 ..	27 626 296	1969-70	48 514 433	1975-76	156 816 460

(a) Referred to as tax reimbursement grants from 1942-43 to 1958-59.

Personal Income Tax Sharing with the States

Commencing with the financial year 1976-77, major changes are taking place in Federal and state financial relations. The Federal Government has introduced a

new scheme under which the states and local government will receive each year a fixed proportion of Federal personal income tax collections. This scheme replaces the financial assistance grants.

The revenue-sharing arrangements between the Federal Government and the states are being introduced over two financial years. Under Stage 1, which commenced in 1976-77, the Federal Government continues to be the sole Government imposing taxes on income but the states receive a specified proportion of the personal income tax collections made under Commonwealth legislation. Under Stage 2, which is expected to commence in 1977-78, the Stage 1 arrangements will continue but, in addition, each state will have the right to impose a surcharge or grant a rebate on personal income tax in its state. Any state surcharges or rebates will be collected or paid by the Federal Government on behalf of the states.

The new arrangements were settled between the Federal and State Governments after a series of Premiers' Conferences during the first half of 1976. Agreement was reached that the percentage figure to be used in determining the states' entitlements would be 33.6. This percentage was determined by relating actual financial assistance grants in 1975-76 of \$3 072.8 million to estimated personal income tax collection for 1975-76 of \$9 150.0 million.

In the event, Federal personal income tax collections were higher than the estimate, totalling \$9 219 million. Nevertheless, following representations by the states, the Federal Government indicated that the previously agreed to percentage of 33.6 would stand.

Special Grants (Section 96 of the Constitution)

Section 96 of the Constitution reads: 'During a period of ten years after the establishment of the Commonwealth and thereafter until the Parliament otherwise provides, the Parliament may grant financial assistance to any state on such terms and conditions as the Parliament thinks fit'.

The Commonwealth Grants Commission was established in 1933 and consists of three members on a part-time basis assisted by a full-time staff. In its third report (1936) it fixed upon the principle of financial need, which was expressed in the following terms: 'Special grants are justified when a state through financial stress from any cause is unable efficiently to discharge its functions as a member of the federation and should be determined by the amount of help found necessary to make it possible for that state by reasonable effort to function at a standard not appreciably below that of other states'. In arriving at its recommendations, the Commission each year makes a detailed comparison of the budget results of the claimant states with those of the non-claimant states.

Prior to the passage of the federal *States Grants Act* 1959, the claimant states had been Tasmania, W.A. and S.A. The new formula evolved under the *States Grants Act* 1959 had been devised partly in reaction to a claim by Victoria and Queensland to be also considered as claimant states; in effect, the new scale of increased grants under this legislation resulted in the number of claimant states falling to two, W.A. and Tasmania. The Grants Commission could then have used the accounts of the four non-claimant states to reach a basis for comparison: it finally decided to adopt a two-state standard, based on the budgets of N.S.W. and Victoria. Recent developments have included: (i) the withdrawal of W.A. as a claimant state from 1968-69; (ii) the acceptance of S.A. as a claimant state from 1970-71; (iii) the acceptance of Queensland as a claimant state from 1971-72; and (iv) the withdrawal of Tasmania as a claimant state from 1974-75.

On 11 June 1974 the Premier announced Tasmania's withdrawal as a claimant state for a Special Grant under Section 96 of the Commonwealth Constitution. The announcement was of historic significance for the State for two reasons:

- (i) In 1912-13 Tasmania first obtained a Special Grant under Section 96 of the Commonwealth Constitution and from that time until 1973-74 had received a special grant each year.
- (ii) In 1933 the Grants Commission was established to examine the claims of states requesting special grants to assist their revenues. From 1933 until 1973-74 Tasmania had had a continuous association with the Grants Commission and its determinations had considerably influenced the State Government's financial policies.

Tasmania's withdrawal from the Grants Commission's Special Grants procedures became operative for the 1974-75 financial year. The withdrawal gives the State Treasurer greater freedom in planning the State's finances; however, some of the protection afforded by the special grant against any sudden unexpected deterioration of the State's financial position is lost.

The financial arrangement for the withdrawal was that \$15m would be added to the State's Financial Assistance Grant for 1974-75 and that the total receipt, including the \$15m, would become the base for calculating the 1975-76 Financial Assistance Grant. Also, as part of the withdrawal arrangement, Tasmania's 1972-73 and 1973-74 advance special grants were not subject to final adjustment.

For details of the method by which Special Financial Assistance Grants were paid to Tasmania, reference should be made to Year Books prior to the 1976 edition.

Payments Under the Financial Agreement (1927)

Under the Financial Agreement, which was entered into by the Federal Government and the states in 1927, the Federal Government contributes towards interest and sinking fund payments in respect of state debts existing at 30 June 1927, and towards sinking fund payments in respect of state debts incurred after that date for purposes other than the funding of revenue deficits. The Federal Government's contribution to Tasmania to assist with the payment of interest on State debt was set at an annual sum of \$533 718, to continue until 1985.

The sinking fund contributions made by the Federal Government under the Agreement in respect of state debts vary according to the date and nature of the borrowings. On state debts existing at 30 June 1927 the Federal Government is making sinking fund contributions at the rate of 0.125 per cent a year until 1985 and in respect of cash loans raised for the states since that date, the Federal Government makes sinking fund payments for 53 years at the annual rate of 0.25 per cent. Each state is obliged to make sinking fund payments for corresponding periods at the rate of 0.25 per cent per annum regardless of the date on which the debt was incurred. The only exception is in relation to debt incurred for the purpose of funding revenue deficits. In these instances, the Federal Government makes no sinking fund contributions and the states are obliged to make annual contributions to the sinking fund of not less than four per cent. However, in respect of Treasury Bills issued to cover states' revenue deficits accruing between July 1927 and June 1935, special arrangements were made under which the Federal Government contributes 0.25 per cent per annum on the amount outstanding until June 1983.

Recent Federal Government sinking fund contributions in respect of the Tasmanian public debt are shown in the following table:

**Federal Government Contributions to National Debt Sinking Fund: Tasmanian Debt
(\$'000)**

Year	Amount	Year	Amount
1966-67	1 293	1971-72	1 825
1967-68	1 398	1972-73	1 934
1968-69	1 485	1973-74	2 044
1969-70	1 598	1974-75	2 141
1970-71	1 694	1975-76	2 100

The acceptance of some Federal Government liability for interest and sinking fund payments on state debts was only one part of a more extensive agreement setting up an Australian Loan Council and a National Debt Sinking Fund. The raising of loan money for the states under the Agreement is described later in this chapter.

New Assistance for Debt Charges

At the 1970 February Premiers' Conference, the Federal Government announced it was prepared to take over state debt totalling \$1 000m during the five-year period 1970-71 to 1974-75. However, this would have necessitated amendments to the 1927 Financial Agreement and caused considerable delay. The Federal Government then proposed an alternative which involved grants to the states equal to interest on specific parcels of state debt. The distribution between the states was in proportion to Federal Government securities on issue on behalf of each state at 30 June 1970. Tasmania's estimated receipts under this scheme were (in \$m): 1970-71, 0.8; 1971-72, 1.6; 1972-73, 2.4; 1973-74, 3.2; and 1974-75, 3.9. The 1927 Financial Agreement brought into effect by the *Financial Agreement Act 1928* was to have been amended by June 1975, and the total of \$1 000 million of State debt formally transferred to the Commonwealth. The amendment was made during 1975-76 with retrospective effect to 30 June 1975.

To assist the states in meeting their capital works programs since 1970-71, the Federal Government has provided annual grants for financing non-reproductive capital works. Total approved borrowing programs from 1971-72 to 1975-76 have been (in \$m): 1971-72, 892; 1972-73, 982; 1973-74, 867; 1974-75, 1 087; and 1975-76, 1 291. The proportion of the total states' capital works program provided by Federal Government grants in this period has been: 1971-72, 24.6 per cent; 1972-73, 25.3; 1973-74, 32.1; 1974-75, 31.8; and 1975-76, 33.3. For 1976-77 the proportion will again be 33.3 per cent. Changes in the composition of total state capital works programs have occurred during this period: (i) 1971-72 and 1972-73 figures include borrowings for state housing; (ii) from 1973-74, figures exclude borrowings for welfare housing and from 1 January 1974 tertiary education—the latter has become a Federal Government function following an agreement at the June 1973 Premiers' Conference.

Distribution of the grants was by agreement between the states or by the Federal Government if the states fail to reach agreement. Tasmania's share of the 1975-76 grant was \$30.37m which was credited to the State's Loan Fund. Expected capital grant receipts for 1976-77 for Tasmania are \$31.90m and expected borrowings for new capital purposes are \$63.80m.

The provision of these grants reduces the amount which the State needs to borrow in order to carry out its capital works program. The result of this decrease in the amount borrowed means that the burden of debt charges (interest payments and sinking fund contributions) on the Consolidated Revenue Fund is eased.

Federal Government Aid for Roads

Arrangements for the financing of road expenditure are embodied in three separate Federal Acts—the *National Roads Act 1974*, the *Roads Grants Act 1974* and the *Transport (Planning and Research) Act 1974*. These Acts cover the period 1974-75 to 1976-77 and it is expected that future legislation will extend the period for a further three years. (For historical information on road financing, reference should be made to the 1977 and earlier Year Books.)

Under the *National Roads Act 1974*, grants are allocated to the states to meet the total cost of approved construction and maintenance of declared national highways. Grants are also provided, on the same basis, for roads which have been classified as important for facilitating trade and commerce between states, and with other countries. At this stage, declared roads are those classified as such by the Commonwealth Bureau of Roads in its 'Report on Roads in Australia 1973'. The *Roads Grants Act 1974* provides grants for roads not covered by the *National Roads Act 1974*. Various classifications are used and amounts granted separately toward rural arterial and developmental roads, beef roads, urban local roads, rural local roads and minor traffic engineering and road safety improvements. The *Transport (Planning and Research) Act 1974* provides for grants to meet two thirds of the cost of approved planning and research projects in relation to roads and road transport. Of the total available under this Act over the three-year period (\$26m), only \$15m was specifically allocated to the states. The balance is to be allocated to projects irrespective of which state is involved, where each proposed project will compete for available funds. Provision has been made for the transfer of amounts between the various categories and the various Acts provided that over the three-year period, expenditure of grants on each classification does not exceed the total provided under the appropriate Act.

To qualify for a grant under these Acts, annual minimum quotas have been set specifying the expenditure on roads which each state must make from its own resources. Provision has been made for the carry forward of excesses or deficiencies in expenditure from state resources when determining if a quota has been met.

Since 1974, grants in addition to those specified have been provided. In 1974-75, \$30m was provided under the *National Roads Act 1974* and the *Road Grants Act 1974*, to assist employment in the building and maintenance of roads. In 1975-76 an additional \$64m was granted to offset the higher than expected cost escalation effects on the 1975-76 road appropriations. This grant was authorised by the *Roads Acts Amendment Act 1976*.

Details of Tasmanian receipts of Federal Government contributions in respect of road expenditure are shown in the following table:

Federal Government Aid for Roads: Receipts by Tasmania
(\$'000)

Year	Amount	Year	Amount	Year	Amount
1958-59 ..	3 624	1964-65 ..	6 500	1970-71 ..	10 230
1959-60 ..	(a) 4 366	1965-66 ..	7 000	1971-72 ..	10 820
1960-61 ..	4 600	1966-67 ..	7 500	1972-73 ..	12 150
1961-62 ..	5 000	1967-68 ..	8 000	1973-74 ..	13 950
1962-63 ..	5 400	1968-69 ..	8 500	1974-75 ..	18 585
1963-64 ..	5 800	1969-70 ..	9 100	1975-76 ..	20 097

(a) Payment under the *Commonwealth Aid Roads Act 1959* was \$4.2m; the balance represents a final adjustment of Federal Government commitments under previous legislation.

Loan Council (Financial Agreement)

The original Financial Agreement was made on 12 December 1927, but Tasmania did not become a party to it until 1 July 1928. The basic intention of the agreement was a co-ordinated approach to the loan market, the establishment of sound sinking fund arrangements and the sharing of state debt charges with the Federal Government. The main provisions are summarised as follows:

- (i) The Federal Government assumed certain liabilities in respect of state debts (see previous section on interest and sinking fund payments made by the Federal Government in respect of Tasmanian State debt—'Payments under the Financial Agreement 1927').
- (ii) The Australian Loan Council was set up to co-ordinate the public borrowings of the Federal Government and the states. It consists of the Prime Minister (or his nominee) as chairman, and the state premiers (or their nominees). Each financial year the Federal Government and the states submit programs to the Loan Council setting out the amounts they desire to raise by loan during the next year. Revenue deficits to be funded are included in the borrowing programs but borrowing by the Federal Government for defence purposes is excluded from the terms of the agreement.

If the Loan Council decides that the total amount of the loan programs for the year cannot be borrowed at reasonable rates and conditions, it then decides the amount which shall be borrowed and may, by unanimous decision, allocate that amount between the Federal Government and the states. In default of a unanimous decision, the Federal Government is entitled to one-fifth of the total amount to be borrowed and each state to a proportion of the remainder equal to the ratio of its net loan expenditure in the preceding five years to the net loan expenditure of all states during the same period.

Subject to the decisions of the Loan Council the Federal Government arranges all borrowings, including those for conversions, renewals and redemptions. However, the Federal Government or a state may borrow for 'temporary purposes' by way of overdraft or fixed deposit, subject to limits fixed by the Loan Council. In addition, the Federal Government may borrow within Australia, or a state within its own territory, from authorities, bodies, institutions, or from the public by counter sales of securities, subject to Loan Council approval. Federal Government securities are issued for money borrowed in this way and amounts so borrowed are treated as part of the borrowing program for the year.

- (iii) The Agreement involved setting up a National Debt Commission to administer one consolidated sinking fund in respect of the debt of the Federal Government and the states. Sinking fund moneys are used to redeem unconverted securities at maturity and to re-purchase securities on the stock market.
- (iv) It was realised at the inception of the Loan Council that, in the interests of co-ordinated borrowing, the Council should be advised of borrowings of large amounts by semi-government authorities (such loan raisings do not form part of state or Federal Government debt and therefore are not within the scope of the original

agreement). A set of rules evolved in 1936 is regarded as the 'Gentlemen's Agreement' and makes provision for the submission to the Council of annual loan programs in respect of larger semi-government and local government authorities (in conjunction with the loan programs of the governments concerned) and for the fixing of the terms of individual loans coming within the scope of the annual program. For 1975-76 larger authorities are those semi-government and local government authorities borrowing more than \$700 000 in a year. (For 1975-76 borrowings approved by the Loan Council for larger Tasmanian semi-government and local government authorities amounted to \$23 107 000.)

It should be emphasised that the Australian Loan Council does not itself raise money for Tasmanian semi-government and local government authorities; its concern is to assess the total impact of government borrowing for the year and then to fix ceilings for semi-government and local government authorities in the interests of a co-ordinated program.

The following table shows Loan Council borrowings undertaken on behalf of the State of Tasmania to finance new capital works and, for 1971-72 and 1972-73, housing:

Tasmania: New Cash Borrowings Authorised by Australian Loan Council (a)
(\$'000)

Year	Amount	Year	Amount	Year	Amount
1959-60 ..	27 080	1965-66 ..	34 834	1971-72 ..	(c) 47 020
1960-61 ..	28 388	1966-67 ..	37 580	1972-73 ..	(c) 51 252
1961-62 ..	28 996	1967-68 ..	40 610	1973-74 ..	(d) 43 467
1962-63 ..	30 708	1968-69 ..	42 120	1974-75 ..	54 952
1963-64 ..	32 020	1969-70 ..	45 370	1975-76 ..	60 743
1964-65 ..	34 136	1970-71 ..	(b) 34 570	1976-77 ..	63 802

(a) For State works programs; amounts credited to State Loan Fund.

(b) Commencing in 1970-71 the Federal Government has provided capital grants to replace some amounts which would otherwise have been obtained as loan borrowings; hence the reduced amount in 1970-71.

(c) New cash borrowings for 1971-72 and 1972-73 include allocations for State housing.

(d) From 1973-74 excludes borrowings for State welfare housing and from 1 January 1974 for tertiary education.

For years prior to 1971-72 and from 1973-74, the previous table excludes allocations under the Federal Government and State Housing Agreements, which were also part of the Loan Council's program. The following table shows allocations to Tasmania for housing purposes:

Tasmania: Allocations for Housing
(\$'000)

Year	Amount	Year	Amount	Year	Amount
1958-59.. ..	4 400	1964-65	6 400	1970-71	8 700
1959-60.. ..	3 900	1965-66	7 448	1971-72	(a)
1960-61.. ..	4 000	1966-67	7 500	1972-73	(a)
1961-62.. ..	5 856	1967-68	6 700	1973-74	16 445
1962-63.. ..	5 200	1968-69	7 500	1974-75	r 26 369
1963-64.. ..	6 000	1969-70	7 600	1975-76	22 380

(a) Allocations included with other borrowings in the previous table (1971-72, \$8.3m and 1972-73, \$9.1m).

STATE FINANCIAL TRANSACTIONS

Tasmanian Public Account

The State Public Account includes the Consolidated Revenue Fund, the Trust and Special Funds, and the Loan Fund. Revenue from State taxation, Federal Government financial assistance grants and other departmental sources is paid into the Consolidated Revenue Fund from which the main expenditures are for education, health and hospitals, roads, law and order, public debt charges, and subsidies to State business undertakings. The Trust and Special Funds cover special transactions outside the ordinary operations of departmental expenditure, such as funds from the Federal Government for specific purposes and moneys held for expenditure by the State at some future time. The Loan Fund receives its funds from public borrowings and grants, and the main expenditure is on State public works and on advances to State business undertakings.

A summary of transactions on the Tasmanian Public Account is given in the following table:

Public Account: Summary of Transactions
(\$'000)

Particulars	1973-74	1974-75	1975-76
Cash and investments at beginning of year ..	7 448	8 852	6 518
Receipts—			
Consolidated Revenue Fund	206 947	268 522	(a) 322 091
Special grant adjustment	-1 350	..	..
Borrowings for new capital purposes ..	43 490	54 952	60 743
Other Loan Fund receipts	29 893	40 104	47 898
Net increase, Trust and Special Funds ..	2 419	-1 067	8 704
Total	281 399	362 510	439 436
Expenditure—			
Consolidated Revenue Fund	210 097	282 065	(a) 317 947
Loan Fund, public works and purposes ..	69 875	82 778	98 818
Discount	23	..	..
Total	279 995	364 844	416 765
Percentage increase	7.6	30.3	14.2
Cash and investments at end of year ..	8 852	6 518	29 189

(a) These amounts are as reported by the State Treasurer, and disagree slightly with figures used later in this chapter which have been adjusted for remissions of Casino tax.

The State Public Account is a complete record of the Government's operation of three specific funds, i.e. Consolidated Revenue, the Trust and Special Funds, and the Loan Fund. It is by no means a complete records of government activity, since statutory authorities and semi-government authorities such as the Hydro-Electric Commission, Transport Commission and Agricultural Bank carry on financial operations which are not recorded in the State Public Account. In a later section of this chapter under the heading 'Exclusions from Consolidated Revenue', the relationship between the finances of the principal authorities and the Consolidated Revenue Fund is described; the general principle is that gross receipts and expenditure of the authorities are excluded from the Public Account.

In the following table are shown the balances credited to each fund constituting the Public Account and the form in which the balances are held:

Public Account: Summary of Balances at 30 June
(\$'000)

Year	Balance				Location			
	Accumulated Revenue Account	Loan Fund	Trust and Special Funds	Total	Cash in Treasury or bank	Advanced to departments	Govt and other securities (a)	Total
1972	-2 433	1 310	8 707	7 585	5 427	890	1 268	7 585
1973	-6 586	2 810	11 224	7 448	3 467	905	3 075	7 448
1974	-7 282	2 490	13 643	8 852	2 359	931	5 562	8 852
1975	-13 544	7 486	12 576	6 518	3 295	970	2 253	6 518
1976	-9 400	17 308	21 280	29 189	4 696	1 423	23 069	29 189

(a) Includes fixed deposits.

In the previous table, 'Accumulated Revenue Account' is a suspense account recording accumulated surpluses and deficits in the Consolidated Revenue Fund, and also the funding of deficits. Details of the account are as follows:

Accumulated Revenue Account: Summary of Transactions
(\$'000)

Year	Opening balance	Transactions			Closing balance
		Budget result, Consolidated Revenue	Special grant adjustment (a)	Deficits charged to Loan Fund (b)	
1971-72	-1 128	-2 455	-3 200	+4 350	-2 433
1972-73	-2 433	-4 132	-2 400	+2 378	-6 586
1973-74	-6 586	-3 150	-1 350	+3 805	-7 282
1974-75	-7 282	-13 544	..	+7 282	-13 544
1975-76	-13 544	+4 144	..	..	-9 400

(a) It is Tasmanian Treasury practice to record special grant adjustments in the Accumulated Revenue Account and to include, in published Consolidated Revenue receipts, only the advance grant as determined by the Commonwealth Grants Commission.

(b) See later section in this chapter 'Deficit Funding'.

In the following section dealing with Consolidated Revenue, Treasury practice of eliminating special grant adjustments from Consolidated Revenue total receipts has been followed.

Consolidated Revenue Fund

General

The financial transactions of the State of Tasmania are recorded under:
(i) Consolidated Revenue; (ii) Trust Funds; and (iii) Loan Fund:

Payments from Consolidated Revenue are made only on the basis of authority found in: (i) the annual Appropriation Act of the Parliament; (ii) Acts of the Parliament made in previous years and under which certain annual payments are classified as 'reserved by law'; and (iii) the *Public Account Act 1957* (as amended in 1962) and the *Audit Act 1918*.

The third category of authority listed above is designed to give the Treasurer and the Government some flexibility in public expenditure since the Appropriation Act cannot be expected to anticipate, to the nearest dollar, the expenses that are likely to be incurred for each and every item. The relevant sections of the amended *Public Account Act* are 5A and 5B which provide that, in relation to Consolidated Revenue, the Treasurer may authorise transfers between votes within certain subdivisions of the appropriation and, on the authority of the Governor, supplement certain appropriations and provide funds to meet expenditure for which no other provision exists. Transfers, as described under 5A, are a matter for the Treasurer but additional expenditure, as described under 5B, needs ratification by Parliament before the close of the following financial year. Regulations 20 and 21 of the second schedule of the *Audit Act* provide for expenditure by the Treasurer to meet emergencies for which no vote exists; the Governor must first authorise such expenditure and the Auditor-General investigate the circumstances before payment can be made.

Exclusions from Consolidated Revenue

It should be observed that the Consolidated Revenue Fund does not include all revenue and expenditure in respect of activities undertaken or authorised by the State Government. Some moneys are paid directly into State Trust Funds; e.g. Federal Government assistance for roads is paid into the State Highways Trust Fund and the various expenditures on roads are made directly from that Fund. The gross receipts and payments of a number of State business undertakings and State authorities are excluded from the Consolidated Revenue Fund, their relation to the Fund being as follows:

- (i) In Tasmania, the railways (up to 1 July 1975) and the government shipping services are administered by the Transport Commission and, since 1939-40, only the *net* losses of this authority have been met from the Consolidated Revenue Fund. Annual payment of debt charges (interest and sinking fund contributions) on advances made by the Government is credited to the Consolidated Revenue Fund. (Tasmania's railways were taken over by the Federal Government from 1 July 1975.)
- (ii) Omnibus services in Hobart, Launceston and Burnie are operated by the Metropolitan Transport Trust. The *net* annual loss of the authority is a charge against Consolidated Revenue. Annual payment of debt charges on government advances is credited to the Fund.
- (iii) The gross receipts and expenditure of the Hydro-Electric Commission are excluded from the Consolidated Revenue Fund; however, the annual payment of debt charges by the Commission is credited to the Fund. Net profit or loss on the Commission's activities is carried forward in the authority's own suspense account. From 1971-72 the Commission has been required to pay an annual contribution to Consolidated Revenue. The amount was five per cent of the total revenue derived from retail sales of electricity in the preceding year, until January 1977, when it was reduced to 2½ per cent and eventually eliminated from July 1977.
- (iv) Also excluded from the Consolidated Revenue Fund are the gross receipts and payments of: regional water schemes, Government Printing Office, Government Insurance Office, Public Trustee, State housing authorities, closer settlement, rural credits and other activities of the Agricultural Bank, etc. In accordance with various Acts, it is usual for the net profits or losses of the previous year to

be paid to or from the Consolidated Revenue Fund for the current year. Debt charges on government money loaned to the authorities are paid to Consolidated Revenue.

Consolidated Revenue Fund—Summary

The following table shows the transactions of the Tasmanian Consolidated Revenue Fund, the surplus or deficit, and the aggregate deficit at the end of each year. It also calls attention to the special grant adjustments which were made up to 1971-72 and shows how these Federal Government payments modified the original budget result. As a consequence of Tasmania's withdrawal from the Grants Commission Special Grants procedures during 1973-74, no adjustments were made for 1972-73 and 1973-74 advance Special Grants. (Details are given earlier in this chapter.)

Consolidated Revenue Fund: Surpluses and Deficits
(\$'000)

Year	Revenue			Expenditure	Budget result		Aggregate net deficit at end of year
	Before adjustment	Special grant adjustment	After adjustment		Before adjustment	After adjustment	
1966-67	92 676	- 1 190	91 486	93 248	- 572	- 1 762	14 693
1967-68	100 563	- 100	100 463	102 413	- 1 851	- 1 951	16 644
1968-69	107 846	+ 1 680	109 526	111 540	- 3 695	- 2 015	18 659
1969-70	123 819	- 3 200	120 619	121 004	+ 2 815	- 385	19 044
1970-71	138 229	- 2 400	135 829	138 207	+ 22	- 2 377	21 421
1971-72	157 782	- 1 350	156 432	160 237	- 2 455	- 3 805	25 226
1972-73	181 866	..	181 866	185 998	- 4 132		29 358
1973-74	206 947	..	206 947	210 097	- 3 150		32 508
1974-75	268 522	..	268 522	282 065	- 13 544		46 052
1975-76	(a) 322 091	..	322 091	(a) 317 947	+ 4 144		41 908

(a) These amounts are as reported by the State Treasurer, and disagree slightly with figures used later in this chapter which have been adjusted for remissions of casino tax.

Deficit Funding

While the aggregate of all deficits at 30 June 1976 was \$41 908 000, the sum of \$32 508 000 has been charged against the Loan Fund as 'revenue deficits funded': thus the unfunded aggregate deficit is only \$9 400 000 carried as a negative balance in the Accumulated Revenue Account. Prior to 1972-73 the original budget result was treated as provisional because the Grants Commission's adjustment was used to amend the original surplus or deficit and also the aggregate deficit.

The next table shows the adjusted budget result for recent years and how the result was treated.

Consolidated Revenue Fund: Adjusted Budget Result and Treatment
(\$'000)

Budget result			Budget result		
Year	Amount	Treatment	Year	Amount	Treatment
1966-67 ..	- 1 762	Funded	1971-72 ..	- 3 805	Funded
1967-68 ..	- 1 951	Funded	1972-73 ..	- 4 132	Funded
1968-69 ..	- 2 015	Funded	1973-74 ..	- 3 150	Funded
1969-70 ..	- 385	Funded	1974-75 ..	- 13 544	To be funded
1970-71 ..	- 2 377	Funded	1975-76 ..	+ 4 144	To be offset

Consolidated Revenue Fund—Receipts

The following table shows Tasmanian Consolidated Revenue Fund receipts for recent years:

Consolidated Revenue Fund: Receipts
(\$'000)

Item	1973-74	1974-75	1975-76
Federal Government grants—			
Financial agreement	534	534	534
Financial assistance	92 451	140 205	156 816
Special	8 650	..	..
Debt charges assistance (a)	3 180	3 975	..
Education	654	3 867	8 501
Health	2 702	4 157	(b) 20 668
Social Welfare	260	421	458
Unemployment relief	647	1 100	700
Total	r 109 077	r 154 258	187 677
Debt charge recoveries (c)—			
Interest	29 453	32 452	33 835
Sinking fund	3 471	3 717	4 807
Total	32 924	36 169	38 641
State taxation (d)	48 134	60 456	74 691
Victorian lotteries agreement	228	301	331
Territorial revenue—			
Forestry	3 259	3 865	4 159
Other property income, etc.	2 160	2 231	2 926
Total	5 419	6 097	7 085
Departmental revenue, fees, etc.—			
Education r	1 111	76	260
Health r	492	574	659
Law and order r	1 185	1 194	1 480
Tourism	564	854	1 061
Other (e) r	6 463	8 543	9 876
Total r	9 814	11 241	13 337
Total actual receipts	205 597	268 522	321 761
Transfer, Accumulated Revenue Account (f)	+1 350	..	..
Grand total	206 947	268 522	(g) 321 761
Percentage increase	13.8	29.8	19.8

(a) Refer to earlier sections on assistance for debt charges.

(b) Includes receipts of \$15 889 000 under the Medibank agreement.

(c) Mainly on advances made to semi-government authorities.

(d) See later section 'State Taxation'.

(e) Includes transfers from the Loan Fund and the State Highways Trust Fund relating to the Public Works Department of, for 1973-74, \$3.68m; 1974-75, \$5.02m; 1975-76, \$5.50m.

(f) Special grant adjustments.

(g) Remissions of casino tax of \$329 000 have been deducted from State taxation receipts; this total is consequently slightly less than that recorded by the State Treasurer. (For further explanation, see the section 'Casino Tax and Licence Fees' later in this chapter.)

The relative importance of the various components of the Consolidated Revenue Fund can be assessed by expressing them on a per capita basis using the State mean population for the relevant financial year.

**Consolidated Revenue Fund: Receipts Per Head of Population
(\$)**

Item	r 1973-74	r 1974-75	1975-76
Federal Government grants	264.9	362.2	389.0
Debt charge recoveries	82.7	89.8	95.1
State taxation	120.9	150.2	183.8
Territorial revenue	13.6	15.1	17.4
Departmental revenue, fees, grants, etc. ..	33.7	48.9	105.7
Victorian lotteries agreement	0.6	0.7	0.8
Transfer, Accumulated Revenue Account ..	3.4	..	..
Total	519.8	667.0	791.9

State Taxation

During 1975-76 the chief state taxes, in order of importance, were: pay-roll tax; motor taxes; stamp duties (on cheques, legal documents, etc.); probate and succession duties; and land tax. Pay-roll tax, which was handed over to the State by the Federal Government from the 1971-72 financial year, has now become the largest single source of State tax revenue.

In the following tables, the figures shown for total taxes paid to Consolidated Revenue do not agree with those published by the State Treasurer. Excluded from the tables are amounts received from the Victorian Government under the Victorian Lotteries Agreement while 'motor taxes' includes amounts not treated as taxes by the State Treasurer. The following table gives a summary, for a three-year period, of State taxation taken into the Consolidated Revenue Fund:

**State Taxation Collections Paid into Consolidated Revenue
(\$'000)**

Tax or licence	1973-74	1974-75	1975-76
Deceased persons' estates duties	3 398	4 123	5 461
Stamp duties (a)	r 7 168	7 515	10 743
Land tax	3 055	3 673	4 349
Motor taxes (b)	9 537	11 093	14 884
Liquor tax and licences	1 590	1 907	2 782
Racing taxes (a)	1 322	1 477	1 644
Casino tax and licence fees	1 605	1 820	1 674
Entertainment tax	153	241	246
Pay-roll tax	17 681	27 048	31 014
Hydro-Electric Commission statutory levy	1 362	1 430	1 712
Tobacco tax and licence fees	1 247	66	1
Soccer Football Pools tax .. .. .	..	..	108
Other licences	17	64	73
Total (c)	48 134	60 456	74 691

(a) Excludes: (i) stamp duties on bookmakers' tickets (included in 'Racing taxes'); (ii) stamp duty on third party insurance (included in 'Motor taxes'); and (iii) stamp duty on motor vehicle registrations (included in 'Motor taxes').

(b) See following section 'Motor Taxes'.

(c) Excluded are the following amounts received from the Victorian Government under the Victorian Lotteries Agreement: 1973-74, \$228 000; 1974-75, \$301 000; 1975-76, \$331 000.

Motor Taxes: In the preceding table motor taxes are shown as \$14 884 000 for the year 1975-76. The next table shows how this figure can be reconciled with motor tax figures published by the State Treasurer:

Debt Charge Recoveries: Consolidated Revenue Fund
(\$'000)

Source of recovery	Interest			Sinking fund contributions		
	1973-74	1974-75	1975-76	1973-74	1974-75	1975-76
Agricultural Bank—						
Housing	296	302	295	..	..	..
State Advances Act ..	267	299	343	..	..	..
Closer settlement ..	97	106	127	..	..	..
Returned soldier settlement	15	14	14	..	..	..
Other	14	10	9	..	..	..
Artificial Breeding Board ..	20	22	25	2	2	3
Forestry Department ..	550	654	828	..	..	..
Government Printing Office	3	10	16	3	3	3
Housing Department ..	1 468	1 448	1 430	197	200	234
Hydro-Electric Commission	21 084	23 348	27 151	2 800	2 998	3 784
King Island Abattoirs Board	21	26	32	3	4	5
Loans to industry—						
Aluminium industry agree- ment	131	158	158	..	..	..
Iron ore (Savage River agreement)	192	184	175	..	..	..
Other	492	446	414	..	..	..
Metropolitan Transport Trust	144	160	206	21	21	30
Metropolitan Water Board ..	868	932	1 033	121	126	160
Rivers and Water Supply Commission	265	286	343	34	35	46
Tasmanian Grain Elevators Board	45	66	98	10	10	15
Tourism development ..	143	167	187	..	..	..
Transport Commission ..	2 542	3 227	553	280	319	528
Other	796	585	397	..	..	..
Total	29 453	32 452	33 835	3 471	3 717	4 807

Consolidated Revenue Fund—Expenditure

In the following table a summary is given of the principal items of Consolidated Revenue Fund expenditure classified according to purpose:

Consolidated Revenue Fund: Expenditure by Purpose (a)
(\$'000)

Purpose	1973-74	1974-75	1975-76
General administration <i>n.e.c.</i>	r 22 336	r 28 115	32 473
Law, order and public safety—			
Law courts and legal services	2 939	3 996	4 603
Correctional and custodial services	1 873	2 609	2 960
Police services	9 397	13 858	16 146
Fire protection	886	1 207	1 571
Road safety	153	194	262
Other	r 89	r 141	197
Total	r 15 337	r 22 005	25 739
Education—			
General administration, regulation and research ..	2 091	3 479	4 681
Student transport	2 818	3 347	3 930
Primary and secondary	38 028	53 238	67 351
Technical	3 060	4 841	6 128
University	2 067	13	18
Other higher education	4 871	3 460	4 753
Special schools	696	1 828	1 682
Other	616	1 371	680
Total	54 246	71 576	89 223

Consolidated Revenue Fund: Expenditure by Purpose (a)—continued
(\$'000)

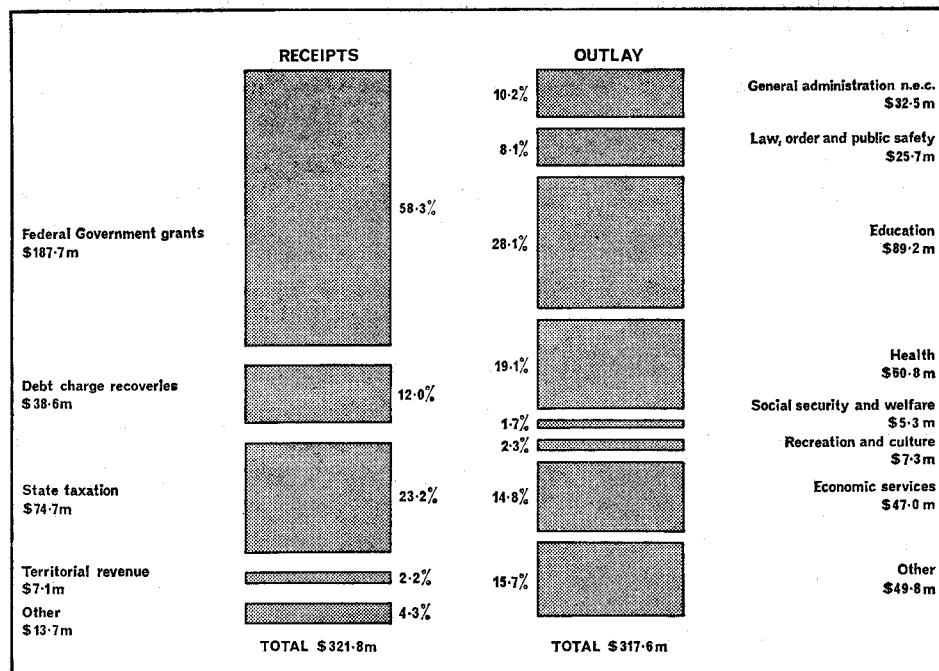
Purpose	1973-74	1974-75	1975-76
Health—			
General administration, regulation and research ..	912	1 237	1 452
Mental health	4 753	7 172	8 353
Other hospital and clinical services	22 119	r 37 378	45 380
Preventive services	371	504	554
Maternal and infant health	497	738	859
Other health services	r 1 484	r 2 673	3 478
Ambulance services	265	594	713
Total	r 30 401	r 50 298	60 789
Social security and welfare—			
General administration, regulation and research ..	370	646	693
Aged persons	76	r 276	286
Unemployed and sick persons and unemployment relief	703	1 155	763
Family and child care and assistance	1 118	1 724	2 071
Other	1 029	1 173	1 455
Total	3 297	r 4 974	5 268
Housing	1 024	1 061	2 351
Protection of the environment	279	413	507
Recreation and related cultural services—			
Cultural facilities	2 239	3 809	4 577
Support for creative and performing arts	55	25	25
Recreational facilities	r 923	r 1 298	1 637
Other	632	r 868	1 032
Total	r 3 849	r 6 000	7 270
Economic services—			
General administration, regulation and research ..	1 030	1 492	1 754
Soil and water resources management	3 824	4 923	5 728
Forest resources management	2 517	3 259	3 865
Other services to agricultural and pastoral industries	5 903	9 370	9 193
Mining and services to mining	1 279	1 671	1 951
Manufacturing and services to manufacturing	279	378	487
Electricity supply services	43	47	122
Water supply services	1 314	1 583	1 724
Transport and communication—			
Roads and ancillary services	r 6 889	r 7 411	9 269
Sea transport	223	233	212
Urban bus services	2 520	3 957	5 156
Other (including railways)	7 856	12 183	3 308
Other	r 2 738	r 3 786	4 278
Total	r 36 415	r 50 295	47 046
Other (including debt charges)	42 912	47 328	46 952
Total	210 097	282 065	(b) 317 617
Percentage increase	13.0	34.3	12.6

(a) Based on Australian purpose classification developed for analysis of government sector accounts; not strictly comparable with functional classifications published in Year Books prior to the 1975 edition.

(b) Remissions of casino tax of \$329 000 have been excluded from this table and applied to reduce taxation receipts into C.R.F. (For further explanation, see the section 'Casino Tax and Licence Fees' later in this chapter.)

State Financial Transactions
Consolidated Revenue Fund, 1975-76

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Public Debt Charges

A significant item of expenditure is public debt charges, but a high proportion is recovered from semi-government authorities. The next table shows the net burden on Consolidated Revenue Fund of debt charges:

Public Debt Charges: Net Burden on Consolidated Revenue
(\$'000)

Particulars	Interest			Sinking fund contribution		
	1973-74	1974-75	1975-76	1973-74	1974-75	1975-76
Expenditure from Consolidated Revenue	(a) 43 013	(a) 47 245	(a) 47 041	(b) 6 354	(b) 6 818	(b) 7 004
Recovered from semi-government bodies, etc.	29 453	32 452	33 835	3 471	3 717	4 807
Net burden on Consolidated Revenue (c)	13 560	14 793	13 206	2 883	3 100	2 197

(a) Includes loan management charges.

(b) Contribution payable under the Financial Agreement to the National Debt Sinking Fund.

(c) In respect of non-revenue producing assets such as schools, roads, etc.

Government Transport Services

Unlike the Consolidated Revenue Funds of some Australian states, the Tasmanian Fund excludes the gross receipts and expenditure of State business undertakings such as railways, bus services, etc. The principal charge in 1975-76 under

this item was in respect of the *net* loss incurred by the Transport Commission for operations other than railway services during 1974-75 (\$3 232 286). From 1 July 1975 the Federal Government took over responsibility for Tasmania's railway operations. Another major item was a contribution of \$5 156 000 to the Metropolitan Transport Trust which experienced a net trading loss of \$5 084 315 in 1975-76.

Roads and Bridges

The chief expenditure under this item in 1975-76 was a transfer of \$8 545 324 to the State Highways Trust Fund, representing revenue received from motor tax and public vehicles fees. Grants totalling \$2 183 000 were paid from Consolidated Revenue Fund to the Transport Commission to cover the cost of vehicle registration and traffic control.

State Trust and Special Funds

State revenues are payable to Consolidated Revenue with the exception of certain revenues which have been set aside by acts of Parliament for specific purposes and which are payable into special funds or accounts at the State Treasury. The volume of these transactions is high, \$350 435 098 being received in 1975-76, \$341 731 044 being expended and the balance in the funds changing from \$12 575 801 (1 July 1975) to \$21 279 855 (30 June 1976).

It should be noted that many accounts in the Trust and Special Funds indicate Treasury transactions which merely reiterate those recorded under Consolidated Revenue and Loan Funds; the following examples are given:

State Trust and Special Funds: Selected Accounts, 1975-76 (\$'000)

Account	Receipts	Expenditure
Income Tax Deductions Suspense Account (a)	38 241	38 241
Hydro-Electric Commission London Suspense Account (b) ..	1 407	1 368

- (a) Wages and salaries included under Consolidated Revenue and Loan Fund expenditure are shown at gross value; however, the deductions applicable to wage and salary earners on Tasmanian Government pay-rolls are passed, via this account, to the Federal Government.
- (b) The Treasury acts as agent for meeting overseas liabilities incurred by the Hydro-Electric Commission; these liabilities, mainly incurred in the acquisition of plant and equipment, are largely accounted for in Loan Fund expenditure.

Some accounts are concerned with government activities financed by the Federal Government, the State acting as trustee or agent in the transactions; examples follow:

State Trust and Special Funds: Selected Federal Accounts, 1975-76 (\$'000)

Account	Receipts	Expenditure
Tasmanian University (Commonwealth Grants) Account (a) ..	16 153	16 153
Recurrent Grants to Non-Government Schools Account (b) ..	2 597	2 597
Home Builders No. 3 Account (c)	5 524	5 449

- (a) Treasury passes Federal Government grants to University of Tasmania.
- (b) Treasury passes Federal Government grants to non-government schools.
- (c) Agricultural Bank administered loans to home builders, the source of funds being the Federal Government.

In the case of some accounts, there is provision for crediting the Trust and Special Funds with contributions from Consolidated Revenue, an important example being the State Highways Trust Fund:

State Trust and Special Funds: State Highways Trust Fund, 1975-76
(\$'000)

Item	Receipts	Expenditure
Federal Government contribution	20 097	..
Grants from Consolidated Revenue	8 545	..
Roads, bridges, jetties, ferries and planning	646	29 457
Self-balancing entries	11 486	11 486
Fund entries	40 775	40 943

The Forestry Fund Account records transactions under legislation requiring revenue from forestry to be paid to Consolidated Revenue, and for Consolidated Revenue to expend an equal amount on forestry in the following year:

State Trust and Special Funds: Forestry Fund Account, 1975-76
(\$'000)

Item	Receipts	Expenditure
Grants from Consolidated Revenue (a)	3 865	..
Expenditure on forestry .. .. .	..	4 089
Reimbursement, Softwood Forestry Agreement	224	..
Self-balancing entries	1 890	1 890
Fund entries	5 978	5 978

(a) Consolidated Revenue recorded forestry receipts of \$3 865 000 in 1974-75; this sum therefore became the 1975-76 contribution from Consolidated Revenue.

Some of the funds held in trust are not owned by the State Government, e.g. St John's Park Inmates Trust Account. Other funds are held on behalf of semi-government authorities, e.g. the Agricultural Bank.

State Loan Fund

Expenditure from the Loan Fund is devoted to two main purposes: (i) the making of advances to State semi-government authorities; and (ii) the carrying out of the State's own works program. Such funds, whether lent to other authorities for their works programs or spent directly by the State, result in the creation of new capital assets, a large proportion of which are revenue earning and therefore capable of reimbursing the State for the debt charges which it has incurred. (An earlier section on Consolidated Revenue expenditure shows the gross and net expenditure on annual debt charges.) In addition, conversion of existing loans is effected from the Loan Fund, but the amounts involved have been excluded from the next two tables as these transactions only alter the rates, sources or terms of existing public debt. Details of these debt servicing transactions are contained in a later table, 'Net Loan Fund Expenditure—Reconciliation'.

In addition to money from loan raisings, the Loan Fund may record other receipts such as the repayment of advances which had been made from the Fund to some Government authorities and community organisations, and contributions to capital works by the Federal Government.

Receipts into the Loan Fund during 1975-76 (\$200 690 000) comprised: (i) loans raised for new capital purposes, \$60 743 000; (ii) loans raised for the redemption and conversion of existing loans, \$92 049 000; (iii) non-specific grants from

the Federal Government, \$30 372 000; (iv) specific grants from the Federal Government, \$12 588 000; and (v) repayments by State authorities, \$4 938 000. Specific purpose federal grants credited to the Loan Fund in 1975-76 included grants for: (i) education, \$6 703 000; (ii) health and mental health, \$3 049 000; and (iii) urban public transport, \$2 380 000. Principal payments to the Loan Fund from State sources were: (i) repayments under the *Industrial Development Act 1954*, \$811 000; (ii) repayments under the *Aluminium Industry Act 1964*, \$767 000; (iii) repayments by the Transport Commission under the *Transport Act 1938*, \$710 000; (iv) payments under the *State Advances Act 1935*, \$611 000; (v) repayments under the *Homes Act 1935*, \$556 000; and (vi) repayment of tourism accommodation and facilities loans, \$185 000.

The following table shows annual gross and net loan expenditure. The net loan expenditure for 1975-76 (\$81.4m) was 7.0 per cent greater than for 1974-75.

Loan Fund: Gross and Net Loan Expenditure
(\$'000)

Year	Loan expenditure		Year	Loan expenditure	
	Gross	Net		Gross	Net
1966-67	40 161	36 636	1971-72	73 037	66 268
1967-68	46 054	42 128	1972-73	76 813	67 243
1968-69	44 458	40 164	1973-74	73 947	64 603
1969-70	49 411	45 069	1974-75	90 182	76 056
1970-71	52 079	47 393	1975-76	98 895	81 369

Traditionally, loan expenditure has been recorded on both gross and net bases. The annual net loan expenditure is equal to the disbursement of borrowings during the year for new capital purposes (as distinct from borrowings for the conversion of existing debt), plus capital contributions by the Federal Government as above, augmented or diminished by the net movement in the Loan Fund balance. The following table shows the calculation of net loan expenditure from two viewpoints: (i) as a residue from gross loan expenditure; and (ii) as the algebraic sum of new loan raisings for new capital purposes, the net movement in the Loan Fund balance and discount and capital appreciation expenses.

State Loan Fund: Calculation of Net Loan Expenditure
(\$'000)

Particulars	1973-74	1974-75	1975-76
(i) Gross loan expenditure	73 947	90 182	98 895
Less Repayments	4 684	3 311	4 938
Less Federal Government grants	4 660	10 815	12 588
Net loan expenditure	64 603	76 056	81 369
(ii) Gross borrowings for new capital purposes ..	(a) 43 502	54 952	60 743
Federal Government grant	20 549	25 977	30 372
Movement in Loan Fund balance (b)	+320	-4 995	-9 823
Other (c)	232	122	77
Net Loan Expenditure	64 603	76 056	81 369

(a) Includes discount on borrowings for new capital purposes, \$35 000.

(b) Negative sign (-) indicates an increase from opening to closing balance, plus sign (+) indicates a decrease.

(c) Discount on borrowings for conversion and re-financing purposes and capital appreciation items.

The next table shows Loan Fund payments classified according to purpose:

Loan Fund Payments Classified by Purpose (a)

(\$'000)

Purpose	1973-74	1974-75	1975-76
General administration, <i>n.e.c.</i>	r 2 792	r 4 225	5 434
Law, order and public safety—			
Law courts and legal services	919	1 319	565
Correctional and custodial services	265	222	119
Police services	3 075	2 621	3 987
Fire protection services	100	153	109
Other	79	80	55
Total	4 437	4 396	4 836
Education—			
General administration, regulation and research ..	3 482	3 922	5 953
Primary, pre-school and secondary	r 8 011	r 14 370	18 062
Technical	1 108	188	1 424
University	1 373	..	..
Other higher education	2 078	..	..
Adult education	57	40	32
Special schools	245	16	320
Total	16 354	18 536	25 792
Health—			
Mental health	318	700	603
Other hospital and clinical services	3 250	4 371	6 990
Ambulance services	91	67	101
Total	3 659	5 137	7 694
Social security and welfare—			
Aged persons	872	466	2 408
Family and child care and assistance	23	57	56
Total	895	523	2 464
Housing and home finance services .. .. .	..	..	3 084
Recreation and related cultural services—			
Cultural facilities	604	571	362
Recreational facilities	734	r 606	608
Total	1 338	r 1 177	969
Economic services—			
Soil and water resource management	r 100	r 200	200
Forest resources management	3 110	4 000	6 250
Services to agricultural, pastoral and fishing industries	1 031	1 216	2 352
Mining and services to mining	64	100	109
Manufacturing and services to manufacturing ..	983	864	1 303
Electricity supply	23 000	23 225	29 700
Water supply services	650	1 195	683
Transport and communication—			
Road and ancillary systems	849	883	1 179
Rail transport	9 174	14 345	1 691
Sea transport	6	..	247
Urban transport .. .. .	..	1 059	3 730
Other	1 410	1 699	1 101
Total	r 40 376	r 48 786	48 544

Loan Fund Payments Classified by Purpose (a) —continued
(\$'000)

Purpose	1973-74	1974-75	1975-76
Natural disaster relief	23	..	..
Deficit on Consolidated Revenue Fund	3 805	7 282	..
Sinking fund and redemption (incl. conversions)..	79 339	65 105	92 049
Total payments from Loan Fund ..	153 019	155 165	190 868

(a) Based on Australian purpose classification developed for analysis of government sector accounts; not strictly comparable with functional classification published in Year Books prior to the 1975 edition.

The following table shows how a reconciliation may be obtained between total Loan Fund payments in the previous table and net Loan Fund expenditure.

Net Loan Fund Expenditure: Reconciliation
(\$'000)

Particulars	1973-74	1974-75	1975-76
Total payments from Loan Fund	153 019	155 165	190 868
<i>Less</i> Debt service transactions—			
Conversion (Australia)	38 534	39 732	78 096
Conversion (State Savings Bank Agreement) ..	960	960	960
Redemption from new cash borrowing	39 845	24 412	12 994
Loan Fund expenditure for new capital purposes	73 680	90 060	98 818
<i>Plus</i> Capital appreciation on special bonds	232	122	77
<i>Plus</i> Discount allowed on borrowings	35	..	..
Gross Loan Fund expenditure	73 947	90 182	98 895
<i>Less</i> Total repayments to Loan Fund	9 344	14 127	17 526
Net Loan Fund expenditure (a)	64 603	76 056	81 369

(a) As specified in the Treasurer's Statement.

The *Public Account Act* 1962 has, amongst other things, the following provisions relating to the Loan Fund: (i) the Governor, on Treasury advice, may make transfers between block votes as long as the total authorised amount is not exceeded; (ii) a sum of up to \$400 000 may be spent for purposes not previously authorised; (iii) for purposes previously authorised, an additional sum of up to \$1m may be spent; (iv) in instances of expenditure outside the provisions of a specific Loan Fund Appropriation Act, the ratification of such action is to be sought from Parliament before the close of the following financial year. The Act also provides for the unexpended balances of votes at the close of the financial year to lapse.

State Public Debt

In previous years, the State public debt was calculated on two bases: (i) with overseas debt calculated at 'mint par of exchange' i.e. at the exchange rates prevailing on 1 July 1927; and (ii) with overseas debt calculated at current rates of exchange. 'Mint par debt' was the official debt for the purpose of determining sinking fund contributions payable under the Financial Agreement, 1927. This Agreement was amended at the end of June 1975 and a new formula was applied for determining sinking fund contributions. 'Mint par debt' is no longer used in the calculations.

The following table shows the State Public Debt at current rates of exchange:

State Public Debt at 30 June 1976: At Current Rates of Exchange

Place in which debt repayable	Amount in currency in which raised		\$ Aust. at current rates of exchange	
	Currency	Debt ('000)	Conversion rate of \$A (a)	Debt (\$A'000)
Australia	\$A	746 952	.. ..	746 952
London	£ sterling	1 765	£stg 0.6919	2 551
New York	U.S. \$	4 276	US \$ 1.2351	3 462
Canada	Canadian \$	652	Can \$ 1.1952	546
Netherlands	Guilders	967	Guilders 3.375	287
Total .. ..	..	..	..	753 797

(a) Exchange rates at 30 June 1976 for \$A1.

The growth of the public debt, expressed at current rates of exchange (as at 30 June for year shown), is shown in the following table:

State Public Debt: Place of Flotation and Interest Payable (\$'000)

At 30 June	Debt redeemable in—						Total debt	Interest payable
	London	New York	Canada	Switzerland	Netherlands	Australia		
1967	17 054	11 479	842	756	596	504 880	535 606	25 940
1968	8 980	10 674	790	756	556	546 539	568 296	27 778
1969	8 659	9 884	778	756	516	586 078	606 671	30 040
1970	7 151	9 076	777	756	477	625 575	643 811	32 939
1971	6 594	8 207	740	810	444	654 530	671 324	36 203
1972	6 099	6 743	686	810	417	695 167	709 921	39 202
1973	4 937	4 565	533	895	390	740 672	751 990	41 620
1974	4 142	3 849	507	834	328	777 958	787 618	45 922
1975	3 161	3 799	498	1 117	350	824 936	833 862	49 005
1976	2 551	3 462	546	..	287	746 952	753 797	53 748

A notable feature of the State Public Debt is that approximately 99 per cent of indebtedness is now domiciled in Australia. There has been a gradual change from the situation which existed a century ago when nearly all loans were financed in London. In 1870, the State's public debt (\$2 537 400) was wholly redeemable in London and even in 1900, less than 10 per cent of the State debt was redeemable in Australia.

Public Debt Transactions

Securities in the form of bonds, inscribed stock and debentures are issued by the Commonwealth for and on behalf of Tasmania. Under the Financial Agreement of 1927 redemption and conversion of loans is carried out by the National Debt Sinking Fund Commission.

With the amendment, in 1975, to the Agreement of 1927, a new base for the provision of Sinking Funds by the States was established. The agreement, which is to continue until 1985, provided for a base payment by Tasmania of \$7m per annum. For the period until 1985 Tasmania's contribution to the Sinking Fund is to be increased or reduced by 1.2 per cent per annum of the amount by which the public debt thereafter is increased or diminished.

The following table shows particulars of loans raised and redeemed annually during the most recent four-year period expressed at current rates of exchange. It will be observed that redemption of loans falling due in any particular year is achieved, in the main, by conversion (i.e. by renewal of the original loans on new terms and conditions).

State Public Debt: Conversion and Redemption at Current Rates of Exchange
('\$000)

Particulars	1972-73	1973-74	1974-75	1975-76
Loans raised for—				
New capital purposes	51 254	43 490	54 952	60 743
Conversion purposes	42 648	39 494	40 692	79 056
Redemption of maturing loans	5 345	39 857	24 412	12 994
Total raisings	99 246	122 841	120 057	152 792
Less Loans redeemed—				
By conversion	42 648	39 494	40 692	79 056
From new cash raisings	5 222	39 613	24 290	12 917
From National Debt Sinking Fund (a)	9 306	8 106	8 831	9 284
Debt transferred to Commonwealth .. .. .	..	..	..	(b) 131 600
Net increase in public debt	42 070	35 628	46 244	- 80 065
Debt at end of year	751 990	787 618	833 862	753 797

(a) Includes a balancing item due to fluctuation in exchange rates during the year, the actual redemption being \$7 491 000 in 1972-73, \$7 105 000 in 1973-74, \$9 674 000 in 1974-75 and \$9 177 000 in 1975-76.

(b) (i) State debt of \$69 100 000 taken over by the Federal Government following amendment to the Financial Agreement of 1927.

(ii) Debt of \$62 500 000 related to railway operations transferred to the Federal Government under the Railways Transfer Agreement of 1975.

The next table summarises the transactions of the National Debt Commission in relation to the Tasmanian Public Debt:

National Debt Commission: Transactions in Respect of Tasmanian Public Debt
('\$000)

Particulars	1972-73	1973-74	1974-75	1975-76
Balance at beginning of period	209	671	1 974	1 268
Contributions—				
From—Federal Government	1 934	2 044	2 141	2 100
State Government	6 008	6 339	6 805	7 000
Interest received (net)	11	26	21	17
Funds available	8 162	9 080	10 941	10 385
Less Redemption and re-purchase at current rates of exchange	7 491	7 105	9 674	9 177
Balance at end of period	671	1 974	1 268	1 208

The National Debt Commission was established as part of the 1927 Financial Agreement and its function is to administer a single consolidated sinking fund in respect of the debt of the Federal and state governments. (The obligations of the states and the Federal Government in contributing to the consolidated sinking fund are set out earlier in this chapter in a section headed 'Payments Under the Financial Agreement (1927)').

TAXATION

Taxation in Tasmania

As Australian citizens, Tasmanians are subject to taxes levied both by the State and the Federal Government. The next table shows taxes (total amounts and per capita figures) collected by the State Government and semi-government authorities in Tasmania and Federal Government collections for Australia:

Taxation: State of Tasmania and Federal Government, 1975-76 (a)

Tax	Amount (\$'000)		Per head of population (\$)	
	Tasmania (b)	Federal Government (c)	Tasmania	Federal Government
Income (personal and company) .. ..	..	11 830 507	..	854.43
Customs and excise .. .. .	..	3 263 390	..	235.69
Sales .. .. .	..	1 408 286	..	101.71
Pay-roll	31 014	19 386	76.33	1.40
Probate and succession duties	5 461	76 391	13.44	5.52
Motor	15 144	..	37.27	..
Stamp duties	10 743	..	26.44	..
Land	4 349	..	10.70	..
Racing	2 785	..	6.85	..
Liquor	2 782	..	6.85	..
H.E.C. statutory levy	1 712	..	4.21	..
Levy on insurance companies for fire author- ities	2 473	..	6.09	..
Entertainment	246	..	0.61	..
Casino tax and licence fees	1 674	..	4.12	..
Soccer football pools tax	108	..	0.27	..
Coal export duty .. .. .	..	111 640	..	8.06
Primary production tax .. .. .	..	114 590	..	8.28
All other	75	132 288	0.19	9.55
Total	78 564	16 956 478	193.35	1 224.64

(a) Collections from all sources, including amounts paid to special funds.

(b) State taxes collected by Tasmanian Government and other state authorities.

(c) Federal Government taxes collected for Australia as a whole.

In addition to the taxes shown in the above table Tasmanian property owners also pay rates and licence fees to local government authorities. Total rates and licence fees collected during 1975-76 amounted to \$39.7m or \$97.67 per head of mean population.

Assuming that Tasmanians contributed to Federal Government taxation in strict proportion to the relative mean populations of the State and Australia, it would be theoretically correct to add the three per capita figures (\$193.35, \$1 224.64 and \$97.67) and arrive at a figure of \$1 515.66 as the *total per capita taxation* of all levels of government on residents within the State. However there are inaccuracies involved in this method. For a number of federal taxes (e.g. payroll tax and rates on land paid to the Federal Government by residents of the A.C.T., and coal export duty) Tasmanians pay minimal or no tax. An alternative way of examining the problem is to refer to total Federal Government taxes collected in Tasmania but this measure is unsatisfactory for a number of reasons, the chief defects being:

- (i) Central office collections of Federal Government taxation ceased at 30 June 1970 and for the income years after 1969-70 all assessments are being handled in state offices of the Taxation Depart-

ment. The effects of this change are deceptive because income tax collected in Tasmania does not necessarily directly relate to income earned in Tasmania (e.g. a company with branches in Tasmania but with its head-office in Melbourne would normally submit its tax return to the Victorian Taxation Office). (The 1976 Year Book includes a special article on the location of control of Tasmanian business establishments—pp. 404-406.)

- (ii) Goods shipped to Tasmania will, in some cases, already have been taxed in another state in respect of customs or sales taxes. Even though other states are credited with the collection of these taxes, the fact remains that Tasmanians bear their incidence in the form of increased commodity prices. The amount of tax collected in other Australian states on goods shipped to Tasmania is not known.

Estimated Incidence

In assessing the collection in other Australian states of two taxes affecting Tasmanians, account is taken of selected sales figures derived from the latest Retail Census (for 1973-74) which showed Tasmanian *per head* sales to be 93.2 per cent of the corresponding Australian figure. Accordingly the *per head* incidence of customs and sales taxes in Tasmania is taken to be 93.2 per cent of the Australian *per head* collection figure for each tax. Estimates are compiled using these *per head* figures and the State's mean population.

The following table shows actual collections of the Federal Government taxes in the State and also the estimated incidence of taxes (other than income tax and estate duty) collected elsewhere in Australia:

**Taxation Collected by the Federal Government in Tasmania and Elsewhere,
and Estimated Incidence in Tasmania**
(\$'000)

Tax	1973-74	1974-75	1975-76
Collected in Tasmania—			
Income tax (a)	148 078	218 390	263 264
Estate duty (a)	1 281	1 300	1 757
Gift duty	173	192	233
Stevedoring industry charge	1 108	1 306	1 980
Broadcast listeners' and television viewers' licences	1 879	556	..
Primary production taxes	1 246	2 217	2 752
Sales tax	15 679	19 176	23 052
Customs	3 744	6 400	6 308
Excise	42 824	47 852	57 832
Other	r 285	r 246	265
Total collected in Tasmania	216 297	297 635	357 443
Collected elsewhere in Australia (b)—			
Sales tax	11 471	13 121	15 463
Customs	13 196	17 118	19 183
Estimated incidence (c)	240 964	327 874	392 089

(a) Tax collected in Tasmania may not directly relate to income earned and assets in Tasmania since a multi-state return can be lodged in any one state office.

(b) Estimated; goods on which these taxes were paid are assumed to have been sold in Tasmania.

(c) Excludes company income tax collected in other states in respect of establishments operating in Tasmania.

Federal Government Income Tax

Income tax, the most important revenue raising levy in Australia, was introduced in 1884 by the colony of South Australia. In the course of time this form of taxation was adopted by all the state governments and the Federal Government between 1884 and 1915. From 1915 to 1942 the state and Federal Governments imposed income taxation concurrently, the rate of state income tax varying from state to state. Uniform taxation on incomes throughout Australia was adopted in 1942, as a war measure, when the Federal Government became the sole authority levying this tax. However, under a new scheme introduced by the Federal Government and expected to commence in 1977-78, each state was to have the right to impose a surcharge or grant a rebate on personal income tax in its state (see 'Personal Income Tax Sharing with the States' earlier in this chapter).

Income Tax Rates

Details relating to the amounts of income tax payable by companies and by individuals are included in Chapter 18.

Personal Income Tax Assessed in Tasmania

The next tables show the number of taxpayers, taxable income and income tax assessed during the year 1975-76 (income year 1974-75) and earlier years. The following definitions apply:

Net Income: Assessable income less deductions for expenditure incurred in earning that income (but before deductions for concessional allowances).

Individuals (Excluding Companies): Includes residents and non-residents assessed in Tasmania.

Taxable Income: Net income less concessional deductions.

Tasmania, Income Tax: Individuals (a)

Income year	Number of taxpayers			Net income \$'000	Taxable income \$'000	Net income tax assessed		
	Males	Females	Persons			Total \$'000	Per taxpayer	
							Amount \$	Increase (b) per cent
1969-70 ..	107 393	50 449	157 842	504 007	402 083	67 114	425	11.0
1970-71 ..	107 078	52 174	159 252	550 670	446 520	72 323	454	6.8
1971-72 ..	108 171	54 860	163 031	615 567	500 856	88 239	541	19.2
1972-73 ..	99 830	44 984	144 814	660 913	539 410	92 335	638	17.8
1973-74 ..	103 903	50 815	154 718	817 976	688 577	134 109	867	35.9
1974-75 ..	105 639	56 602	162 241	1 064 186	917 430	180 392	1 112	28.3

(a) For definitions, see text above.

(b) Increase on previous year.

The following table dissects the number of taxpayers, income tax assessed, etc. by grade of net income for the income year 1974-75. Average weekly earnings per employed male unit (see Chapter 17) for Tasmania in 1974-75 were \$140.20 (equivalent to an annual salary of \$7 290).

Tasmania, Income Tax: Income Year 1974-75—Individuals (a)

Grade of net income	Number of taxpayers			Cumulative percentage of taxpayers	Net income	Total taxable income	Net income tax assessed
	Males	Females	Persons				
\$					\$'000	\$'000	\$'000
1- 1 199 ..	533	1 096	1 629	1.0	1 770	1 737	27
1 200- 1 999 ..	3 326	7 092	10 418	7.4	16 623	15 582	471
2 000- 2 499 ..	2 059	4 506	6 565	11.5	14 809	13 799	616
2 500- 2 999 ..	3 119	4 964	8 083	16.5	22 259	20 654	1 101
3 000- 3 499 ..	3 275	4 669	7 944	21.4	25 796	23 699	1 599
3 500- 3 999 ..	3 473	4 301	7 774	26.1	29 127	26 685	2 224
4 000- 4 499 ..	3 750	4 341	8 091	31.1	34 391	31 254	3 063
4 500- 4 999 ..	4 419	4 113	8 532	36.4	40 596	36 579	4 079
5 000- 5 499 ..	5 451	4 188	9 639	42.3	50 618	45 079	5 509
5 500- 5 999 ..	6 763	3 414	10 177	48.6	58 499	50 955	6 756
6 000- 6 499 ..	7 772	2 782	10 554	55.1	65 964	56 710	8 200
6 500- 6 999 ..	7 813	2 280	10 093	61.3	68 127	57 853	9 053
7 000- 7 499 ..	8 044	1 904	9 948	67.5	72 082	60 618	10 224
7 500- 7 999 ..	7 178	1 492	8 670	72.8	67 126	56 077	10 126
8 000- 8 499 ..	6 506	1 097	7 603	77.5	62 640	52 214	10 134
8 500- 8 999 ..	5 399	858	6 257	81.3	54 672	45 477	9 356
9 000- 9 499 ..	4 490	578	5 068	84.5	46 859	38 811	8 480
9 500- 9 999 ..	3 557	526	4 083	87.0	39 773	33 121	7 621
10 000-10 999 ..	5 473	741	6 214	90.8	65 056	53 962	13 243
11 000-11 999 ..	3 666	466	4 132	93.4	47 401	39 823	10 667
12 000-12 999 ..	2 609	304	2 913	95.2	36 302	30 571	8 794
13 000-13 999 ..	1 657	207	1 864	96.3	25 085	21 273	6 517
14 000-14 999 ..	1 166	140	1 306	97.1	18 906	16 172	5 204
15 000-19 999 ..	2 581	320	2 901	98.9	49 140	42 591	15 258
20 000-24 999 ..	820	110	930	99.5	20 551	18 387	7 738
25 000-29 999 ..	333	41	374	99.7	10 187	9 252	4 340
30 000-49 999 ..	352	50	402	100.0	14 603	13 530	7 018
50 000 and over	55	22	77	100.0	5 223	4 963	2 973
Total ..	105 639	56 602	162 241	..	1 064 186	917 430	180 392

(a) For definitions, see text above.

State Taxation

In the section on the Consolidated Revenue Fund, taxes collected by the Tasmanian Government are shown in summarised form.

The next table gives full details of State taxation. It should be noted that certain taxes are reserved for special purposes. Examples are: (i) motor taxation—the 'motor tax' and 'public vehicle fees' components of this item (\$8 545 000 in 1975-76) are passed from Consolidated Revenue to the State Highways Trust Fund; and (ii) racing and gaming taxes—all racing and gaming taxes paid to special funds are passed to the racing clubs.

State Taxation Collections (a)
(\$'000)

Tax	1973-74	1974-75	1975-76
Deceased persons' estates duties	3 398	4 123	5 461
Entertainment tax	153	241	246
Stamp duties (excluding bookmakers' tickets)—			
Cheques	878	976	1 153
Bills of exchange and lading .. .. .	..	1	1
Hire purchase and related agreements ..	890	1 044	1 381
Legal documents, etc.	3 286	3 170	5 044
Adhesive revenue stamps	376	376	411
Insurances	1 605	1 828	2 623
Marketable securities	133	120	129

State Taxation Collections (a)—continued
(\$'000)

Tax	1973-74	1974-75	1975-76
Land tax	3 055	3 673	4 349
Motor taxation—			
Paid to—Consolidated Revenue	9 537	11 093	14 884
Special funds	88	95	260
Tax paid to fire authorities (b)	1 263	2 123	2 473
Liquor tax and related licences (c) ..	1 590	1 907	2 782
Racing and gaming taxes—			
Paid to—Consolidated Revenue	1 322	1 477	1 644
Adjustment (d)	+17	+61	+133
Special funds	551	r 724	1 007
Pay-roll tax	17 681	27 048	31 014
Hydro-Electric Commission statutory levy ..	1 362	1 430	1 712
Casino tax and licence fees	1 605	1 820	1 674
Soccer football pools tax .. .. .	..	..	108
Tobacco tax and licence fees	1 247	66	1
Sundry licences—			
Auctioneers and estate agents	6	6	8
Environment Protection Act	3	51	56
Other (including Firearms Act)	7	7	10
Total	50 054	r 63 461	78 564
Percentage increase	27.3	r 26.8	23.8

(a) Collections from all sources of taxation, including amounts paid to special funds.

(b) Paid by insurance companies direct to the Fire Brigades Commission and the Rural Fires Board.

(c) See later section 'Fees and Licences under the Licensing Act' for details.

(d) For different accounting periods.

State Land Tax

The rates of land tax on urban land assessed on urban unimproved land values for the year 1975-76 are shown in the following table:

Selected Rates of State Land Tax (a): Urban Land 1975-76
(\$)

Taxable value (b)	Tax payable	Taxable value	Tax payable
2 000	5	25 000	225
4 000	13	50 000	575
6 000	23	100 000	1 575
10 000	55	150 000	2 825
15 000	105		

(a) Tax on unspecified values may be calculated by simple proportion, e.g. tax on \$5 750 equals \$13 plus $1\,750/2\,000 \times (\$23 \text{ less } \$13)$ i.e. \$21.75. Land values exceeding \$150 000 were further taxed at 3 cents in the dollar on the excess.

(b) Properties having an unimproved value of less than \$2 000 are not subject to land tax.

The rates of land tax assessed on rural land values for the year 1975-76 are shown in the following table:

Rates of State Land Tax: Rural Land 1975-76

Unimproved value (\$)	Taxable value	Tax rate
1-20 000 ..	Nil	Nil
20 001-25 000 ..	Unimproved value — (\$20 000 — \$4 × each dollar of excess over \$20 000)	} As for urban land with a 25 per cent rebate allowed
25 001 and over	Unimproved value	

State Land Tax: Value of Taxable Properties and Tax Assessed
(\$'000)

Year	Gross unimproved value				Tax assessed			
	Urban	Rural	Compo- site (a)	Total	Urban	Rural	Compo- site (a)	Total
1970-71	267 319	33 410	24 234	324 964	2 313	277	312	2 903
1971-72	274 210	30 349	26 698	331 257	2 319	(b) 224	(b) 309	2 852
1972-73	296 176	(c)21 011	(c)26 392	343 579	2 494	(c) 178	(c) 283	2 954
1973-74	310 740	20 860	29 724	361 324	2 522	177	335	3 035
1974-75	359 069	25 113	32 123	416 304	3 167	221	416	3 803
1975-76	414 793	29 109	33 305	477 207	3 776	256	393	4 425

(a) Properties made up of both urban and rural land.

(b) Decrease due to 25 per cent rebate applicable to rural land.

(c) Decrease due to an increase in the exemption level on rural land from \$10 000 to \$20 000.

State Deceased Persons' Estate Duties

The legislation dealing with State deceased persons' estate duties is contained in the *Deceased Persons' Estates Duties Act 1931* (as amended). The following table gives details of assessments for 1975-76:

State Deceased Persons' Estate Duties
Number of Estates, Net Value and Tax Assessed, 1975-76

Grade of dutiable value	Estates		Net value as assessed	Total duty assessed (a)	Average duty per taxable estate
	Examined	Taxable			
	no.	no.	\$'000	\$'000	\$
1- 500	88	4	13	..	44.3
501- 1 000	44	3	32	..	103.3
1 001- 1 500	52	19	65	1	78.3
1 501- 2 000	56	21	98	3	123.6
2 001- 3 000	87	26	219	5	199.1
3 001- 4 000	76	17	249	6	341.7
4 001- 5 000	83	49	369	9	180.0
5 001- 6 000	82	51	451	13	255.0
6 001- 8 000	134	93	915	36	388.0
8 001- 10 000	117	79	1 041	36	458.6
10 001- 15 000	272	197	3 299	159	808.0
15 001- 20 000	196	194	3 274	228	1 172.9
20 001- 30 000	234	232	5 494	457	1 968.9
30 001- 40 000	117	117	3 603	351	3 003.7
40 001- 50 000	107	107	4 270	440	4 111.0
50 001-100 000	152	152	8 345	1 136	7 476.9
100 001-150 000	53	53	4 620	923	17 415.7
150 001 and over	48	48	9 776	2 456	51 157.8
Adjustments .. ..	..	..	..	..	..
Total	1 998	1 462	46 130	6 259	..

(a) Rates of duty and levels of exemption vary according to the class of beneficiary and the type of asset contained in the estate (details may be obtained from the Public Trustee).

Motor Taxation

The chief components of motor taxation are: (i) motor tax assessed on a power-weight formula; (ii) vehicle registration fees; (iii) drivers' and riders' licences; and (iv) other registration fees mainly related to public vehicles.

Details of motor taxation collections are shown in the following table:

State Motor Taxation
(\$'000)

Particulars	1973-74	1974-75	1975-76
Motor tax	5 965	6 312	8 045
Public vehicle fees (a)	462	443	605
Stamp duty on—Third party insurance	358	391	428
Vehicle registration	609	1 718	2 706
Other traffic fees (b)	2 232	2 324	3 205
Total	9 625	11 188	14 988
Paid into Consolidated Revenue Fund	9 537	11 093	14 884
Retained by Transport Commission	88	95	104

(a) Includes public vehicle fees retained by Transport Commission.

(b) Includes registration fees, licences, number plate charges, transfer fees and learners' permits.

'Motor tax' plus most of the item 'public vehicle fees' shown in the above table are paid to the State Highways Trust Fund. (The amount paid over in 1975-76 was \$8 545 000.)

Racing Taxation

Amendments to the *Racing and Gaming Act* in 1974 established the Totalisator Agency Board from January 1975, operating both on and off course totalisator betting, and restricted the operations of licensed bookmakers to on-course betting only. (For further details on the rates of taxation on racing, see the 1977 *Year Book*.)

Details of racing taxation collections and distribution are shown in the next table:

State Racing Taxation: Collection and Distribution
(\$'000)

Particulars	1973-74	1974-75	1975-76
RACING TAXATION RECEIPTS			
Totalisator tax (a)	77	r 489	1 641
Bookmakers' commission and licences	1 574	r 1 597	1 078
Stamp duty on bookmakers' tickets	240	176	65
Total	1 891	r 2 262	2 785
DISTRIBUTION OF RACING TAXATION RECEIPTS			
Paid into Consolidated Revenue Fund	1 322	1 477	1 644
Adjustment (b)	+17	+61	+133
Commission payable to racing clubs	551	r 724	1 007
Total	1 891	r 2 262	2 785

(a) Includes amounts received by the Racing and Gaming Commission for payment to Consolidated Revenue. Excludes amounts retained by the Totalisator Agency Board.

(b) An adjustment item is necessary to reconcile items referring to different accounting periods.

The turnover on which taxes were levied are as follows:

Betting: Bookmakers' and Totalisator Turnover
('\$000)

Turnover	1973-74	1974-75	1975-76
Licensed bookmakers	62 008	63 032	42 059
Totalisator	1 651	(a) 11 378	28 974
Total betting turnover	63 659	74 410	71 034

(a) Year ended 31 July.

State Taxation on Lotteries

From 1942 (when the Federal Government became the sole collector of income tax), lotteries conducted from Hobart by Tattersalls (George Adams Estate) were Tasmania's chief source of revenue through State taxation. On 14 July 1954, the promoters transferred their operations to Victoria. A new organisation—Tasmanian Lotteries—was granted a licence and operated until 30 September 1961, when the proprietor surrendered the licence. No operator is now licensed.

In September 1960, the *Racing and Gaming Act 1952* was amended to permit agreements with other states for the sale of their lottery tickets in Tasmania. Under an agreement with the Victorian Government, Tattersalls was allowed to sell tickets through accredited Tasmanian representatives; the Victorian Government was to pay quarterly to the Tasmanian Government 15½ per cent of the value of subscriptions made as a result of this concession.

For the purpose of public finance statistics, these amounts are classified not as 'taxation' but as 'payments from other states'.

The following table shows the payments made under the interstate agreement since 1968-69:

Payments to Tasmanian Government Based on Sale of Tattersalls Lottery Tickets
(\$)

Year	Amount	Year	Amount
1968-69	141 624	1972-73	200 059
1969-70	116 196	1973-74	227 770
1970-71	(a) 196 038	1974-75	300 810
1971-72	179 343	1975-76	(b) 330 660

(a) Includes \$33 858 due for the year 1969-70 but not received until early 1970-71.

(b) Excludes \$135 533 due for the year 1975-76 but not received until July 1976.

Fees and Licences under the Licensing Act

The State raises revenue from hotels, clubs, restaurants and liquor wholesalers by: (i) licensing; and (ii) imposing 'percentage fees' based on turnover for the year preceding collection.

**Fees and Related Licences Collected Under the Licensing Act
(\$'000)**

Tax or licence	1973-74	1974-75	1975-76
Percentage fees (a)	1 356	1 637	2 360
Publicans' and other licences under the Licensing Act	43	41	37
Wholesale licences	184	221	379
Registration of clubs	7	8	7
Total	1 590	1 907	2 782

(a) Based on liquor purchases by hotels and direct sales by wholesalers to the public.

Casino Tax and Licence Fees

The rate of casino tax and the licence fee were established by an agreement made in September 1968 between the State Treasurer, Federal Hotels Ltd and Australian National Hotels Ltd. The agreement was ratified by the *Wrest Point Casino Licence and Development Act 1968*. The casino tax is calculated according to a graduated scale based upon monthly gross profit and is payable monthly. Initially rates ranged from five per cent of gross profit where that profit was less than \$25 000 for the month to 30 per cent where the gross profit exceeded \$125 000. The licence fee was fixed at \$2 500 per month.

Early in 1975 the State Government received a submission from Australian National Hotels Ltd for changes in the tax scale. As a result, the effective maximum rate of tax was reduced to 25 per cent. This reduction was effected, from 1 June 1975 to 30 November 1976, by the remission of one sixth of the tax paid through an appropriation from Consolidated Revenue. An amendment to the Act passed in November 1976 reduced the actual maximum rate of tax to 25 per cent. In this Chapter, taxation receipts have been recorded *net* of the remission of casino tax and, consequently, total receipts and expenditure for Consolidated Revenue are slightly less than the totals recorded by the State Treasurer.

Details of casino taxation collections are shown in the following table:

**Casino Tax and Licence Fees
(\$'000)**

Particulars	1973-74	1974-75	1975-76
Casino tax	1 575	1 790	(a) 1 646
Licence fee	30	30	28
Total	1 605	1 820	1 674

(a) Total tax paid \$1 975 000; amount of remission \$329 000.

Tobacco Tax and Licence Fees

Tobacco licence fees were suspended from 1 July 1974 by force of the Tobacco (Suspension) Regulations 1974. Tobacco tax was not required to be collected from 1 April 1974. Receipts amounting to \$1 155 collected in 1975-76 related to arrears due for 1974-75.

Chapter 6

DEMOGRAPHY

POPULATION

Introduction

Census of 30 June 1976

Detailed analysis of the population according to its principal characteristics as at the Census of 30 June 1971 is included in the 1976 *Year Book*; preliminary population data from the Census of 30 June 1976 are contained in this edition.

Following the conduct of the Census on 30 June 1976, a decentralised processing centre was established in Hobart to process the basic population characteristics from the Tasmanian Census schedules (namely age, sex, marital status, birthplace and occupied and unoccupied dwellings). The intention was that after the completion of the decentralised processing in each state in about October 1976, the schedules would be sent to a centralised processing centre in Sydney where the remaining data from the schedules for all states and territories would be processed. However, as a result of Federal Government budgetary decisions, the centralised processing was deferred until the following financial year and commenced in Sydney in July 1977 and was to continue through until early 1978; detailed analyses of the population and dwellings were expected to be available progressively from mid-1978.

Post-enumeration surveys designed to measure the degree of error were conducted after both the 1976 and 1971 censuses. Net under-enumeration was derived by comparing results from the Census and the post-enumeration survey for the same individuals, and identifying omissions and duplications in the Census.

Tasmania's under-enumeration was found to be 1.116% in the 1976 Census (2.709% for Australia) which was a significant increase in the level of under-enumeration nationally compared with the 1971 Census. Therefore, it was decided to adjust the 1976 population count for each state and territory. The local government area, statistical division and sub-division and urban centre figures have also been adjusted, though figures for bounded localities and collection districts have not been adjusted.

Source of Population Figures

There are two principal methods by which population figures are obtained: (i) by census enumeration; and (ii) intercensal estimates based on the application of vital and migration statistics to census data. The second method involves taking account of *natural increase* (excess of births over deaths), and *net migration* (excess of arrivals over departures) and applying these net figures to information obtained from an earlier census, the result being termed an intercensal estimate. After each census, the estimates for the newly-completed intercensal period are revised to adjust for the difference between the new census result and the comparable estimate.

Censuses were conducted by the State in 1841, 1847, 1851, 1857, 1861, 1870, 1881, 1891 and 1901; the Australian Statistician became responsible for censuses with the establishment of the Commonwealth Bureau of Census and Statistics (now the Australian Bureau of Statistics) and conducted them in 1911, 1921, 1933, 1947, 1954, 1961, 1966, 1971 and 1976.

Population from 1820

The table that follows is based on the traditional historical series and has been compiled to show the population at the end of each decade from 1820, the natural increase and the average annual growth in total population for each decade.

Historical Summary of Tasmanian Population in Decades

Year	Estimated population (a)			Average annual increase for decade (b)	
	Males	Females	Persons	In total population	From natural increase (c)
1820 (d)	4 057	1 343	5 400	..	..
1830 (d)	18 108	6 171	24 279	1 888	..
1840 (d)	32 040	13 959	45 999	2 172	106
1850	44 229	24 641	68 870	2 287	656
1860	49 653	40 168	89 821	2 095	1 214
1870	53 517	47 369	100 886	1 107	1 622
1880	60 568	54 222	114 790	1 390	1 542
1890	76 453	68 334	144 787	3 000	2 496
1900	89 763	83 137	172 900	2 811	2 776
1910	97 026	92 781	189 807	1 691	3 322
1920	106 236	103 189	209 425	1 962	3 649
1930	111 148	108 835	219 983	1 056	3 127
1940	121 911	118 280	240 191	2 021	2 438
1950	140 339	135 563	275 902	3 571	3 768
1960	174 379	169 531	343 910	6 801	5 523
1970	195 280	192 440	387 720	4 381	5 116
1976 (e)	204 120	203 240	407 360	(f) 3 273	(f) 4 232

(a) Up to 1900, at 31 December; from 1910, at 30 June.

(b) Decade ending in year shown.

(c) Excess of births over deaths in calendar years.

(d) Imperial military establishment of about 1 000 troops included; excluded after 1842.

(e) 1976 census result, adjusted for under-enumeration.

(f) Average calculated for six years of present decade.

Census Populations From 1841

The table below shows the population and the average annual rate of increase and masculinity of the population for each Census from 1841:

Population and Masculinity at Each Census from 1841

Census date (a)	Population			Average annual percentage rate of increase (b)	Masculinity (c)
	Males	Females	Persons		
31 Dec. 1841	34 469	16 981	51 450	..	220.99
31 Dec. 1847	45 000	22 313	67 313	4.70	201.68
1 Mar. 1851	44 648	25 482	70 130	1.07	175.21
31 Mar. 1857	46 606	34 886	81 492	2.53	133.60
7 Apr. 1861	49 593	40 384	89 977	2.51	122.80

Population and Masculinity at Each Census from 1841—*continued*

Census date (a)	Population			Average annual percentage rate of increase (b)	Masculinity (c)
	Males	Females	Persons		
7 Feb. 1870	52 853	46 475	99 328	1.11	113.72
3 Apr. 1881	61 162	54 543	115 705	1.40	112.14
5 Apr. 1891	77 560	69 107	146 667	2.40	112.23
31 Mar. 1901	89 624	82 851	172 475	1.64	108.17
3 Apr. 1911	97 591	93 620	191 211	1.04	104.24
4 Apr. 1921	107 743	106 037	213 780	1.12	101.61
30 June 1933	115 097	112 502	227 599	0.52	102.31
30 June 1947	129 244	127 834	257 078	0.87	101.10
30 June 1954	157 129	151 623	308 752	2.65	103.63
30 June 1961	177 628	172 712	350 340	1.82	102.85
30 June 1966	187 391	184 045	371 436	1.18	101.82
30 June 1971	196 442	193 971	390 413	1.00	101.27
30 June 1976 (d)	204 120	203 240	407 360	0.78	100.43

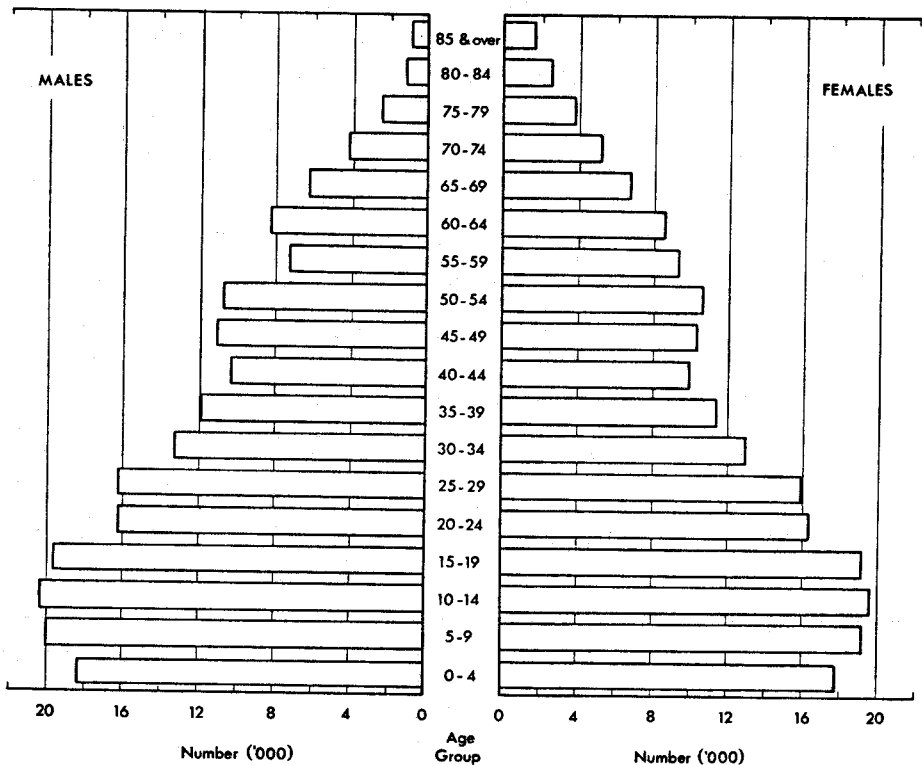
(a) Imperial military establishments included until 1870, when British troops were withdrawn.

(b) Intercensal increase in total population as compound rate of growth per cent.

(c) Number of males per 100 females.

(d) Adjusted for under-enumeration; earlier census figures are as recorded.

Age and Sex of Population at 30 June 1976, Tasmania (f)



Comparison With Other States

The following table compares the Tasmanian population at censuses from 1901 with that of other states and territories (full-blood Aboriginals are included from 1966):

Australia: Census Populations of States and Territories (a) (b)
(^{'000 Persons})

State or territory	1901	1933	1947	1954	1961	1966 (b)	1971	1976 (c)
N.S.W. ..	1 355	2 601	2 985	3 424	3 917	4 238	4 601	4 914
Victoria ..	1 201	1 820	2 055	2 452	2 930	3 220	3 502	3 746
Queensland ..	498	947	1 106	1 318	1 519	1 674	1 827	2 112
S.A. ...	359	581	646	797	969	1 095	1 174	1 262
W.A. ...	184	439	502	640	737	848	1 030	1 170
Tasmania ..	172	228	257	309	350	371	390	407
N.T. ...	5	5	11	17	27	57	86	101
A.C.T. (d) ..	..	9	17	30	59	96	144	203
Australia ..	3 774	6 630	7 579	8 987	10 508	11 599	12 756	13 916

(a) Censuses of 1911 and 1921 are not shown.

(b) Includes full-blood Aboriginals from 1966.

(c) Adjusted for under-enumeration; earlier census figures are as recorded.

(d) Part of N.S.W. prior to 1911.

The next table shows average annual rates of population increase:

Australia: Average Annual Rate of Increase of Population During Intercensal Periods (a) (b)
(Per Cent)

State or territory	1921-33	1933-47	1947-54	1954-61	1961-66	1966-71(b)	1971-76(c)
N.S.W. ..	1.76	0.99	1.98	1.94	1.51	1.66	1.03
Victoria ..	1.42	0.87	2.56	2.58	1.80	1.69	1.14
Queensland ..	1.86	1.11	2.53	2.04	1.86	1.77	2.59
S.A. ...	1.31	0.76	3.05	2.83	2.29	1.40	1.25
W.A. ...	2.29	0.97	3.51	2.03	2.63	3.97	2.28
Tasmania ..	0.52	0.87	2.65	1.82	1.18	1.00	0.78
N.T. ...	1.87	5.93	6.12	7.37	10.41	8.86	2.36
A.C.T. ...	10.71	4.65	8.70	9.93	7.75	8.45	6.53
Australia ..	1.63	0.96	2.46	2.26	1.88	1.92	1.48

(a) Full-blood Aboriginals excluded for 1961-66 and earlier periods.

(b) Calculated using as recorded census figures for 1966-71 and earlier periods.

(c) Calculated using census figures adjusted for under-enumeration.

Arrivals and Departures

Net migration, on a *de facto* basis for any period, is the difference between arrivals and departures, such movements being reported by the shipping companies and airlines. 'Arrivals' in the following table applies to all persons arriving in Tasmania from overseas or from other Australian states; it includes Tasmanians returning home. Similarly, 'departures' applies to all persons leaving Tasmania for overseas or for other Australian states; it includes visitors returning home from Tasmania. The table below shows annual arrivals and departures and also quarterly arrivals and departures for recent years.

Recorded Arrivals and Departures: Tasmania (a)

Year	Arrivals	Departures	Quarter ending	Arrivals	Departures
1968	276 798	276 856	1975—March	150 818	162 623
1969	296 186	297 069	June	116 751	125 827
1970	320 867	323 449	September	110 019	109 503
1971	340 163	340 642	December	131 697	116 462
1972	356 689	355 512			
1973	450 794	448 765	1976—March	148 623	156 019
1974	502 813	502 649	June	121 320	131 939
1975	509 285	514 415	September	105 599	104 829
1976	505 278	507 465	December	125 736	114 678

(a) Arrivals and departures on a *de facto* basis.

It should be noted that the data shown in the preceding table are compiled only on the basis of individual journeys. There is no classification of the arrival or departure figures into 'Tasmanians' and 'others' nor is any information obtained about the type of movement involved—i.e. whether the arrival or departure is of a permanent, long-term or short-term nature. It therefore follows that while increased tourist movements have made a principal contribution to the growth in the arrival and departure figures, as shown in the table, it is not possible to isolate tourist movements from other movements to and from Tasmania.

Population in Local Government Areas

The next table shows the population in local government areas, statistical divisions and sub-divisions for the censuses of 1961, 1966, 1971 and 1976:

Population in Local Government Areas and Statistical Divisions at 30 June

Local government area (statistical division and sub-division in bold type)	Census			
	1961	1966	1971	1976 (a)
Hobart (H)	54 021	53 257	52 426	50 570
Glenorchy (H)	35 682	39 053	42 651	42 600
Clarence (H)	23 140	30 236	37 104	42 360
Brighton (H) (S)	2 115	2 207	2 333	4 970
Kingborough (H) (S)	10 025	10 322	10 815	13 940
New Norfolk (H) (S)	10 217	10 315	10 613	10 240
Sorell (H) (S)	2 878	3 309	3 636	4 350
Bothwell (S)	1 288	1 008	813	840
Bruny (S)	504	400	311	320
Esperance (S)	3 436	3 740	3 508	3 180
Glamorgan (S)	1 128	1 125	1 120	1 330
Green Ponds (S)	969	880	881	870
Hamilton (S)	4 178	4 329	4 060	3 550
Huon (S)	5 460	5 264	4 756	4 870
Oatlands (S)	2 691	2 501	2 132	2 210
Port Cygnet (S)	2 754	2 550	2 070	2 060
Richmond (S)	1 673	1 658	1 579	1 690
Spring Bay (S)	1 155	1 205	1 413	1 770
Tasman (S)	1 108	1 126	1 035	950
HOBART	164 422	141 311	153 216	162 660
SOUTHERN		33 174	30 040	30 010

Population in Local Government Areas and Statistical Divisions at 30 June—*continued*

Local government area (statistical division and sub-division in bold type)	Census			
	1961	1966	1971	1976 (a)
Launceston	38 118	37 217	35 107	33 080
Beaconsfield	8 550	9 983	10 970	12 550
Deloraine	5 574	5 205	4 807	4 820
Evandale	1 608	1 554	1 462	1 600
George Town	3 677	5 101	6 029	6 790
Lilydale	6 744	7 841	8 308	8 830
Longford	6 762	5 354	5 145	5 430
St Leonards	11 032	13 660	16 093	18 400
Westbury	4 581	4 964	4 863	5 530
Tamar	86 646	90 879	92 784	97 030
Campbell Town	1 893	1 753	1 641	1 620
Fingal	4 475	3 791	3 441	2 930
Flinders	1 407	1 234	968	980
Portland	1 274	1 391	1 497	1 650
Ringarooma	3 056	2 866	2 474	2 260
Ross	672	617	541	550
Scottsdale	3 417	3 628	3 615	3 980
North Eastern	16 194	15 280	14 177	13 970
NORTHERN	102 840	106 159	106 961	111 000
Burnie	16 745	18 611	19 954	19 620
Circular Head	7 733	7 884	7 981	7 770
Devonport	14 276	16 758	19 802	21 550
Kentish	4 167	5 614	5 325	4 110
King Island	2 784	2 462	2 793	2 750
Latrobe	4 367	4 807	5 115	5 570
Penguin	4 673	4 677	4 791	5 020
Ulverstone	9 365	10 150	11 052	12 190
Wynyard	8 835	9 564	10 600	11 680
North Western	72 945	80 527	87 413	90 260
Gormanston	507	540	489	400
Queenstown	4 624	4 393	5 123	4 720
Strahan	565	470	447	440
Waratah	367	698	1 940	2 080
Zeehan	3 191	3 489	4 369	5 220
Western	9 254	9 590	12 368	12 860
MERSEY-LYELL	82 199	90 117	99 781	103 120
Migratory	879	675	415	570
TASMANIA	350 340	371 436	390 413	407 360

(a) Adjusted for under-enumeration; census figures for earlier years are as recorded.

Distinction Between Urban and Rural

After the Censuses of 1954 and 1961, the Commonwealth Statistician published a population classification using the terms 'metropolitan', 'urban' and 'rural'. Delineation of the urban boundaries was subjective and the methods used were not completely comparable between states.

In order to develop an objective definition of 'urban' and 'rural' areas, Dr G. J. R. Linge of the Australian National University was commissioned by the Commonwealth Statistician to make a report.

At the 27th Conference of Statisticians in 1965, the following resolutions relating to the delimitation of urban areas based substantially on Dr Linge's report were passed:

- (i) (a) That the concept of an *inner* and *outer* boundary around each of the state capitals and other cities with an urban population of at least 75 000 and a regional population of at least 100 000 be adopted;
- (b) that the inner boundary be drawn to delimit the extent of urban development at each Census and it should, therefore, be a moving boundary to be adjusted after each Census, except that any state may extend the inner boundary during intercensal years to encompass significant and well-defined peripheral population growth; and
- (c) that the outer boundary be designed to contain the anticipated urban development of a city for a period of at least 20 to 30 years.
- (ii) (a) That an urban boundary be defined as soon as possible for all other settlements with a population of 1 000 or more; and
- (b) that state, statistical division, local government area, and other boundaries be ignored in delimiting these urban areas.
- (iii) That urban boundaries be defined so as to include all contiguous census collector's districts which have a population density of 200 or more per square kilometre (subject to certain special rules).

Effect of Change in Tasmania

The resolution previously quoted as (i) affected only one centre in Tasmania since only the Hobart area has 'an urban population of at least 75 000 persons and a regional population of at least 100 000'. Resolutions (ii) and (iii) affected all other cities and towns, including Launceston. The concept of ringing the capital city with two statistical boundaries, an inner and an outer, was discussed in depth in the 1968 and 1969 *Year Books*.

Revised Criteria, 1976

For the 1976 Population Census, the statisticians agreed that the concept of an *inner* and *outer* boundary be adopted for all towns and cities with populations of 25 000 or more persons. (Previously this concept was only applied to cities with an urban population of at least 75 000 and a regional population of 100 000.) This decision affected Tasmania since the Launceston area met these criteria. Accordingly it became necessary to delineate a Launceston Statistical District (see below).

The Launceston Statistical District

For the purposes of presenting the results of the 1976 Census, *two* boundaries around Launceston have been drawn:

- (i) a fixed *Outer Boundary* (Launceston Statistical District) enclosing the area of expected urban growth during the next two decades (broadly this comprises the City of Launceston and parts of seven other municipalities); and
- (ii) a flexible *Inner Boundary* (Urban Launceston) which moves towards the Outer Boundary as urbanisation develops. This area in 1976 comprised the continuous area of urban development centred on Launceston City and included parts of the municipalities of Beaconsfield, Westbury, Evandale, St Leonards and Lilydale.

The delineation of the Launceston Statistical District was based on the assumption that northern development of the urban aggregate would tend to thrust along the axis of the Tamar River. Accordingly it was decided that the district should extend to Bass Strait to take account of the region's unique geography (Launceston City is the southern terminus of 70 kilometres of navigable river with major ports and industries situated close to the northern river mouth).

The logic of forming a district from Launceston City and parts of seven other municipalities was as follows: (i) parts of Beaconsfield, Westbury, Evandale, St Leonards and Lilydale were already included in the aggregate known as Urban Launceston; (ii) in the south, the border of Longford Municipality was only a kilometre or so from the boundary of Urban Launceston; and (iii) in the north, George Town municipality was the site of Launceston's major port (Bell Bay), of the State's aluminium refinery and of two major plants exporting woodchips; the George Town-Launceston link has been reinforced in recent years by the construction of a railway. The unity of the region is emphasised by the downstream Batman Bridge linking George Town and Beaconsfield municipalities.

Users of statistics wanting valid north-south comparisons should note that the Launceston Statistical District was delineated on the basis of the same principles as the Hobart Statistical Division. To the extent that drawing both areas involved forecasts of where future growth will occur, there is of course an element of subjectivity which cannot be avoided. Nevertheless these two areas are recommended as a sound basis for making north-south comparisons. Statistics relating to the new Launceston Statistical District became available progressively from July 1976. Maps of the two areas are included in Chapter 2.

With the formation of a Launceston Statistical District, the opportunity existed to simplify the geography of the Northern Statistical Division which could have been presented as: (i) the Launceston District; and (ii) the balance of the Division. This alternative was rejected because data for the District would only begin from 1976 whereas data for the Tamar Sub-division could be taken back to 1919 for many series.

Urban and Rural Population of Tasmania

The urban-rural proportion of each Tasmanian local government area is set out in the table below; also the proportion of the State's population contributed by each local government area. Localities are classified as urban if they have populations exceeding 1 000 persons together with a population density of 200 or more per square kilometre; special rules have been applied in the case of holiday resorts where housing density is taken into account.

Percentage of Population in Local Government Areas
Classified as Urban or Rural at Census, 30 June 1976

Local government area (statistical division and sub-division in bold type)		Persons (a)		Rural	Urban Hobart	Urban Laun- ceston	Other urban	Total
		Number	Per cent					
per cent of area's population								
Hobart	(H)	50 570	12.41	1.5	98.5	..	..	100.0
Glenorchy	(H)	42 600	10.46	2.3	97.7	..	..	100.0
Clarence	(H)	42 360	10.40	6.8	88.7	..	4.5	100.0
Brighton	(H) (S)	4 970	1.22	43.4	56.6	..	..	100.0
Kingborough	(H) (S)	13 940	3.42	32.8	21.3	..	45.8	100.0
New Norfolk	(H) (S)	10 240	2.51	33.4	..	..	66.6	100.0
Sorell	(H) (S)	4 350	1.07	38.5	..	..	61.5	100.0

Details of Urban Centres and Bounded Localities

The next table shows the population of each urban centre and bounded locality as determined at the 1971 and 1976 Censuses:

Population of Urban Centres and Bounded Localities (a) at Censuses of 30 June 1971 and 1976

Urban centre or bounded locality	1971 census (b)	1976 census (c)	Urban centre or bounded locality	1971 census (b)	1976 census (c)
Avoca	251	207	Luina	458	521
Beaconsfield	950	936	Margate	353	392
Beauty Point	869	1 034	Maydena	527	537
Bichenno	284	414	Mole Creek	287	300
Bothwell	386	389	New Norfolk	6 839	6 827
Bracknell	274	271	Oatlands	548	553
Branxholm	262	275	Orford	312	351
Bridgewater	229	2 811	Penguin	2 294	2 558
Bridport	591	725	Perth	1 112	1 166
Burnie-Somerset	20 087	19 189	Poatina	216	213
Campbell Town	916	936	Pontville	482	809
Carrick .. .. .	..	227	Port Sorell	564	772
Cremorne .. .. .	..	259	Queenstown	5 025	4 620
Cressy	630	621	Railton	933	926
Currie	913	861	Richmond	491	515
Cygnets	708	720	Ridgley	474	513
Deloraine	1 812	1 884	Ringarooma	270	287
Derby	243	202	Rosebery	2 380	2 590
Devonport	18 183	19 473	Ross	279	301
Dodges Ferry .. .. .	..	442	Rossarden	624	291
Dover	462	408	St Helens	825	817
Dunalley	270	247	St Marys	745	677
Electrona	243	251	Savage River	1 208	1 212
Evandale	472	529	Scottsdale	1 815	4 855
Exeter	324	347	Seven Mile Beach	343	464
Fingal	446	430	Sheffield	795	833
Forth	338	227	Smithton	3 208	3 307
Franklin	587	530	Snug	530	668
Geeston	958	900	Sorell-Midway Point	2 029	2 231
George Town	4 838	5 413	Stanley	715	650
Gormanston	409	358	Strahan	429	416
Grassy	767	718	Strathgordon	1 270	912
Gravelly Beach	466	522	Sulphur Creek	421	401
Hadsden	395	619	Swansea	372	376
Hamilton	212	222	Tarraleah	524	495
Heybridge	388	378	Triabunna	591	881
Hobart	129 928	132 027	Tullah .. .. .	..	267
Huonville-Ranelagh	1 317	1 370	Turners Beach	461	659
Kettering	232	285	Ulverstone	8 009	8 988
Kingston-Blackmans Bay	3 688	6 398	Waratah	217	246
Lanena-Blackwall	464	455	Westbury	965	1 028
Latrobe	2 464	2 428	Westerway	255	202
Lauderdale	1 329	1 923	Woodbridge	327	300
Launceston	62 241	63 629	Wynyard	4 006	4 444
Lilydale	307	316	Yolla .. .. .	..	205
Longford	1 713	1 825	Zeehan	1 471	1 793
Low Head	263	275			

(a) Bounded localities are population clusters of 200 to 999 persons.

(b) As recorded.

(c) Urban centres (localities with 1 000 or more persons) have been *adjusted* for under-enumeration. Localities with less than 1 000 persons are *as recorded*.

Population Centred on Hobart

The Hobart Statistical Division

The next table shows the population of the Hobart Statistical Division at the 1966, 1971 and 1976 Censuses:

Population of Hobart Statistical Division

Components	Census 30 June 1966 (a)	Census 30 June 1971 (a)	Census 30 June 1976 (b)
Urban Hobart	119 469	129 928	132 027
Other urban centres—			
Urban New Norfolk	5 770	6 839	6 827
Urban Kingston-Blackmans Bay	3 263	3 688	6 398
Urban Sorell-Midway Point	1 652	2 029	2 231
Urban Lauderdale	916	1 329	1 923
Urban Bridgewater	(c)	(c)	2 811
Urban Dodges Ferry	(d)	(d)	(e) 442
Total other urban.. .. .	11 601	13 885	20 632
Total urban	131 070	143 813	152 659
Rural	10 241	9 403	10 001
Total Hobart Statistical Division ..	141 311	153 216	162 660

(a) As recorded.

(b) Adjusted for under-enumeration.

(c) Population of less than 1 000 persons and thus not classified as an urban centre.

(d) Population of less than 1 000 persons and failed to meet the housing density criterion used for holiday resorts.

(e) Although the population was less than 1 000 persons at 30 June 1976, Dodges Ferry has been included as urban in 1976 because the housing density criterion, used for holiday resorts, has been met.

The Two-Boundary Concept

For the purposes of presenting the results of the 1966 and 1971 Censuses, two boundaries around Hobart were drawn:

(i) a fixed *Outer Boundary* (*Hobart Statistical Division*) enclosing the area of expected urban growth during the next 20 to 30 years (broadly this comprises the cities of Hobart and Glenorchy, Clarence municipality and parts of Kingborough, New Norfolk, Brighton and Sorell municipalities); and

(ii) a flexible *Inner Boundary* (*Urban Hobart*) which moves outwards towards the Outer Boundary as urbanisation develops. This area in 1966 comprised the continuous area of urban development from Taroona in the south to Granton in the north and the eastern shore suburbs from Risdon Vale southward to Tranmere. In 1971 Rokeby was added to the area. The area includes only contiguous *urban* portions of the cities of Hobart and Glenorchy and of the municipalities of Clarence and Kingborough.

A detailed account of the *Two-Boundary Concept* was included in the 1968 and 1969 *Year Books*.

Population Centred on Launceston

Population of Launceston and Suburbs

In 1891 the Tasmanian Government Statistician first published figures for an area called *Launceston and Suburbs* which comprised Launceston City plus the urban areas of surrounding municipalities, a practice continued until 1966. In 1966, to coincide with the population census, the new terminology *Urban Launceston* was adopted in lieu of *Launceston and Suburbs*; however, at the time of this change, the *Urban Launceston* boundary differed very little from that

of the former *Launceston and Suburbs*. An additional boundary defining the 'Launceston Statistical District' has been drawn for purposes of the 1976 population census (see details earlier in this Chapter; a map is included in Chapter 2).

The next table shows the population of the Launceston Statistical District at 30 June 1976. Also shown are the populations of Urban Launceston and other urban centres at the 1966 and 1971 Censuses.

Population of Launceston Statistical District

Components	Census 30 June 1966 (a)	Census 30 June 1971 (a)	Census 30 June 1976 (b)
Urban Launceston	60 456	62 241	63 629
Other urban centres—			
Urban Beauty Point	873	869	1 034
Urban George Town	4 086	4 838	5 413
Urban Longford	1 688	1 713	1 825
Urban Perth	1 002	1 112	1 166
Total other urban	7 649	8 532	9 438
Total urban .. .. .	..	..	73 067
Rural	n.a.	n.a.	9 263
Total Launceston Statistical District (c)	n.a.	n.a.	82 330

(a) Figures as recorded.

(b) Adjusted for under-enumeration.

(c) Delineated in 1976.

VITAL STATISTICS

Summary of Principal Statistics

Vital statistics (births, deaths and marriages) are compiled from details registered with the Registrar-General of Tasmania and refer to registrations processed during the periods specified. The principal number and rates relating to vital statistics in Tasmania for recent years are given in the following table:

Summary of Vital Statistics

Year	Number registered				Rate per 1 000 of mean population			Infant mortality (deaths under one year per 1 000 live births)
	Marriages	Live births	Deaths	Infant deaths (a)	Marriages	Live births	Deaths	
1971	3 578	8 321	3 295	114	9.13	21.23	8.41	13.7
1972	3 426	7 824	3 227	127	8.70	19.88	8.20	16.2
1973	3 395	7 326	3 347	137	8.56	18.47	8.44	18.7
1974	3 567	7 398	3 484	123	8.91	18.49	8.71	16.6
1975	r 3 242	6 982	3 339	128	8.01	17.25	8.25	18.3
1976	3 477	6 702	3 389	77	8.54	16.44	8.32	11.5

(a) Deaths under one year; included also in total deaths.

Crude Rate Comparisons

The rates per 1 000 of mean population for births, deaths and marriages are referred to as *crude* rates. It will be seen, in regard to marriages, that not *all* the population is 'at risk', children and those already married being obvious

excluded examples. Similarly, births are clearly events related to certain fertile age groups of women and not to the total population; births also are related to the number of married persons and to the age structure of the married proportion of the community. Finally, deaths have a definite relationship with the numbers of each sex and the age structure of the community. Crude rates are valid measures of comparison in the short term only.

Subject to this limitation, the following Tasmanian historical comparisons exist as from 1880:

- (i) Crude marriage rate: highest 10.51 (1946); lowest 5.50 (1859 and 1896).
- (ii) Crude birth rate: highest 36.63 (1884); lowest 16.44 (1976).
- (iii) Crude death rate: highest 17.41 (1883); lowest 7.70 (1960).

It is probably significant that 1946 was the year of rapid demobilisation after World War II and that a similar marriage trend was recorded for 1919 and 1920 after World War I. The crude birth rate for 1976 (16.44 per 1 000 of mean population) is the lowest recorded. The popularly accepted theory attributes the current low figure to deliberate family planning. This is supported by the fact that, although girls born in the post-war period have now entered the ranks of those likely to marry and have therefore increased the number of potentially fertile women, the fertility rate is declining (as described in a later section under 'Births').

Review of Infant Mortality

Infant mortality relates to the number of deaths *under one year* and the rate is expressed as the number of such deaths per 1 000 live births. It follows that comparisons over long periods of time are valid and not affected by the limitations attached to crude rates. In the following record of infant mortality, the drop in rates has been dramatic with the 1976 rate (11.5) being the lowest yet experienced.

Infant Mortality Rates (Deaths under One Year Per 1 000 Live Births) Selected Years from 1880

Year	Rate	Year	Rate	Year	Rate
1880	112.3	1930	50.6	1972	16.2
1890	105.6	1940	35.2	1973	18.7
1900	80.0	1950	23.8	1974	16.6
1910	101.7	1960	19.1	1975	18.3
1920	65.5	1970	14.2	1976	11.5

The peak year since 1880 was 1883 with a rate of 124.0. In the period 1880-1910, the annual infant mortality rate exceeded 100 on 14 occasions. There has been a steady improvement in infant mortality rates over the past 50 years. The rate for the period 1916-1920 was 64, for the year 1961, 16.8, and in 1976 a record minimum of 11.5 was achieved.

At the turn of the century, 20 to 25 per cent of all deaths were those of infants under one year. The rapid fall in infant mortality rates had a marked effect on the crude death rates as infant deaths are a component of total deaths. Infant mortality has fallen largely due to advances in medical science enabling the control of disease and the development of techniques to reduce perinatal deaths; improvements in child care and nutrition also have made a significant contribution.

Marriages

The following table summarises the number of marriages registered and the crude marriage rate since 1880:

Marriages and Crude Marriage Rates, Selected Years from 1880

Year	Marriages		Year	Marriages	
	Number	Crude rates ^(a)		Number	Crude rates ^(a)
1880	840	7.39	1940.. .. .	2 476	10.27
1890	954	6.66	1950.. .. .	2 560	9.18
1900	1 332	7.72	1960.. .. .	2 713	7.82
1910	1 493	7.82	1970.. .. .	3 535	9.11
1920	1 999	9.50	1975.. .. .	r 3 242	r 8.01
1930	1 450	6.56	1976.. .. .	3 477	8.53

(a) Number of marriages per 1 000 of mean population.

The following table gives the average age of brides and bridegrooms in recent years based on 'age last birthday' figures:

Average Age of Bridegrooms and Brides (Years)

Particulars	1970	1971	1972	1973	1974	1975
Average age of bridegrooms—						
Bachelors	23.9	24.0	24.0	24.0	23.9	23.5
Widowers	56.9	55.5	56.2	57.9	58.9	57.0
Divorcees	39.8	38.7	39.5	38.4	38.5	37.3
All bridegrooms ..	25.8	26.0	26.1	26.1	26.0	23.7
Average age of brides—						
Spinsters	21.4	21.2	21.2	21.2	21.2	20.8
Widows	49.0	48.6	50.2	49.9	49.2	51.2
Divorcees	35.5	35.7	36.0	35.5	34.5	35.2
All brides	23.0	23.1	23.2	23.3	23.2	23.0

The next table analyses the ages of all bridegrooms and brides contracting marriages:

Age of Bridegrooms and Brides, 1975

Age last birthday (years)	Bridegrooms		Brides	
	Number	Per cent of total	Number	Per cent of total
Under 20	324	9.99	1 250	38.56
20-24	1 748	53.92	1 335	41.18
25-29	638	19.68	318	9.81
30-34	196	6.05	93	2.87
35-39	99	3.05	58	1.79
40-44	59	1.82	48	1.48
45-49	56	1.73	40	1.23
50-54	37	1.14	33	1.02
55-59	27	0.83	26	0.80
60-64	21	0.65	21	0.65
65 and over ..	37	1.14	20	0.62
Total	3 242	100.00	3 242	100.00

The following three tables show: (i) the number of persons under 21 years of age marrying; (ii) the conjugal condition of persons marrying; and (iii) marriages according to the type of marriage ceremony conducted, for a six-year period.

Marriages: Persons Under 21 Years of Age

Year	Age in years						Persons under 21 years		
	15	16	17	18	19	20	Number	Percentage of all marriages	
BRIDEGROOMS									
1970	6	160	235	348	749	21.19	
1971	..	1	8	111	244	362	726	20.29	
1972	..	1	8	127	235	336	707	20.64	
1973	4	111	218	375	708	20.85	
1974	7	144	220	393	764	21.42	
1975	6	105	213	348	672	20.73	
BRIDES									
1970	..	2	111	269	425	541	505	1 853	52.42
1971	..	2	120	247	437	557	534	1 897	53.02
1972	..	8	131	247	432	490	503	1 811	52.86
1973	..	4	93	225	445	532	515	1 814	53.43
1974	..	1	88	231	483	588	507	1 898	53.21
1975	..	1	94	208	441	504	422	1 670	51.51

Conjugal Condition of Persons Marrying

Year	Bridegrooms			Brides			Total marriages
	Bachelors	Widowers	Divorcees	Spinsters	Widows	Divorcees	
1970	3 202	95	238	3 236	101	198	3 535
1971	3 214	109	255	3 224	129	225	3 578
1972	3 072	102	252	3 063	120	243	3 426
1973	3 028	102	265	3 025	118	252	3 395
1974	3 184	86	297	3 169	133	265	3 567
1975	2 844	90	308	2 863	108	271	3 242

Marriages, Religious and Civil

Particulars of celebration	1970	1971	1972	1973	1974	1975
Religious rites—						
Church of England	1 431	1 359	1 332	1 265	1 350	1 147
Catholic	738	757	721	696	693	645
Presbyterian	160	150	161	148	155	134
Methodist	477	498	412	466	440	407
Congregational	45	43	47	53	51	31
Baptist	97	86	101	89	89	103
Churches of Christ	23	19	21	19	22	21
Salvation Army	23	17	26	35	38	26
Seventh-day Adventist	7	12	12	5	5	10
Other	90	112	92	112	123	114
Civil ceremonies (a)	444	525	501	507	601	604
Total	3 535	3 578	3 426	3 395	3 567	3 242

(a) Marriages contracted before registrars.

Divorce

The *Matrimonial Causes Act* 1860, as amended, provided for divorce in Tasmania until 1 February 1961, when Australia came under a uniform divorce law, the *Matrimonial Causes Act* 1959, passed by the Federal Parliament. The *Family Law Act* 1975 came into effect on 5 January 1976, replacing the *Matrimonial Causes Act* 1959. The main changes were the creation of the Family Court of Australia and the alteration of the grounds for divorce to the sole ground of irretrievable breakdown of marriage after 12 months separation.

In 1975 dissolutions of marriage represented 18.23 per cent of the number of marriages contracted for that year (591 dissolutions compared with 3 242 marriages). The increase in the number of dissolutions is illustrated in the historical table which follows:

Dissolutions of Marriage Granted (a): Summary from 1881

Decade ending—	Maximum in decade		Minimum in decade	
	Year	Number	Year	Number
1890	1886	6	1884	..
1900	1894	6	1896	3
1910	1909	13	1904	2
1920	1920	18	1916	2
1930	1928	55	1924	20
1940	1938	109	1937	30
1950	1949	266	1942	83
1960	1954	233	1958	176
1970	1970	426	1964	230

(a) Includes nullities of marriage and judicial separations.

The following table gives the number of petitions filed by husbands and wives respectively, and the number of dissolutions of marriage during recent years. Every decree of dissolution of marriage is, in the first instance, a decree *nisi* and is normally made absolute after a period of three months.

Petitions Filed and Dissolutions Granted

Particulars	1970	1971	1972	1973	1974	1975
Petitions for dissolution (a) filed by—						
Husband	224	221	237	281	309	287
Wife	279	267	288	354	444	444
Total petitions	503	488	525	635	753	731
Dissolutions (a) granted on petition of—						
Husband	187	198	200	186	240	242
Wife	239	234	246	258	296	349
Total dissolutions	426	432	446	444	536	591

(a) Includes nullities of marriage and judicial separations; no petitions for nullity or nullities were granted in 1975.

The table that follows analyses the grounds on which dissolutions were granted:

Dissolutions (a) Granted According to Grounds, 1975

Grounds	Petitioner		Total
	Husband	Wife	
Single ground—			
Desertion	92	123	215
Adultery	90	118	208
Separation	51	79	130
Cruelty .. .. .	..	9	9
Drunkenness	1	4	5
Other .. .. .	..	3	3
Dual grounds—			
Desertion and adultery	5	2	7
Desertion and separation	3	2	5
Cruelty and drunkenness .. .. .	..	2	2
Other .. .. .	..	7	7
Total	242	349	591

(a) Includes nullities of marriage and judicial separations.

The more frequent grounds for the granting of dissolutions in recent years are shown in the next table:

Dissolutions (a) Granted According to Principal Grounds: Summary

Grounds	1970	1971	1972	1973	1974	1975
On petition of husband—						
Adultery	74	80	84	69	114	90
Desertion	72	76	76	80	81	92
Separation	34	39	30	34	40	51
Other	7	3	10	3	5	9
On petition of wife—						
Adultery	73	71	80	83	107	118
Desertion	74	74	88	92	97	123
Separation	59	59	45	60	58	79
Other	33	30	33	23	34	29
Total	426	432	446	444	536	591

(a) Includes nullities of marriage and judicial separations.

Dissolutions of Marriage 1975 (a): Ages of Parties at Time of Dissolution

Age of husband (years)	Age of wife (years)							Total husbands
	Under 20	20-29	30-39	40-49	50-59	60 and over	Not stated	
Under 20
20-29	154	3	..	..	..	..	157
30-39	74	125	4	..	..	1	204
40-49	1	48	73	9	..	..	131
50-59	3	31	25	4	..	63
60 and over	2	..	3	17	8	..	30
Not stated	1	..	..	..	..	5	6
Total wives	232	179	111	51	12	6	591

(a) Includes nullities of marriage and judicial separations.

Dissolutions of Marriage, 1975 (a): Duration of Marriage and Issue

Duration of marriage (years)	Dissolutions of marriages with—						Total marriages dissolved	Total number of children (b)
	No children	1 child	2 children	3 children	4 children	5 or more children		
0- 4	42	15	6	..	..	..	63	27
5- 9	46	42	61	17	1	1	168	226
10-14	18	23	48	28	14	5	136	285
15-19	9	4	18	20	16	8	75	209
20-24	8	7	16	15	9	5	60	147
25-29	18	17	10	3	2	5	55	83
30-34	10	8	..	..	1	..	19	12
35-39	11	1	..	..	..	..	12	1
40-44	2	..	..	..	..	..	2	..
45 and over	1	..	..	..	..	..	1	..
Total	165	117	159	83	43	24	591	990

(a) Includes nullities of marriage and judicial separations.

(b) Under 21 years of age.

Births

The following table summarises births and crude birth rates from 1880:

Number of Births and Crude Birth Rates, Selected Years from 1880

Year	Births		Year	Births	
	Number	Per 1 000 of mean population		Number	Per 1 000 of mean population
1880	3 739	32.90	1940	4 994	20.71
1885	4 637	36.29	1945	5 785	23.27
1890	4 813	33.60	1950	7 242	25.96
1895	4 790	31.16	1955	8 089	25.63
1900	4 864	28.18	1960	8 853	25.52
1905	5 257	28.50	1965	7 535	20.48
1910	5 586	29.25	1970	8 185	21.09
1915	5 845	29.78	1972	7 824	19.90
1920	5 740	27.29	1973	7 326	18.46
1925	5 218	24.21	1974	7 398	18.42
1930	4 785	21.66	1975	6 982	17.17
1935	4 456	19.39	1976	6 702	16.44

The next table shows the number of births classified according to the age of mother for recent years:

Number of Births Classified According to Age of Mother

Age group (years)	1972	1973	1974	1975	1976	
					Number	Per cent
10-14	4	7	7	7	8	0.1
15-19	1 176	1 101	1 056	992	854	12.7
20-24	2 871	2 677	2 699	2 605	2 545	38.0
25-29	2 382	2 322	2 433	2 278	2 202	32.9
30-34	939	836	852	777	801	12.0
35-39	359	291	278	261	223	3.3
40-44	86	87	69	59	65	1.0
45 and over	7	5	4	3	4	0.1
Total births	7 824	7 326	7 398	6 982	6 702	100.0

One observation of interest is that births of males, in total, usually exceed those of females. The next table shows births by sex and indicates masculinity:

Births by Sex and Masculinity

Particulars	1972	1973	1974	1975	1976
Births of—					
Males	3 935	3 744	3 760	3 605	3 464
Females	3 889	3 582	3 638	3 377	3 238
Total	7 824	7 326	7 398	6 982	6 702
Masculinity (a)	101.18	104.52	103.35	106.78	106.98

(a) Number of male births per 100 female births.

In the following table, births are analysed by sex and by the age of the mother and classified as nuptial or ex-nuptial:

Births by Sex, Age of Mother and Nuptial State, 1976

Age group (years)	Nuptial births		Ex-nuptial births		All births		
	Male	Female	Male	Female	Male	Female	Total
10-14 .. .. .	..	..	6	2	6	2	8
15-19	289	253	161	151	450	404	854
20-24	1 195	1 135	108	107	1 303	1 242	2 545
25-29	1 068	1 036	55	43	1 123	1 079	2 202
30-34	398	348	30	25	428	373	801
35-39	112	97	5	9	117	106	223
40-44	31	30	3	1	34	31	65
45 and over	3	1	..	..	3	1	4
Total	3 096	2 900	368	338	3 464	3 238	6 702

The table that follows summarises, for a five-year period, births according to whether the child was first-born or the issue of a subsequent birth:

Births by Nuptial State of Mother and First Born or Subsequent Issue

Particulars	1972	1973	1974	1975	1976
Nuptial—					
First born (a)	2 544	2 358	2 456	2 349	2 263
Subsequent birth	4 585	4 225	4 154	3 875	3 733
Ex-nuptial	695	743	788	758	706
Total births	7 824	7 326	7 398	6 982	6 702
Ex-nuptial births as per cent- age of total births	8.9	10.1	10.7	r 10.9	10.5

(a) In case of multiple births with no previous issue, first child born alive is recorded as 'First born' and subsequent child or children as 'Subsequent birth'.

It should be noted that 'First born' in the previous tables refers specifically to the union from which the child originates; thus a mother married for the second time could be credited with a 'First born' child despite having issue from the previous union.

Birth Rates

The *crude birth rate* is expressed as the number of births per 1 000 of mean population; this is obviously an unsatisfactory measure since births are events strictly related to the number of women in the fertile age groups. A more satisfactory index is the *fertility rate*, expressed as the number of births per 1 000 women aged 15-44 years. However, there are profound differences between the relative fertility of various age groups and a further refinement is the calculation of *age-specific birth rates*. The following table shows age-specific birth rates for each five-year age group of females from 10-49 years, the fertility rate applicable to all women in the age group 15-44 years and the crude birth rate.

Birth and Fertility Rates

Particulars	1972	1973	1974	1975	1976
AGE SPECIFIC BIRTH RATES (a)					
Age group (years)—					
10-14	0.2	0.3	0.3	0.3	0.4
15-19	64.0	58.6	54.6	50.0	44.6
20-24	186.2	166.9	165.6	153.4	156.1
25-29	176.3	162.8	163.1	147.1	138.8
30-34	81.3	71.4	70.7	61.8	62.2
35-39	34.4	27.6	26.3	23.9	19.6
40-44	8.0	8.2	6.5	5.8	6.5
45-49	0.6	0.5	0.3	0.3	0.4
FERTILITY RATE (b)					
Fertility rate	98	90	88	81	78
CRUDE BIRTH RATE (c)					
Crude birth rate	19.9	18.5	18.4	17.2	16.4

(a) Number of births per 1 000 women in age groups shown.

(b) Number of births per 1 000 women aged 15-44 years.

(c) Number of births per 1 000 of mean population.

Infant Mortality

Infant mortality relates to children dying within one year of birth. The table that follows analyses such deaths in further detail and shows that the greatest mortality rate is associated with infants in their first day of life. To obtain a correct picture of relative risk, it should be noted that deaths in the 'one day and under one week' class are spread over six days; in the 'one week and under four weeks' class spread over 21 days; and in the final class, spread over 338 days.

Infant Mortality: Number of Deaths and Mortality Rates at Specific Ages

Year	Infant deaths		Mortality rate (a) at age specified			
	Number	Per 1 000 live births	Under 1 day	1 day and under 1 week	1 week and under 4 weeks	4 weeks and under 12 months
1971	114	13.7	2.5	3.8	1.1	6.2
1972	127	16.2	4.7	2.3	2.2	7.0
1973	137	18.7	6.4	3.8	1.1	7.4
1974	123	16.6	5.3	3.9	0.9	6.5
1975	128	18.3	4.6	5.2	1.4	7.2
1976	77	11.5	2.5	3.1	0.7	5.1

(a) Infant deaths per 1 000 live births.

Causes of Infant Deaths

The following table has been compiled on the basis of the Eighth Revision (1965) of the International Classification of Diseases (World Health Organisation).

Infant Mortality: Causes of Death Under One Year

Cause		1973	1974	1975	1976
009	Diarrhoeal diseases	1	1	2	..
036	Meningococcal infection	1	..	1	2
000-008	} Other general diseases (a)	4	3	6	..
010-035					
037-315					
320	Meningitis .. .. .	..	..	..	..
321-389	Other diseases of the nervous system and sense organs .. .. .	..	..	1	..
390-458	Diseases of the circulatory system	1	2	1	..
460-466	Acute respiratory infection (except influenza)	9	2	..	1
470-474	Influenza .. .. .	..	..	..	..
480-486	Pneumonia	20	5	12	5
490-493	Bronchitis, emphysema and asthma .. .. .	..	..	..	..
500-519	Other diseases of respiratory system .. .. .	..	1	..	..
520-577	Diseases of the digestive system	2	1	1	1
580-629	Diseases of genito-urinary system .. .. .	..	..	1	..
680-709	Diseases of skin and subcutaneous tissue .. .. .	..	..	..	..
710-738	Diseases of musculoskeletal system and connective tissue .. .. .	..	..	..	1
740-759	Congenital anomalies	19	18	22	8
760-763	Certain maternal conditions	3	5	8	1
764-768	} Birth injury, difficult labour and other anoxic and hypoxic conditions	28	21	16	18
772, 776					
769-771					
773-775	} Other causes of perinatal mortality	32	30	30	14
777-779					
780-796	Symptoms and ill-defined conditions (b)	13	33	26	25
800-999	Accidents, poisonings and violence	4	1	1	1
Total		137	123	128	77

(a) Principally infective and parasitic diseases.

(b) Includes sudden death in infancy syndrome; 13 in 1973, 33 in 1974, 26 in 1975, 24 in 1976.

Deaths

The following table summarises the number of deaths and crude death rates from 1880 to 1976:

Number of Deaths and Crude Death Rates, Selected Years from 1880

Year	Deaths		Year	Deaths	
	Number	Rate (a)		Number	Rate (a)
1880	1 832	16.12	1930.. .. .	1 948	8.82
1885	2 036	15.94	1935.. .. .	2 353	10.24
1890	2 118	14.79	1940.. .. .	2 387	9.90
1895	1 811	11.78	1945.. .. .	2 413	9.71
1900	1 903	11.02	1950.. .. .	2 466	8.85
1905	1 844	10.00	1955.. .. .	2 489	7.89
1910	2 120	11.10	1960.. .. .	2 670	(b) 7.70
1915	2 015	10.27	1965.. .. .	3 043	8.27
1920	2 036	9.68	1970.. .. .	3 174	8.18
1925	1 996	9.26	1976.. .. .	3 389	8.32

(a) Per 1 000 of mean population.

(b) Lowest on record.

A marked difference exists between male and female crude death rates:

Male and Female Deaths and Crude Rates

Year	Number of deaths			Deaths per 1 000 of mean population			Ratio of male to female crude death rates
	Males	Females	Persons	Males	Females	Persons	
1965	1 716	1 327	3 043	9.24	7.29	8.27	1.267
1970	1 785	1 389	3 174	9.11	7.20	8.29	1.265
1972	1 793	1 434	3 227	9.05	7.33	8.20	1.235
1973	1 894	1 453	3 347	9.50	7.36	8.44	1.291
1974	1 954	1 530	3 484	9.73	7.67	8.71	1.269
1975	1 849	1 490	3 339	9.11	7.38	8.25	1.234
1976	1 850	1 539	3 389	9.08	7.59	8.32	1.196

Death Rates for Specific Age Groups

Previously in this chapter, crude death rates were described as unsuitable for comparisons over long periods of time due to changes in the age structure of the community. In the following table, this difficulty is overcome by calculating death rates for specific age groups. The method employed is to obtain the average annual deaths for specific age groups over those three-year periods which are broken into equal parts by a census of population (e.g. 30 June 1947 is the census date for a calculation of rates in the three years, 1946-1948 inclusive). Rates can then be calculated by comparing the average number of deaths for each group with the number of persons in each group as revealed by the census. In theory, the calculation of such rates need not be restricted to periods for which a census date forms the midpoint but the advantage of accepting such restriction lies in the accuracy of the age distribution obtained from the census. In the table, three-year periods have been selected appropriate to the censuses of 1947 and 1971 (the data relates to the Tasmanian population):

Death Rates for Specific Age Groups (a)

Age group (years)	Males		Females		Persons	
	1946-48	1970-72	1946-48	1970-72	1946-48	1970-72
0-4	9.13	4.46	7.24	2.93	8.21	3.71
5-9	1.15	0.47	0.69	0.36	0.92	0.42
10-14	0.67	0.56	0.39	0.30	0.53	0.43
15-19	1.62	2.42	1.46	0.60	1.54	1.53
20-24	2.10	2.10	1.79	0.53	1.94	1.96
25-29	2.12	1.87	1.74	0.83	1.93	1.37
30-34	2.27	1.84	1.90	0.79	2.09	1.33
35-39	3.10	2.10	2.59	1.34	2.85	1.73
40-44	3.93	3.43	3.51	1.89	3.73	2.69
45-49	5.88	5.36	4.66	3.10	5.28	4.25
50-54	9.52	9.65	7.84	5.79	8.65	7.74
55-59	16.98	15.77	10.03	8.26	13.44	12.06
60-64	23.87	25.71	17.30	12.82	20.53	19.19
65-69	41.82	41.10	27.35	22.40	34.56	31.51
70-74	58.43	64.05	49.47	37.51	53.80	48.92
75-79	103.22	94.96	77.00	62.46	89.78	74.91
80-84	156.64	140.11	123.49	99.45	138.41	114.30
85 and over	292.36	220.56	220.32	204.67	250.16	210.54

(a) Rate per 1 000 of the population in the specified age group at census date.

Causes of Death

The next table shows causes of death, the rates per 100 000 of mean population and the proportion of deaths from each cause based on the Eighth (1965) Revision of the International Classification of Diseases (adopted for use in 1968).

In 1976, diseases of the heart (items (25) to (29)) accounted for 36.1 per cent of all deaths (1 225 deaths out of the total of 3 389). The comparable figures for 1975 were 1 199 deaths (35.9 per cent) out of the total of 3 339 deaths. Other major causes of death in 1976 (with 1975 figures in brackets) were: cancer, all forms (item (19)), 618 (593); cerebrovascular disease, 424 (445); motor vehicle accidents, 108 (127); and all other accidents, 106 (87).

Causes of Death: Numbers and Rates, 1976

Cause of death	International classification	Number of deaths	Rate per 100 000 of mean population	Percentage of total deaths
0-4. (a)	(a)	3	1	0.1
5. Tuberculosis of respiratory system	010-012	4	1	0.1
6. Other tuberculosis including late effects	013-019	2	..	0.1
7-16. (b)	(b)	2	..	0.1
17. Syphilis and its sequelae	090-097	..	..	..
18. All other infective and parasitic diseases	(c)	10	2	0.3
19. Malignant neoplasms—				
Digestive organs and peritoneum	150-159	195	48	5.8
Trachea, bronchus and lung	162	121	30	3.6
Breast	174	51	13	1.5
Genito-urinary organs	180-189	110	27	3.2
Leukaemia	204-207	21	5	0.6
Other malignant and lymphatic neoplasms	(d)	120	29	3.5
20. Benign and unspecified neoplasms	210-239	..	..	..
21. Diabetes mellitus	250	48	12	1.4
22. Nutritional deficiencies	260-269	1	..	..
23. Anaemias	280-285	13	3	0.4
24. Meningitis	320	3	1	0.1
25. Active rheumatic fever	390-392	..	..	..
26. Chronic rheumatic heart disease	393-398	15	4	0.4
27. Hypertensive disease	400-404	50	12	1.5
28. Ischaemic heart disease	410-414	986	242	29.1
29. Other forms of heart disease	420-429	174	43	5.1
30. Cerebrovascular disease	430-438	424	104	12.5
31. Influenza	470-474	32	8	0.9
32. Pneumonia	480-486	128	31	3.8
33. Bronchitis, emphysema and asthma	490-493	167	41	4.9
34. Peptic ulcer	531-533	25	6	0.7
35. Appendicitis	540-543	..	..	..
36. Intestinal obstruction and hernia	{ 550-553	6	1	0.2
	560	4	1	0.1
37. Cirrhosis of liver	571	19	5	0.6
38. Nephritis and nephrosis	580-584	40	10	1.2
39. Hyperplasia of prostate	600	3	1	0.1
40. Abortion	640-645	..	..	..
41. { Other complications of pregnancy, childbirth	630-639	2	..	0.1
and the puerperium. Delivery without men-				
tion of complication	650-678	..	..	..
42. Congenital anomalies	740-759	21	5	0.6
43. { Birth injury, difficult labour and other anoxic	764-768	3	1	0.1
and hypoxic conditions	772-776	17	4	0.5
	760-763	1	..	..
44. Other causes of perinatal mortality	{ 769-771	9	2	0.3
	773-775	..	..	..
	777-779	4	1	0.1

Causes of Death: Numbers and Rates, 1976—*continued*

Cause of death	International classification	Number of deaths	Rate per 100 000 of mean population	Percentage of total deaths	
45. Symptoms and other ill-defined conditions ..	780-796	33	8	1.0	
46. All other diseases	} Remainder of 240-738	252	62	7.4	
47. Motor vehicle accidents		810-823	108	26	3.2
48. All other accidents		800-807
49. Suicide and self-inflicted injuries		825-949	106	26	3.1
50. All other external causes		950-959	46	11	1.4
	960-999	10	2	0.3	
All causes .. .. .	..	3 389	831	100.0

(a) 000-009. (See following text for specification of diseases.)

(b) 020, 032, 033, 034, 036, 040-043, 050, 055, 080-084. (See following text for specification of diseases.)

(c) 021-027, 030, 031, 035, 037, 038, 039, 044-046, 051-054, 056, 057, 060-068, 070-079, 085-089, 098-117, 120-136.

(d) 140-149, 160, 161, 163, 170-173, 190-203, 208, 209.

It will be noted that items 0-4 and 7-16 in the table were not listed individually, few associated deaths having been recorded. The specification of causes reads: (1) cholera; (2) typhoid fever; (3) dysentery, all forms; (4) enteritis and other diarrhoeal diseases; (7) plague; (8) diphtheria; (9) whooping cough; (10) streptococcal sore throat and scarlet fever; (11) meningococcal infection; (12) acute poliomyelitis; (13) smallpox; (14) measles; (15) typhus and other rickettsial diseases; (16) malaria. Uncertainty as to diagnosis in earlier periods makes comparison difficult but, at the turn of the century, whooping cough, diphtheria, typhoid fever and scarlet fever were diseases associated with numerous deaths.

Causes of Death in Age Groups

The previous tables showing causes of death make no reference to age, a complete dissection by age and cause being beyond the scope of a *Year Book*. Nevertheless, there is an extremely significant relationship between age and cause of death and the next table indicates, in summary form, their close inter-connection. For each of the specified causes in the next table, two percentages are shown: (i) deaths in a particular age group as a proportion of total deaths from all causes in that age group; and (ii) deaths in a particular age group as a proportion of total deaths from the same cause at all ages. The causes chosen and specified are such that they account, in total, for approximately 75 per cent or more of deaths in most of the given age groups.

Attention is called to 'Accidental and violent deaths' (800-999) which account for over 60 per cent of deaths in the age from 1 to 34 years inclusive. Also noteworthy is the present relative unimportance of 'Infective and parasitic diseases' (001-136). The most important group, in a total sense, is 'Diseases of the heart' (390-398, 400-404, 410-429) followed by 'Cancer (all forms)' (140-209); then 'Cerebrovascular diseases' (430-438); and 'Diseases of the respiratory system' (460-519). Nevertheless, the inter-connection between age and cause of death is so close that none of these causes needs to be specified for some age groups in the table.

Principal Causes of Death in Age Groups, 1976

Age group in years	Inter- national classifi- cation	Cause of death	Deaths from specified causes in age groups		
			Number	Proportion of deaths	
				In age group (per cent)	At all ages (per cent)
Under 1 ..	795	Sudden death in infancy	24	31.2	100.0
	776	Anoxic and hypoxic conditions	17	22.1	100.0
	740-759	Congenital anomalies	8	10.4	38.0
	460-519	Diseases of respiratory system	6	7.7	1.7
	777	Immaturity unqualified	2	2.6	100.0
	..	Other causes	20	26.0	..
		All causes	77	100.0	2.3
1-4	800-999	Accidents and violence	10	41.7	3.7
	140-209	Cancer (all forms) (a)	4	16.6	0.6
	740-759	Congenital anomalies	3	12.5	14.3
	..	Other causes	7	29.2	..
		All causes	24	100.0	0.7
5-14	800-999	Accidents and violence	22	64.7	8.1
	140-209	Cancer (all forms) (a)	3	8.8	0.5
	460-519	Diseases of respiratory system	3	8.8	0.9
	..	Other causes	6	17.7	..
		All causes	34	100.0	1.0
15-19	800-999	Accidents and violence	46	80.7	17.0
	140-209	Cancer (all forms) (a)	4	7.0	0.6
	..	Other causes	7	12.3	..
		All causes	57	100.0	1.7
20-24	800-999	Accidents and violence	22	64.7	8.1
	..	Other causes	12	35.3	..
		All causes	34	100.0	1.0
25-34	800-999	Accidents and violence	26	44.8	9.6
	390-398	} Diseases of heart	8	13.8	0.7
	400-404				
	410-429	Cancer (all forms) (a)	6	10.3	1.0
	140-209	Other causes	18	31.1	..
	..	All causes	58	100.0	1.7
35-44	800-999	Accidents and violence	26	25.7	9.6
	140-299	Cancer (all forms) (a)	21	20.8	3.4
	390-398	} Diseases of heart	20	19.8	1.6
	400-404				
	410-429				
	430-438	Cerebrovascular diseases	12	11.9	2.8
	460-519	Diseases of respiratory system	9	8.9	2.6
	..	Other causes	13	12.9	..
	All causes	101	100.0	3.0	

Principal Causes of Death in Age Groups, 1976—continued

Age group in years	International classification	Cause of death	Deaths from specified causes in age groups		
			Number	Proportion of deaths	
				In age group (per cent)	At all ages (per cent)
45-54 ..	390-398	} Diseases of heart Cancer (all forms) (a) Accidents and violence Diseases of respiratory system Cerebrovascular diseases Other causes All causes	84	30.9	6.9
	400-404				
	410-429				
	140-209				
	800-999				
	460-519				
	430-438				
	..				
55-64 ..	390-398	} Diseases of heart Cancer (all forms) (a) Cerebrovascular diseases Diseases of respiratory system Accidents and violence Diseases of arteries Other causes All causes	216	40.3	17.6
	400-404				
	410-429				
	140-209				
	430-438				
	460-519				
	800-999				
	440-448				
..					
65-74 ..	390-398	} Diseases of heart Cancer (all forms) (a) Cerebrovascular diseases Diseases of respiratory system Diseases of arteries Diabetes Other causes All causes	331	40.1	27.0
	400-404				
	410-429				
	140-209				
	430-438				
	460-519				
	440-448				
	250				
..					
75 and over..	390-398	} Diseases of heart Cerebrovascular diseases Diseases of respiratory system Cancer (all forms) (a) Diseases of arteries Diabetes Other causes All causes	596	43.5	48.7
	400-404				
	410-429				
	430-438				
	460-519				
	140-209				
	440-448				
	250				
..					
			1 371	100.0	40.5

(a) Includes Hodgkin's disease and the leukaemias.

Heart Diseases

As the previous two tables indicate, heart diseases (list items 390-398, 400-404, 410-429) are the greatest single cause of death. In the following record of deaths due to heart diseases, 1950 has been chosen as a starting point since earlier figures are not strictly comparable.

Deaths from Heart Diseases (All Causes) (a)

Year	Number of deaths			Death rate per 100 000 of mean population	Deaths as a percentage of deaths from all causes
	Males	Females	Persons		
1950	413	304	717	257	29.1
1970	681	454	1 135	292	35.8
1972	619	474	1 093	278	33.9
1973	700	458	1 158	292	34.6
1974	661	503	1 164	290	33.4
1975	673	526	1 199	294	35.9
1976	710	515	1 225	300	36.1

(a) List items 400-416, 420-443 in 1950; 390-398, 400-404, 410-429 from 1968.

Malignant Neoplasms

In the next table, deaths from 'Malignant neoplasms including Hodgkin's disease and the leukaemias' (cancer, all forms) are summarised:

Deaths from all Types of Malignant Neoplasms (a)

Year	Number of deaths			Death rate per 100 000 of mean population	Deaths as a percentage of deaths from all causes
	Males	Females	Persons		
1950	159	164	323	115	13.1
1970	253	229	482	124	15.2
1972	278	270	548	139	17.0
1973	312	259	571	144	17.1
1974	339	276	615	153	17.7
1975	330	263	593	146	17.8
1976	328	290	618	152	18.2

(a) List items 140-207 in 1950; 140-209 from 1968.

Lung Cancer

Considerable interest has been shown in lung cancer recently because of its suspected connection with smoking habits. The following table shows deaths attributed to 'Malignant neoplasm of respiratory system' for recent years:

Deaths from Malignant Neoplasm of Respiratory System (a)

Year	Males	Females	Persons	Year	Males	Females	Persons
1950	20	4	24	1973 ..	75	8	83
1960	40	3	43	1974 ..	103	13	116
1970	72	19	91	1975 ..	103	20	123
1972	78	13	91	1976 ..	112	15	127

(a) List items 160-165 to 1967; 160-163 from 1968.

EXPECTATION OF LIFE AND LIFE TABLES

Previously, reference was made to the limitations of crude death rates as a measure of mortality. However, a correct measurement of the mortality of the population can be obtained from life tables.

A life table is, in effect, a mathematical model, its starting point being a hypothetical population (say 100 000) of newly-born males or females. Using data for a given period (e.g. single year age distribution of an actual population, deaths at single ages, etc.), the compiler calculates the theoretical number of survivors at each age in the hypothetical population until there are no survivors remaining.

Calculation of Life Expectancy

In the table that follows, l_x is the number of persons surviving at exact age x . From this survivors' table, other measures can then be computed, namely:

- L_x : the average number living between any year x and $x + 1$
 e°_x : the complete expectation of life (i.e. the average number of years lived after age x by each of a group of persons aged exactly x).

Not only does the l_x column give numbers of survivors at each age but, if accumulated, it gives an approximate measure of the total number of years lived by the life-table population. To obtain a more refined measure of the total number of years lived, it is necessary to accumulate L_x values. These can be obtained by averaging each consecutive pair of l_x values.

Taking the male life table for 1970-72 as an example and using rounded figures:

Total of all l_x values (for $x = 0, 1, \dots, 110$)	= 6 831 000 years
Total of all l_x values (for $x = 1, 2, \dots, 111$)	= 6 731 000 years
Therefore, total L_x values (for $x = 0, 1, \dots, 110$)	= 6 781 000 years

According to the table, 100 000 males live a total of 6 781 000 years. It follows then, that the complete expectation of life (e°_x) can be taken as 67.81 years as from birth.

The above calculation shows the derivation of e°_x where x is 0. The same logic applies to other ages (apart from the highest ages):

Again taking the male life table as an example:

Total of l_x values ($x = 10, 11, \dots, 110$)	= 5 862 000 years
Total of all l_x values ($x = 11, 12, \dots, 111$)	= 5 765 000 years
Therefore, total L_x values ($x = 10, 11, \dots, 110$)	= 5 813 500 years

According to the table, 97 437 males live a total of a further 5 813 500 years. It follows then, that each male aged 10 has an average life expectancy of a further 59.66 years.

$$\left(\text{i.e. } \frac{5\,813\,500}{97\,437} \right)$$

From these examples, it will be seen that e°_x is simply an average or per capita figure, the two elements involved being the total number of years lived by a given population, and the given population itself.

For the sake of brevity, the following usual values have not been given in the table:

- d_x : the number of deaths in the year of age x to $x + 1$ among the l_x persons who enter on that year.
 p_x : the probability of a person aged x living a year.
 q_x : the probability of a person aged x dying within a year.

If required, these values can be computed from the tables as follows:

$$d_x = l_x - l_{x+1}$$

$$p_x = \frac{l_{x+1}}{l_x}$$

and $q_x = 1 - p_x$

The next table gives the number of survivors (l_x values) and complete expectation of life (e°_x values) for Australian males:

Australia: Life Tables, 1970-1972

Survivors (l_x) and Complete Expectation of Life (e°_x)

Males

Age x	l_x	e°_x	Age x	l_x	e°_x	Age x	l_x	e°_x
0	100 000	67.81	40.. ..	93 150	31.61	80.. ..	23 399	5.52
1	98 051	68.25	41.. ..	92 887	30.69	81.. ..	20 575	5.21
2	97 904	67.35	42.. ..	92 598	29.79	82.. ..	17 913	4.92
3	97 807	66.42	43.. ..	92 274	28.89	83.. ..	15 393	4.64
4	97 726	65.47	44.. ..	91 915	28.00	84.. ..	13 055	4.38
5	97 661	64.52	45.. ..	91 520	27.12	85.. ..	10 950	4.13
6	97 607	63.55	46.. ..	91 079	26.25	86.. ..	9 057	3.89
7	97 558	62.58	47.. ..	90 589	25.39	87.. ..	7 363	3.67
8	97 514	61.61	48.. ..	90 049	24.54	88.. ..	5 877	3.48
9	97 474	60.64	49.. ..	89 455	23.70	89.. ..	4 605	3.30
10	97 437	59.66	50.. ..	88 798	22.87	90.. ..	3 539	3.15
11	97 402	58.68	51.. ..	88 075	22.05	91.. ..	2 672	3.02
12	97 365	57.70	52.. ..	87 283	21.25	92.. ..	1 984	2.90
13	97 326	56.73	53.. ..	86 409	20.46	93.. ..	1 450	2.79
14	97 282	55.75	54.. ..	85 441	19.68	94.. ..	1 044	2.69
15	97 228	54.78	55.. ..	84 392	18.92	95.. ..	740	2.60
16	97 154	53.82	56.. ..	83 245	18.18	96.. ..	517	2.52
17	97 044	52.88	57.. ..	82 001	17.45	97.. ..	356	2.44
18	96 887	51.97	58.. ..	80 640	16.73	98.. ..	242	2.38
19	96 685	51.08	59.. ..	79 171	16.03	99.. ..	162	2.31
20	96 473	50.19	60.. ..	77 574	15.35	100	107	2.25
21	96 265	49.29	61.. ..	75 861	14.69	101	70	2.20
22	96 065	48.40	62.. ..	74 014	14.04	102	45	2.15
23	95 884	47.49	63.. ..	72 026	13.41	103	29	2.10
24	95 723	46.57	64.. ..	69 901	12.81	104	18	2.06
25	95 574	45.64	65.. ..	67 659	12.21	105	11	2.02
26	95 437	44.70	66.. ..	65 282	11.64	106	7	1.98
27	95 307	43.76	67.. ..	62 786	11.08	107	4	1.94
28	95 179	42.82	68.. ..	60 183	10.54	108	3	1.91
29	95 049	41.88	69.. ..	57 444	10.02	109	2	1.88
30	94 916	40.94	70.. ..	54 616	9.51	110	1	1.85
31	94 779	39.99	71.. ..	51 671	9.03			
32	94 639	39.05	72.. ..	48 626	8.56			
33	94 495	38.11	73.. ..	45 490	8.12			
34	94 346	37.17	74.. ..	42 285	7.69			
35	94 186	36.23	75.. ..	39 056	7.29			
36	94 010	35.30	76.. ..	35 801	6.90			
37	93 821	34.37	77.. ..	32 577	6.54			
38	93 618	33.44	78.. ..	29 414	6.19			
39	93 395	32.52	79.. ..	26 349	5.85			

The following table shows the l_x and e^o_x values for Australian females:

Australia: Life Tables, 1970-1972
Survivors (l_x) and Complete Expectation of Life (e^o_x)
Females

Age x	l_x	e^o_x	Age x	l_x	e^o_x	Age x	l_x	e^o_x
0	100 000	74.49	40.. ..	95 848	37.16	80.. ..	44 242	6.68
1	98 499	74.74	41.. ..	95 671	36.22	81.. ..	40 588	6.45
2	98 369	73.83	42.. ..	95 477	35.30	82.. ..	36 855	6.06
3	98 294	72.89	43.. ..	95 263	34.37	83.. ..	33 106	5.69
4	98 240	71.93	44.. ..	95 026	33.46	84.. ..	29 358	5.35
5	98 193	70.97	45.. ..	94 771	32.55	85.. ..	25 746	5.03
6	98 153	69.99	46.. ..	94 488	31.64	86.. ..	22 270	4.74
7	98 116	69.02	47.. ..	94 176	30.75	87.. ..	19 024	4.46
8	98 084	68.04	48.. ..	93 835	29.86	88.. ..	16 030	4.20
9	98 056	67.06	49.. ..	93 462	28.97	89.. ..	13 315	3.96
10	98 030	66.08	50.. ..	93 057	28.10	90.. ..	10 888	3.73
11	98 007	65.10	51.. ..	92 615	27.23	91.. ..	8 753	3.52
12	97 984	64.11	52.. ..	92 138	26.37	92.. ..	6 921	3.33
13	97 960	63.13	53.. ..	91 625	25.51	93.. ..	5 378	3.14
14	97 931	62.14	54.. ..	91 073	24.66	94.. ..	4 103	2.97
15	97 897	61.17	55.. ..	90 484	23.82	95.. ..	3 070	2.81
16	97 857	60.19	56.. ..	89 843	22.99	96.. ..	2 250	2.65
17	97 802	59.22	57.. ..	89 150	22.16	97.. ..	1 615	2.51
18	97 734	58.27	58.. ..	88 401	21.35	98.. ..	1 133	2.37
19	97 664	57.31	59.. ..	87 595	20.54	99.. ..	776	2.25
20	97 596	56.35	60.. ..	86 719	19.74	100 ..	519	2.13
21	97 532	55.38	61.. ..	85 774	18.95	101 ..	338	2.02
22	97 472	54.42	62.. ..	84 753	18.17	102 ..	214	1.91
23	97 414	53.45	63.. ..	83 652	17.41	103 ..	132	1.82
24	97 356	52.48	64.. ..	82 462	16.65	104 ..	79	1.72
25	97 296	51.51	65.. ..	81 187	15.90	105 ..	46	1.64
26	97 236	50.54	66.. ..	79 813	15.17	106 ..	26	1.56
27	97 175	49.58	67.. ..	78 310	14.45	107 ..	14	1.48
28	97 112	48.61	68.. ..	76 688	13.75	108 ..	7	1.41
29	97 046	47.64	69.. ..	74 909	13.06	109 ..	4	1.35
30	96 975	46.67	70.. ..	72 983	12.39	110 ..	2	1.28
31	96 899	45.71	71.. ..	70 885	11.74	111 ..	1	1.23
32	96 819	44.75	72.. ..	68 607	11.12			
33	96 732	43.79	73.. ..	66 156	10.51			
34	96 637	42.83	74.. ..	63 510	9.93			
35	96 534	41.88	75.. ..	60 697	9.36			
36	96 422	40.92	76.. ..	57 700	8.82			
37	96 299	39.98	77.. ..	54 551	8.30			
38	96 162	39.03	78.. ..	51 258	7.80			
39	96 012	38.09	79.. ..	47 832	7.33			

The statistics in the above tables have been extracted from tables produced by the Commonwealth Actuary, the source data being supplied by the Australian Statistician and comprising: (i) the number of males and females living at each age last birthday, as shown by the 1971 Census; and (ii) the number of male and female deaths at each age (last birthday) in the years 1970, 1971 and 1972.

True Death Rates

From a life table, the total number of years lived by the original population of 100 000 can readily be calculated. In the case of the 1970-72 male life table, the total number of years lived was 6 781 000. It follows that the death rate of this population may be expressed as:

$$\frac{100\ 000}{6\ 781\ 000} \times \frac{1\ 000}{1} \text{ per } 1\ 000 \text{ years lived;}$$

i.e. 14.747 deaths per 1 000 years lived.

Life table experience can be regarded as the experience of a cross section of the population in a *single year* and the above calculation derives what is known as a 'true death rate' (the true death rate for the 1970-72 male population was 14.75 deaths per 1 000). The true death rate is thus the reciprocal of the complete expectation of life of a person at birth multiplied by 1 000.

The true death rate for a given period is unaffected by the particular age distribution of that period, and is determined solely by the mortality experience of the period as manifested in the rate of survival from each year of age to the next. The table below sets out complete expectation of life at birth and true death rates for the periods covered by the Australian life tables:

Australia: Complete Expectation of Life at Birth and True Death Rates

Period	Complete expectation of life at birth (years)		True death rate (a)	
	Males	Females	Males	Females
1881-1890	47.20	50.84	21.19	19.67
1891-1900	51.06	54.76	19.58	18.26
1901-1910	55.20	58.84	18.12	17.00
1920-1922	59.15	63.31	16.91	15.80
1932-1934	63.48	67.14	15.75	14.89
1946-1948	66.07	70.63	15.14	14.16
1953-1955	67.14	72.75	14.89	13.75
1960-1962	67.92	74.18	14.72	13.48
1965-1967	67.63	74.15	14.79	13.49
1970-1972	67.81	74.49	14.75	13.42

(a) Number of deaths per 1 000 in stationary (or life-table) population in one year.

Chapter 7

LAND USE AND AGRICULTURE

LAND TENURE

Introduction

The area of Tasmania is 68 300 square kilometres, all of which had been proclaimed as Crown property when the first settlers arrived in 1803. In the period since their landing 40.3 per cent of the State's total area has been alienated by grant or sale; the Crown still owns 57.4 per cent and the residual 2.3 per cent is in the process of alienation (i.e. being purchased from the Crown by instalment payments).

Crown Lands

The following table classifies the area of the State by ownership (i.e. alienated or Crown). (For details of land alienation from 1820 see the 1977 and earlier Year Books.) Crown forestry reservations, apart from one component, is land used or to be used exclusively for forestry purposes; the exception is the forested area of recreation and conservation reservations. The forestry reservations account for 30 per cent of the State's area.

Alienation and Occupation of Crown Lands at 30 June
(^{'000 Hectares})

Classification of land	Area			
	1973	1974	1975	1976
Alienated (aggregate) (a)	2 729	2 731	2 755	2 751
In process of alienation (a)	133	135	159	154
Crown lands—				
Leased or licensed—				
Through Lands Department (a)—				
Pastoral	200	188	173	170
Closer settlement	} 12	12	12	12
Soldier settlement				
Short-term				
Through Mines Department (b)	36	36	38	47
Total	248	236	223	229

Alienation and Occupation of Crown Lands at 30 June—*continued*
(*000 Hectares)

Classification of land	Area			
	1973	1974	1975	1976
Crown lands— <i>continued</i> —				
Forestry reservations (c)—				
State forests	1 199	1 345	1 372	1 474
Other land reserved for forestry purposes (d) ..	795	686	668	567
Total	1 994	2 030	2 040	2 040
Other Crown land (a)	1 726	1 698	1 653	1 656
Total area of State	6 830	6 830	6 830	6 830

(a) Estimates only.

(b) Includes a small area of private land leased through the Mines Department.

(c) Includes areas under pulpwood concessions and exclusive forest permits, 1 977 000 ha at 30 June 1976; see Chapter 8 for further details.

(d) Includes estimated forested component of State reserves.

Although the possibility of rapidly alienating more Crown land for farming purposes on any large scale may seem remote, it should be noted that much of this land is nevertheless of importance to the State's economy, specifically for forestry and tourism purposes.

National Parks and Wildlife Service

The *National Parks and Wildlife Act 1970* repealed the *Animals and Birds Protection Act 1928* and the *Scenery Preservation Act 1915* and placed the management and control of parks, reserves, fauna and flora in the hands of a single authority, the National Parks and Wildlife Service. This authority has wide-ranging powers covering the management of parks, protection of fauna and flora, regulation of hunting and enforcement of regulations under the Act. It is responsible for the administration of State reserves and conservation areas. Areas designated as State reserves have maximum protection and include areas classified as national parks, State reserves, nature reserves, Aboriginal sites and historic sites. Conservation areas are usually set aside for the protection of flora and fauna.

State Reserves

The following gives a brief description of principal State reserves:

Ben Lomond National Park: Is located 45 kilometres south-east of Launceston. This high plateau area includes Legges Tor and is Tasmania's principal skiing area.

Cradle Mountain-Lake St Clair National Park: This is an area of rugged mountain scenery; it contains some of Tasmania's highest peaks (Mt Ossa, Barn Bluff, Mt Pelion West and Cradle Mountain), numerous lakes, deep gorges and several waterfalls. Flora and fauna in the park are representative of Tasmania's montane species and are in a largely untouched condition. The weather of the area is unpredictable and at times extremely severe—blizzards are common and may occur in mid-summer. The principal walking track extends from Cradle Valley (in the north) to Lake St Clair, a distance of 85 kilometres.

Frenchmans Cap National Park: The park boundary is three kilometres from the Lyell Highway and about midway between Queenstown and Derwent Bridge. Access to the park is by foot. It is an area of rugged glaciated landscape and is an ideal wilderness area for experienced bushwalkers. Frenchmans Cap, an enormous white quartz peak with a 300 metre face on the eastern side, is the principal feature of the park.

Freycinet National Park: Occupies the whole of Freycinet Peninsula on the east coast. A principal feature of the park is the 300 metres high red granite Hazards. The park provides pleasant walking throughout the year, although during summer water may be scarce. To the south of Freycinet Peninsula is Schouten Island, also a State reserve.

Hartz Mountains National Park: Is located south-west of Geeveston. The main features of the park are Hartz Mountain, 1 253 metres high, several small picturesque lakes, and the superb eastward view from Waratah Lookout. The park is renowned for its display of wildflowers during summer.

Maria Island National Park: Is situated off the east coast from Orford and may be reached by chartered boat or aeroplane. The *Maria Van Diemen* provides a daily passenger service to the island from Triabunna during the summer months. Principal attractions include convict ruins from two penal settlements, the main one being at Darlington on the north-west corner of the island. Forester kangaroo, Bennetts wallaby and other Tasmanian fauna have been established on the island and emu have been introduced. At the north-east corner of the island high fossil cliffs rise abruptly from the sea.

Mount Field National Park: This park, near Maydena and only 75 kilometres from Hobart, is the only southern ski resort in Tasmania and includes spectacular mountain scenery. Principal peaks are Mt Field East and West; other features include Russell Falls, Lake Dobson and several tarns.

Port Arthur and Tasman Peninsula: This historic and scenic area is possibly the best known and most visited tourist attraction in Tasmania. The area, in addition to the historic convict ruins of the Port Arthur penal settlement, contains many small reserves of either historic or scenic significance. Port Arthur, site of a convict settlement from 1830 to 1877, has a number of historic ruins. Unfortunately, many of the buildings are in an extreme state of disrepair; however, some restoration work has been undertaken and a draft management plan for the site is under preparation. Other historic sites include the old convict coal mines at Plunkett Point and Eagle Hawk Neck where guards were stationed and a line of dogs tethered to prevent escape from the Peninsula. Eagle Hawk Neck is also renowned for its spectacular coastal landforms, e.g. the Blowhole, Devils Kitchen, Tasman's Arch and the Tessellated Pavement.

South-West National Park: Is Tasmania's largest State reserve and covers 191 582 hectares of Tasmania's rugged south-west. It is a true wilderness area and encompasses the Western and Eastern Arthur Ranges, Federation Peak, Frankland Range, Mt Anne, Lake Pedder and part of the rugged south-coast. Dense scrub, which covers much of the area, frequent harsh weather and a scarcity of cleared tracks make this area the domain of the experienced self-contained bushwalker.

State Reserves and Conservation Areas

The following table lists the Tasmanian national parks, their areas and locations. The 1976 *Year Book* also includes details of all other reserves (State reserves, historic sites, Aboriginal sites and nature reserves) and conservation areas under

National Parks and Wildlife Service management. At 30 June 1976 the total area of reserves was 454 578 hectares, while that of conservation areas was 514 722 hectares.

National Parks, July 1976

Name	Area (hectares)	Date first gazetted	Location	Remarks
Asbestos Range	3 330	7.7.76	North coast	Coastal heathland
Ben Lomond	16 457	23.7.47	North-east	Mountainous, ski-field
Cradle Mt-Lake St Clair	126 062	16.5.22	West central	Mountainous, lakes
Frenchmans Cap	10 214	4.6.41	West central	Mountainous, scenic
Freycinet	7 541	29.8.16	East	Coastal, red granite
Hartz Mountains	8 620	24.5.39	South	Mountainous, scenic
Maria Island	9 672	14.6.72	East	Wildlife, convict station
Mount Field	16 212	29.8.16	South central	Mountainous, scenic, ski-field, temperate forest
Mount William	9 797	3.10.73	North-east	Forester kangaroo, coastal
Rocky Cape	3 000	21.6.67	North-west	Coastal heath, banksia
South-west	191 582	16.10.68	South-west	Rugged wilderness
Strzelecki	3 946	15.3.67	Flinders Island	Mountainous, coastal
Total	406 433	..	..	..

GOVERNMENT FINANCIAL ASSISTANCE TO RURAL PRODUCERS

The Agricultural Bank of Tasmania

The State Advances Act

In 1907 the Government of the day passed the *State Advances Act* to set up the Agricultural Bank of Tasmania for the purpose of providing financial assistance to a limited section of the rural community.

Just prior to the legislation being enacted, a considerable amount of indiscriminate selection of Crown land had taken place. Most of the settlers had used what small resources they had on development. The location of their holdings and the nature of their proposals were such that normal financial institutions were not interested in providing the further finance required. It was to help these settlers that the Bank was established.

Over the years the legislation was widened and today loans are made to persons engaged in rural industries, irrespective of the nature of the tenure of their holdings, for many of their requirements. Finance is most frequently requested for: the purchase of farm properties; refinancing of mortgages; purchase of live-stock, plant and equipment; land development; structural improvements; and land irrigation. (Some loans are also made to professional fishermen.) During the year ended 30 June 1976, loans totalling \$2 734 842 were approved for these purposes. Loans outstanding at 30 June 1976 totalled \$10 895 102.

Special Relief

It has been the practice of governments to channel assistance to rural industries through the Agricultural Bank and over the years more than 30 items of rural legislation have been administered. Some have been in respect of State Government assistance only and others in respect of joint assistance by State and Federal Governments. Much of this legislation has been directed at alleviating conditions of hardship following droughts, fires, floods and market down-turns. There are still liabilities from borrowers in respect of these areas but no new loans are

currently being advanced. The amount outstanding at 30 June 1976 in respect of loans advanced under the *Primary Producers Relief Act (No. 2) 1947*, the *Flood Relief Act 1960*, the *Primary Producers Relief Acts 1968, 1970 and 1971*, and the *Fire Damage Relief Act 1967* was \$1 642 988 (this included \$126 499 outstanding in respect of housing loans made under the *Fire Damage Relief Act 1967*).

Other Rural Activities of the Bank

In addition to the provision of loans under the *State Advances Act*, the Agricultural Bank also currently provides assistance under the *War Service Land Settlement Act 1950*, the *Closer Settlement Act 1957*, the *Rural Reconstruction Act 1971*, the *Dairy Adjustment Program Act 1975* and the *Beef Industry Assistance Act 1975*. The purposes and provisions of these Acts are briefly outlined in the following sections.

Closer Settlement Scheme

Under this scheme the Agricultural Bank may, under certain conditions, acquire freehold land; it can appropriate Crown land, and it can purchase land by negotiation. Land so obtained may be developed into farms for allotment to eligible persons. Developed or partly developed farms may also be purchased and allotted and available funds have been directed to this end in recent years.

Properties are made available on a 99-year lease with an option to purchase the freehold. Persons obtaining properties may receive loans to enable them to carry on farming operations. Currently, only token funds are available and during the year ended 30 June 1976 only three properties were purchased and allotted.

War Service Land Settlement

In 1944-45 the Federal and State Governments reached agreement on a scheme for the settlement of ex-servicemen on farming properties. Large areas of land were investigated and subsequently over 180 000 hectares were purchased for development and allotment to eligible ex-servicemen. All holdings have been allotted as grants in perpetuity at a pre-determined rental. After a period of six years a settler may, subject to conditions laid down in the Act, exercise a right to convert the property to a freehold title by payment of an option price determined at the time of allotment, or he may transfer his interest in the holding to a person not entitled to receive an allotment under the Scheme.

At 30 June 1976, 215 properties developed under this scheme were occupied by the original settlers, a further 68 settlers had exercised their option to purchase the freehold on their properties, and 195 properties had been re-allocated or were occupied by other than eligible ex-servicemen.

Rural Reconstruction Act

On 4 June 1971 an agreement was signed between the Federal Government and the State of Tasmania, the object being the implementation of a national scheme of rural reconstruction; in essence, the Federal Government provides the financial assistance but the detailed administration is vested in the State. Similar federal-state agreements were entered into by the other Australian states on the same date. In October the Tasmanian Parliament passed the *Rural Reconstruction Act 1971* which established the mechanism for administering the scheme in Tasmania.

Operation of the Scheme

The two principal functions of the scheme relate to debt reconstruction and farm build-up:

Debt Reconstruction: This applies to the farmer who has sound prospects of successful operation but who has used all his cash resources and cannot meet his financial commitments. The assistance can encompass a rearrangement and/or a composition of debts, the negotiation of a concessional rate of interest in substitution for existing rates, advances of additional funds for carry-on expenses, the purchase of livestock and further property development.

Farm Build-up: The basic intention is to assist in the build-up of properties to a size commensurate with economic operation; the concern is with the amalgamation of adjoining holdings. When an adjoining property is sold to a farmer, the reconstruction authority may make a grant to cover the value of acquired assets which are not useful to the enlarged property (e.g. the farm dwelling). Advances may also be made by the authority for carry-on expenses, plant, livestock and property development if these demands are associated with the additional land.

For the first two years of the scheme's operation, Tasmania was allocated a sum of \$3.3m. In subsequent years, allocations were made each year following annual meetings between Federal and State Ministers. The allocation for 1975-76 was \$0.7m. The table below shows the number of applications for assistance under the scheme and the assistance approved during 1975-76 and to 30 June 1976:

Rural Reconstruction

Particulars	1975-76	Total to 30.6.1976
Farm build-up—		
Applications—Considered no.	24	184
Approved no.	10	106
Assistance approved \$'000	162	1 925
Debt reconstruction—		
Applications—Considered no.	51	445
Approved no.	14	160
Assistance approved \$'000	262	2 997
Rehabilitation loans—		
Applications—Considered no.	3	27
Approved no.	1	21
Assistance approved \$'000	3	56

Dairy Adjustment Program Act 1975

The scheme provided for under this legislation replaced the Marginal Dairy Farms Reconstruction Scheme which had been in operation since 1970. This latter scheme was originally introduced to assist dairy farmers producing milk and cream for manufacturing purposes, and whose farms had insufficient potential to become economic units. Such farmers could dispose of their land and improvements to the State at market value. The State could in turn sell the land and any useful improvements on the basis of the most practicable and economic land use. In general the properties were amalgamated with other holdings.

The Scheme was extended and broadened in 1973-74 and eventually embodied in the new Dairy Adjustment Scheme. This Scheme provided for:

- (i) a continuation of the original scheme;

- (ii) the purchase of land other than a dairying property for the purpose of building uneconomic dairy farms to economic size;
- (iii) the development of uneconomic dairy farms to bring them to economic levels;
- (iv) loans for diversification of dairy farms to other forms of production;
- (v) carry-on loans during development or diversification;
- (vi) loans for the purchase of livestock and equipment where development or diversification is involved;
- (vii) relocation assistance for those obliged to leave the dairy industry;
- (viii) interest free loans for the purchase of refrigerated bulk milk vats and for the discharge of liabilities on vats purchased after 23 July 1973;
- (ix) loans to dairy factories to provide adequate facilities for—
 - (a) the supply of wholemilk as refrigerated bulk milk to the factory; and
 - (b) the receipt, processing and storage of wholemilk at the factory; and
- (x) carry-on loans to dairy farmers following the down-turn in their industry.

The following table summarises details of advances approved under the Scheme up to 30 June 1976:

Dairy Adjustment Program: Advances to 30 June 1976

Purpose	Number	Amount
		\$'000
Amalgamation of properties (a)	32	484
Development loans	51	222
Refrigerated bulk milk vats	168	886
Carry-on loans	135	506
Loans to dairy factories	2	1 052

(a) Includes assistance under the Marginal Dairy Farms Reconstruction Scheme.

Assistance to Beef Producers

Under arrangements made between the Federal and state governments, funds have been provided for limited carry-on finance to producers of beef cattle. For Tasmania, the Federal Government provided \$300 000 which has been matched by a similar amount from the State Government. The scheme is administered by the Rural Reconstruction Board under provisions of the *Beef Industry Assistance Act 1975*. Loans are made for a period of not more than seven years with no repayment being required in the first year. Interest at the rate of four per cent is charged in the first year of a loan and this is capitalised. In the second and subsequent years, possible changes in the interest rate, and repayment arrangements, will be determined having regard to the viability of the industry at the time. Loans totalling \$237 580 had been approved to 45 applicants by 30 June 1976.

Fruitgrowing Reconstruction Scheme (Tree Removal)

Serious economic problems confronting the Australian fruit industry led to the establishment in 1972, by the Federal Government, of a scheme to assist reconstruction of the fruit industry. In Tasmania the scheme applied only to apple or pear growers in serious financial difficulties. The Tasmanian *Fruitgrowing Industry Reconstruction Act 1972* authorised implementation of the Federal-State fruitgrowing reconstruction agreement.

Total financial assistance provided under the scheme to all states by the Federal Government was limited to \$4.6m. Administrative expenses incurred are borne by the states.

Eligible Fruitgrowers

Growers involved in the apple or pear industry in Tasmania could apply for assistance if the Rural Reconstruction Board was satisfied that the number of trees which the grower had, constituted a commercial operation and either the grower: (i) was predominantly a horticulturist in severe financial difficulties and intended to remove all of his trees and leave the apple or pear industry; or (ii) did not have adequate resources to withstand the short-term economic effects of removal of surplus trees, but in the opinion of the Board his farm enterprise had sound long-term prospects after tree removal and putting the released land to an alternative use. The Scheme (which commenced operation in 1972) was originally due to expire on 30 June 1973. There were subsequent extensions and the expiry date for applications was extended to 31 December 1976 with all trees to be removed by 30 June 1977 in order to qualify for compensation.

Type of Assistance

Assistance was based on tree removal and compensation up to a maximum \$864.87 per hectare (\$350 per acre) for growers of fresh apples and pears with an overall average of not more than \$617.76 per hectare (\$250 per acre) payable for approved tree removals.

Growers who received compensation and remained on their holdings had to undertake not to re-plant apple or pear trees on their properties within a period of five years. To ensure compliance, compensation was provided in the form of an interest bearing loan—if the grower observed the undertaking not to replant, the interest was rebateable and loans were to be converted to non-repayable grants at the end of the required five-year period.

At the end of June 1976 the following progress had been made: (i) applications received for (a) partial removal, 415; (b) complete removal, 370; (ii) assistance approved for (a) partial removal, \$1 118 596; (b) complete removal, \$962 401; (c) total approvals, \$2 080 997; (iii) total area of trees approved for removal, 3 364 hectares. The area known to have been removed under the scheme as at 30 June 1976 was 2 999 hectares of orchard.

AGRICULTURAL INDUSTRY

General

The Tasmanian rural economy is marked by great diversity and even allowing for the special regional adaptations made necessary by soil, climate, terrain and altitude, there are many agricultural holdings which individually exhibit an extremely varied range of activities.

Because of the importance of exports, agriculture in Tasmania has suffered generally as a result of adverse international currency movements and weak or protected overseas markets. Although livestock, wool and dairy products have been affected by these factors the pattern of farming in Tasmania has maintained the emphasis on rearing livestock for meat production with dairy products and wool also important. Apple growing, while still significant, has suffered from the inability of returns to cover costs and hop growing has encountered marketing problems. The growing of vegetables for processing remains a significant activity. Oil poppies have become an important crop in the last few years.

Historical

The 1976 and earlier editions of the *Year Book* include a summary of agricultural statistics available from as early as 1818.

Agricultural Industry Statistics*Sources of Information*

The statistics are, in the main, compiled from census returns of crop, pastoral and dairying production collected from agricultural holdings in Tasmania at 31 March each year. In conjunction with the general census, supplementary collections from farms are conducted where the harvesting of certain crops has not been completed by 31 March (e.g. apples, potatoes).

Additional information is also obtained from various marketing and other authorities and from a number of entirely separate collections covering such data as slaughterings and meat and dairy production.

Period Covered

Data relating to area sown, production and number of holdings growing crops are, in general, for the season ended 31 March. In cases where harvesting has not been completed by 31 March (e.g. potatoes), total production is nevertheless collected and included in published figures. Livestock numbers are also reported as at 31 March.

The census is conducted at 31 March (rather than 30 June) as it is considered to be the most appropriate date for all states to draw a line between the activities of two successive seasons.

Agricultural Holding—New Definition

Prior to 1975-76 an 'agricultural holding' was defined as 'a piece of land, one hectare or more in extent, used for the production of crops or for the raising of livestock and the production of livestock products'. Holdings of less than one hectare, on which commercial agricultural pursuits were carried out (e.g. nurseries, poultry farms, etc.) were also generally included.

It was recognised that many small holdings included under this definition were not engaged in agriculture on a 'commercial' scale and that the contribution such 'sub-commercial' holdings made to item totals was, in most cases, negligible.

With the introduction of a new register of agricultural businesses the opportunity was taken to streamline the Agricultural Census by redefining a rural holding as: 'an area of land (at one or more locations) where agricultural activity is undertaken and which is run by an enterprise with an estimated annual value of agricultural operations of \$1 500 or more'.

The estimated value of operations for 1975-76 was obtained for each holding by applying unit values to the commodity data reported on the 1976 Agricultural Census returns. The unit values used were averages for the previous three years to reduce the effects of short-term fluctuations in prices. In the case of crops, both area and production were valued, and for livestock, both animals sold during the year and numbers on the holding at 31 March were valued. This was done to reduce the effects of variations in average yields and to give due acknowledgement to any business that undertook agricultural operations but did not actually sell any agricultural commodities (due to factors such as crop failures or unfavourable market conditions).

The value of operations concept is merely a convenient way of objectively determining: (i) the relative scales of activity of agricultural holdings so as to exclude the small ones; and (ii) the industry classification of holdings. It is *not* a method of calculating *actual* gross income of holdings.

Total effect of the new definition was not felt in 1975-76, as a resistance factor was introduced to prevent rural holdings which were 10 hectares or more in extent being excluded from the tabulations. These will be excluded in the future if their estimated value of agricultural operations is below \$1 500. Thus, it is expected that there will be a further reduction in the number of holdings included in 1976-77.

The new definition resulted in the total number of holdings included in the 1975-76 tabulations being approximately 800 (9 per cent) *less* than the number that would have been included had the definition used for the previous agricultural census been applied.

An analysis undertaken to investigate the possible effect of the new definition on census totals suggests that, except for cattle, pigs and a few minor crops, the effect on data is minimal.

Area of Crops

Total area of land sown or planted to crops is shown irrespective of whether the whole area was subsequently harvested or whether a portion or the whole of the crops failed and was not harvested. Where two *successive* crops are grown on the same land during the one season the land is included twice in the area of crops.

Value of Production

The statistics in the following sections refer mainly to areas sown to crops and quantities produced. The value of the various crops is shown under 'Value of Production' in Chapter 8. Financial statistics relating to agricultural enterprises are included towards the end of this Chapter.

Classification of Agricultural Enterprises by Industry

The following table shows for 1974-75 all agricultural enterprises in Tasmania with an estimated value of operations of \$2 000 or more, classified according to industry class and estimated value of operations.

Agricultural Enterprises (a) Classified According to Industry Class and Estimated Value of Operations, 1974-75 (Number)

Industry class	Estimated value of operations (\$'000)						Total
	2 to 9	10 to 19	20 to 39	40 to 59	60 to 99	100 and over	
Sheep-meat cattle ..	305	186	167	76	60	56	850
Sheep	308	154	153	65	37	44	761
Meat cattle	995	185	93	15	14	4	1 306
Milk cattle	721	822	391	50	13	4	2 001
Pigs	55	25	23	4	2	2	111
Orchard and other fruit	295	147	59	12	3	1	517
Vegetables—potatoes ..	100	56	43	9	3	2	213
Vegetables—other	80	44	54	26	26	10	240
Other	181	58	56	22	22	21	360
Total	3 040	1 677	1 039	279	180	144	6 359

(a) An agricultural enterprise may comprise more than one agricultural holding.

Creation of the new register of agricultural businesses (enterprises) and the application of the Australian Standard Industrial Classification to the Agricultural Sector has enabled the production of a classification of agricultural enterprises by size and industry.

The industry class of an agricultural enterprise is determined basically according to the predominant activity as measured after the application of the unit value mentioned above.

Size of Agricultural Holdings

A classification of agricultural holdings by size is carried out at irregular intervals. In the next table the size classifications have been converted directly from acres to hectares; hence the unusual class limits.

Classification of Rural Holdings by Size

Size of holdings (hectares)	Number of holdings			Area of holdings ('000 hectares)		
	1928	1969	1976	1928	1969	1976
Under 20	3 164	2 241	(a) 925	23	19	(a) 11
20 and under 40 ..	2 108	1 457	1 168	59	42	32
40 " " 202 ..	4 779	4 624	4 090	443	427	379
202 " " 405 ..	726	950	949	240	267	258
405 " " 2 023 ..	775	888	862	647	754	697
2 023 " " 4 047 ..	146	124	125	412	339	320
4 047 " " 8 094 ..	67	68	64	374	372	339
8 094 " " 20 234 ..	29	27	26	329	300	274
20 234 and over ..	5	5	5	155	146	149
Total	11 799	10 384	(a) 8 214	2 684	2 667	(a) 2 459

(a) Not comparable with previous years, see 'Agricultural Holding—New Definition', above.

Number of Holdings with Crops or Livestock

At 31 March 1976, there were 8 214 agricultural holdings. The following table shows the number of holdings growing selected principal crops or carrying livestock; this gives some indication of farming activities on a broad basis only, since the same holding may be included more than once in the figures (in an extreme case, one holding could be included 11 times):

Number of Holdings Growing Principal Crops or Carrying Livestock

Particulars	1965-66	1972-73	1973-74	1974-75	1975-76
Number of agricultural holdings (at 31 March)	10 777	9 733	9 375	9 052	(a) 8 214
Holdings—					
Growing—					
Grain (b)—					
Barley	348	472	441	387	386
Oats	341	236	312	174	117
Wheat	213	147	91	39	47
Hops	107	73	76	50	28
Vegetables (c)—					
Potatoes	1 963	651	624	805	664
Onions	13	54	65	101	66
Fruit—					
Orchard tree (c) ..	1 305	768	612	486	425
Small fruit (c) ..	418	268	244	249	211

Number of Holdings Growing Principle Crops or Carrying Livestock—*continued*

Particulars	1965-66	1972-73	1973-74	1974-75	1975-76
Holdings— <i>continued</i> —					
Carrying—					
Cattle	8 667	8 314	8 098	7 986	7 229
Sheep	5 276	3 973	3 784	3 844	3 579
Pigs	3 153	1 533	1 185	1 010	974

(a) Not comparable with previous years, see definition of 'Agricultural Holding', given earlier.

(b) Eight hectares and over up to 1973-74; 10 hectares and over from 1974-75. Corresponding figures for 1973-74 using the 10 hectare limit are: barley, 358; oats, 243; wheat, 70.

(c) 0.4 hectares and over up to 1971-72; 0.5 hectares and over from 1972-73.

It should be noted that a fall in the number of holdings engaged in a particular activity does not necessarily involve decreased total activity. Holdings carrying cattle have decreased over the last 10 years while cattle numbers have doubled in the same period. However, the decline in the number of holdings growing fruit has been matched by an actual fall in crop area and in total production.

Land Utilisation on Agricultural Holdings

Agricultural holdings at present occupy 36.0 per cent of Tasmania's area of 6 830 000 hectares; details of land utilisation follow:

Land Utilisation on Agricultural Holdings
(Hectares)

Particulars of usage	1965-66	1973-74	1974-75	1975-76
Crops (excluding sown pastures harvested) (a)	97 078	73 908	66 665	60 030
Sown pastures (b)	682 812	919 784	921 229	935 164
Balance (used mainly for grazing)	1 849 137	1 567 025	1 504 385	1 464 062
Total area of all holdings	2 629 027	2 560 717	2 492 279	2 459 256

(a) Excludes area of sown pasture harvested; includes orchards and small fruits.

(b) Includes area harvested. Lucerne is classified to sown pastures.

Definition of 'Crops'

'Crops' as specified in the previous table, refers only to cultivated fields and orcharding land. However, it is reasonable to regard as a crop the yield obtained from harvesting sown pastures. The next table shows the total area of crops, using this wider definition and taking account of double-cropping:

Total Area of Crops
(Hectares)

Area	1965-66	1973-74	1974-75	1975-76
Area used for crops (a)	97 078	73 908	66 665	60 030
Area double cropped	2 921	2 575	1 883	2 076
Sown pastures harvested (b)	60 571	97 164	84 171	73 717
Total area of crops	160 570	173 647	152 719	135 823

(a) As shown in previous table.

(b) Includes lucerne.

Definition of 'Sown Pasture'

The next table shows the total area of sown pasture and distinguishes between areas *cut* for various purposes and areas simply grazed:

Sown Pasture: Classification of Total Area
(Hectares)

Particulars	1965-66	1973-74	1974-75	1975-76
Pasture harvested—				
Hay	54 390	88 884	78 557	70 262
Seed	1 258	3 982	2 219	628
Green feed or silage	4 923	4 298	3 395	2 827
Total pastures harvested	60 571	97 164	84 171	73 717
Pastures not harvested	622 241	822 620	837 058	861 447
Total sown pasture	682 812	919 784	921 229	935 164

CROPS

The summary table below shows the area devoted to principal crop types. The table shows that the total area of pasture crops (harvested for hay, seed, green feed and silage) varies significantly from season to season.

Area of Principal Crops: Summary
(Hectares)

Crop	1965-66	1973-74	1974-75	1975-76
Section 1 (a)—				
Cereals for grain	25 227	22 826	19 629	17 045
Legumes mainly for grain	3 340	1 317	1 607	591
Crops for hay (b)	5 434	3 040	1 926	1 305
Crops for green feed or silage (c)	43 029	30 731	26 872	21 962
Fruit—Orchard tree	8 380	5 414	4 169	3 586
Berry and small	696	582	579	492
Vegetables for sale for human consumption	12 359	10 288	11 521	11 235
Hops	635	703	662	513
Oil poppies	(d)	854	1 146	4 240
Other crops	900	727	437	1 136
Total section 1 (e)	100 000	76 483	68 548	62 106
Section 2—				
Pasture harvested for hay, seed, green feed or silage (f)—				
Pasture hay	54 390	88 884	78 557	70 262
Pasture seed	1 258	3 982	2 219	628
Pasture harvested for green feed or silage	4 923	4 298	3 395	2 827
Total section 2	60 571	97 164	84 171	73 717
Total area of crops	160 570	173 647	152 719	135 823

(a) Section 1 excludes pastures harvested for hay, seed, green feed or silage; details for these are given in section 2.

(b) Excludes pasture hay; see section 2.

(c) Includes vegetables for stock feed but excludes pastures harvested for green feed or silage; see section 2.

(d) Prior to 1970-71 oil poppies were included in 'Other crops'.

(e) Includes land double cropped; in 1975-76 area involved was 2 076 hectares.

(f) Includes lucerne harvested.

Details of individual crops, their area, production and yield per hectare, are shown in the next table:

Crops: Area, Production and Yield per Hectare, 1975-76

Crop	Area (hectares)	Production		
		Unit of quantity	Total	Yield per hectare
Cereals for grain—				
Barley	11 475	tonnes	18 389	1.60
Oats	3 924	"	3 497	0.89
Rye	2	"	2	..
Wheat	1 644	"	1 728	1.05
Legumes mainly for grain—				
Beans—Navy (haricot)	82	tonnes	152	1.85
Horse	62	"	147	2.35
Field peas—Blue	209	"	261	1.24
Grey and other	238	"	325	1.36
Hay—				
Pasture (incl. lucerne)	70 262	tonnes	322 235	4.59
Oaten	1 068	"	4 215	3.94
Other	237	"	789	3.32
Orchard tree fruit—				
Bearing—				
Apples	2 947	'000 bush	3 817	1.30
Apricots	61	"	9	0.14
Pears	145	"	143	0.99
Other	25	..	..	..
Non-bearing	405	..	..	..
Berry and small fruit—				
Bearing—				
Currants (black and red)	208	tonnes	470	2.26
Gooseberries	7	"	49	6.97
Loganberries	37	"	154	4.15
Raspberries	139	"	656	4.72
Strawberries	11	"	72	6.51
Non-bearing	91	..	..	..
Vegetables for human consumption—				
Beans, French and runner	1 054	tonnes	10 077	9.56
Peas, green (a)—				
For processing	5 525	"	20 680	3.74
Sold in pod	13	"	8	0.58
Potatoes	3 354	"	95 614	28.51
Turnips, swede and white	190	"	2 859	15.06
Other	1 099	..	..	..
Pasture seed (incl. lucerne)	628	kg	140 554	223.81
Other crops—				
Hops (b)	513	tonnes	1 129	2.20
Oil poppies	4 240	..	n.p.	n.p.

(a) Ex-shell weight.

(b) Production is expressed as dry weight.

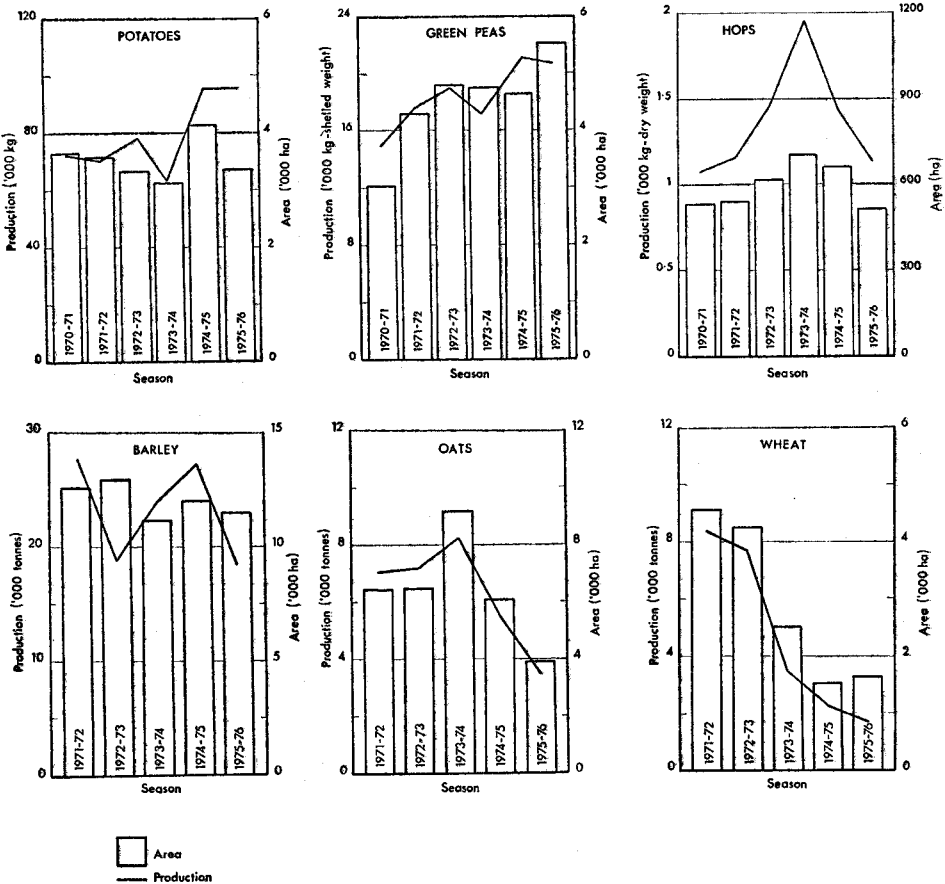
Principal Crops

The data on area and production of crops are compiled, in general, to give totals for each municipality. In subsequent parts of this chapter dealing with geographical distribution, the information is presented only in statistical divisions;

however, the Hobart and Southern Division totals have been combined since the Hobart Division is basically a concept related to a population which is predominantly urban in character. A description of the Tasmanian statistical divisions and sub-divisions appears in Chapter 2.

Trends in areas and production of six of the more important crops over the last 6 years are shown in the following graphs:

Selected Crops: Production and Area Harvested



The graphs above highlight the significant decline in the area and production of oats and wheat in recent years. The area sown to barley for grain has remained relatively constant but production has shown greater fluctuations, falling by 32.6 per cent in 1975-76 compared to the previous year. Green peas have increased in both area and production while the production of potatoes has increased significantly, despite an overall decline in area over the period, due to increased yields. Hops reached a peak in 1973-74 but marketing problems besetting this industry have contributed to the subsequent decline. A graph in a later section on fruit highlights the decline in the area and production of apples in the State over recent years.

Summary of Principal Crops

The following tables, which summarise the area of selected principal crops and give details of production for recent years, illustrate: (i) the increasing

importance of French and runner beans for processing and of peas for processing; and (ii) the declining importance of orchards and small fruit, and of wheat and oats for grain.

Selected Principal Crops: Area and Production

Crop	1965-66	1971-72	1972-73	1973-74	1974-75	1975-76
AREA (HECTARES)						
Barley for grain	8 056	12 576	12 802	11 121	12 020	11 475
Oats for grain	11 449	6 432	6 477	9 173	6 069	3 924
Wheat for grain	5 709	4 570	4 251	2 521	1 535	1 644
Total hay	59 824	81 176	58 387	91 924	80 483	71 567
Field peas	3 183	1 445	1 146	1 038	1 439	447
Pasture seed	1 259	2 061	840	3 982	2 219	628
Hops (a)	635	539	616	703	662	513
Beans, French and runner	245	723	738	1 089	1 078	1 054
Peas, green—						
For processing	6 437	4 290	4 779	4 750	4 635	5 525
Sold in pod	54	12	21	11	16	13
Potatoes	4 853	3 593	3 330	3 127	4 143	3 354
Orchard (tree) bearing—						
Apples	6 254	5 218	4 980	4 148	3 335	2 947
Pears	581	385	345	278	194	145
Berry and small fruit, bearing—						
Currants (black and red)	310	238	232	216	228	208
Loganberries	44	42	38	39	31	37
Raspberries	263	206	198	179	169	139
Strawberries	30	21	24	15	13	11
PRODUCTION						
Barley for grain tonnes	15 509	27 696	18 711	23 790	27 266	18 389
Oats for grain tonnes	12 279	7 050	7 144	8 247	5 496	3 497
Wheat for grain tonnes	10 025	8 357	7 701	3 510	2 282	1 728
Total hay tonnes	261 366	449 937	233 037	461 459	384 257	327 239
Field peas tonnes	4 044	2 320	1 047	1 750	2 959	586
Pasture seed tonnes	270	432	166	1 130	558	141
Hops (b) tonnes	1 392	1 159	1 450	1 949	1 439	1 129
Beans, French and runner .. tonnes	2 517	5 988	6 237	8 840	7 982	10 077
Peas, green (c)—						
For processing tonnes	23 185	17 617	18 976	17 139	21 070	20 680
Sold in pod tonnes	69	14	27	18	11	8
Potatoes tonnes	77 626	70 370	78 286	62 866	95 610	95 614
Apples '000 bush	8 364	5 873	7 024	5 948	5 013	3 817
Pears '000 bush	650	296	302	309	158	143
Currants (black and red) .. tonnes	1 332	1 140	905	865	951	470
Loganberries tonnes	306	255	271	239	248	154
Raspberries tonnes	1 588	1 311	1 466	946	1 216	656
Strawberries tonnes	99	85	112	103	94	72

(a) Includes areas not in full bearing.

(b) Dry weight.

(c) Ex-shell weight.

Cereals for Grain

Barley has become the most important cereal grain crop, the area having levelled off after a steady increase up to 1970-71. The area of wheat for grain has remained at a low level and in 1975-76 the area of oats for grain dropped to its lowest level this century.

The next table shows the geographical distribution of cereal grain growing:

Area of Cereals for Grain in Statistical Divisions, 1975-76
(Hectares)

Cereals for grain	Hobart and Southern	Northern			Mersey-Lyell			Total Tasmania
		Tamar (a)	North Eastern (a)	Total	North Western (a)	Western (a)	Total	
Barley ..	3 637	4 397	1 273	5 670	2 168	..	2 168	11 475
Oats ..	1 336	1 235	1 219	2 454	134	..	134	3 924
Rye ..	2	..	..	..	..	..	..	2
Wheat ..	765	321	506	827	52	..	52	1 644
Total ..	5 740	5 953	2 998	8 951	2 354	..	2 354	17 045

(a) Statistical sub-division.

Legumes Mainly for Grain

The geographical distribution of these crops follows:

Area of Legumes Mainly for Grain in Statistical Divisions, 1975-76
(Hectares)

Crop	Hobart and Southern	Northern			Mersey-Lyell			Total Tasmania
		Tamar (a)	North Eastern (a)	Total	North Western (a)	Western (a)	Total	
Beans—								
Navy ..	4	66	3	69	9	..	9	82
Horse ..	20	22	20	42	..	..	..	62
Field peas—								
Blue ..	33	160	7	167	9	..	9	209
Grey, etc. ..	37	111	4	115	86	..	86	238

(a) Statistical sub-division.

Hay and Green Feed

The following table shows the geographical distribution of hay and green feed crops:

Area of all Hay and Crops for Green Feed or Silage in Statistical Divisions, 1975-76
(Hectares)

Crop	Hobart and Southern	Northern			Mersey-Lyell			Total Tasmania
		Tamar (a)	North Eastern (a)	Total	North Western (a)	Western (a)	Total	
Hay—								
Pasture ..	10 138	20 897	12 203	33 100	26 998	26	27 024	70 262
Oaten ..	214	441	155	596	258	..	258	1 068
Other ..	59	80	..	80	98	..	98	237
Total ..	10 411	21 418	12 358	33 776	27 354	26	27 380	71 567
Crops for green feed or silage (b) ..	8 071	6 386	5 055	11 441	5 219	58	5 277	24 789

(a) Statistical sub-division.

(b) Includes vegetables for stock feed and pasture harvested for green feed or silage.

The North Western sub-division, with the largest area devoted to sown pastures, produces approximately 40 per cent of the State's hay. Its predominance in area under hay and green feed crops can be related to the fact that it carries nearly 40 per cent of the State's cattle and is the principal dairying area.

The principal green feed crop is oats (nearly half of total green feed area); other green feed crops include soft turnips, rape, chou moellier, barley, millet, rye-corn and wheat.

Orchard Tree Fruit and Berry and Small Fruit

The geographical distribution of orchards and berry and small fruit areas is shown below:

Area of Orchard Tree and Berry and Small Fruit in Statistical Divisions, 1975-76
(Hectares)

Type	Hobart and Southern	Northern			Mersey-Lyell			Total Tasmania
		Tamar (a)	North Eastern (a)	Total	North Western (a)	Western (a)	Total	
Orchard tree fruit ..	2 689	599	14	613	284	..	284	3 586
Berry and small fruit ..	448	4	16	20	24	..	24	492

(a) Statistical sub-division.

Orcharding is heavily concentrated in and around the Huon Valley (Southern Statistical Division); the other main area is in the Tamar Valley (Northern Division). Berry and small fruit growing is almost entirely confined to the Derwent and Huon Valleys.

In the period from 1948-49 State production of berry and small fruit has dropped by over three quarters. In spite of this Tasmania is still a principal producer of raspberries and black and red currants.

Principal Small Fruits: Area and Production

Year	Currants (black and red)		Loganberries		Raspberries		Strawberries	
	Bearing area	Pro-duction	Bearing area	Pro-duction	Bearing area	Pro-duction	Bearing area	Pro-duction
	hectares	'000 kg	hectares	'000 kg	hectares	'000 kg	hectares	'000 kg
1948-49 (a) ..	812	2 735	86	380	844	3 449	101	395
1971-72 ..	238	1 140	42	255	206	1 311	21	85
1972-73 ..	232	905	38	271	198	1 466	24	112
1973-74 ..	216	865	39	239	179	946	15	103
1974-75 ..	228	951	31	248	169	1 216	13	94
1975-76 ..	208	470	37	154	139	656	11	72

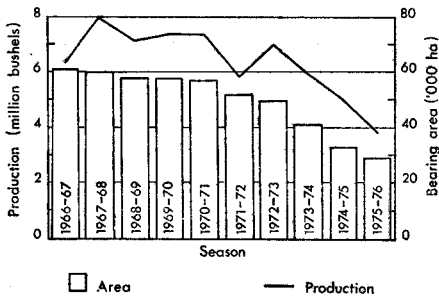
(a) Representative year from period when small fruit areas were at record level.

Although apple production is declining the gross value of the apple crop still represents about one quarter of the total gross value of all crops (see the Appendix to Chapter 8). The next table gives recent details of area, production and average yield and illustrates the effect of economic problems confronting the industry.

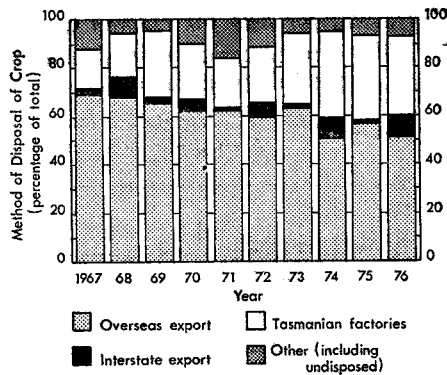
Apples: Area and Production

Season	Area		Number of trees		Production		
	Bearing	Non-bearing	Bearing	Non-bearing	Total	Yield	
						Per hectare	Per bearing tree
	hectares	hectares	'000	'000	'000 bush.	bush.	bush.
1971-72	5 218	1 358	2 015	524	5 873	1 125	2.91
1972-73	4 980	1 097	1 977	435	7 024	1 410	3.55
1973-74	4 148	837	1 647	332	5 948	1 434	3.61
1974-75	3 335	508	1 323	202	5 013	1 503	3.79
1975-76	2 947	385	1 220	160	3 817	1 295	3.13

Apples: Bearing Area and Production



Disposal of the Tasmanian Apple Crop



Economic Problems: In recent years, economic problems related to the importance of overseas markets and shipping costs have prompted the introduction of assistance to apple growers through schemes providing a stabilisation price for each variety of apple exported at risk to European markets. In the 1970-71 export season the Federal Government's *Apple and Pear Stabilisation Act* came into effect. Under this Act a support price is decided upon for each variety and, depending on the average market return for that variety, payments either into or from the fund are calculated. Pay-outs, which predominate, are made up to a maximum of eighty cents per bushel for any variety. Net amounts paid for apples under this scheme were: 1970-71, \$1 701 000; 1971-72, \$1 872 000; 1972-73, \$1 798 000; 1973-74, \$1 918 000; 1974-75, \$1 733 000; 1975-76, \$2 540 000.

Since the 1973-74 season further subsidies have been provided under the *Apple Industry (Assistance) Act*. This Act, which effectively lifts the limit on payments under the stabilisation scheme, provides for equal contributions from the Federal and state governments; however, in 1975-76 the Tasmanian Government paid an extra \$284 000. The total payments under this Act have been: 1973-74, \$3 180 000; 1974-75, \$1 144 000 and 1975-76, \$742 000.

Details relating to compensation of growers for removal of apple and pear trees are given in an earlier section. As shown earlier in this Chapter, the number of holdings with at least 0.5 hectares of orchard tree fruit (apples, pears, apricots, etc.) was only 425 at 31 March 1976 compared to 486 in 1975, 612 in 1974 and 768 in 1973; this decline is indicative of the serious problems facing the industry.

The total government subsidy towards apples under the two Acts specified above (\$3.282m in 1975-76) gives an average of \$10 161 per holding for the 323 holdings exporting apples overseas in the 1975-76 season.

Concurrent with increasing economic problems the number of apple trees planted has decreased markedly. In 1966 total tree plantings were 108 000 comprising: (i) replacement plantings in existing orchards for trees removed, 38 000; and (ii) trees planted in new orchard areas, 70 000. In 1975 plantings were only 10 000 trees (6 000 replacement plantings and 4 000 trees in new orchard areas).

A wide variety of apples is produced in Tasmania but many only in small quantities. Of the total production of 3 817m bushels in 1975-76, two varieties accounted for 36 per cent (granny smith, 19 per cent and democrat, 17 per cent) while jonathon, delicious (golden and other) and sturmer pippin accounted for a further 47 per cent between them.

Vegetables for Sale for Human Consumption

The concentration of vegetable growing in certain areas of the State is illustrated in the following table:

Vegetables for Sale for Human Consumption (a)
Area Under Selected Crops in Statistical Divisions, 1975-76
(Hectares)

Crop	Hobart and Southern	Northern			Mersey-Lyell			Total Tasmania
		Tamar (b)	North Eastern (b)	Total	North Western (b)	Western (b)	Total	
Beans, French and runner	2	13	108	120	932	..	932	1 054
Peas, green ..	10	1 550	344	1 893	3 635	..	3 635	5 539
Potatoes ..	241	103	329	432	2 679	2	2 681	3 354
Turnips, swede and white ..	57	8	24	32	100	1	101	190
Other vegetables ..	207	94	83	177	716	..	716	1 099
Total ..	516	1 768	887	2 655	8 061	3	8 064	11 235

(a) Includes vegetables for processing.

(b) Statistical sub-division.

Hops

The almost universal use of the 'Pride of Ringwood' hop variety has led to a general increase in per hectare yields in recent years. As well, this variety has a higher percentage of usable resin than the older types and at the same time more efficient extraction methods have been devised. This has led to a changed disposal pattern with more emphasis on export, although export markets have not been particularly rewarding recently and stockpiling has occurred.

Other changes have also recently taken place in the industry. The majority of hops now produced are seedless (through the exclusion of male plants) so as to meet changing brewery demand and the market for hop extract. This change to seedless hops means that, as yields are lower than for seeded hops, the comparability of data for the last four years with that for earlier years is affected. Also, an increased quantity of hops is being pelletised before shipment. In this process the dried hops are hammer-milled, compressed into pellets and put into

airtight containers that are either vacuum sealed or nitrogen flushed before sealing. This reduces resin losses due to oxidation, allows storage without refrigeration and decreases the bulk to be shipped.

Tasmania's total production of 1 129 tonnes in 1975-76 was over 60 per cent of total Australian hop production. The next table shows details of area, production and value over a five-year period:

Hops: Area, Production and Value

Season	Number of growers	Total area	Production		
			Total (a)	Yield per hectare (a)	Value
		hectares	'000 kg	kg	\$'000
1971-72	74	539	1 159	2 149	2 186
1972-73	73	616	1 450	2 353	2 844
1973-74	76	703	1 949	2 772	3 213
1974-75	50	662	1 439	2 174	1 238
1975-76	28	513	1 129	2 200	1 575

(a) Dry weight.

Oil Poppies

Oil poppies are a relatively new cash crop in Tasmania. Initially they were grown on the mid north-west coast, but more recently oil poppies have been grown in other parts of the State although adverse weather conditions, particularly excessive rain, have proved to be a problem in some areas.

In 1975-76 the total area of oil poppies was 4 240 hectares compared with 1 146 hectares in the previous year, the distribution being: Hobart and Southern statistical divisions, 944 hectares; Northern, 1 935 hectares; and Mersey-Lyell, 1 361 hectares. Production figures are not available for publication.

Oil poppy growing provides the raw material in the production of codeine and, within Australia, is at present restricted to Tasmania where two processing plants now operate.

Pasture Seed

The main seed varieties produced on Tasmanian farms during the past five years are listed in the following table:

Pasture Seed Production (a)
(kg)

Type of grass	1971-72	1972-73	1973-74	1974-75	1975-76
Clover—White	45 324	6 643	22 197	22 480	6 460
Red	2 880	..	6 217	2 027	1 700
Other	14 461	..	1 360	..	115
Ryegrass—Perennial	212 917	75 338	563 870	278 258	68 432
H.1.	56 309	19 146	86 713	10 343	4 740
Italian	57 022	35 929	399 425	210 774	36 813
Cocksfoot	1 905	336	11 157	13 350	13 751
Phalaris tuberosa	7 801	5 942	10 067	9 440	1 312
Lucerne	4 790	1 830	8 801	5 499	6 871
Other	28 208	20 389	20 125	5 740	360
Total	431 616	165 553	1 129 932	557 911	140 554

(a) Includes all pasture seed harvested, whether as a separate crop or from an area sown to grain crops.

All Other Crops

In the table 'Area of Principal Crops' the item 'Other crops' (900 hectares in 1975-76) includes lavender, flower seeds, cut flowers, lupins and a variety of other crops grown for seed.

LIVESTOCK**Introduction**

This subject is dealt with in two parts: (i) this section, which deals with numbers of livestock on agricultural holdings; and (ii) a later section, 'Livestock Products'.

The first part needs no comment but the second part (Livestock Products) requires explanation. In relation to the various types of livestock, the following products are included:

Cattle—meat, milk, butter, cheese.

Sheep—meat, wool.

Pigs—meat.

Poultry—meat, eggs.

Butter, meat and cheese, although regarded as manufacturing industry products, are included in the later section 'Livestock Products', because the pattern and scale of livestock farming is closely linked to the processing of these products.

Number of Livestock on Agricultural Holdings

The following summary table shows the number of livestock on agricultural holdings since 1860. The table highlights the increasing importance of cattle relative to the slower growth in sheep numbers.

Livestock on Agricultural Holdings: Selected Years

Year	Horses	Cattle	Sheep	Pigs
	no.	no.	'000	no.
1860 (a)	21 034	83 366	1 701	31 290
1900	31 607	165 516	1 684	68 291
1939-40 (a)	29 605	252 484	2 677	44 941
1949-50 (b)	21 197	274 740	2 170	35 841
1959-60	10 512	375 342	3 494	67 118
1969-70	6 478	646 439	4 560	111 275
1975-76	5 523	909 232	4 249	69 773
Tasmanian numbers as proportion of Australian total (1975-76) ..	% n.a.	% 2.7	% 2.9	% 3.2

(a) At 31 December.

(b) At 31 March from 1949-50.

Cattle*Classification*

The traditional way of classifying cattle has been to call them either 'dairy' or 'beef' cattle but this has possibly been confusing since the terms may refer to either *purpose* or *breed*. In the period 1942-43 to 1962-63, the annual farm census required this dissection but the terms were not defined. As from 1963-64 the cattle groupings have been as follows: (i) bulls classified by *breed*; (ii) 'house cows' specified separately; and (iii) all other cattle classified according to *purpose* (i.e. milk production or meat production). The results of the 1974-75 and 1975-76 farm censuses are given in the following table which closely follows the lay-out of the collection form and provides an analysis in which it is possible to isolate the number of cows and heifers directly associated with dairying:

Classification of Cattle on Agricultural Holdings at 31 March

	Description	1975	1976
Bulls used or intended for service	Dairy breed bulls (1 year and over)	3 091	2 893
	Beef breed bulls (1 year and over)	13 408	12 982
	Bull calves (under 1 year) intended for service—		
	Dairy breed bull calves	1 153	1 101
	Beef breed bull calves	4 594	4 243
Cows and heifers used or intended for production (for sale) of milk and cream	Cows—In milk and dry at 31 March	143 719	143 310
	Heifers (1 year and over)	38 990	35 850
	Heifer calves (under 1 year)	36 880	32 014
House cows (in milk and dry) and heifers (1 year and over) being kept primarily for own milk supply		3 439	2 970
Cattle and calves (not included above) mainly for meat production	Cows and heifers (1 year and over)	316 027	319 902
	Calves (under 1 year) including vealers	237 278	233 032
	Other (1 year and over) i.e. steers, bullocks, etc.	122 256	120 935
Total cattle and calves for all purposes		920 835	909 232

The distribution of holdings with cattle is shown below:

Distribution of Cattle in Statistical Divisions, 31 March 1976

Statistical division or sub-division	Number of holdings with cattle	Total dairy cattle (a)	Total beef cattle (b)	Total cattle
Hobart and Southern	2 082	16 803	158 064	174 867
Northern—				
Tamar	1 634	51 654	164 138	215 792
North Eastern	764	26 560	162 395	188 955
Total	2 398	78 214	326 533	404 747
Mersey-Lyell—				
North Western	2 739	123 112	205 060	328 172
Western	10	9	1 437	1 446
Total	2 749	123 121	206 497	329 618
Total Tasmania	7 229	218 138	691 094	909 232

(a) Includes dairy breed bulls and bull calves, cows and heifers used or intended for production of milk and cream for sale and house cows.

(b) Includes beef breed bulls and bull calves and other cattle and calves mainly for meat production.

The total of 'Cows and heifers used or intended for production (for sale) of milk and cream' in a previous table (211 174 for 1976) can be associated directly with the dairying industry. Similarly the total of 'Cattle and calves, mainly for meat production' (673 869) can be associated directly with the beef cattle industry. The previous change in classification makes it impossible to compare, in full detail, the description of cattle in 1964-65 and subsequent years with descriptions reported in previous years but the following table is compiled to show broad groups regarded as generally comparable:

Description of Cattle on Agricultural Holdings at 31 March

Year	Number of holdings with cattle	Bulls (1 year and over)	Cows and heifers (1 year and over)	Calves (under 1 year)	Other	Total cattle
1950	9 759	6 186	158 424	60 601	49 529	274 740
1955	9 668	7 002	194 016	78 252	40 147	319 417
1960	9 031	7 237	229 162	100 849	38 094	375 342
1965	8 384	(a) 8 311	283 955	119 455	39 750	451 471
1970	8 405	10 812	378 836	200 588	56 203	646 439
1975	7 986	16 499	502 175	279 905	122 256	920 835
1976	7 229	15 875	502 032	270 390	120 935	909 232

(a) The specification of 'Bull calves (under 1 year)' from 1963-64 may have affected the comparability of the series.

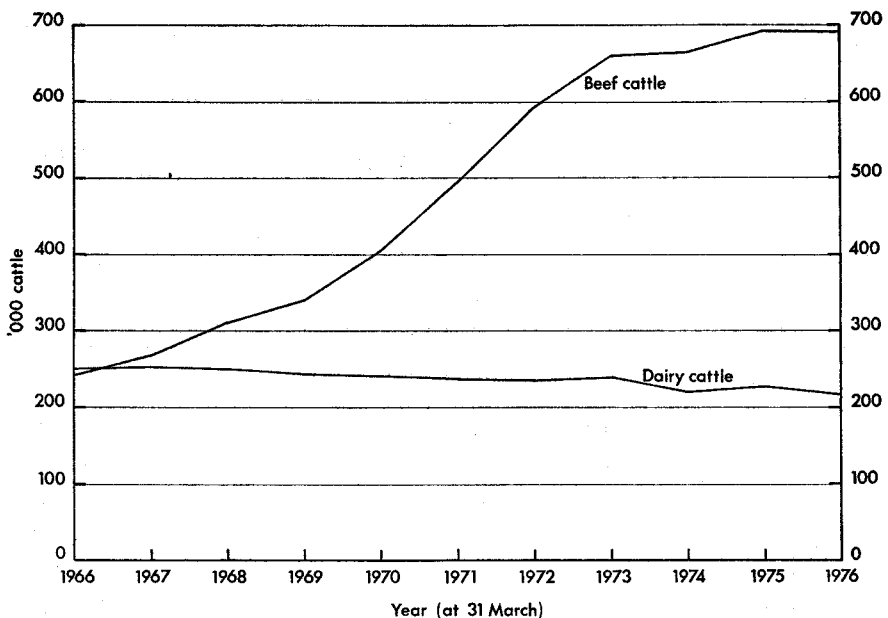
Breeds of Cattle

The main breeds of cattle in Tasmania for milk production are jersey, friesland and ayrshire with small numbers of milking shorthorn and guernsey, while breeds used for the production of beef are hereford, aberdeen angus, shorthorn and devon. In recent years, new cattle lines such as the brahmans, murray greys and charolais have been introduced by farmers wishing to utilise the advantages of cross-breeding.

The following graph gives an indication of the recent trends in numbers of cattle according to their association with the beef industry or the dairy industry. Details of the classification used are given in the notes to a table above. For the years 1965 to 1968 there was no split of bull calves between beef and dairy so this was estimated for the graph.

Numbers of Beef and Dairy Cattle, Tasmania, 1965 to 1976

(Cattle Mainly for Meat Production and Cattle Mainly for Milk Production)



Sheep

The table below shows the trend in sheep numbers on agricultural holdings since 1953:

Sheep on Agricultural Holdings at 31 March
(^{'000})

Year	Sheep	Year	Sheep	Year	Sheep	Year	Sheep
1953 ..	2 422	1959 ..	3 536	1965 ..	3 793	1971 ..	4 517
1954 ..	2 465	1960 ..	3 494	1966 ..	4 127	1972 ..	4 237
1955 ..	2 595	1961 ..	3 439	1967 ..	4 321	1973 ..	3 824
1956 ..	2 673	1962 ..	3 532	1968 ..	4 428	1974 ..	3 964
1957 ..	2 943	1963 ..	3 570	1969 ..	4 395	1975 ..	4 136
1958 ..	3 298	1964 ..	3 600	1970 ..	4 560	1976 ..	4 249

The next table shows the geographical distribution and various descriptions of sheep and also details of the lambing season:

Description of Sheep at 31 March 1976 and Lambing, 1975 Season, in Statistical Divisions

Particulars	Hobart and Southern	Northern			Mersey-Lyell			Total Tasmania
		Tamar (a)	North Eastern (a)	Total	North Western (a)	Western (a)	Total	
Holdings with sheep no.	1 267	1 031	467	1 498	813	1	814	3 579
Sheep (^{'000})—								
Rams (1 year and over)	19.5	14.3	12.3	26.6	3.4	..	3.4	49.5
Breeding ewes ..	784.9	492.8	428.6	921.5	128.3	..	128.3	1 834.7
Other ewes (1 year and over) ..	100.1	58.5	59.5	118.1	7.3	..	7.3	225.4
Wethers (1 year and over) ..	566.8	196.3	270.0	466.3	24.3	..	24.3	1 057.4
Lambs and hoggets (under 1 year) ..	486.2	259.2	262.3	521.5	74.2	..	74.2	1 081.9
Total ..	1 957.6	1 021.2	1 032.7	2 053.9	237.4	..	237.5	4 248.9
Lambing, 1975 season—								
Ewes mated (^{'000}) ..	718.8	461.0	386.4	847.4	110.6	..	110.6	1 676.9
Lambs marked (^{'000}) ..	653.9	413.9	343.3	757.2	103.9	..	103.9	1 515.1
Marking ratio (%) (b) ..	91.0	89.8	88.8	89.4	94.0	..	94.0	90.4

(a) Statistical sub-division.

(b) Lambs marked as percentage of ewes mated; lamb mortality is one of the factors affecting marking ratios.

The following table summarises the descriptions of sheep on a State basis and also gives details of lambing:

Description of Sheep at 31 March and Details of Lambing: Summary

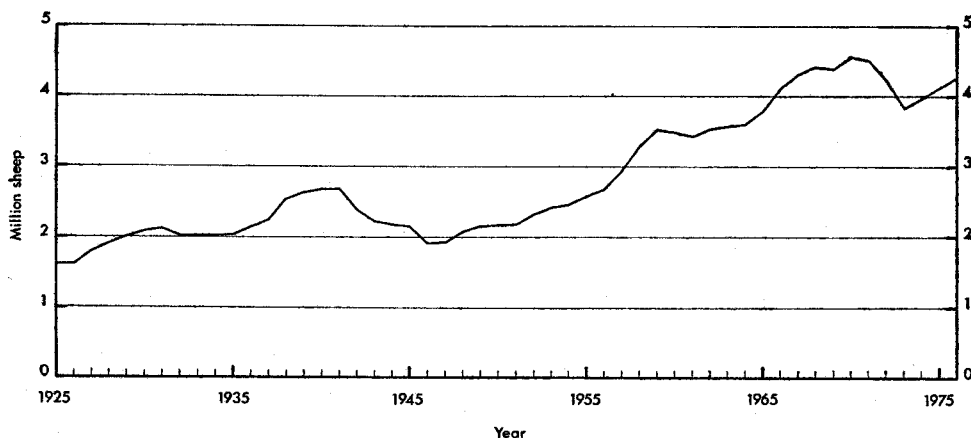
Particulars	1966	1971	1972	1973	1974	1975	1976
Holdings with sheep .. no.	5 276	4 611	4 257	3 973	3 784	3 844	3 579
Sheep ('000)—							
Rams (1 year and over) ..	45	51	50	48	47	50	50
Breeding ewes	1 826	1 994	1 841	1 711	1 788	1 846	1 835
Other ewes (1 year and over) ..	172	226	265	212	194	209	225
Wethers (1 year and over) ..	951	1 075	952	895	937	998	1 057
Lambs and hoggets (under 1 year)	1 133	1 171	1 128	960	998	1 034	1 082
Total	4 127	4 517	4 237	3 824	3 964	4 136	4 249
Lambing (a)—							
Ewes mated '000	1 651	1 889	1 805	1 604	1 535	1 644	1 677
Lambs marked—							
Number '000	1 594	1 705	1 617	1 369	1 361	1 466	1 515
Marking ratio (b) .. %	96.5	90.3	89.6	85.3	88.7	89.2	90.4

(a) In the season preceding the year named.

(b) Lambs marked as percentage of ewes mated.

The following graph shows the trend in sheep numbers since 1925 and highlights the decline in the early 1970's and the subsequent partial recovery.

Sheep Numbers, Tasmania, 1951 to 1976



Breeds of Sheep

The merino is the mainstay of the Australian wool industry and accounts for over 75 per cent of the Australian sheep population. However, in Tasmania the predominant sheep breeds are polwarth and corriedale; both were originally developed from merino cross-breds. A new sheep breed, the 'cormo', has been developed in Tasmania to suit local conditions and to provide a highly fertile breed having a high yield of fine wool and good body conformation.

Over the past 10 years, the breeds of sheep reported by growers have shown a trend in favour of polwarths. Corriedale numbers, after showing a small but consistent increase for some years, are now exhibiting an opposite trend. The following table shows the percentage of the main breeds of sheep (including rams):

Proportion of Breeds of Sheep at 31 March (a)
(Per Cent)

Breed	1964	1967	1968	1969	1970	1971	1974
Polwarth	36.7	39.9	40.5	41.7	42.5	43.6	44.0
Corriedale	16.3	19.5	18.0	17.3	15.4	14.4	13.1
Merino	9.7	8.0	7.1	7.7	7.9	8.9	10.7
Romney marsh	2.3	2.2	2.0	1.9	1.2	1.3	0.7
Other breeds (b)	3.5	3.0	3.0	3.3	3.9	4.9	6.3
Comebacks	12.2	10.5	10.7	11.1	12.6	11.8	14.8
Cross-breeds	19.3	17.0	18.7	17.0	16.4	15.0	10.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(a) Similar data are not available for 1972, 1973, 1975 or 1976.

(b) Recognised breeds of sheep which individually, in 1974, accounted for about one per cent or less of all sheep; includes cheviot, dorset horn, border leicester, English leicester, ryeland, south-down, suffolk, lincoln, poll dorset, shropshire and cormo.

The majority of all breeds of sheep are run on improved pastures. However, particularly in the Midlands, use is made of considerable areas of unimproved 'run' country for polwarths, comebacks and merinos. The Central Plateau also provides summer grazing, particularly for wethers.

Pigs

The geographical distribution of pigs, by statistical division, is shown in the next table:

Distribution of Pigs in Statistical Divisions at 31 March 1976

Particulars	Hobart and Southern	Northern			Mersey-Lyell			Total Tasmania
		Tamar (a)	North Eastern (a)	Total	North Western (a)	Western (a)	Total	
Holdings with pigs (no.)	225	289	127	416	331	2	333	974
Pig numbers—								
Boars ..	182	291	127	418	397	3	400	1 000
Breeding sows ..	1 619	2 716	1 221	3 937	4 487	81	4 568	10 124
Other (b) ..	8 259	15 893	8 403	24 296	26 039	55	26 094	58 649
Total pigs	10 060	18 900	9 751	28 651	30 923	139	31 062	69 773

(a) Statistical sub-division.

(b) Includes baconers and porkers, backfatters, stores, weaners, suckers and slips.

Pig Population

The pig population at 31 March each year is not, in itself, a very significant figure. It is possible for a sow to produce two litters within the one year and for the offspring to number more than 10 in each litter. It follows, therefore, that the real measure of activity in pig-raising is not so much the size of the pig herd at a particular point in time, but rather the number of pigs slaughtered and the dressed carcass weight of the meat so produced; such information is given in the 'Livestock Products' section of this chapter.

In the previous table, the most significant item is the number of breeding sows. A sow can be mated when only nine or ten months old and the gestation period is a mere four months. Piglets are weaned at four to six weeks—this early weaning calls for more skilled management but has advantages of avoiding heavy weight loss by the sow and reducing the period between litters.

The following table summarises pig numbers:

Pigs on Agricultural Holdings at 31 March: Summary

Year	Holdings with pigs	Boars	Breeding sows	Other (a)	Total pigs
1955	4 235	1 608	9 065	47 709	58 382
1960	3 681	2 075	10 730	54 313	67 118
1965	3 315	2 327	14 578	75 116	92 021
1970	2 302	1 978	16 629	92 668	111 275
1975	1 010	976	9 243	53 754	63 973
1976	974	1 000	10 124	58 649	69 773

(a) Includes baconers and porkers, backfatters, stores, weaners, suckers and slips.

LIVESTOCK PRODUCTS

Quantity and Value of Livestock Products

The statistics in the following section refer, in the main, to quantities of livestock products. The associated values will be found under 'Value of Production' in Chapter 8.

Wool

Wool Production

For statistical purposes, the total amount of wool produced in the State in any year consists of not only the 'clip' (shorn wool) but also of the wool on skins, irrespective of whether it is actually removed by local fellmongers or exported on skins. Production figures for the latest 10-year period are given in the next table:

Wool Production (a) Summary
(⁰⁰⁰ kg)

Year	Shorn wool (including crutchings)	Fell-mongered wool, and wool exported on skins	Total	Year	Shorn wool (including crutchings)	Fell-mongered wool, and wool exported on skins	Total
1966-67 ..	17 548	2 026	19 574	1971-72 ..	18 573	2 490	21 063
1967-68 ..	15 286	2 090	17 376	1972-73 ..	15 973	2 180	18 154
1968-69 ..	18 955	2 344	21 299	1973-74 ..	16 021	1 528	17 549
1969-70 ..	19 409	2 452	21 861	1974-75 ..	17 147	1 741	18 888
1970-71 ..	19 165	2 506	21 670	1975-76 ..	17 962	1 989	19 951

(a) Fellmongered wool has been converted to greasy wool equivalent weight.

As illustrated in the previous table the shorn wool component has accounted for almost 90 per cent of total wool production over the last 10 years.

Total wool production of 21 861 000 kilograms in 1969-70 was the highest recorded wool output for Tasmania. However, uncertain economic conditions in the wool industry for subsequent years have resulted in a substantial decline in wool production.

Export of Wool

Export details for wool for recent years are given in the following table:

Exports of Wool, Greasy (Overseas and Interstate)
(*000 kg)

Year	Quantity	Year	Quantity	Year	Quantity
1961-62 ..	12 342	1966-67	16 240	1971-72	20 413
1962-63 ..	11 919	1967-68	13 995	1972-73	17 735
1963-64 ..	11 379	1968-69	15 799	1973-74	r 16 963
1964-65 ..	13 757	1969-70	16 513	1974-75	15 947
1965-66 ..	15 443	1970-71	17 146	1975-76	17 436

It should be noted that not all Tasmanian wool is exported, some being used, after scouring, etc., for manufacturing purposes within the State. Any locally processed wool exported would not be classified under greasy wool.

Shorn Wool

The principal months for shearing in Tasmania are October, November and December, but during more recent years an increasing number of farmers have been shearing outside the traditional spring period. Such practices not only facilitate flock and property management but also provide more continuous employment for shearers and shed hands. The following table gives shearing details for recent years:

Shearing and Shorn Wool Obtained

Year	Numbers shorn			Shorn wool obtained			Average yield		
	Sheep	Lambs	Total	From sheep (a)	From lambs	Total	From sheep (a)	From lambs	Total
	'000	'000	'000	'000 kg	'000 kg	'000 kg	kg	kg	kg
1964-65 ..	3 171	807	3 978	15 310	847	16 157	4.83	1.05	4.06
1970-71 ..	3 864	942	4 806	18 045	1 120	19 165	4.67	1.19	3.99
1971-72 ..	3 711	895	4 607	17 441	1 132	18 573	4.69	1.26	4.03
1972-73 ..	3 413	838	4 251	15 038	935	15 973	4.41	1.12	3.76
1973-74 ..	3 280	821	4 101	15 010	1 011	16 021	4.57	1.23	3.90
1974-75 ..	3 417	736	4 153	16 182	965	17 147	4.73	1.31	4.12
1975-76 ..	3 579	772	4 351	16 930	1 032	17 962	4.73	1.34	4.13

(a) Includes crutchings from sheep.

In 1975-76, 46 per cent of the shorn wool produced in Tasmania came from the Hobart and Southern Statistical Divisions combined; the Tamar and North-Eastern Subdivisions contributed 23 and 26 per cent of the total, respectively.

The next table shows the geographical distribution of shorn wool production:

Shearing and Shorn Wool Obtained (a) in Statistical Divisions, 1975-76

Particulars	Hobart and Southern	Northern			Mersey-Lyell			Total Tasmania
		Tamar (b)	North Eastern (b)	Total	North Western (b)	Western (b)	Total	
NUMBER SHORN ('000)								
Sheep ..	1 697	824	896	1 720	162	..	162	3 579
Lambs ..	303	210	209	418	52	..	52	772
SHORN WOOL OBTAINED ('000 kg)								
From—Sheep	7 953	3 872	4 375	8 247	730	..	730	16 930
Lambs	364	298	281	579	89	..	89	1 032
Total ..	8 317	4 170	4 656	8 826	819	..	819	17 962
AVERAGE YIELD (c) (kg)								
Sheep ..	4.69	4.70	4.88	4.80	4.52	..	4.52	4.73
Lambs ..	1.20	1.42	1.35	1.38	1.70	..	1.70	1.34

(a) Includes crutchings from sheep.

(b) Statistical sub-division.

(c) Per sheep or lamb shorn.

Wool Auctions

The bulk of Tasmanian shorn wool is marketed in Hobart and Launceston at auctions organised by wool-selling brokers. Four auction sales are held each year—in October, December, February and June, with the February sale being the most important.

In addition to wool sold at auctions, some wool is bought direct from growers by dealers and by local manufacturers of woollen goods. A small proportion of the State's wool is marketed at Victorian auctions; growers on King Island and Flinders Island tend to use this outlet because of sea transport factors.

The following table shows the average price of shorn greasy wool sold at Tasmanian auctions in selected years since World War II and also the value of all wool produced. After a period of very low prices there was an upsurge in demand in 1972-73, particularly from Japanese buyers, and prices rose strongly. High prices continued until early 1974 when, with wool users turning to alternatives, buyers were being left with large stockpiles and prices started dropping. At this time the Australian Wool Corporation was established with the administration of the flexible reserve price scheme as part of its duties. A floor price of 300 cents per kilogram for 21 micron wool on a clean basis was originally set with the Wool Corporation carrying out 'support-buying'. The market declined further however, and the minimum price dropped to 250 cents for the 1974-75 and 1975-76 seasons.

Tasmanian Average Auction Price and Total Value of Wool Produced

Year	Average auction price per kg of shorn greasy wool	Total value of wool produced (a)	Year	Average auction price per kg of shorn greasy wool	Total value of wool produced (a)
	cents	\$'000		cents	\$'000
1950-51	331	24 226	1971-72	86	(b) 18 001
1960-61	106	14 458	1972-73	229	(b) 37 481
1964-65	109	19 050	1973-74	192	31 973
1969-70	88	18 081	1974-75	137	23 890
1970-71	74	14 983	1975-76	157	28 420

(a) Includes value of shorn wool, fellmongered and dead wool and estimated value of wool exported on skins.

(b) Includes Government wool deficiency payments of \$1 258 000 in 1971-72 and \$112 000 in 1972-73.

The preceding price series refers only to shorn greasy wool sold at auction. In arriving at the value series for all wool produced, account is taken not only of wool sold at auction but also of direct growers' sales to dealers, manufacturers and fellmongers plus estimated value of wool exported on skins.

Classification of Greasy Wool Sold at Auction

The following information is compiled by the Wool Statistical Service of the Australian Wool Corporation on the basis of catalogues of auction sales. Wool sold at auction is classified according to quality which is expressed in terms of average fibre diameter. This is measured in millionths of a metre (microns).

Mean Micron Analysis (a) of Greasy Wool Sold at Auction
(Source: Australian Wool Corporation)

Average fibre diameter (mean microns)	Greasy wool sold at auction—percentage of total			
	In Tasmania		In Australia	
	1974-75	1975-76	1974-75	1975-76
Finer than 18	0.3	0.2	..	..
18	2.2	1.7	0.4	1.1
19	3.1	3.2	2.1	4.6
20	1.6	1.7	6.2	9.0
21	7.1	8.7	13.3	17.8
22	11.6	12.5	20.4	21.4
23	12.8	12.4	18.7	16.0
24	14.1	14.0	11.2	8.5
25	12.1	11.5	6.1	4.4
26	6.6	7.0	5.2	3.9
27	8.4	7.5	3.8	3.2
28	5.3	4.8	3.3	2.7
29	0.4	0.4	0.3	0.2
30	7.2	7.0	4.2	3.3
32	3.1	2.5	1.8	1.2
33	0.4	0.4	0.2	0.1
34	0.9	0.9	0.6	0.3
35 .. ..	..	..	..	..
36	0.4	0.3	0.2	0.1
38	0.5	0.6	0.2	0.2
Coarser than 38	0.2	0.2	..	..
Oddments	1.9	2.5	1.7	2.0
Total	100.0	100.0	100.0	100.0

(a) A micron equals one millionth of a metre; the measurement relates to fibre diameter.

Clean Wool Yield

While the proportion of fine wool is comparatively low in the Tasmanian clip (since the State is historically and climatically a producer of crossbred wool), growers offering fine wool sell a high proportion of superfine merino wool at premium prices. The next table shows Tasmanian yields and those for other States.

Average Clean Yield of Wool Clip, Tasmania and Other Australian States
(Source: Australian Wool Corporation)

State of sale (a)	Yield of clean wool from greasy (per cent)					
	1964-65	1971-72	1972-73	1973-74	1974-75	1975-76
New South Wales	56.84	57.61	57.64	58.33	60.54	61.06
Victoria	59.21	59.10	59.29	60.24	61.55	62.02
Queensland	55.70	54.03	54.89	55.96	59.04	58.91
South Australia	53.10	55.02	54.01	56.77	58.76	57.90
Western Australia	54.76	54.16	52.29	54.26	57.69	58.42
Tasmania	62.93	63.83	63.14	65.05	66.21	67.01
Australia	56.86	56.93	56.43	58.08	59.93	60.18

(a) Wool from other Australian states is not sold at Tasmanian auctions so, for Tasmania, 'State of sale' and 'State of origin' are virtually the same except that some wool from Tasmania (mainly King and Flinders Islands) is sold at Victorian auctions.

In 1975-76 the Tasmanian proportion of auctioned greasy wool classified as 'finer than 25 mean microns' was 54 per cent, whereas the corresponding Australian proportion was 78 per cent. There is usually a difference of this order, but the Tasmanian average price is nevertheless usually a few cents above the Australian auction average. Tasmanian averages, with Australian equivalents in brackets, have been (in cents): 1972-73, 228.90 (183.77); 1973-74, 191.82 (181.16); 1974-75, 137.46 (126.99); 1975-76, 156.57 (143.25). This apparent contradiction is explained by taking into account a second factor, not included in the foregoing quality analysis, namely the yield of clean wool that can be obtained from greasy wool. In respect of this factor, Tasmanian wools tend to yield higher than Australian; both natural and artificial environmental factors operate to the advantage of the Tasmanian clip. Evidence of this peculiarity of Tasmanian wool is provided in the previous table which suggests that Tasmanian wool is freer from dust and vegetable matter than wool produced in other states.

Meat*Slaughtering*

The following table summarises slaughtering activity for recent years:

Stock Slaughtered (a) for Human Consumption: Summary
(*000)

Year	Cattle and calves	Sheep and lambs	Pigs	Year	Cattle and calves	Sheep and lambs	Pigs
1949-50 ..	58	508	51	1971-72 ..	185	1 475	165
1954-55 ..	75	643	79	1972-73 ..	261	1 278	152
1959-60 ..	145	1 166	115	1973-74 ..	259	825	116
1964-65 ..	174	987	135	1974-75 ..	262	980	101
1969-70 ..	178	1 297	160	1975-76 ..	348	1 069	94

(a) In all registered slaughtering establishments and on farms.

To fully record the level of meat production for human consumption, statistics should be obtained in respect of operations in abattoirs, other slaughtering establishments and factories; slaughtering on farms also needs to be taken into account.

The next table analyses the items 'Cattle and calves' and 'Sheep and lambs':

Stock Slaughtered (a) for Human Consumption
(*000)

Year	Cattle and calves				Sheep and lambs			Pigs
	Bulls, bullocks & steers	Cows and heifers	Calves	Total	Sheep	Lambs	Total	
1970-71	79	61	22	162	713	681	1 394	171
1971-72	96	69	19	185	813	662	1 475	165
1972-73	125	110	26	261	637	642	1 278	152
1973-74	126	104	30	259	336	490	825	116
1974-75	149	75	37	262	403	577	980	101
1975-76 (b)	164	119	65	348	455	614	1 069	94

(a) In all registered slaughtering establishments and on farms.

(b) In 1975-76 the on-farm components of total livestock slaughtered were: cattle and calves, 5 616; sheep and lambs, 65 833; pigs, 1 125.

Meat Production

Statistics of actual carcass weight rather than numbers of stock slaughtered provide a more precise measure of actual meat production and annual trends. The necessary weight data are collected from abattoirs, factories and licensed slaughterhouses (including 'country butchers'); in the case of livestock killed on farms, only the numbers are available and the resulting carcass weight has to be estimated. Statistics in terms of carcass weight cover the same field as the previous tables on slaughtering. The following table shows details of production from slaughtering:

Production of Meat
(*000 tonnes—Carcass Weight)

Year	Beef and veal			Mutton and lamb			Pigmeat (a)	Total meat
	Beef	Veal	Total	Mutton	Lamb	Total		
1970-71	29.5	0.4	29.9	14.8	11.3	26.1	8.5	64.5
1971-72	34.4	0.4	34.8	16.3	10.9	27.2	8.3	70.3
1972-73	46.9	0.5	47.5	12.2	10.3	22.5	7.4	77.4
1973-74	45.7	0.6	46.3	6.7	8.1	14.8	5.5	66.5
1974-75	47.6	0.7	48.3	8.0	9.5	17.5	4.9	70.7
1975-76	57.9	1.2	59.2	9.0	9.8	18.8	4.5	82.5

(a) Includes pork for manufacture into bacon and ham.

Export of Meat

The next table shows exports of edible meat from cattle, sheep and pigs by weight. Export weights cannot be directly compared with production weights since the former include boneless meat and meat which has had its fat content reduced, while the latter are in terms of carcass weight.

*Land Use and Agriculture***Exports of Meat, 1975-76
(Tonnes)**

Destination	Beef and veal	Lamb	Mutton	Pork	Offal (edible)	Bacon and ham
Interstate	1 194	582	52	222	37	76
Overseas	14 130	638	2 697	80	1 123	..
Total	15 324	1 220	2 749	301	1 160	76

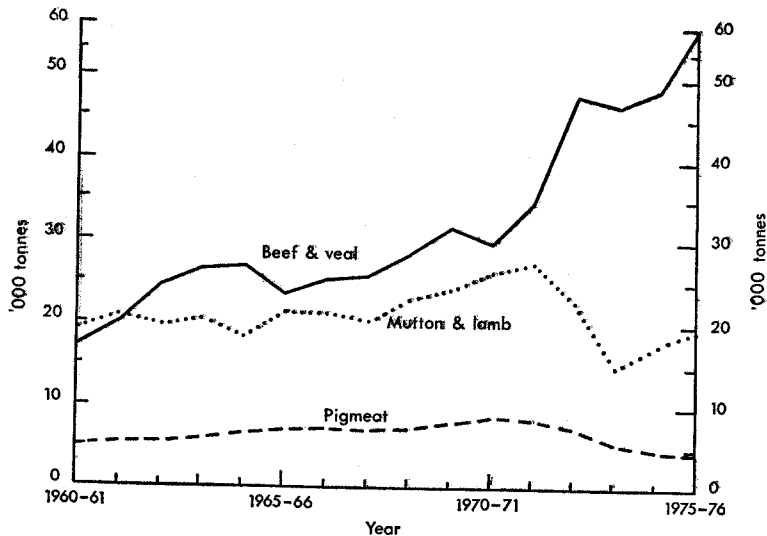
The importance of Tasmania's overseas meat trade can be judged from Australian Meat Board estimates of the percentage of Tasmanian production actually exported. The trends in recent years are shown by the following table:

Proportion of Tasmanian Meat Production Exported Overseas (a)
(Source: Australian Meat Board)
(Per Cent)

Type of meat	1970-71	1971-72	1972-73	1973-74	1974-75	1975-76
Beef and veal	32.2	44.0	44.2	47.0	37.7	43.6
Mutton	43.1	59.6	53.7	40.5	r 55.0	67.0
Lamb	6.6	6.0	8.4	1.7	r 7.4	6.1

(a) The estimated percentages are derived by converting actual export weights to a carcass weight equivalent, thus giving a basis for comparison with production figures.

Meat Production (Carcass Weight)

**Meat Export Works**

In 1975-76 there were eight licensed exporters in Tasmania. These were in Launceston (two), Camdale, Devonport, Hobart, Longford, Smithton and King Island.

Bacon and Ham

In the tables on meat production, the product from pig slaughtering has been referred to as 'pigmeat'. Approximately 48 per cent of Tasmania's pigmeat was converted in Tasmania to bacon and ham in 1975-76. Considerable quantities of pigmeat are also exported and used, in part, for making bacon and ham in other states. The next table summarises the production of bacon and ham since 1949-50:

Production of Bacon and Ham
(Tonnes)

Year	Bacon and ham			Year	Bacon and ham		
	Factory (a)	Farm	Total (b)		Factory (a)	Farm	Total (b)
1949-50 ..	963	44	1 007	1971-72 (c) ..	1 984	<i>n.a.</i>	1 984
1954-55 ..	1 008	36	1 044	1972-73 ..	1 902	<i>n.a.</i>	1 902
1959-60 ..	1 138	24	1 162	1973-74 ..	1 931	<i>n.a.</i>	1 931
1964-65 ..	1 177	13	1 190	1974-75 ..	2 169	<i>n.a.</i>	2 169
1969-70 ..	1 403	<i>n.a.</i>	1 403	1975-76 ..	2 356	<i>n.a.</i>	2 356

(a) From 1959-60 includes small quantities made in establishments not classified as factories.

(b) Excludes farm production from 1967-68.

(c) From 1970-71 all weights are on a bone-in basis; earlier figures include an element of unconverted bone-out weights.

Dairy Products

In 1975-76 Tasmania's production of milk was 435 million litres which was about 5.5 per cent lower than the level in 1974-75. The amount of milk used for cheese manufacture continued its upward trend with 30.6 per cent of all milk being used for that purpose.

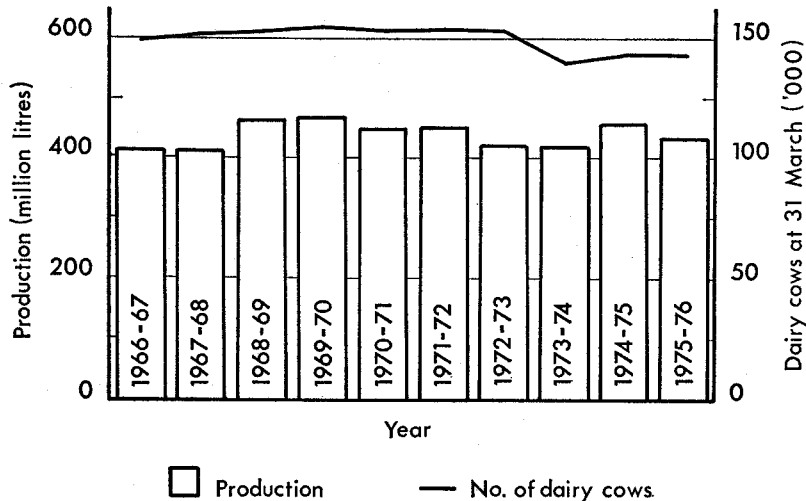
The following table summarises milk production and utilisation since 1964-65:

Milk Production and Milk Utilisation: Summary

Year	Quantity of milk used for—			Total milk production	Dairy cows at 31 March	Average annual production of milk per dairy cow (b)
	Factory butter	Factory cheese	Other purposes (a)			
	'000 litres	'000 litres	'000 litres	'000 litres	no.	litres
1964-65 ..	293 773	23 935	79 361	397 069	143 257	2 678
1969-70 ..	336 715	54 194	78 306	469 216	155 040	2 955
1972-73 ..	264 392	72 342	87 108	423 841	154 823	2 671
1973-74 ..	252 766	84 662	84 386	421 814	140 401	2 788
1974-75 ..	248 075	123 781	88 665	460 521	143 719	3 165
1975-76 ..	218 793	133 206	83 087	435 086	143 310	2 965

(a) Milk used for 'Other purposes' goes into the making of cream, ice cream, milk powder, concentrated milk, and other preserved milk products. It includes milk consumed as such and the milk equivalent of farm-made butter and cheese.

(b) Average annual yield is based on the estimated number of dairy cows, including house cows, which were in milk during any part of the year. (The mean of the number of dairy cows and house cows at 31 March in the year of production and in the preceding year is used for this purpose.) The figures should therefore be treated as an index rather than as an actual average quantity of milk produced per dairy cow.

Milk Production and Number of Dairy Cows*Milk Products*

The Australian dairy industry produces butter, cheese and skim milk powder in quantities considerably above domestic requirements but competition from other countries (in notoriously unstable overseas markets) has resulted in low overseas prices relative to prices on the Australian market. In order to maintain domestic prices at reasonable levels, the Commonwealth Dairy Produce Equalisation Committee Ltd administers voluntary equalisation pools for butter, cheese, skim milk powder and casein. In general terms the purpose of these marketing arrangements, which operate separately for each product, is to pool the returns from both domestic sales and overseas sales and to distribute from the pool to each individual factory at the same rate, irrespective of whether its product is sold at home or abroad. In effect, the process of price equalisation removes the incentive for individual manufacturers to cut prices on the domestic market; higher domestic returns are used to offset lower overseas prices.

The Federal Government introduced legislation for Stage I of changed marketing arrangements for the dairy industry in 1977. These arrangements were intended to operate from 1 July 1977. The changes follow a report from the Industries Assistance Commission and negotiation between Federal and state governments. The legislation provides for a system of levies which, in effect, make equalisation compulsory for all manufacturers of butter, cheese, skim milk powder, casein and whole milk powder. It also provides for a system of levies that can be used to preserve a price structure for milk used for liquid consumption in the event of a breakdown in orderly marketing. However, this provision will only be implemented if the need arises. Stage I of the new marketing arrangements will be administered by the Australian Dairy Corporation.

The Federal Government is also considering Stage II recommendations for a national entitlement scheme made by the Industries Assistance Commission with the aim of implementing changes by 1 July 1978. The objective of Stage II is to ensure that market signals are more effectively passed back to producers and processors in order to encourage production to be in line with current market conditions.

The Tasmanian Government passed the *Dairy Industry Act* in 1976. Under this Act a Dairy Industry Authority will be established to administer the Tasmanian dairy industry. As part of its function it will replace the Milk Board of Tasmania, which was responsible for the administration of the market milk (milk for liquid consumption) industry. The responsibility of the new Authority will cover all sectors of the Tasmanian dairy industry. Almost 90 per cent of dairy farmers in Tasmania supply milk or cream which is used solely for manufacturing purposes. The remaining 10 per cent of dairymen supply market milk under contract for direct human consumption.

The past tradition of farmers separating their milk into cream concentrate for delivery to the butter factory, with the residue, skim milk, being used to feed pigs, is now less common. In 1973 approximately 43 per cent of dairies registered with the Department of Agriculture supplied cream to factories but by April 1976 this had dropped to only 23 per cent. Cream suppliers generally have smaller herds and their farms carried only 10.8 per cent of the State's dairy cows in April 1976.

Most milk now collected by factories is still used to manufacture butter and cheese. When milk is used for buttermaking it is first separated into cream from which comes butter together with a small quantity of butter-milk powder; the residue skim milk is used for production of skim milk powder or casein. In cheese making, milk is first standardised and any residual cream is used to make butter. Whole milk powder and chocolate are two other products which account for the usage of a significant quantity of Tasmanian milk.

With the increased use of the protein component of milk the financial well-being of dairy farmers is now much more dependent on markets for skim milk powder, casein and cheese than in the past when butter was the main commodity.

In 1975-76 export values for skim milk powder fell to low levels. This fall in price was caused by a fall in world demand and a build-up of a large stockpile of skim milk powder in the European Economic Community. As a result some factories, particularly those committed to making skim milk powder, paid suppliers less than \$1 per kg for butterfat in 1975-76, compared with prices of \$1.54 per kg in the previous season. All factories paid substantially lower prices in 1975-76 and this, coupled with inflation, resulted in a large reduction in net farm income for dairy farmers.

In May 1976, agreement was reached between the Federal and state governments to underwrite skim milk powder covered by equalisation arrangements in 1975-76 at \$300 per tonne. The cost was to be shared between Federal and state governments on a two-for-one basis. An additional \$2 million was provided for the remainder of 1975-76 under the Dairy Adjustment Program for relocation diversification, farm amalgamation and for carry-on loans for dairy farmers experiencing difficulties. States were required to match the amounts the Federal Government contributes for carry-on loans.

Because of the poor outlook for dairy products on export markets in 1976-77, the Federal Government offered to continue underwriting skim milk powder at \$300 per tonne and to extend the underwriting to include casein at an equivalent butterfat rate. The cost was to be shared between the Federal and state governments on a two-for-one basis as in 1975-76. In addition, the Federal Government agreed to underwrite butter and cheese at \$900 and \$680 per tonne respectively for the six months ended December 1976. No assistance was given in respect of butter or cheese for 1975-76. Similar underwriting arrangements apply to the six months ending July 1977 at the following rates per tonne: skim milk powder,

\$330; butter, \$1 150; and cheese, \$820. Lower rates applied for skim milk powder in New South Wales and South Australia where state governments did not agree to contribute to the cost.

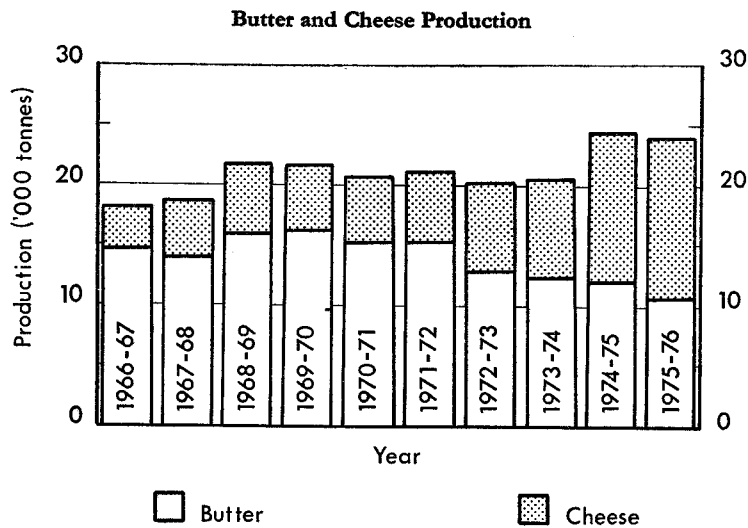
The Tasmanian Government provided additional assistance in 1976-77 with a grant of \$250 000 which was distributed to dairy farmers through dairy factories on the basis of butterfat deliveries in October. Special assistance was provided to dairy farmers on King Island with direct payments of 24c per kg of butterfat delivered in cream and 33c per kg of butterfat delivered in whole milk.

The following table shows details of factory production of butter and cheese for recent years:

Factory Production of Butter and Cheese
(Tonnes)

Year	Butter (a)	Cheese	Year	Butter (a)	Cheese
1968-69	16 017	5 820	1972-73	12 947	7 218
1969-70	16 343	5 407	1973-74	12 398	8 475
1970-71	15 273	5 556	1974-75	12 196	12 387
1971-72	15 318	5 923	1975-76	10 762	13 332

(a) Includes butter equivalent of butter oil.



Consumption of Butter

Over the past decade there has been a substantial decline in the annual Tasmanian per capita consumption of butter. The decline may be partly attributed to the greater use of margarine. However, in 1975-76 the State's average butter consumption of 8.7 kg per head of population was still well above the Australian figure of about 6.9 kg per person.

Disposal of Butter

Tasmania is a butter exporting state and the following table shows a recovery from the marked decline in exports in recent years. The quantity of butter exported overseas varies from year to year depending on seasonal and market conditions.

Butter (a): Production, Exports and Local Consumption
(Tonnes)

Year	Production (factory)	Net exports (b)	Local consump- tion (c)	Year	Production (factory)	Net exports (b)	Local consump- tion (c)
1966-67 ..	14 541	10 241	4 479	1971-72 ..	15 318	10 138	4 712
1967-68 ..	13 999	9 547	4 773	1972-73 ..	12 947	7 514	4 452
1968-69 ..	16 017	9 350	4 519	1973-74 ..	12 398	8 275	4 176
1969-70 ..	16 343	12 763	4 725	1974-75 ..	12 196	5 071	4 052
1970-71 ..	15 273	10 955	4 665	1975-76 ..	10 762	9 955	3 532

(a) Includes butter equivalent of butter oil.

(b) Net and gross are identical as there were no imports during the years shown. Includes overseas and interstate exports.

(c) Quantity of butter released for the Tasmanian market (as supplied by the Commonwealth Dairy Produce Equalisation Committee Ltd) less the butter content of major commodities exported.

Bee-farming

The next table, which summarises bee-keeping statistics from 1971-72, is restricted to details from apiarists with 40 or more hives:

Bee-farming

Year	Apiarists	Hives	Honey produced		Beeswax produced	
			Quantity	Average per productive hive	Quantity	Average per productive hive
	no.	no.	'000 kg	kg	'000 kg	kg
1971-72	58	9 632	365	45.4	5.8	0.73
1972-73	55	9 292	388	49.2	5.2	0.66
1973-74	67	11 323	455	46.9	6.4	0.66
1974-75	62	10 738	574	62.1	8.4	0.91
1975-76	63	10 932	626	70.1	11.7	1.31

Of the 63 apiarists with 40 or more hives in 1975-76, 24 with 100 or more hives contributed 89.8 per cent of the total honey produced.

Tasmania is both an exporter and importer of honey with exports generally having a higher unit value than imports. The Tasmanian market shows a preference for the clover type of honey rather than the stronger flavoured leatherwood. Tasmania produces a high quality product but producers in mainland states have significant cost advantages in packaging because of the quantities involved. Therefore, considerable quantities of honey are imported from other states, both for manufacturing and for retail outlets, while much of Tasmania's production, particularly leatherwood, but also clover, is exported.

A proportion of the larger commercial apiarists can be described as 'migratory' in the sense that they seasonally move their hives for access to leatherwood growing in the Western Sub-division and near the new Lake Gordon. Leatherwood, *Eucryphia lucida*, from which a distinctively flavoured honey is produced, is unique to Tasmania. The quantity of leatherwood honey produced varies considerably from year to year depending upon the amount of blossom and weather conditions. In 1975-76 it accounted for 58.8 per cent of total honey production compared with 46 per cent the previous year and 21 per cent in 1966-67. The following table gives details of Tasmanian exports and imports of honey:

Land Use and Agriculture

Production, Imports and Exports of Honey
(*000 kg)

Year	Production (a)	Imports	Exports
1971-72	365	83	301
1972-73	388	105	220
1973-74	455	123	218
1974-75	574	120	244
1975-76	626	133	370

(a) By apiarists with 40 or more hives.

Poultry Farming

Household Production: Many householders have small flocks of up to 20 birds (i.e. below the legal minimum requiring registration and payment of fees) and surveys suggest that these 'back-yard' flocks may produce up to 50 per cent of all eggs. However, no accurate statistics are available for this component and it is excluded from the tables that follow.

Commercial Producers: Producers with small flocks over the legal minimum size (more than 20 birds) may nevertheless keep them mainly for their own use rather than for the sale of eggs. Accordingly, it was also decided to exclude from the statistics producers with less than 100 birds (of all types); the Bureau's 1966-67 census of the poultry industry established that producers with between 20 and 100 birds numbered 213 but owned only three per cent of the total number of hens and laying pullets in commercial flocks in Tasmania.

In the poultry industry, as in many other primary industries, there has been a trend to fewer but larger establishments in recent years. In 1967 there were 196 poultry farms with a total of 189 600 hens and laying pullets; by 1976 the number of farms had decreased to 77 with 200 800 hens and laying pullets and 461 200 other poultry. A size classification of the 77 farms in 1976 shows that 24 farms (only 31 per cent of farm numbers) possessed 85 per cent of the laying stock. Forty-three per cent of the poultry farms had less than 500 laying birds each.

Poultry Numbers and Egg Production, 1975-76
Commercial Producers Only (a)

Statistical division	Number of holdings with poultry	Poultry numbers at end of year			Eggs produced during year (b)
		Hens and laying pullets (c)	Other fowls	Ducks and drakes, turkeys and geese	
Hobart	no. 15	'000 36.9	'000 8.1	'000 ..	'000 doz. 656.9
Southern	22	74.9	360.8	..	1 077.1
Northern	24	69.1	75.2	n.p.	1 427.4
Mersey-Lyell	16	19.9	15.9	n.p.	345.6
Total Tasmania ..	77	200.8	460.0	1.2	3 507.1

(a) Relates to holdings that possessed 100 or more birds of all types at 30 June 1976.

(b) Hen and pullet eggs only.

(c) Not comparable with Egg Marketing Board series due to different definitions.

Poultry Slaughtering

Poultry slaughtering statistics are collected from all known establishments slaughtering 100 or more birds (of all types) annually.

Number and Weight of Poultry Slaughtered (a)

Year	Number (^{'000})	Live weight		Dressed weight (b)	
		Total (^{'000} kg)	Average per bird (kg)	Total (^{'000} kg)	Average per bird (kg)
CHICKENS (c)					
1972-73	1 558	2 521	1.6	1 850	1.2
1973-74	1 756	2 832	1.6	1 961	1.1
1974-75	1 895	3 345	1.8	2 340	1.2
1975-76	1 911	3 257	1.7	2 329	1.2
OTHER FOWLS (d)					
1972-73	84	186	2.2	124	1.5
1973-74	111	246	2.2	160	1.4
1974-75	116	245	2.1	151	1.3
1975-76	159	368	2.3	226	1.4
DUCKS AND DRAKES, TURKEYS AND GESE					
1972-73	30	94	3.1	71	2.4
1973-74	12	45	3.6	34	2.7
1974-75	5	17	3.2	11	2.2
1975-76	4	13	3.4	9	2.4

(a) Includes only establishments slaughtering 100 or more birds of all kinds.

(b) Includes weight of whole birds, pieces and giblets.

(c) Includes broilers, fryers and roasters.

(d) Hens, roosters, etc.

Size Structure of Slaughtering Industry

The trend in poultry slaughtering in recent years has been towards larger establishments. In 1965-66 there were 95 establishments slaughtering 100 or more birds (of all types). Nine establishments killing more than 5 000 birds each a year slaughtered a total of 606 000 birds. By 1975-76, however, there were only 22 establishments killing 100 or more birds, five of which slaughtered over 20 000 birds each and a total of 2 025 000 birds. The dressed carcass weight of birds produced in those establishments slaughtering over 20 000 birds was 2 494 000 kg; for all establishments in the following table, the total was 2 566 000 kg. In 1965-66 the over 20 000 birds size group accounted for 83.3 per cent of the number of birds slaughtered and in 1975-76, 97.6 per cent.

The following table classifies poultry slaughtering establishments according to the number of birds slaughtered for establishments slaughtering 100 or more birds of all types per year:

Number of Poultry Slaughtered According to Size of Establishment, 1975-76

Size of establishment (number of birds slaughtered) (a)	Number of establish- ments	Number of birds slaughtered			Total birds slaughtered	
		Chickens (b)	Other fowls (c)	Ducks and drakes, turkeys and geese	Number	Proportion of total
100- 500	8	'000 2	'000 ..	'000 ..	'000 2	per cent 0.1
501- 5 000	7	6	10	..	16	0.8
5 001-20 000	2	..	30	..	30	1.5
Over 20 000	5	1 904	118	4	2 025	97.6
Total	22	1 911	159	4	2 074	100.0

(a) Classified according to number of birds of all kinds slaughtered.

(b) Includes broilers, fryers and roasters.

(c) Hens, roosters, etc.

RURAL POPULATION AND EMPLOYMENT

Employment on Agricultural Holdings

The following table gives details of employment on agricultural holdings during the week ended 26 March 1976:

Agricultural Employment (a)

Hours worked during the week ended 26 March 1976	Males	Females
15 to 39 hours	3 393	1 694
40 or more hours	6 262	1 709

(a) On the 8 214 holdings covered by the 1975-76 agricultural census.

Due to changes to the definition of a rural holding (explained earlier in this chapter) and to the question asked of farmers on the 1975-76 Agricultural Census form concerning the nature of employment on rural holdings, the above employment details cannot be directly compared with figures published in earlier editions of the *Year Book*.

TECHNICAL ASPECTS OF AGRICULTURAL INDUSTRY

Area of Land Irrigated

Introduction

In 1975-76 there were only 22 305 hectares of land irrigated in Tasmania. Owing to the generally reliable rainfall in the State, scarcity of water is not such a problem as it is in the other Australian states, although quite a number of streams are not permanently flowing and drought conditions in some areas of Tasmania are not unknown.

Area Irrigated

A total of 1 550 farms reported the use of irrigation in 1975-76, the same number as in the previous year. Details of the area of crops and pastures irrigated in Tasmania in recent years are shown in the following table:

Area of Crops and Pasture Irrigated
(Hectares)

Year	Crop (a)						Pasture	Total
	Hops	Green feed	Fruit	Potatoes	Other vegetables	Other crops		
1964-65 ..	628	1 045	2 410	909	2 451	704	5 744	13 890
1969-70 ..	583	2 065	3 101	2 193	4 771	1 250	10 291	24 252
1971-72 ..	(b)	(b)	2 993	2 253	2 792	1 868	9 951	19 857
1972-73 ..	(b)	(b)	3 301	2 313	4 841	2 641	14 551	27 647
1973-74 ..	(b)	(b)	3 014	2 167	3 702	1 704	12 789	23 376
1974-75 ..	(b)	(b)	2 605	3 105	4 271	1 582	12 123	23 686
1975-76 ..	(b)	(b)	2 158	2 720	4 627	1 729	11 071	22 305

(a) Excludes pasture crops which are included with 'Pasture'.

(b) Not available separately. Included with 'Other crops'.

Irrigation Methods and Sources of Water

The main method of irrigation is by 'spray' which accounted for 73 per cent of the total area irrigated in 1975-76. The following table gives details of the areas of crops, etc. irrigated and the methods of irrigation used:

Methods of Irrigation, 1975-76
(Hectares)

Crop or pasture irrigated	Method				Total
	Spray	Furrows	Flood	Other and multiple methods (a)	
Crop—					
Potatoes	2 700	2	..	18	2 720
Other vegetables	4 597	9	..	21	4 627
Fruit	1 814	14	87	243	2 158
Other (b)	1 432	83	181	33	1 729
Pasture (incl. lucerne)	5 838	250	4 850	133	11 071
Total	16 383	358	5 118	448	22 305

(a) Includes 182 hectares of fruit watered by the 'trickle' method of irrigation.

(b) Excludes pastures harvested.

Potatoes respond particularly well to irrigation. For the 1975-76 season the State average potato yield from irrigated areas was 32.3 tonnes per hectare while for non-irrigated potato crops the yield was only 11.2 tonnes per hectare. The next table highlights the importance of irrigation in the potato growing industry:

Potatoes Irrigated

Particulars	1965-66	1972-73	1973-74	1974-75	1975-76
Total area of potatoes planted (hectares)	4 853	3 330	3 127	4 143	3 354
Area irrigated—					
Total	1 706	2 313	2 166	3 105	2 720
As proportion of area planted (per cent)	35.2	69.5	69.3	74.9	81.1

Irrigation Schemes*Cressy-Longford Irrigation Scheme*

The State's first major irrigation system was officially opened in 1974. Situated some 30 km south of Launceston, between Cressy and Longford, the Irrigation District covers about 9 000 ha of some of the oldest and most intensively farmed areas in the State.

The source of supply is the tailrace of the Poatina Power Station from which 12 000 megalitres may be diverted annually for irrigation. Water is supplied under gravity to each farm in the constituted Irrigation District through an earthen channel system some 85 km in length. The scheme is administered and operated by the Rivers and Water Supply Commission.

Some 4 500 ha can be watered by gravity from the channel system and are suitable for irrigation by flood, furrow or sprinkler methods. In addition, there are about 2 000 ha above the channel system which could be conveniently irrigated by pumping. A further 2 500 ha outside the boundary of the Irrigation District could be supplied either by pumping or gravity. There are 64 separate holdings within the constituted Irrigation District but at least another 30 holdings outside the District could be supplied from the scheme. Water from the scheme can also be discharged into the Liffey River below Bracknell and by this means at least another 20 riparian holdings within the Liffey River Augmented Flow District can be supplied.

Each piece of land within the Irrigation District is given an 'Irrigation Right' which is an annual entitlement to a certain quantity of water. The total water allocation as Irrigation Rights within the Irrigation District in 1977 was approximately 6 300 megalitres or 97 megalitres per holding. The average size of holdings was 140 hectares. Water charges within the Irrigation District for the 1976-77 season were: \$5 per megalitre for Irrigation Rights plus \$3 per megalitre for each megalitre of water used. The charge to irrigators outside the Irrigation District was \$10 per megalitre. The Hydro-Electric Commission charges the scheme \$1.30 per megalitre of water used by the irrigators.

Irrigation water used during the 1976-77 season amounted to 2 169 megalitres. The total area irrigated was 1 429 hectares, the main crops irrigated being: pasture, 872 ha; green peas, 260 ha; oats, 84 ha; barley, 65 ha; and oil poppies, 29 ha. Under full development 3 000-4 000 hectares could be irrigated annually.

Capital cost of the scheme to the end of June 1976 was approximately \$1 179 000 of which \$750 000 was contributed by the Federal Government.

Togari Water Supply

This scheme was originally administered by the Tasmanian Closer Settlement Board but authority to administer it was vested in the Rivers and Water Supply Commission in May 1974. It is designed purely as a stock and dairy watering system for 44 dairy properties at Togari in the Circular Head Municipality. Capital cost of the scheme to 30 June 1976 amounted to \$33 000.

Artificial Breeding

In Tasmania most artificial breeding activities are undertaken by the Artificial Breeding Board which operates a Semen Production Centre at Hadspen Park and seven artificial insemination centres throughout the State. Some artificial insemination services are provided by private organizations. Over 75 per cent of inseminations in Tasmania are carried out with semen produced at Hadspen Park.

Because artificial breeding allows extensive use of superior bulls it has been used as an effective tool for herd improvement. Since 1964 the Artificial Breeding Board of Tasmania has carried out dairy bull proving programs in which genetically superior bulls are selected on the performance of their female progeny in test mated herds and are then used extensively over large numbers of the State's dairy cows. It has been estimated that these programs have achieved a 1 per cent annual genetic gain in the State dairy herd. Owing to different management practices, artificial breeding has not been used so extensively in beef herds.

The following table gives details of Artificial Breeding Board activities in recent years:

Artificial Breeding: Services and Inseminations
(Source: Artificial Breeding Board)

Year	Cows served (a)	Total Inseminations	Non-return rate for commercial service (b) (per cent)
1964-65	23 884	36 847	62.5
1969-70	49 818	70 350	70.2
1971-72	55 505	81 581	66.1
1972-73	59 215	81 760	70.7
1973-74	57 751	69 728	72.6
1974-75	52 058	56 763	74.5
1975-76	45 000	59 400	n.a.

(a) Includes cows which have undergone infertility service, however numbers are negligible from 1968-69.

(b) Percentage of cows not returning for further service within 90-120 days following first service.

Artificial Fertilisers

Types of Artificial Fertiliser

The basic types of artificial fertiliser employed are phosphatic (e.g. superphosphate), nitrogenous (e.g. sulphate of ammonia) and potassic (e.g. muriate of potash), their essential chemical contribution to plant nutrition being phosphoric oxide (P_2O_5), nitrogen (N) and potassium oxide (K_2O). Superphosphate, either 'straight' or with additives, is most widely used in Tasmania, the additives consisting of trace elements such as cobalt, molybdenum, copper, boron, zinc, etc. In addition to the basic fertiliser types, various combinations are also used. Due to the numerous fertiliser combinations on the market it has not been possible to obtain any detailed analysis of the types applied for various purposes.

Usage

In 1975-76 the sharp drop in artificial fertiliser usage from the record level of 1973-74 continued, the quantity used being the smallest since 1952-53. The removal of the government subsidy on superphosphate in December 1974, a substantial increase in its price and a need to reduce costs because of low prices for many farm products, contributed to this decline. The decline has been particularly marked with respect to fertilisation of pastures.

Changes in government policy on subsidies for the use of superphosphate have caused considerable interest in the extent of the concentration of usage. The following table shows the distribution of usage, according to quantity used on holdings, of artificial fertilisers, excluding straight nitrogenous types (1 851 tonnes in 1975-76 out of a total of 65 509 tonnes of artificial fertiliser used) and including 'other types and mixtures' (17 648 tonnes) which include a sizeable proportion of

superphosphate. The table shows that holdings using over 50 tonnes accounted for 32.7 per cent of the quantity used in 1975-76 but represented only 4.6 per cent of the total number of holdings that used artificial fertiliser (other than straight nitrogenous types).

Rural Holdings Classified According to the Quantity of Artificial Fertiliser (Other than Straight Nitrogenous Types) Used, 1975-76

Particulars	Size category (tonnes used)			
	Up to 10	Over 10 and up to 50	Over 50	Total
Number of holdings	2 677	1 399	197	4 273
Percentage (a)	62.7	32.7	4.6	100.0
Quantity used (tonnes)	12 082	30 793	20 783	(b) 63 658
Percentage (c)	19.0	48.3	32.7	100.0

(a) Of total holdings using fertilisers.

(b) Comprises 46 010 tonnes of superphosphate (including superphosphate with trace elements) and 17 648 tonnes of other types and mixtures.

(c) Of total fertiliser used.

The following table shows the amount of artificial fertiliser used, by the type of crop, for recent years:

Artificial Fertilisers Used

Particulars	Unit	1965-66	1972-73	1973-74	1974-75	1975-76
Vegetables (a)—						
Area fertilised	hectares	12 245	9 087	8 780	10 054	9 911
Fertiliser used—Total	tonnes	9 763	7 856	7 834	9 719	9 157
Per hectare	tonnes	0.80	0.86	0.89	0.97	0.92
Fruit—						
Area fertilised	hectares	8 502	5 306	4 577	3 346	3 017
Fertiliser used—Total	tonnes	7 803	4 919	4 505	3 073	2 737
Per hectare	tonnes	0.92	0.93	0.98	0.92	0.91
Other crops (b)—						
Area fertilised	hectares	74 518	47 916	42 158	35 521	32 213
Fertiliser used—Total	tonnes	19 716	12 460	11 678	9 679	9 229
Per hectare	tonnes	0.26	0.26	0.28	0.27	0.29
Pastures (b)—						
Area fertilised	hectares	597 068	602 991	724 104	510 594	244 284
Fertiliser used—Total	tonnes	129 273	131 323	156 293	102 390	44 386
Per hectare	tonnes	0.22	0.22	0.22	0.20	0.18
Total usage—						
Area fertilised	hectares	692 333	665 299	779 619	559 515	289 425
Fertiliser used	tonnes	166 555	156 558	180 310	124 861	65 509

(a) Vegetables for human consumption only.

(b) 'Pastures' includes lucerne from 1971-72 but lucerne is included in 'Other crops' for earlier years.

ECONOMIC STATISTICS: AGRICULTURE

It is now possible to produce economic statistics for agriculture on a compatible basis with those produced for the mining, manufacturing, retailing and other sectors of the economy (see the section 'Economic Censuses and Surveys' in

Chapter 18). This results from basing the Agricultural Finance Survey (a recently introduced economic sample survey) on the new register of agricultural businesses which was established in 1974-75.

The population identified as the basic framework for the 1974-75 and subsequent Agricultural Finance Surveys consisted of all agricultural *enterprises*, i.e. all enterprises classified to an industry within sub-division 01, Agriculture, of the Australian Standard Industrial Classification (ASIC). This contrasts with the framework used for surveys prior to 1974-75 when the survey population consisted of all agricultural *holdings* (see definition earlier in this Chapter).

The coverage of the 1974-75 and subsequent surveys consists of a randomly selected sample of enterprises which fall within the scope of the survey. In earlier surveys financial data relating to agricultural activity only were collected but, as from 1974-75, data connected with any non-agricultural activity of an agricultural enterprise (such as agricultural services, retailing, transport, etc.) were collected in addition to data about its agricultural activities. Any enterprise which was predominantly engaged in non-agricultural activity was out of scope of the survey.

The main items of interest from the survey for the years 1973-74 to 1975-76 are contained in the following table. Further details and an explanation of the terms used (in addition to those in Chapter 18 of this publication) can be found in the Canberra Office of the Bureau publication 'Agricultural Sector - Part IV, Financial Statistics' (Ref. No. 7507.0).

Financial Statistics, Agricultural Enterprises (a)

(\$ million)

Item (b)	1973-74 (c)	1974-75	1975-76 p
Sales from crops	28.3	33.0	27.8
Sales from livestock	67.5	44.4	36.6
Sales from livestock products	51.9	50.5	52.5
Turnover	142.4	136.2	119.6
Purchases and selected expenses	69.8	71.3	63.2
Value added	74.4	67.9	58.0
Adjusted value added	63.4	59.1	48.9
Gross operating surplus	47.2	40.2	28.1
Cash operating surplus	37.5	30.3	16.3
Total net capital expenditure	27.2	16.8	17.5
Gross indebtedness	91.8	105.8	108.0

(a) These figures are estimates based on a sample and are therefore subject to possible inaccuracies. 'Standard errors' indicating the reliability of each item are included in the Canberra Office of the Bureau publication 'Agricultural Sector, Part IV, Financial Statistics' (Ref. No. 7507.0).

(b) See Chapter 18 for definitions.

(c) Not strictly comparable with later years.

The only other economic statistics relating to the agricultural industry are the 'Value of Production' series which have now been substantially reduced in scope following the introduction of the annual surveys. There are basic differences in the two series of statistics and an explanation of these differences and definitions of the terms used for 'Value of Production' purposes are contained in the Appendix to Chapter 8 of the 1977 and earlier issues of the *Year Book*.

TASMANIAN DEPARTMENT OF AGRICULTURE**Aims and Structure**

The Department of Agriculture was preceded by a series of agricultural organisations, the first of which was 'The Department', established by an Act of Parliament in 1875 to control stock diseases. This was followed in 1880 by the Agricultural Bureau of Tasmania, a non-government group with very narrow aims, and in 1891 by a 'Council of Agriculture' consisting of 11 members nominated by the Governor-in-Council. The Council continued to operate during the first few years of the 'Department of Agriculture and Stock', a Government Department established in 1898. Both the Council and Department of Agriculture and Stock were later abolished and replaced with a Department of Agriculture headed by a Director in 1911. In 1927, on the recommendation of the Commonwealth Development and Migration Commission, the Department was completely re-organised and enlarged with a new and wider aim: 'to spread scientific knowledge among primary producers'.

The functions of the modern Department are: (i) active research and investigation into agricultural problems; (ii) wide dissemination of technical information and other advice to farmers; and (iii) regulatory and administrative action as required under various State Acts.

To carry out the functions associated with agriculture, the Department, headed by the Director, is divided into eight divisions (Crop Production, Animal Production, Extension, Animal Health, Administration, Plant Pathology, Entomology and Fisheries) and one Section (Agricultural Economics). The Department has its own research stations and laboratories.

At present there are five research stations and four laboratories. Research programs initiated by different divisions are conducted at these research centres. Three research stations and two laboratories are involved in agronomical research, two research stations and one laboratory are concerned with livestock studies, two research stations and one laboratory are associated with horticultural research, one laboratory is responsible for dairy research and bacteriological investigations, another laboratory deals with entomological and plant pathological investigations, while the marine laboratory is engaged on stock assessment, fisheries development and pollution and marine chemistry.

Total expenditure by the Department of Agriculture (including the Fisheries Division) from Consolidated Revenue in 1975-76 was \$8.399m compared to \$7.587m in 1974-75.

Chapter 8

FORESTRY, MINING AND FISHERIES

FORESTRY

Introduction

When the first explorers ventured beyond the main coastal areas of mainland Australia, they encountered arid zones and desert nearly devoid of timber. By contrast, in Tasmania dense and continuous forest was the main barrier to early penetration, although the early settlements were sited in open savanna-like country which originated from firing by the Tasmanian natives. No other Australian state has similar widespread conditions favourable for forest growth: a cool temperate climate; an assured annual rainfall varying from 500 to 3 800 millimetres according to locality, and showing relatively small seasonal variation.

In the 170 years since the first settlement, land clearing, timber exploitation and fires have left their mark; however the Forestry Commission estimates that the current total forest area (including some forest of little or no commercial value) is 2 802 000 hectares (i.e. about 40 per cent of the State's total area of 68 300 sq km).

Forest Area

Of all the Australian states, Tasmania is unique in its concentration of forest resources. Native forests of potentially commercial quality cover 2 124 000 hectares (or 31 per cent of the State's area). Of this area 909 000 hectares are privately owned and 1 215 000 hectares are Crown owned forest.

The need for permanent reservation of land for timber production was first officially recognised by the *Waste Lands Act* 1881 and the first forest reservation occurred in the late 1880's when some 21 270 hectares were gazetted. Reservations had reached 403 660 hectares by 1910 and 651 890 hectares at the time of World War II. An on-going program of dedication of suitable lands as State forests in perpetuity is a firm undertaking of the Commission's policy. The gazetted area at 30 June 1976 was 1 411 000 hectares towards a target of 1 618 000 hectares of permanent State-owned forests managed for the benefit, both material and environmental, of future generations. In addition to the State forests there are 'timber reserves' (land reserved for the supply of timber, including fuel); at 30 June 1976 the area of timber reserves was 129 000 hectares.

The State forests are located, in the main, in five distinct regions: (i) far north-west about the axis of the Arthur River; (ii) north-eastern highlands; (iii) north and north-west of the Great Lake; (iv) from the south coast, north to Lake King William; and (v) the east coast area.

Classification of State Forests and Timber Reserves

A classification of State forests, timber reserves and land acquired for forestry purposes is set out below:

Classification of State Forests and Timber Reserves at 30 June 1976
(000 Hectares)

Forest type	Area
Eucalypt forest with a mature or potential mature height over 41 m	356
Eucalypt forest with a mature or potential mature height of 15 m to 41 m	670
Temperate rainforest (<i>N. cunninghamii</i>) and associated species	165
Plantations (mainly <i>P. radiata</i>)	27
Total forest area	1 219
Non-productive forests and other land included for protection purposes	321
Total	(a) 1 540

(a) Comprised: State forest, 1 411 000 hectares (gazetted State forest only); timber reserves, 129 000 hectares.

Timber Concession and Reserve Areas

The establishment in Tasmania of various industries using forest resources has given rise to the need for some guarantee of assured timber supplies to those industries. Therefore certain concessions and cutting rights on Crown lands have been awarded to companies relying on forest products as their raw materials. The map on the following page shows the location of concession and reserve areas in Tasmania. Concession areas are those areas where a company is at present allowed to operate while reserve areas are set aside for future use. Providing that the company meets certain stipulated conditions, permission to remove timber from the reserve area will be granted by the Forestry Commission. The total area of Crown land under pulpwood concessions and exclusive forest permits at 30 June 1976 was 1 977 000 hectares.

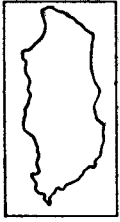
Plantations

The scarcity of native softwoods is being met, in part, by the creation of exotic plantations, the principal species grown being *Pinus radiata*, but at 30 June 1976 the softwoods plantations (39 000 hectares) accounted for only 1.4 per cent of the State's total forested area. The Forestry Commission had established almost 27 000 hectares of softwood plantations in Tasmania by 30 June 1976.

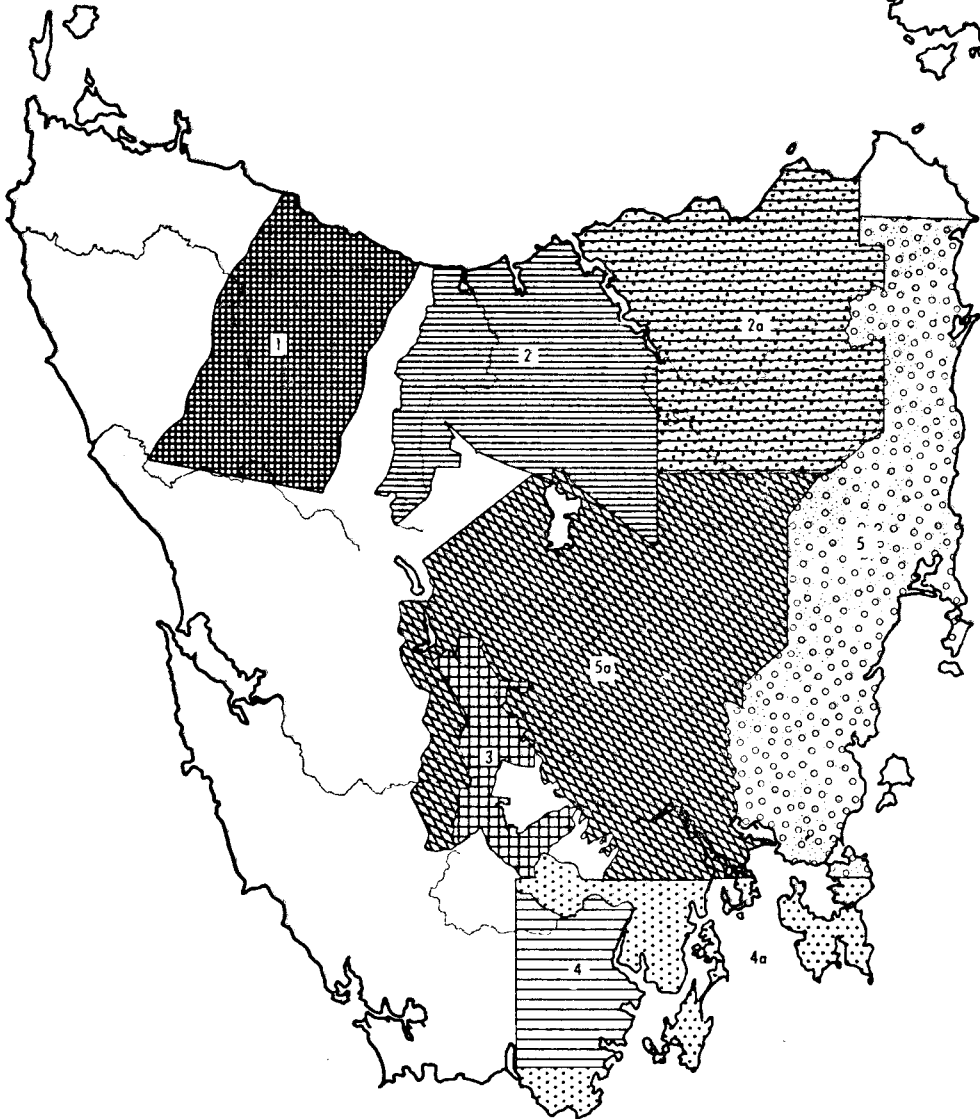
The following table shows the area of softwood and hardwood plantations established by the Forestry Commission (but excludes privately owned areas):

Area of Forestry Commission Plantations at 30 June
(Hectares)

District	1975			1976		
	Softwood	Hardwood	Total	Softwood	Hardwood	Total
Smithton .. .. .	..	9	9	..	9	9
Burnie	2 580	3	2 583	2 650	3	2 653
Devonport	4 337	333	4 670	4 866	333	5 199
Queenstown	1 275	..	1 275	1 355	..	1 355
Launceston	692	1	693	727	1	728
Scottsdale	6 967	2	6 969	7 400	2	7 402
Fingal	9 034	2	9 036	9 772	2	9 774
Triabunna .. .. .	..	90	90	..	92	92
Geeveston	86	16	102	86	16	102
Total	24 971	456	25 427	26 856	458	27 314



TIMBER CONCESSION AREAS



A.P.M.: (1) Burnie Concession Area; (2) Wesley Vale Concession Area; (2a) Wesley Vale Reserve.

A.N.M.: (3) Concession Area.

A.P.M.: (4) Concession Area; (4a) Reserve.

T.P.F.H.: (5) Concession Area; (5a) Reserve.

In May 1974, following the calling of tenders for cutting rights in *Pinus radiata* plantations in the north-east of Tasmania, a substantial sale of sawlogs was made and resulted in the establishment of a milling complex near Scottsdale. The annual volume of timber to be harvested is 50 000 m³ obtained by clear felling at a rotation age of 35 years and a further 12 000 m³ from first thinnings. Harvesting commenced in early 1976 and will extend over 15 years.

Tasmanian Forest Types

The better quality forests largely occur where the annual rainfall exceeds 760 mm, but soil quality and the frequency of past fires also influence distribution. This productive native forest estate consists of four main vegetation types, dry sclerophyll, open, wet sclerophyll and temperate rain forests. The rain forest is principally located in the western half and to a lesser extent in the north-east highlands; the other three types (eucalypt forest) predominate elsewhere. The rainforest is characterised by the dominance of *Nothofagus cunninghamii* (myrtle), *Atherosperma moschatum* (sassafras), *Eucryphia lucida* (leatherwood) and other trees which appear on poorer soils. *Acacia melanoxylon* (blackwood) grows where rain forest has been disturbed in the past; principally where fires have occurred.

Eucalypt forests of good quality are not common on soils of reasonable depth and fertility where the annual rainfall is below 760 mm. Where the rainfall is above 1 130 mm, rain forest species appear in the understorey but are excluded should fires occur, say, every 40 to 50 years. With rainfall above 1 520 mm rainforests can exclude eucalypts. However, even with rainfall well above 1 520 mm a combination of poor soils and frequent burning produces areas of button grass and heathy plains.

Tasmanian forests are cut almost exclusively for hardwood (eucalypts), the slow growing native softwoods never having been very plentiful. The principal softwood species which have been utilised are *Athrotaxis selaginoides* (king billy pine), *Dacrydium franklinii* (huon pine) and *Phyllocladus aspleniifolius* (celery-top pine).

Hardwoods: The most valuable eucalypts are those which belong to the so-called ash group—*E. obliqua* (stringy-bark), *E. delegatensis* (gum-top stringy-bark or alpine ash) and *E. regnans* (swamp gum or mountain ash). In the south and south-east *E. globulus* (Tasmanian blue gum) occurs in high quality forests. In areas where the annual rainfall is below 760 mm, the more important eucalypts are *E. amygdalina* (black peppermint), *E. ovata* (swamp or black gum), *E. viminalis* (white gum), *E. obliqua* (stringy-bark) and *E. linearis* (white peppermint).

Tasmania offers 11 tree types suitable for chipping, of which 10 are eucalypts. The eleventh is the myrtle (*Nothofagus cunninghamii*), a rainforest hardwood available in the north-west of the island. The eucalypts can be graded into:

- | | |
|-------------------------------------|---|
| (i) First quality (four species)— | <i>E. obliqua</i> (stringy-bark) (a)
(b)
<i>E. delegatensis</i> (gum-top stringy-bark) (a) (b)
<i>E. regnans</i> (swamp gum) (b)
<i>E. sieberi</i> (ironbark) |
| (ii) Second quality (three 'gums')— | <i>E. viminalis</i> (white gum) (a) (b)
<i>E. globulus</i> (blue gum) (a)
<i>E. ovata</i> (swamp or black gum) (b) |

- (iii) Third quality (three 'peppermints')—*E. amygdalina* (black peppermint) (*a*) (*b*)
E. linearis (white peppermint)
E. tasmanica (silver peppermint)

Two species of eucalypt—*E. delegatensis* and *E. obliqua* account for over 60 per cent of all eucalypt logs cut for woodchipping. The east coast offers all 10 varieties of which the five marked (*a*) are the common ones. The north coast offers, in useful quantity, only the six varieties marked (*b*).

Softwoods: Although Tasmania's native forests produce some very valuable softwood timber, these are very slow growing and in short supply. For this and other reasons, attention has been given to building up another section of the total forest estate—namely, plantations of exotic species, particularly *Pinus radiata*. At mid-1976 there were almost 27 000 hectares of State owned pine plantations with another 12 000 hectares on private land.

Forest Utilisation

Introduction

An extensive sawmilling industry has been a major and traditional part of the Tasmanian scene since the mid-19th century—an industry solely reliant on native forests for its raw material. For a number of years, usage of logs for sawing, peeling and slicing remained at over 1 000 000 cubic metres per year but declined to 985 000 m³ in 1975-76 when 373 000 m³ of sawn, peeled or sliced timber was produced.

However, typical native forests produce much wood not suitable for sawmilling and in 1937 a start was made on the use of this previously wasted resource for the manufacture of paper at Burnie. Since that time, the use of pulpwood has expanded, particularly in the present decade, producing pulp paper, building panelboards and raw woodchips. In 1941 the only newsprint mill in Australia was established at Boyer on the Derwent; more recently, in 1962, a pulp mill began operations at Port Huon in the south. A further pulp and paper mill commenced production during 1970 at Wesley Vale near Devonport. Further utilisation of forestry products has been introduced by factories producing plywood, hardboard, particle board, woodchips (for export), etc.

Establishment of the woodchip industry and the expansion of other timber-using industries has resulted in greatly increased annual timber requirements necessitating careful utilisation of existing forest resources and the development of viable reforestation schemes.

The problem of possible overtaxing of existing resources has been met partly by multiple use which, in effect, means the same logs supply the raw material for a number of purposes. Pulpwood is often obtained as a by-product from mill-logging operations while waste from sawmilling is used for the manufacture of woodchips, pulp and hardboard. During 1969-70, the year preceding the first export of woodchips, approximately 25 per cent only of sawmill waste was chipped for use in woodpulp and wallboard manufacture. As a direct consequence of the woodchip export trade the proportion was approximately 63 per cent for 1975-76. Thinnings from Forestry Commission *Pinus radiata* plantations are used at Wesley Vale in particle board manufacture and for making ground-woodpulp, used in paper manufacture.

Regeneration is carried out by the Forestry Commission and by the companies themselves. On Crown land reforestation is mandatory, the work in some areas being done by the companies and in other areas by the Forestry Commission. Industries utilising privately owned forest resources have established incentive schemes to encourage reforestation.

Total Log Usage

The next table shows total log usage by the sawmilling, paper making, chipping and allied industries:

Hardwood and Softwood Log Usage
(*000 m³)

Year	Sawmilling and plywood milling	Chipping, grinding and flaking	Total
1970-71	1 054.80	(a) 771.50	(a) 1 826.30
1971-72	1 081.09	1 171.37	2 252.46
1972-73	1 096.99	2 133.65	3 230.64
1973-74	1 073.73	2 961.66	4 035.39
1974-75	1 071.27	2 866.34	3 937.61
1975-76	984.54	2 396.09	3 380.63

(a) Production of woodchips for export commenced in February 1971.

Timber Using Industries

Normally the Bureau does not publish information relating to any single enterprise or establishment but only publishes statistical aggregates where these do not directly or indirectly reveal the operations of any single informant. However, a description of some of the State's major timber using companies is obviously desirable; therefore, the Forestry Commission has supplied the details given below.

Paper, Hardboard and Particle Board

Associated Pulp and Paper Mills Ltd and subsidiaries manufacture paper and hardboard at Burnie and particle board and paper at Wesley Vale. The Company owns 101 172 hectares of forested land and holds cutting rights over Crown land for 24 kilometres on each side of the Emu Bay railway line from the north coast to the Pieman River.

In 1970 the Company completed the first stage of its pulp and paper mill at Wesley Vale at a cost of \$25m. The first paper machine installed has an annual capacity of about 41 000 tonnes of magazine paper and provision has been made for the installation of three additional machines. Two small pulping units manufacture eucalypt cold soda semi-chemical pulp and *Pinus radiata* refiner groundwood. A.P.P.M. Ltd plans to establish a large chemical pulp mill at Wesley Vale by 1985 which will duplicate present production from the Burnie complex.

Newsprint

Australian Newsprint Mills Ltd, situated at Boyer on the Derwent River is Australia's sole manufacturer of newsprint. Its timber concession follows the general line of the Derwent as far north as Lake King William.

The *Florentine Valley Paper Act* 1966 increased A.N.M.'s concession area from 110 479 hectares to 150 948 hectares to provide the basis for an expansion program. The Company is required by the Act to supply 23 600 cubic metres of logs to other timber-using industries each year. A third paper machine came into production in January 1969 increasing annual capacity to 168 000 tonnes

of newsprint. Output on this machine was progressively speeded-up and further ancillary equipment introduced raised annual capacity to approximately 205 000 tonnes.

Woodpulp

Australian Paper Manufacturers Ltd manufacture woodpulp at Port Huon on the Huon River. The pulp is shipped in pellet form to the Company's paper mills in other states, principally to Botany, N.S.W. The Company's pulpwood concession and reserve areas include virtually the whole of the D'Entrecasteaux Channel coastline and the south coast as far west as Prion Bay; inland it extends west to the Mt Picton area. Also included in the reserve are Bruny Island and the Tasman Peninsula.

Woodchips

Woodchips manufactured from sawmill waste and other timber previously of limited commercial value, are primarily used for woodpulp production. Three Tasmanian companies, Northern Woodchips Ltd, Tasmanian Pulp and Forest Holdings Ltd and Associated Pulp and Paper Mills Ltd have negotiated woodchip export contracts with Japanese interests. Before granting woodchip export licences, the Federal Government stipulated that the companies, if they did not already have the capacity, should develop woodpulp manufacturing facilities within 15 years. Articles on each of the three companies' woodchip operations were included in the 1975 edition of the *Year Book*.

Tasmanian Pulp and Forest Holdings Ltd's plant at Spring Bay, near Triabunna on the east coast, has an annual capacity of more than 610 000 tonnes of woodchips. Timber for the project comes from pulpwood concession areas extending along the Eastern Tiers from St Helens (177 kilometres north of Triabunna) to Buckland (24 kilometres to the south-west). The Company has also been granted concessions over reserve areas covering much of central Tasmania. These areas will ultimately be used provided Tasmanian Pulp and Forest Holdings Ltd meets various stipulations contained in the *Pulpwood Products Industry (Eastern and Central Tasmania) Act 1968*. In addition the Company is permitted to obtain pulpwood from areas in the reserve set aside by the Forestry Commission for silvicultural purposes or by utilising trees removed to open the forest for economic extraction of milling-quality timber.

The Company's first woodchips were exported from the Spring Bay complex in April 1971; during the last six years the Company has exported a little over 600 000 tonnes of woodchips per annum.

Associated Pulp and Paper Mills Ltd and Northern Woodchips Pty Ltd constructed their woodchip plants at Long Reach, near Bell Bay, on the Tamar River. Northern Woodchips Pty Ltd has also installed portable and satellite chipping plants in the northern half of Tasmania. A.P.P.M. Ltd draws its timber supplies from Crown forest concessions, private land and sawmill waste while Northern Woodchips Pty Ltd relies on timber from private lands and sawmill waste. Annual capacity of the A.P.P.M. Ltd plant is 914 500 tonnes of woodchips; Northern Woodchips Pty Ltd's 15-year export contract is for an annual 711 000 tonnes of woodchips.

Both companies commenced production of woodchips in 1972; A.P.P.M. at its Long Reach plant in May 1972 and Northern Woodchips from its portable and satellite chipping plants in mid-1972. First exports by the two companies were made in late 1972. In February 1973 the first log trains commenced using the rail extension to Long Reach giving the two companies economic access to more distant timber supplies.

Forest Production

Definition

The cutting of logs in a forest and the production of sawn timber in a mill seem closely related activities and may both, in fact, be conducted by a single operator with the same team of employees; similarly, the cutting of pulpwood and its later conversion to newsprint or fine paper may be viewed, in a broad sense, as a single activity. For statistical purposes, however, sawmills, paper mills, newsprint mills, woodchip plants, etc., are classified as factories, while logging operations which provide the raw materials for the factories, are classified as forestry activity. It necessarily follows that the definition of forest production must be restricted to include only the output of logs, hewn timber, firewood, tanning bark, etc. before such products have passed into the sector covered by factory statistics. Some forestry products, as just defined, (e.g. fence posts and rails, hewn sleepers, firewood, etc.) may go direct to the final consumer without passing as a raw material to the factory sector.

Value of Forest Production

Gross Value of Production is the value placed on the recorded production at the wholesale price realised in the principal markets. In cases where forestry products are consumed at the place of production or where they become raw material for a secondary industry, these points of consumption are presumed to be the principal markets (e.g. the value of logs cut for sawmilling is the value on the mill skids).

Local Value (i.e. value of recorded production at the place of production) is ascertained by deducting marketing costs from gross value. Marketing costs include freight, cost of containers, commission, and other charges incidental thereto.

Statistics of Forest Production

The next table shows the production of the various forest products and from where they are obtained, i.e. either Crown or private land. In this table, the 'Logs for processing' figures include the log usage of the woodchip export industry. Woodchips have been an input material for locally based paper and woodpulp plants for many years but demand increased greatly with the establishment of woodchip export markets from 1971.

The following table shows details of forest production:

Forest Production, 1975-76

Product	Obtained from—		Total
	Crown land	Private land	
Logs for processing (a)—			
Forest hardwoods '000 m ³	2 010.76	1 335.75	3 346.50
Indigenous softwoods '000 m ³	10.24	..	10.24
Plantation grown pines '000 m ³	53.45	19.99	73.44
Total logs—Quantity '000 m ³	2 074.45	1 355.74	3 430.19
Gross value \$'000	<i>n.a.</i>	<i>n.a.</i>	42 496
Hewn and other timber—Quantity '000 m ³	29.99	<i>n.a.</i>	(b) 29.99
Value \$'000	<i>n.a.</i>	<i>n.a.</i>	(c) 4 495
Total gross value of forest products \$'000	<i>n.a.</i>	<i>n.a.</i>	46 991

(a) Logs for sawing, peeling, slicing, chipping and pulping.

(b) From Crown land only; includes firewood, sleepers, transoms, girders, bridge timber, mining timber, poles, piles and other forest products.

(c) Includes estimates of the value of hewn and other timber and firewood taken from private land and of other forest products.

The next table shows details of forest production for a five-year period on a basis comparable with the previous analysis:

Forest Production

Product		1971-72	1972-73	1973-74	1974-75	1975-76
Logs for processing (a)—						
Forest hardwood ..	'000 m ³	2 184.7	3 159.6	3 974.3	3 915.9	3 346.5
Indigenous softwood ..	'000 m ³	4.3	8.4	11.1	10.9	10.2
Plantation grown pines	'000 m ³	57.0	56.4	73.3	70.2	73.4
Total logs—Quantity ..	'000 m³	2 246.0	3 224.4	4 058.7	3 997.1	3 430.2
Gross value ..	\$'000	18 858	27 897	39 802	46 234	42 496
Hewn and other timber—						
Quantity (b)	'000 m ³	40.4	39.4	32.3	38.5	30.0
Value (c)	\$'000	3 069	3 025	3 471	3 788	4 495
Total gross value of forest products	\$'000	21 927	30 922	43 273	50 022	46 991

(a) Logs for sawing, peeling, slicing, chipping and pulping.

(b) From Crown land only; includes firewood, sleepers, transoms, girders, bridge timber, mining timber, poles, piles and other forest products.

(c) Includes estimates of the value of hewn and other timber and firewood taken from private land and of other forest products.

Source of Production Data

The principal sources of data are the returns of the various establishments classified as factories (e.g. sawmills, newsprint mills, paper mills, plywood mills, etc.) which report details of logs, pulpwood, sawmill edgings, off-cuts, etc. used as raw materials; other data are available from the State Forestry Commission and the Bureau's export statistics.

Tasmanian and Australian Log Production

For the purposes of the last two tables, log production is defined as relating to 'logs' for sawing, peeling, slicing, chipping and pulping (i.e. it includes logs used in sawmills as well as those used for production of woodpulp in newsprint and paper mills, woodchips, particle board, etc.). In terms of this definition Tasmania is the major producer, the State's log production being over 31 per cent of the Australian total in 1974-75. The two next largest producers, N.S.W. and Victoria, each produced 22 per cent of total Australian production in that year. Considering Tasmania's small relative size and population, it is apparent that forest production is one of its more important contributions to the Australian economy.

Gross and Local Value of Production

The following table gives details of gross and local values of forestry production for a five-year period.

Gross and Local Value of Forestry Production (\$'000)

Particulars	1971-72	1972-73	1973-74	1974-75	1975-76
Gross value (production valued at principal markets)	21 927	30 922	43 273	50 022	46 991
Less marketing costs	3 734	5 562	7 393	7 160	6 317
Local value (production valued at place of production)	18 193	25 360	35 880	42 862	40 674

Timber and Timber Products

Output and Exports

The following table shows timber production by mills for a five-year period, together with exports of sawn timber:

Production and Exports of Sawn Timber

Particulars	1971-72	1972-73	1973-74	1974-75	1975-76
LOGS USED ('000 m ³)					
Hardwood	1 054.60	1 068.65	1 037.77	1 023.08	930.43
Softwood	26.48	28.34	35.96	48.19	54.10
Total	1 081.09	1 096.99	1 073.73	1 071.27	984.54
SAWN, PEELED AND SLICED TIMBER PRODUCED (a) ('000 m ³)					
Hardwood	401.23	403.85	398.22	388.34	349.68
Softwood	11.62	12.45	16.10	21.81	23.78
Total	412.85	416.29	414.32	410.15	373.47
EXPORTS OF SAWN TIMBER (b) ('000 m ³)					
Total	202.33	224.83	270.25	213.43	248.00
VALUE OF EXPORTS OF SAWN TIMBER (b) (\$'000)					
Total	17 385	20 822	26 156	22 690	26 079

(a) Includes: plywood, veneer and sliced timber production converted to an equivalent cubic measurement; and rough sawn timber, including that subsequently seasoned and dressed to produce flooring, weatherboards, etc.

(b) Includes dressed and undressed timber.

Geographical Distribution of Sawmills

The next table records the absolute decline in the number of mills over recent years. The area with the heaviest incidence of closures has been the southern orcharding region.

Distribution of Operative Sawmill and Plywood Mill Locations
by Statistical Divisions and Sub-divisions

Statistical divisions and sub-divisions	1971-72	1972-73	1973-74	1974-75	1975-76
Hobart	12	12	14	12	13
Southern	73	70	73	64	56
Northern—					
Tamar	61	61	56	55	52
North Eastern	29	29	30	27	25
Total	90	90	86	82	77
Mersey-Lyell—					
North Western	39	37	38	36	34
Western	8	8	7	7	7
Total	47	45	45	43	41
Tasmania	222	217	218	201	187

Average Size of Mills

In the year 1963-64 no Tasmanian sawmill exceeded an annual log input of 25 000 cubic metres. A size distribution of mills, classified by volume of log inputs, is given in the next table:

**Number of Operative Sawmills (including Plywood Mills)
by Volume of Annual Log Input**

Size classification (cubic metres)	Number of sawmills and plywood mills				
	1971-72	1972-73	1973-74	1974-75	1975-76
Up to 500	49	42	50	53	44
501- 1 000	14	24	28	19	19
1 001- 1 500	17	14	11	10	13
1 501- 3 000	36	38	33	28	22
3 001- 5 000	35	29	30	26	27
5 001-10 000	42	40	40	35	36
10 001-15 000	13	14	14	14	12
15 001-30 000	15	14	8	11	9
30 001-45 000	1	1	2	4	3
45 001-60 000 .. .. .	..	..	1	..	2
Over 60 000 .. .. .	..	1	1	1	..
Total	222	217	218	201	187

Mill Production of Timber

As shown previously, 1975-76 logs treated in sawmills and plywood mills for the production of sawn, peeled, and sliced timber totalled 985 000 m³ while the resulting timber produced totalled only 373 000 m³. The difference between the volume of logs treated and of timber produced is not all waste from the millers' point of view. Admittedly, there is very limited use for sawdust but most offcuts are sold as input to the woodchip and woodpulp industries or docked and sold as firewood.

Chipping, Grinding and Flaking of Wood

Apart from sawmills and plywood mills, the main users of logs from Tasmanian forests were until early 1971, the mills producing as their final products woodpulp, paper, hardboard and particle board. As an intermediate stage in the various processing systems, the timber used was chipped, ground or flaked at eight locations.

The rapid development of woodchipping for export is shown in the following table:

Chipping, Grinding and Flaking of Wood

Particulars	1971-72	1972-73	1973-74	1974-75	1975-76
Producing locations at 30 June number	18	28	30	31	31
Materials used—					
Logs (a) '000 m ³	1 171.37	2 133.65	2 961.66	2 866.34	2 396.09
Sawmill offcuts '000 m ³	139.09	224.10	268.73	246.43	216.09
Total '000 m ³	1 310.46	2 357.75	3 230.39	3 112.77	2 612.18
Chipped, ground and flaked wood produced (green weight)—					
For local processing '000 tonnes	<i>n.p.</i>	793.74	892.47	785.59	743.60
For export '000 tonnes	<i>n.p.</i>	1 397.18	2 150.16	2 161.28	1 692.80
Total '000 tonnes	1 213.17	2 190.93	3 042.63	2 946.87	2 436.40

(a) Includes log equivalent of limbwood and billets.

The State Forestry Commission

The principal officers of the State Forestry Commission are the chief commissioner and two assistant commissioners. At 30 June 1976 the Commission employed a work force of 661 including administrative staff.

The Forestry Commission is primarily concerned with the conservation of Tasmania's State forests; this requires that it exercise control over the rate at which logs and pulpwood are taken, and also that it introduce effective measures to ensure regeneration. Other important functions include: (i) fire prevention and suppression; (ii) road construction to give access to forests; and (iii) development of plantations. Some concept of the scope of Forestry Commission activities can be obtained from the following table:

Activities of Forestry Commission: Summary
(Source: Forestry Commission)

Particulars	1971-72	1972-73	1973-74	1974-75	1975-76
Regeneration assistance, area of native forests treated .. hectares	1 426	3 146	4 492	7 296	3 848
Seedlings produced '000	3 295	3 266	2 901	3 707	3 966
Plantations—					
Established hectares	1 905	1 902	1 903	1 776	2 198
Pruned hectares	754	495	454	368	330
Thinned hectares	302	273	409	455	367
Firebreaks—					
Constructed kilometres	85	49	73	54	90
Roads—					
Constructed kilometres	132	130	103	129	205
Improved kilometres	5	5	12	25	86

The Commission has a responsibility for preventing and fighting forest fires on or near State forests; losses through bush fires fought by the Commission are reported in the following table:

Bush Fires Fought by the Forestry Commission
(Source: Forestry Commission)

Year	Fires reported	Area burnt				Cost of suppression
		State forest	Other Crown land	Private property (a)	Total (a)	
	no.	hectares	hectares	hectares	hectares	\$
1970-71 ..	114	5 987	1 575	1 101	8 663	22 493
1971-72 ..	95	1 016	292	518	1 826	13 841
1972-73 ..	305	50 170	64 870	25 860	140 900	262 531
1973-74 ..	62	2 147	3 727	180	6 054	23 688
1974-75 ..	48	805	412	1 083	2 300	18 205
1975-76 ..	88	5 812	13 097	1 040	19 949	69 512

(a) Includes only those fires on private property fought to protect adjoining State forest or timbered Crown land.

Total expenditure by the Commission during 1975-76 was \$11.8m. This expenditure was funded from Loan Funds, Consolidated Revenue, funds provided under the *Softwoods Forestry Agreement Act 1976* and monies made available for

unemployment relief. Money collected each year (mainly from timber royalties) is paid into Consolidated Revenue and, by law, becomes a grant to the Commission the following year.

The main revenue of the Forestry Commission is derived from royalties, i.e. charges paid by those taking timber from Crown lands. By law, such revenue is specifically reserved for expenditure on forestry. The next table has been compiled to show the revenue and expenditure of the Commission for the last five years; expenditure exceeds revenue since money from State loan funds devoted to forestry purposes is included in expenditure.

Forestry Commission: Revenue and Expenditure
(\$'000)

Particulars	1971-72	1972-73	1973-74	1974-75	1975-76
REVENUE					
Royalties	1 969	2 369	3 141	3 724	4 001
Sale of forest products <i>r</i>	110	96	66	86	103
Other <i>r</i>	48	52	52	55	55
Total	2 127	2 517	3 259	3 865	4 159
EXPENDITURE (a)					
Administration—					
Revenue collection	290	295	422	584	603
Forest management	641	700	850	1 193	1 362
General	504	605	725	1 057	1 261
Forest works—					
Road construction	902	926	1 157	1 348	2 006
Building and other	98	102	199	168	497
Afforestation and reafforestation	1 330	1 657	1 917	2 633	3 582
Forest protection (n.e.i.)	138	274	198	230	357
Mapping and surveys	126	154	220	377	549
Land purchases	8	4	8	2	17
Purchases, plant and equipment	45	43	37	83	368
Interest on advances	451	500	550	654	828
Total	4 533	5 260	6 283	8 329	11 430

(a) Aggregate expenditure from all sources, i.e. Consolidated Revenue, Loan and Trust Funds.

Federal Government-State Agreement

The federal *Softwoods Forestry Agreement Act* 1967 was passed with the specific intention of increasing the rate of softwood-plantings in Australia by providing federal financial assistance to the states. Under the Act each state was allocated: (i) a *base year* area of softwood plantings which was financed by the state; and (ii) a *scheduled* area in excess of the base year figure, the excess financed by special Federal Government loans. The base year area was constant for each year of the five-year program which commenced in 1966-67.

In late 1972 federal legislation was passed which extended the Federal Government-State softwood forestry agreement for a further five years. The legislation was made retrospective from July 1971. Financial terms were similar to those set out in the 1967 agreement. The *Softwoods Forestry Agreement Act* 1976 extended the agreement, but with reduced planting rates, for an additional year from 1 July 1977. Future policy and programs were to be reviewed during 1977-78.

Base year areas (financed by the states) under the second Federal Government-State softwood forestry agreement are: N.S.W., 3 553 hectares; Vic., 2 635 hectares; Qld, 2 282 hectares; S.A., 1 376 hectares; W.A., 1 315 hectares; and Tas., 850 hectares. Tasmania's scheduled plantings for each of the five years ended 30 June from 1972 to 1976 were set at 1 862 hectares, and for 1977 at 1 356 hectares.

MINING

Introduction

For statistical purposes, mining is taken to cover the operations normally thought of as mining and quarrying (i.e. the removal from underground or surface workings of ores, etc.), the recovery of minerals from ore dumps, tailings, etc. and ore dressing (i.e. concentration and other elementary treatment). It does not include the smelting and/or refining of metallic minerals or the processing of non-metallic minerals (e.g. limestone into cement); these operations are classified as manufacturing.

In the present Tasmanian economy, two important metals will serve to illustrate the distinction between mining and manufacturing: aluminium, produced at Bell Bay on the Tamar; and zinc at Risdon near Hobart. In terms of the previous definition, the two metals are considered to be the output of manufacturing and only a small part of their total value is attributable to the mining industry in Tasmania. In the case of aluminium, no Tasmanian ores or concentrates are used and no value accrues to the Tasmanian mining industry. A substantial part of the value of the aluminium is, in fact, accounted for by imported materials. Zinc is produced from both imported and locally-produced concentrate, but only the value of the local concentrates produced at Rosebery is included in the Tasmanian mining industry. The same principle applies with the State's iron-ore pellet industry, i.e. extraction of the ore is classified as mining but pellet-making is classified as manufacturing.

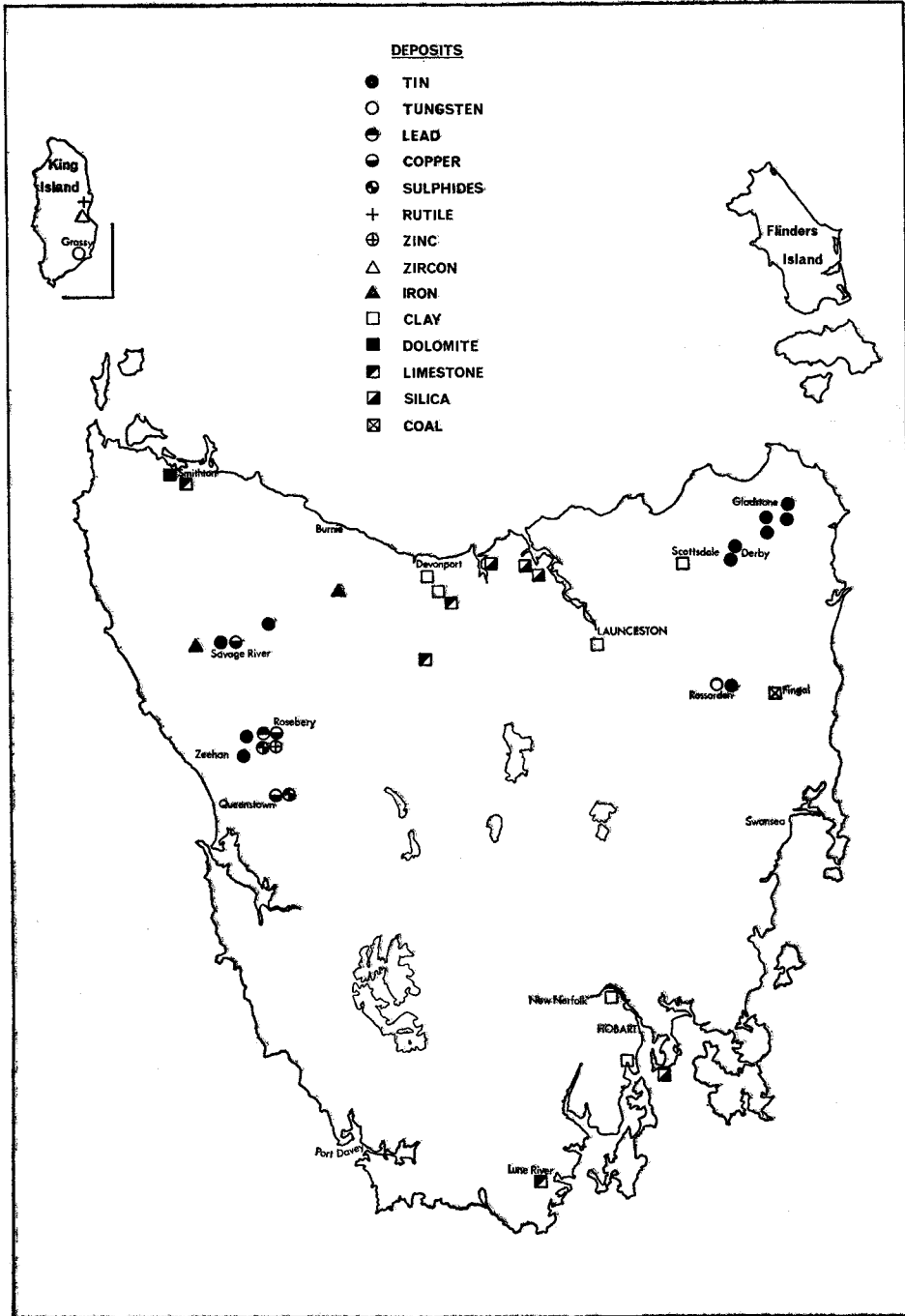
Historical

Tasmania's first mine opened at Port Arthur in 1834. In that year, it produced 61 tonnes of coal but closed just 10 years later due to the poor quality of the coal and other discoveries. Major mineral discoveries were not made until later in the nineteenth century—tin oxide was first discovered near Mt Bischoff in 1871, silver-lead ore was discovered in the Zeehan-Dundas area in 1882 and the 'Iron Blow' copper ore outcrop near Mt Lyell was discovered in 1883. These and later discoveries led to the establishment of mining operations which have had a significant impact on Tasmania's growth. A more detailed historical background to the development of mining in the State is included in the 1976 and earlier editions of the *Year Book* and a 'West Coast Mining Chronology' is included in the 1968 edition.

Importance of Mining to the State

Mining activity in Tasmania has been subject to frequent and severe fluctuations, mainly as a result of changes in supply and demand. Nevertheless, mining forms an important sector of the Tasmanian economy. The next table lists the major mineral products produced in Tasmania, the locations of the main mines, the assayed content of ores mined during 1975-76 and the assayed content of Tasmanian ores mined as a percentage of total Australian production.

Location of Principal Mining Operations, Tasmania
Metallic, Non-Metallic and Fuel Minerals



The accompanying map shows the locations of major operative mines. No indication of relative size is given as the scale of operations varies greatly between mines.

Major Mineral Products: Tasmania-Australia Comparison, 1975-76

Mineral product	Location of main mine(s)	Unit	Assayed content of ores mined		Per cent (a)
			Tasmania	Australia	
Coal (black) ..	Fingal Valley	tonnes	(b) 176 352	(b) 69 269 108	0.3
Copper ..	Mt Lyell	tonnes	25 061	218 296	11.5
Gold ..	Mt Lyell, Rosebery	kg	1 598	16 901	9.5
Iron ..	Savage River	tonnes	1 463 044	58 262 899	2.5
Lead ..	Rosebery, Williamsford	tonnes	19 542	396 644	4.9
Silver ..	Rosebery, Williamsford	kg	75 515	721 544	10.5
Sulphur ..	Mt Lyell, Rosebery	tonnes	149 337	423 011	35.3
Tin ..	Renison Bell	tonnes	5 870	9 685	60.6
Tungstic oxide	Grassy (King Island)	tonnes	1 876	2 124	88.3
Zinc (c) ..	Rosebery	tonnes	67 318	479 263	14.1

(a) Tasmanian production as a proportion of Australian production. (At 30 June 1976, Tasmania's population was 2.9 per cent of the total population of Australia.)

(b) Actual production.

(c) Tasmania accounted for approximately 67 per cent of Australia's total refined zinc production in 1975-76. Both local and interstate concentrates are refined in the State.

Major Mining Companies

Normally, the Bureau does not publish information relating to any single enterprise or establishment but only publishes statistical aggregates where these do not directly or indirectly reveal the operations of any single informant. However, inclusion of some description of some of the major mining companies operating in Tasmania is most desirable; therefore, the State Department of Planning and Development has prepared the following brief summaries and accepts responsibility for the information given. (The operations of The Electrolytic Zinc Company of A/Asia Ltd (Risdon and Rosebery) and Comalco Aluminium (Bell Bay) Ltd, together with other major Tasmanian manufacturing companies, are summarised in the section 'Industrial Development' which appears in Chapter 9.)

King Island Scheelite (King Island): A member of the Peko-Wallsend Limited group of companies, this Company mines and processes scheelite ore to the concentrate stage for export. During 1975-76 through-put of the concentrate plant was increased from 295 000 tonnes to 330 000 tonnes a year. In 1976 the erection of a chemical treatment plant to upgrade the flotation concentrates commenced and is expected to cost \$2.9m.

Mt Lyell Mining and Railway Co. Ltd (Queenstown): This Company, now 87 years old, is producing copper in the form of concentrates at the rate of about 21 000 tonnes per year from 2 200 000 tonnes of ore. The ore is won by underground methods from three separate mines. In recent years, some \$45m has been invested to develop new mines and modernize the treatment plant and ancillary operations. (See also the next section.)

Renison Ltd (Rosebery): The present mining and concentrating plant was commissioned in December 1966. It has grown out of early mining operations to become the largest tin mine in Australia. It has the further distinction of being the world's largest producer of tin metal in concentrates from a hard rock underground mining operation. A concentrate leach plant was completed in August 1977. This plant treats both high grade gravity and low grade flotation concentrates

by sulphuric acid leach to produce a single product containing about 50 per cent tin. Smelting trials were conducted in Japan in 1977 with a view to establishing an electric tin smelter in Tasmania to treat tin concentrates from the Leach Plant.

Savage River Mines (Pickands Mather and Co. International Managing Agent) (Savage River): Established at a cost of \$80m, the Port Latta iron ore pelletising plant commenced operations in 1968. Annual production was increased during 1871 to more than 2.5m tonnes of high-grade iron ore pellets. The entire production is sold to Japanese steel mills.

Problems for the Mt Lyell Mining and Railway Co. Ltd

(Information contained in this article has been obtained from the Mt Lyell Mining and Railway Co. Ltd Annual Report for 1977 and from papers supplied for that purpose by the Company.)

An article under this heading appeared in the 1977 *Year Book* and detailed the problems experienced by the Company in its Queenstown copper mining operations during 1975 and 1976 due to depressed copper prices. These problems are briefly summarised in this section together with an account of subsequent developments up to the end of October 1977.

The Company's loss on mining operations during 1975-76 was \$5.47m. During that year the work force was reduced from 1 332 to 1 072, mainly due to a policy of non-replacement. On 4 November 1976, the Company announced that the two North Lyell mines would be closed and an additional 400 workers retrenched over the following two months. At 30 June 1977, employment had fallen to 741; the loss on mining operations for 1976-77 was \$11.08m.

On 15 August 1977 the Federal Government announced that the Mt Lyell Mining and Railway Co. Ltd would be given emergency assistance on a dollar for dollar basis with the Tasmanian Government in order to allow the Company to continue its mining operations. The assistance was to be provided until the Industries Assistance Commission (I.A.C.) released a report (expected in November) based on an inquiry it was conducting into short term assistance to the Australian copper industry. On 2 September 1977 the Premier, Mr Neilson, announced that the State and the Federal Governments would pay emergency assistance of up to \$1.9m to the Company for the period from 15 August until the I.A.C. report was released.

The I.A.C. inquiry sat in Queenstown in early September 1977 where it received a detailed submission from The Mt Lyell Company. World copper prices had generally remained depressed since September 1974 and the Company had made heavy losses on its mining operations from 1974-75. There was some recovery in copper prices in early 1977 but a steady decline from April of that year. The Company stated that, at the time, its losses on mining operations amounted to approximately \$250 000 per fortnight. On the basis of likely future copper prices, a government subsidy of \$8.5m to \$12.7m was likely to be required in order to keep the Mt Lyell mine open for a further two years. The Company stated that it would have no alternative but to close the mine if such aid was not forthcoming. It was also stated that if the mine closed, there was practically no prospect of it opening again. (The Mt Lyell operation involves a low-grade, underground ore body.)

The Company's submission included a request for the Federal Government to subsidise it on the basis of the amount by which the average cash operating costs per tonne of saleable copper content of production was below the average

Australian copper price for successive 12-weekly periods. It proposed that the subsidy be repaid progressively to the Government on the basis of a similar formula whenever cash operating costs fell below the Australian 'producer price'. (The Company felt confident that prices would rise again to a profitable level for its operations in the longer term.)

Closure of the Mt Lyell mine would have severe repercussions on Queenstown and Gormanston. These two townships, which had populations of 4 620 and 358, respectively, at 30 June 1976, are virtually solely dependent upon the mine for employment. Closure of the mine would also have indirect employment repercussions in other areas.

The table below shows details relating to the Company's operations from 1972-73 to 1976-77:

Mount Lyell Mining and Railway Co. Ltd: Selected Statistics

Year			Copper content of production (a)	Mine operating profit	Net operating profit	Wages and salaries paid	Employment at 30 June
			tonnes	\$'000	\$'000	\$'000	no.
1972-73	..	..	22 532	3 067	2 498	8 258	1 375
1973-74	..	..	23 331	13 310	7 236	10 407	1 384
1974-75	..	..	24 808	-8 290	3 102	12 481	1 332
1975-76	..	..	20 466	-5 465	-1 988	13 052	1 072
1976-77	..	..	17 742	-11 077	-5 768	10 309	741

(a) Total realisable copper contained in copper concentrates produced.

The next table shows details of the Australian copper price, the consumer price index and average weekly earnings for recent years. It is noted that the average Australian copper price for 1969-70 was a peak of \$1 476.40 per tonne; it peaked at \$1 359.00 for March 1977 but had fallen to below \$1 100 by August 1977.

Copper Prices, The Consumer Price Index and Average Weekly Earnings

Year	Average Australian copper price (a)		Consumer price index (b)		Average weekly earnings (c)	
	Price (\$ per tonne)	Percentage change (d)	Index number	Percentage increase (d)	Amount (\$)	Percentage increase (d)
1972-73	990.3	+3.0	129.8	6.0	95.20	8.8
1973-74	(e)1 428.8	+44.3	146.6	12.9	110.50	16.1
1974-75	1 050.5	-26.5	171.1	16.7	140.20	26.9
1975-76	1 017.9	-3.1	193.3	13.0	157.80	12.6
1976-77	1 239.9	+21.8	220.0	13.8	181.30	14.9

(a) Average daily Mount Isa Mines refined electrolytic copper price.

(b) Weighted average of six state capital cities; base: year 1966-67 = 100.0.

(c) Average weekly earnings per employed male unit, Tasmania.

(d) Over the previous year.

(e) Price limited to a maximum of \$1 460.00 from March to June by the Prices Justification Tribunal.

On 8 November 1977, the I.A.C.'s interim report on assistance to the copper industry was tabled in Federal Parliament. It recommended that the Federal and Tasmanian Governments support the Mt Lyell Company until the end of June

1978 through provision of an interest free loan. The loan would amount to approximately \$4.8m if copper prices remained at average prices of about \$1 050 per tonne.

Statistics of Mineral Production

Source of Data

Statistics relating to quantities of minerals produced (including assayed metallic content) are, in the main, obtained from the State Department of Mines and are supplemented, where necessary, with data obtained from the annual census of mines and quarries conducted by the Australian Bureau of Statistics, and from the Commonwealth Bureau of Mineral Resources.

Other details of the mining industry, such as employment, value of output, and costs of production, etc. are obtained from the annual census of mines and quarries, conducted by the Bureau. This census was first conducted in 1952 and the information obtained from each census was basically the same until 1968. As from 1968-69 the mining sector census was standardised in accordance with the concepts employed in the integrated economic censuses (see 'Integrated Economic Censuses' in Chapter 18 for a comparison between mining and other industries included in the integrated censuses).

Tasmania's larger mining operations, in particular metal mining, are located in the West of the State and are concentrated in an area from Queenstown to Savage River. A number of tin mines operate in the North-East of Tasmania but their combined output no longer compares with either former activity in that area or current operations in the West.

Metallic Minerals

The table that follows shows the quantity of metallic minerals produced in Tasmania for a five-year period:

Metallic Minerals: Production

Mineral	1971-72	1972-73	1973-74	1974-75	1975-76
TONNES					
Copper concentrate ..	88 443	91 514	96 015	101 672	83 255
Copper-tin concentrate ..	5 187	4 586	3 124	2 506	2 896
Iron—Concentrate	2 200 630	2 450 932	2 304 575	2 051 783	2 109 363
Oxide	10 875	9 590	12 879	10 989	9 831
Lead concentrate	21 929	22 837	16 937	12 457	13 341
Lead-copper concentrate ..	18 025	16 605	19 919	19 952	19 480
Pyrite concentrate	192 402	197 813	238 850	218 474	212 931
Rutile concentrate	3 330	..	3 237	4 844	6 994
Tin concentrate	12 458	13 895	12 496	12 597	12 889
Tungsten concentrates—					
Scheelite concentrate ..	1 839	1 788	1 630	1 672	2 360
Wolfram concentrate ..	1 351	1 319	1 171	1 207	1 670
Zinc concentrate	122 804	125 087	127 352	108 793	123 944
Zircon concentrate	1 754	..	3 072	7 560	7 953
KILOGRAMS					
Gold (not in concentrates) ..	..	..	2	2	1

Assayed Content: In the following table, the various concentrates have been grouped to show their content in terms of individual metals. The contents stated are as determined by assay and include all pay metals and metals which are a refiner's prize; totals compiled on this basis contain no allowances for losses in smelting and refining and therefore, in general, exceed the quantities actually recoverable. The table refers exclusively to minerals mined in Tasmania.

Assayed Contents of Metallic Minerals Produced

Mineral	1971-72	1972-73	1973-74	1974-75	1975-76
COPPER (TONNES)					
Copper concentrate	22 921	23 449	24 292	25 824	21 298
Copper-tin concentrate	977	878	652	522	628
Lead concentrate	119	78	67	31	63
Lead-copper concentrate	2 133	1 828	2 350	2 652	2 656
Zinc concentrate	447	518	465	351	416
Total	26 597	26 751	27 826	29 380	25 061
GOLD (KILOGRAMS)					
Copper concentrate	430	475	470	508	434
Lead concentrate	150	91	82	30	30
Lead-copper concentrate	1 260	1 038	972	913	986
Zinc concentrate	143	165	166	116	148
Other sources .. ..	..	..	2	2	1
Total	1 983	1 769	1 692	1 569	1 598
IRON (TONNES)					
Iron concentrate	1 505 702	1 695 961	1 599 592	1 426 352	1 463 044
LEAD (TONNES)					
Lead concentrate	12 579	13 414	10 920	8 648	8 919
Lead-copper concentrate	5 127	5 034	5 138	4 207	4 823
Zinc concentrate	4 979	4 616	5 568	5 207	5 800
Zinc-lead ore	23	..	..	..	..
Total	22 708	23 064	21 626	18 062	19 542
SILVER (KILOGRAMS)					
Copper concentrate	3 861	3 965	4 418	5 373	3 983
Lead concentrate	15 209	16 785	13 272	9 383	11 005
Lead-copper concentrate	49 602	49 357	53 034	45 211	42 780
Zinc concentrate	14 447	16 642	17 194	13 320	17 745
Zinc-lead ore	20	..	..	..	..
Total	83 139	86 749	87 918	73 287	75 515
SULPHUR (TONNES)					
Lead concentrate	4 475	4 565	3 118	2 138	2 370
Lead-copper concentrate	5 005	4 427	5 673	6 055	5 527
Pyrite concentrate	92 838	93 709	114 141	103 848	101 156
Zinc concentrate	40 343	41 064	41 820	35 191	40 284
Total	142 661	143 765	164 752	147 232	149 337

Assayed Contents of Metallic Minerals Produced—*continued*

Mineral	1971-72	1972-73	1973-74	1974-75	1975-76
ZINC (TONNES)					
Lead concentrate	4 113	3 776	2 247	1 301	1 348
Lead-copper concentrate	2 360	2 333	2 657	2 409	1 942
Zinc concentrate	65 656	66 544	67 057	57 747	64 028
Zinc-lead ore	12	..	..	..	..
Total	72 141	72 653	71 961	61 457	67 318
TIN (TONNES)					
Copper-tin concentrate	157	129	81	73	76
Tin concentrate	6 312	6 289	5 957	5 863	5 794
Total	6 469	6 418	6 038	5 936	5 870
TUNGSTIC OXIDE (WO₃) (TONNES)					
Scheelite concentrate	1 351	1 319	1 171	1 207	1 670
Wolfram concentrate	565	475	134	230	206
Total	1 916	1 794	1 305	1 437	1 876
CADMIUM (TONNES)					
Zinc concentrate	114	165	177	135	172
MANGANESE (TONNES)					
Zinc concentrate	389	367	423	262	316
TITANIUM OXIDE (TONNES)					
Rutile concentrate	3 166	..	3 140	4 643	6 710
Zircon concentrate	8	..	9	23	23
Total	3 174	..	3 149	4 666	6 733
ZIRCON (TONNES)					
Rutile concentrate	18	..	26	38	56
Zircon concentrate	r 1 140	..	2 009	4 973	5 259
Total	r 1 158	..	2 035	5 011	5 315

Fuel Minerals (Coal)

The only fuel mineral mined in Tasmania is coal. There are known deposits of coal throughout much of Tasmania but the most important are those located in the Fingal Valley in the North-East which were first located in 1866.

In 1890 Tasmania produced 55 000 tonnes of coal and production continued to rise until a peak of over 300 000 tonnes was reached in 1959-60. Since then there has been a marked decline due to competition from oil fuel, particularly in

manufacturing industries. Recently the downward trend in production has been reversed with at least one major Tasmanian manufacturer switching back to coal from oil as his fuel for operations. Production details for recent years (in tonnes) are as follows: 1971-72, 121 302; 1972-73, 128 478; 1973-74, 122 788; 1974-75, 137 868; and 1975-76, 176 352 (all production as of black, bituminous coal).

Non-Metallic (Excluding Fuel) Minerals

The quarrying of limestone is the earliest recorded activity in the field of non-metallic mineral mining in the State; burnt lime, being sought as a base for building mortar. Production of this non-metallic mineral has gradually increased to meet a rising demand in various industrial processes. Large exports of limestone were made in the period 1918-1947, when the B.H.P. Co. Ltd operated quarries at Melrose on the north-west coast.

The next table shows the Tasmanian production of non-metallic minerals for a five-year period.

**Non-Metallic (Excluding Fuel) Minerals Production
(Tonnes)**

Mineral	1971-72	1972-73	1973-74	1974-75	1975-76
Clays and shales—					
Brick	131 391	128 080	138 770	139 679	156 254
Other	100 568	90 892	99 492	74 496	64 447
Dolomite	4 687	3 852	5 450	6 199	9 259
Limestone (a)	523 660	558 948	658 210	579 812	548 969
Peat moss	308	241	318	390	535
Ochre	23	74	62	..	..
Pebbles.. .. .	1 712	1 134	1 264	976	1 771
Silica (b)	31 014	25 596	31 644	32 178	34 708

(a) Excludes quantities used directly as building or road construction material.

(b) For glass, chemical, etc. manufacturing.

Construction Materials

In addition to the types of mining and quarrying previously described there is the quarrying of construction materials (for buildings, roads, etc.) such as crushed and broken stone, gravel and sand. This type of activity also is taken into account when placing a value on the output from mines and quarries, measuring their level of employment, etc.

Census of Mining Establishments

Annual censuses of mines were conducted by the Bureau from 1952; the last 'old-style' mining census covered the calendar year 1968. For 1968-69 simultaneous integrated economic censuses were undertaken in respect of mining and four other sectors (manufacturing; wholesale trade; retail trade; and electricity and gas production and distribution). In the section 'Integrated Economic Censuses' in Chapter 18, the results of these censuses are presented so that the economic significance of mining can be compared with that of other sectors included in the censuses. The reasons for changing to new concepts, new definitions, etc. are set out in Appendix A in the 1972 *Year Book*. Definitions of concepts and terms used are given in Appendix B of this *Year Book*.

Mining Establishments—Summary of Operations

The tables that follow give results for the mining censuses from 1971-72 to 1975-76.

**Census of Mining Establishments
Summary of Operations by Industry Sub-division**

Particulars	Unit	1971-72	1972-73	1973-74	1974-75	1975-76
METALLIC MINERALS						
Establishments (a)	no.	17	16	16	16	18
Persons employed (b)—						
Males	no.	4 165	3 913	3 852	3 924	3 723
Females	no.	186	174	172	211	199
Total	no.	4 351	4 087	4 024	4 135	3 922
Wages and salaries	\$'000	25 370	26 955	29 179	40 993	44 430
Turnover	\$'000	84 567	90 605	138 417	r128 489	124 725
Stocks—						
Opening	\$'000	13 515	13 941	12 541	15 108	17 174
Closing	\$'000	14 046	12 511	15 122	17 172	22 762
Purchases, etc. (c)	\$'000	28 035	29 622	59 099	53 984	54 545
Value added	\$'000	57 063	59 553	81 899	r 76 569	75 768
Rent, leasing expenses ..	\$'000	53	86	151	491	997
Fixed capital expenditure (d)	\$'000	15 899	12 107	12 383	18 129	16 937
COAL (e)						
Establishments	no.	2	1	1	1	1
CONSTRUCTION MATERIALS						
Establishments	no.	24	21	29	26	26
Persons employed (b)—						
Males	no.	167	142	181	163	171
Females	no.	3	2	4	4	7
Total	no.	170	144	185	167	178
Wages and salaries	\$'000	634	647	892	1 041	1 392
Turnover	\$'000	2 856	3 407	4 972	4 871	6 851
Stocks—						
Opening	\$'000	223	342	360	347	419
Closing	\$'000	293	355	378	419	519
Purchases, etc. (c)	\$'000	1 449	1 681	2 566	2 553	3 771
Value added	\$'000	1 478	1 740	2 424	2 389	3 181
Rent, leasing expenses ..	\$'000	52	39	47	68	246
Fixed capital expenditure (d)	\$'000	378	170	666	737	953
OTHER NON-METALLIC MINERALS (e)						
Establishments	no.	10	10	10	13	12
TOTAL MINING						
Establishments	no.	53	48	56	56	57
Persons employed (b)—						
Males	no.	4 449	4 150	4 139	4 232	4 039
Females	no.	191	176	178	218	209
Total	no.	4 640	4 326	4 317	4 450	4 248
Wages and salaries	\$'000	26 458	28 091	30 623	43 026	47 197
Turnover	\$'000	88 675	95 350	144 917	r135 688	134 446
Stocks—						
Opening	\$'000	13 801	14 332	12 966	15 526	18 020
Closing	\$'000	14 391	12 933	15 570	18 017	23 394
Purchases, etc. (c)	\$'000	29 948	31 765	62 200	57 276	59 213
Value added	\$'000	59 317	62 186	85 321	r 80 903	80 607
Rent, leasing expenses ..	\$'000	116	151	235	643	1 351
Fixed capital expenditure (d)	\$'000	16 532	12 482	13 159	19 430	17 972

(a) Excludes small tin producing establishments with value of sales less than \$20 000.

(b) At last pay-period in June; includes working proprietors.

(c) Purchases, transfers in and selected expenses.

(d) Outlay on fixed tangible assets less disposals.

(e) Other data not available for separate publication but included in 'Total Mining'.

Smelting and Refining of Metals

The turnover for a mining establishment includes the selling value of products produced at the establishment (e.g. in a metal mining establishment usually the selling value of specific concentrates at the mine). Earlier, reference was made to the fact that Tasmanian manufacturing industry statistics include the extraction and refining of metals, not only from locally produced ores and concentrates, but also from those that have been imported.

The next table shows details of establishments engaged in making iron ore pellets; extracting and refining zinc and aluminium; and making ferro-manganese alloys. It will be seen by comparing details from the following table with the previous table that, in terms of 'Value added', manufacturing activity became more important than mining activity in 1975-76.

Non-Mining Activity: Extracting and Refining Metals

Particulars	Unit	1971-72	1972-73	1973-74	1974-75
Establishments	no.	4	5	5	4
Persons employed (a)	no.	3 519	3 508	3 465	3 263
Turnover	\$'000	130 836	143 726	176 227	200 556
Value added	\$'000	46 323	48 966	65 912	81 112

(a) Average over whole year, includes working proprietors.

In the previous table, the principal metals and concentrates included are iron ore pellets (from local ore), ferro-manganese alloy (from imported ores), zinc and cadmium (from local and imported ores), alumina and aluminium (from imported bauxite). The codes for the Australia Standard Industrial Classification (ASIC) classes of establishments included in the table are: 2 911; 2 912; 2 921; 2 922; 2 923; and 2 924.

The value added in the manufacturing table does not duplicate values already recorded in the mining sector since the cost of basic raw materials (ores or concentrates) is one of the recorded costs (purchases and selected expenses) of manufacture deducted from the value of turnover.

The next table gives details of the production of zinc and copper by refinery processes:

**Non-Mining Activity: Production of Refined Zinc
(Tonnes)**

Year	Production	Year	Production	Year	Production
1967-68 ..	131 872	1970-71	162 271	1973-74	182 749
1968-69 ..	151 094	1971-72	175 798	1974-75	152 749
1969-70 ..	170 931	1972-73	193 782	1975-76	137 637

Aluminium Production: The refinery for the production of alumina and refined aluminium is situated at Bell Bay on the River Tamar. Production of alumina commenced in February 1955, and of refined aluminium in September 1955. Published statements indicate that the capacity of the plant, in terms of primary aluminium, has been lifted steadily in recent years. The commissioning in 1971 of a third potline brought annual capacity to 95 500 tonnes, nearly eight times the plant's capacity in 1961.

Mineral Exploration (Other than for Petroleum)

The statistics in the following tables relating to exploration for minerals other than petroleum are derived from the annual census of mineral exploration.

'Mineral exploration' consists of the search for mineral deposits, the appraisal of newly-found deposits, and the further appraisal of known deposits (including those being worked) by geological, geophysical, geochemical and other methods (including drilling). Exploration for water is excluded. The construction of shafts and adits is included if primarily for exploration purposes.

The data obtained in the mineral exploration census are divided into the following categories:

Exploration on Production Leases: Relates to exploration carried out on a production lease currently producing, or under development for production of, minerals other than petroleum. Mines included in this section of the mineral exploration census correspond closely to those in the annual census of mining and quarrying with the exception of a limited number of itinerant prospectors and small mines excluded from the collection.

Exploration on Other Areas: Relates to: (i) exploration carried out on areas covered by exploration licences issued by the Department of Mines for minerals other than petroleum; and (ii) exploration by private enterprise for minerals which is not directly connected with areas under lease or licence, including general surveys, aerial surveys, report writing, map preparation and other off-site activities not directly attributable to particular lease or licence areas.

Mineral Exploration Other Than for Petroleum: Expenditure (\$'000)

Year	Wages and salaries paid	Stores, materials, fuels, etc. purchased	Payments to contractors (a)	Other current expenditure (b)	Net capital expenditure (c)	Total
PRIVATE EXPLORATION ON PRODUCTION LEASES						
1971-72 ..	315	125	63	77	18	597
1972-73 ..	404	116	408	<i>n.p.</i>	<i>n.p.</i>	1 077
1973-74 ..	461	168	452	95	24	1 200
1974-75 ..	596	143	859	79	63	1 740
1975-76 ..	363	86	501	60	21	1 031
OTHER PRIVATE EXPLORATION						
1971-72 ..	579	152	1 481	626	43	2 881
1972-73 ..	556	101	1 105	<i>n.p.</i>	<i>n.p.</i>	2 314
1973-74 ..	899	317	1 180	548	49	2 994
1974-75 ..	1 129	397	1 660	517	121	3 824
1975-76 ..	850	347	1 188	637	70	3 092
TOTAL PRIVATE EXPLORATION						
1971-72 ..	893	277	1 544	703	61	3 478
1972-73 ..	960	217	1 512	674	29	3 392
1973-74 ..	1 360	485	1 632	643	74	4 194
1974-75 ..	1 725	540	2 519	596	184	5 565
1975-76 ..	1 213	433	1 690	696	92	4 124

Mineral Exploration Other Than for Petroleum: Expenditure—continued
(*\$'000*)

Year	Wages and salaries paid	Stores, materials, fuels, etc. purchased	Payments to contractors (a)	Other current expenditure (b)	Net capital expenditure (c)	Total
TOTAL GOVERNMENT EXPLORATION (d)						
1971-72 ..	301	..	..	23	..	324
1972-73 ..	368	..	..	34	..	401
1973-74 ..	197	17	3	28	2	246
1974-75 ..	318	62	2	39	13	435
1975-76 ..	366	50	..	77	31	523
TOTAL PRIVATE AND GOVERNMENT EXPLORATION						
1971-72 ..	1 194	277	1 544	726	61	3 802
1972-73 ..	1 328	217	1 512	708	29	3 793
1973-74 ..	1 557	502	1 635	671	76	4 440
1974-75 ..	2 043	602	2 522	635	199	6 000
1975-76 ..	1 579	483	1 690	773	122	4 647

- (a) Amounts paid to contractors, geological consultants, etc., employed to carry out exploration activities.
 (b) Other current exploration expenditure such as maintenance expenses, map preparation, aerial surveys, and rent and fees paid to governments for mineral tenements.
 (c) From 1973-74 net capital expenditure is defined as expenditure on fixed tangible assets less disposals. In previous years, capital expenditure was defined as expenditure on fixed tangible assets.
 (d) Exploration by Tasmanian Department of Mines.

The next table shows the total drill hole depths drilled, sunk or driven in mineral exploration (other than for petroleum) in recent years.

Mineral Exploration Other Than for Petroleum: Metres Drilled, Sunk or Driven

Year	Drilling		
	Core (a)	Non-core (b)	Total
PRIVATE EXPLORATION ON PRODUCTION LEASES			
1971-72	14 697	1 422	16 119
1972-73	32 331	839	33 170
1973-74	38 087	27 543	65 630
1974-75	44 036	918	44 954
1975-76	16 419	494	16 913
OTHER PRIVATE EXPLORATION			
1971-72	32 308	11 799	44 107
1972-73	14 245	12 231	26 476
1973-74	20 848	9 785	30 633
1974-75	26 798	8 674	35 472
1975-76	21 514	6 291	27 805
TOTAL PRIVATE EXPLORATION			
1971-72	47 005	13 221	60 226
1972-73	46 576	13 070	59 646
1973-74	58 935	37 328	96 263
1974-75	70 834	9 592	80 426
1975-76	37 933	6 785	44 718

**Mineral Exploration Other Than for Petroleum:
Metres Drilled, Sunk or Driven—continued**

Year	Drilling		
	Core (a)	Non-core (b)	Total
TOTAL GOVERNMENT EXPLORATION (c)			
1971-72	1 269	..	1 269
1972-73	1 456	..	1 456
1973-74	1 519	..	1 519
1974-75	1 627	..	1 627
1975-76	2 572	..	2 572
TOTAL PRIVATE AND GOVERNMENT EXPLORATION			
1971-72	48 274	13 221	61 495
1972-73	48 032	13 070	61 102
1973-74	60 454	37 328	97 782
1974-75	72 461	9 592	82 053
1975-76	40 505	6 785	47 290

(a) Diamond drilling, or any kind of drilling in which cores are taken.

(b) Alluvial, percussion and other drilling in which cores are not taken.

(c) Exploration by Tasmanian Department of Mines.

FISHERIES

General

The Tasmanian industry involves about 1 440 licensed fishermen and crew who operate from some 640 vessels. The species which comprise the annual catch are not only scale fish but also include elasmobranchs (sharks), molluscs (scallops, oysters, abalone) and crustaceans (southern rock lobster).

In 1975-76 the catch of fish, molluscs and crustaceans totalled approximately 6 671 tonnes. This figure is 55 per cent below the record catch for 1973-74 when 14 828 tonnes were harvested. The high catch for 1973-74 was mainly due to the establishment of a fish protein factory at Triabunna which has since ceased operations.

The Sea Fisheries Division controls saltwater fisheries and the Inland Fisheries Commission controls freshwater fisheries. Most freshwater fish are caught for sport but two species (eels and whitebait) are caught for commercial purposes.

Commercial fishing for whitebait began in 1941 and reached a peak in 1947 when over 450 tonnes were caught. Since 1950 the catch has gradually declined to such a degree that no catches of whitebait were reported in 1974-75. (It was a closed season for whitebait in 1975-76.)

Rainbow trout are raised commercially on a trout farm at Bridport. There are rainbow and brown trout in Tasmanian lakes and rivers (introduced as exotic species) but these may only be fished for by licensed sportsmen and may not be sold.

A commercial freshwater fishery for the short-finned eel was established in 1965 and the catch in 1975-76 was 15 968 kilograms.

Fish Varieties and Species

The following table lists the main Tasmanian commercial fish varieties and species with their code numbers. The code numbers are prepared on behalf of the Federal/State Fisheries Conference by the Fisheries Division of the Federal Department of Agriculture.

Main Commercial Fish Varieties, Species and Code Numbers

Variety	Species	Code number	Variety	Species	Code number
Eels	<i>Anguilla australis</i>		Flathead	<i>Neoplatycephalus</i>	
	<i>occidentalis</i>	035		<i>fuscus</i>	615
Whitebait	<i>Lovettia sealii</i>	076		<i>N. richardsoni</i>	616
Rainbow trout	<i>Salmo gairdnerii</i>	101		<i>N. speculator</i>	617
Flounder	<i>Rhombosolea spp</i>	151		<i>Trudis bassensis</i>	621
	<i>Pseudo bombus spp</i>	176		<i>Leviprora</i>	
Cod	<i>Physiculus</i>			<i>laevigata</i>	625
	<i>barbatus</i>	201	Shark	<i>Mustelus</i>	
Tuna	<i>Thunnus</i>			<i>antarcticus</i>	651
	<i>maccoyii</i>	301		<i>Galeorhinus</i>	
	<i>T. alalunga</i>	303		<i>australis</i>	655
	<i>Katsuwonus</i>		Garfish	<i>Hemirhamphus</i>	
	<i>pelamis</i>	315		<i>melanocheir</i>	712
Mackerel	<i>Auxis thazard</i>	334	Southern rock lob-		
Snoek (barracouta)	<i>Leionura atun</i>	335	ster	<i>Jasus novaebolland-</i>	
				<i>ia</i>	780
Mullet	<i>Mugil cephalus</i>	351	Oyster	<i>Ostrea angasi</i>	831
	<i>Aldrichetta</i>			<i>Crassostrea gigas</i>	832
	<i>forsteri</i>	370	Scallop	<i>Pecten</i>	
Trevally	<i>Usacaranx</i>			<i>meridionalis</i>	835
	<i>nobilis</i>	401		<i>Equichlamys</i>	
Salmon	<i>Arripis trutta</i>	490		<i>bifrons</i>	836
Trumpeter	<i>Latris lineatus</i>	535		<i>Mimachlamys</i>	
	<i>Latridopsis</i>		Abalone	<i>asperimus</i>	837
	<i>forsteri</i>	536		<i>Notobaliothis ruber</i>	845
				<i>Schismotis</i>	
				<i>laevigata</i>	846

Fisheries Statistics

Source of Data and Method of Presentation

Statistics presented in this section have been supplied principally by the Sea Fisheries Division of the State Department of Agriculture. In the preparation of fisheries production statistics, the quantities are generally in terms of the form in which the catch is taken from the water. For example, the statistics of fish production are in terms of 'estimated live weight' which is calculated from landed weights by using conversion factors for the various species. These conversion factors allow for the fact that the quantities of fish reported are frequently in a gutted, headed and gutted, or otherwise reduced condition. Crustaceans are reported on a 'whole weight' basis and molluscs (edible) on a 'gross (in-shell) weight' basis.

The actual edible yield varies depending on types of fish and methods of preparation. Barracouta yield about 51 per cent of liveweight when filleted, and shark about 60 per cent when headed and gutted. The edible flesh in molluscs represents only a small portion of the in-shell weight. Approximately 1 kg of scallop flesh equals 4.5 kg in-shell weight and 1 kg of abalone flesh equals 2.25 kg in-shell weight.

The catch is generally defined as that landed in Tasmanian ports, regardless of whether it is caught in Tasmanian waters or not, or whether it is caught by Tasmanian fishermen or not. Shark, southern rock lobster and other fish taken by Victorian based fishermen in Tasmanian waters, but landed in Victoria, are included in the Victorian catch and excluded from Tasmanian figures, on the basis that the catch influences the Victorian rather than the Tasmanian economy.

Details of production refer only to recorded commercial production. In view of the importance of amateur fishermen in certain types of fishing, details shown cannot be taken as representing the whole catch. In addition, it is likely that the figures shown understate, to some extent, the full commercial catch since no information is available on fish taken for sale by persons not licensed as professional fishermen.

Employment and Boats

Persons Engaged and Boats

The following table shows details of persons and boats employed in the taking of fish, crustaceans and edible molluscs. The data are derived from boat registration records of the State Sea Fisheries Division. The term 'number of crew' refers to the usual number of crew on registered fishing vessels and lacks the precision of the concept 'average number employed' used in statistics of other production sectors. Many of the fishermen operate part-time only, and may normally follow other occupations:

Fisheries: Number and Value of Boats, Number of Crew, etc.

Particulars	1972 (a)	1973 (a)	1974 (b)	1975 (c)	1976 (c)
Number of boats engaged (d)	589	594	616	607	640
Value of boats engaged (d) .. \$'000	7 478	8 611	12 546	13 060	14 918
Average value per boat \$	12 696	14 497	20 367	21 516	23 309
Number of tender boats	341	345	400	395	405
Total value of fishing gear .. \$'000	628	728	1 261	1 255	1 379
Value of fishing gear per boat .. \$	1 067	1 226	2 095	2 068	3 155
Number of crew	1 235	1 268	1 343	1 347	1 439
Number of boats according to size (e)—					
Under 6 metres	120	127	147	149	170
6 and under 9 metres	92	82	88	81	83
9 and under 12 metres	132	129	116	117	118
12 and under 15 metres	152	151	157	150	148
15 and under 18 metres	69	77	77	78	83
18 and under 21 metres	15	15	15	15	17
21 and under 26 metres	5	9	8	10	13
26 and under 30 metres	2	1	4	4	5
30 metres and over	2	3	4	3	3

(a) Based on figures collected in 1969 adjusted for new registrations and de-registrations.

(b) Complete details collected.

(c) Based on figures collected in 1974 adjusted for new registrations and de-registrations.

(d) Excludes tender boats.

(e) Size groupings, originally in feet, have been directly converted to the nearest metre.

The boats used for the estuarine fisheries are mostly small vessels, propelled by diesel or petrol motors of low power. The offshore vessels range in length from 9 metres to over 30 metres and almost invariably are powered by diesel engines. Refrigeration of the catch at sea is becoming more common, the four main types being ice box, ice cooling, brine tanks and dry refrigeration; almost all boats have wells or deck tanks which serve to keep the catch alive, e.g. southern rock lobster or abalone.

Production

Fish Catch

The following table shows the production of certain types of fish caught in Tasmania for a five-year period. The fish types appear in the table without any further description to identify the particular species but a specification of the more common species for each type is given earlier in this section.

Fish: Production by Type
(*000 kg Estimated Live Weight) (a)

Type	1971-72	1972-73	1973-74	1974-75	1975-76
Mullet	11	7	7	5	4
Tuna	44	40	<i>n.a.</i>	135	13
Shark	859	497	1 187	651	1 238
Australian salmon	508	461	371	631	473
Flathead	63	39	73	23	32
Barracouta (snoek)	581	915	598	760	143
Whitebait	5	1	3	..	..
Cod	4	4	2	2	1
Flounder	30	14	10	18	5
Trevally	38	63	41	74	57
Trumpeter	15	7	7	4	2
Garfish	34	36	50	40	35
Other	189	181	(b) 7 535	527	226
Total	2 380	2 265	(b) 9 884	2 870	2 229

a) Estimated live weights are calculated from landed weights by conversion factors since quantities of fish are reported frequently in a gutted, headed and gutted, or otherwise reduced condition (e.g. barracouta and shark).

b) Used mainly for input to a fish protein factory at Triabunna which closed down in mid-1974.

Crustaceans and Molluscs

In terms of value, the most important item in the Tasmanian catch is southern rock lobster (crayfish) and the next table shows details of production of this crustacean and also of molluscs:

Crustaceans and Molluscs: Production by Type

Type	1971-72	1972-73	1973-74	1974-75	1975-76
CRUSTACEANS (*000 kg WHOLE WEIGHT)					
Southern rock lobster ..	1 469	1 583	1 514	1 525	1 229
MOLLUSCS (*000 kg IN-SHELL WEIGHT)					
Squid	8	154	5	6	1
Oysters	53	147	207	105	94
Scallops	52	515	1 158	1 261	690
Abalone	2 971	2 172	2 060	2 108	2 429
Total	3 084	2 988	3 430	3 480	3 213

Development of the Tasmanian abalone fishery dates from 1964 when divers commenced taking abalone for export. The 1963-64 catch was only 33 000 kg. In 1975-76 the catch was 2 429 000 kg which was 1.1m kg below the record 1970-71 abalone harvest of 3 488 000 kg. Currently, in terms of value, abalone is the second most important species in the Tasmanian catch.

Comparison with Other States

Rock Lobster: Total production of rock lobster in Australia during 1975-76 was 13.3 million kg of which Tasmania produced nine per cent. The main producing states were Western Australia (70 per cent) and South Australia (17 per cent).

Abalone: In 1975-76 Tasmania was the leading producer of abalone in Australia contributing 46 per cent of the total Australian production of 5.2 million kg (in the shell) compared with Victoria's 27 per cent (1 404 000 kg).

Scallops: For many years Tasmania was the only state in Australia with a commercial scallop fishery; in 1955-56 Tasmania was joined by Queensland, but continued to retain its dominant position in the industry. In 1963, however, Tasmanian fishermen started a Victorian fishery in beds known to exist in Port Phillip Bay and the new site in its first year (1963-64) produced more than twice the quantity of the Tasmanian fishery. No scallops were dredged from Tasmanian waters in 1970-71, and only 52 000 kg in 1971-72, but following the discovery of new beds in Bass Strait the Tasmanian catch had increased to 1 261 000 kg in 1974-75. Production in Tasmania fell to 690 000 kg in 1975-76, while Victoria produced 2 792 000 kg, 62 per cent of the Australian total of 4 533 000 kg.

Catch of Fish Landed at Fishing Ports

The table that follows shows the proportion of fish landed at Tasmanian fishing ports. The information relates to port of landing only, and not to the area in which the catch was made.

**Proportion of Fish (Live Weight) Landed at Each Port
(Per Cent)**

Port	1974-75	1975-76	Port	1974-75	1975-76
Derwent & Channel—			Bass Strait & Islands—		
Dover	0.3	2.6	Bridport	1.7	2.8
Hobart	4.3	7.3	Currie .. ..	..	..
Kettering	2.3	6.5	Lady Barron	0.5	0.6
Margate	20.3	3.2	Port Sorell	25.1	25.3
Southport	0.4	0.2	Smithton	3.9	2.0
			Stanley	5.6	16.4
			"Tamar" (a)	1.3	3.1
			Wynyard	5.0	3.5
Total	27.6	19.8	Total	43.3	53.7
East Coast and Penin- sula—			West Coast—		
Bicheno	3.1	14.2	Strahan	0.6	0.2
Coles Bay	0.3	0.1			
St Helens	9.6	1.0			
Triabunna	8.0	5.5			
Dunalley	4.0	3.3			
Port Arthur	3.4	2.2			
Total	28.4	26.3	Total Tasmania	100.0	100.0

(a) Launceston, Beauty Point and other Tamar ports.

The next table shows the proportion of the total fish catch landed each month.

Forestry, Mining and Fisheries

Proportion of Fish (Live Weight) Landed in Each Month
(Per Cent)

Month	1974-75	1975-76	Month	1974-75	1975-76
July	2.8	1.3	January	8.6	26.1
August	2.7	1.7	February	9.3	10.9
September	13.2	4.4	March	9.6	14.0
October	2.5	7.1	April	15.0	9.9
November	4.3	3.1	May	16.3	11.8
December	5.9	6.3	June	9.7	3.4

Value of Production—Fishing

The table that follows gives details of gross values of edible fishery products. (For definition see later section 'Value of Production'.)

Fisheries: Gross Value of Production
(\$'000)

Particulars	1971-72	1972-73	1973-74	1974-75	1975-76
Fish (a)	643	546	1 235	768	1 108
Crustaceans (b)	3 351	3 203	3 338	3 476	3 670
Molluscs	1 935	1 989	2 440	2 683	3 733
Total	5 929	5 739	7 014	6 928	8 511

(a) Includes value of seaweed harvested for production of alginate.

(b) Mainly southern rock lobster but includes crabs.

Marketing

In general terms, it can be said that production of fish, crustaceans and molluscs from the Tasmanian fisheries far exceeds the demand generated by the relatively small State population; it follows, therefore, that the industry is largely dependent on its ability to find export markets, both interstate and overseas, and this raises the problem of preserving a perishable product. The problem of preservation has three aspects: (i) at sea; (ii) on shore; and (iii) in transit to market. Of the 616 registered fishing boats in 1974, 201 boats (i.e. 33 per cent) had refrigeration plants of various kinds. In addition, some catches, e.g. southern rock lobster, can be kept alive in boat wells. Cold storage facilities ashore serve to hold the catch before its despatch to interstate and overseas markets while actual exports are carried by air, by refrigerated trailer and container on the roll-on roll-off ferries and in the refrigeration chambers of conventional ships. The following table shows the value of exports and imports of fishery products. The fact that Tasmania has an exportable surplus, yet nevertheless imports some fishery products, is chiefly due to differences in type; the imported varieties include canned sardines, anchovies, oysters, crabs, etc. together with frozen, salted or smoked varieties mainly of European, New Zealand, Canadian or South African origin. The establishment of a Fisheries Development Authority (see the next section 'Fisheries Division—Administration') to promote and develop Tasmania's fishing industry should, if successful, result in significant changes in the industry. Increased catches will have to come from fish types not currently subject to heavy exploitation and this will be reflected in the types of fish being marketed.

Fishery Products: Value of Exports and Imports
(\$'000)

Particulars	1971-72	1972-73	1973-74	1974-75	1975-76
EXPORTS					
Fish (a)—Overseas	11	27	64	4	21
Interstate	452	482	660	573	422
Southern rock lobster—					
Overseas	1 146	439	863	802	339
Interstate	1 298	1 923	2 988	2 371	1 440
Molluscs—Overseas	1 680	1 117	1 780	2 030	2 391
Interstate	193	349	849	551	325
All types—Overseas	2 837	1 583	2 707	2 836	2 751
Interstate	1 943	2 753	4 497	3 495	2 187
Total	4 780	4 336	7 204	6 333	4 939
IMPORTS					
Fish—					
Fresh and frozen—					
Overseas	58	60	65	66	14
Interstate	155	172	130	107	94
Preserved in tins—					
Overseas	86	99	247	265	101
Interstate	105	142	225	227	302
Other (b)—Overseas	2	..	1	1	1
Interstate	29	28	31	21	16
All types—Overseas	146	160	313	332	116
Interstate	289	342	386	355	412
Total	435	502	699	686	528

(a) Includes fresh and frozen fish and fish preserved in tins.

(b) Includes smoked, salted and potted fish, extracts and caviar.

Fisheries Division

(Department of Agriculture)

Administration

The Division of Fisheries comes under the responsibility of the Minister for Primary Industry. For purposes of administration the Division is under the control of the Director of Agriculture.

Under the *Fisheries Act* 1959, provision is made for a Sea Fisheries Advisory Board to advise the Minister on fisheries except in respect of salmon, trout, eels and whitebait which come under the control of the Inland Fisheries Commission. The Board consists of nine members appointed by the Governor as follows: the Director of Agriculture (or his representative); the Commissioner of Police (or his representative); a representative of groups interested in the science of zoology; two representatives of processors; and four representatives of professional fishermen.

In mid-1977 Parliament was considering a bill which provided for the setting up of a Fisheries Development Authority which was to take over the activities carried out by the Fisheries Division.

Fisheries Control

Patrol and inspection duties are carried out by Division officers throughout the State. As well as Tasmanian fisheries, certain Australian waters and the Tasmanian section of the continental shelf are patrolled in addition to the enforcement of the provisions of the Australia-Japan Fishing Agreement; regular inspections are made of Japanese fishing vessels when they enter the port of Hobart. For fisheries control and patrol purposes the Division has five high powered patrol vessels plus the *Challenger* (21.2 metres), a long-range patrol-research vessel. Two new patrol vessels (one 12.2 metres) were expected to be operational by the end of 1977. Frequent use of light aircraft is made to assist in patrol duties. During 1975-76, 61 cases relating to breaches of fishery regulations went before the courts and resulted in total fines of \$6 384.

Research

Fisheries monitoring plays an important role in the Division's research. Analysis of catch and effort data together with measurement of the size of animals in the catch (market measuring) provides up to date information for assessment of closely managed fisheries such as rock lobster and abalone. These investigations are supported by population dynamics projects aimed to determine growth, age, movements and mortality rates. Tagging work at present underway with rock lobster and abalone is basic to this work. Similar studies not utilising tagging are in progress with jack mackerel.

Research is directed toward assessment of fish stocks in Tasmanian waters and investigation of reproduction and growth rates of the species principally fished and the effect of fishing on stocks. A large part of the research effort includes exploratory fishing to locate, test and quantify new potential fisheries and to engage in experimental fishing techniques and adaption of known techniques to the fishery. Research work also includes the culture of a variety of marine species.

Aquaculture research presently centres on hatchery studies of scallops and oysters with other projects involving investigation of farming techniques for mussels, scallops and oyster cultivation.

Pollution and marine chemistry research has evolved from environmental surveys to more intensive investigation of particular fisheries problems. Most work concerns an understanding of the distribution of heavy metals in a large estuary and in its fauna.

A small but growing number of trawlers are now fishing in east coast waters and the Division has become involved in monitoring trawl fishing. Assistance is given wherever possible and surveys of the fishing grounds are being undertaken.

REPORT ON PRIVATE FORESTRY DEVELOPMENT IN TASMANIA

Introduction

On 21 September 1976, Mr M. G. Everett and Mr S. W. Gentle were appointed to a Board of Inquiry to investigate and report on questions associated with private forestry development in Tasmania. The Report of the Board was presented to the State Government on 26 August 1977. The Board was appointed due to a growing concern at the rate at which private forests were being cut. The Government sought recommendations for present and future policy guidelines enabling control of private forestry development.

Terms of Reference of the Inquiry

The following items to be investigated summarise the guidelines set for the Inquiry:

- (i) The present and future economic significance of private forests in Tasmania.
- (ii) The present and future economic, social and environmental effects of changes in use of privately owned forest land.
- (iii) The practices necessary to produce the most desirable form and standards of management of privately owned forest lands, and specifically:
 - (a) the policies most appropriate to such practices;
 - (b) the incentives necessary to enhance such practices; and
 - (c) the means by which such policies and incentives can most appropriately be implemented, including the provision of necessary finance.
- (iv) The best means of ensuring that appropriate liaison and co-operation exist between the State Government and owners and occupiers of private forest lands.
- (v) The extent to which the development and exploitation of private forest lands have indirect effects on the welfare of Tasmanians, including the supply of clean water, the preservation of wildlife habitat, and tourist, scenic and recreation values.
- (vi) The desirable administrative and legislative machinery required for implementing the Board's recommendations.

The Inquiry

The Board of Inquiry began its public sittings on 6 December 1976 and received 43 written submissions. The members of the Board inspected many areas of Crown forest and were taken on field inspections by representatives of the following companies: Associated Pulp and Paper Mills Ltd; Tasmanian Pulp and Forest Holdings; Northern Woodchips; and Consolidated Forest Owners Pty Ltd.

In an attempt to assess the practical efficiency of possible courses of action, the Board travelled widely in Australia and overseas including New Zealand, Sweden, the U.S.A. and Japan.

Summary of Principal Findings and Recommendations

The Report deals at length with considerations under the third Term of Reference (above).

Proposed Forest Practices Act

The Report proposed that a Forest Practices Act be passed which would be unique to Australia, being designed to establish, in the long run, proper standards of management ensuring conservation of the forest environment and a future supply of private timber. At present only one quarter of privately woodchipped land is expected to be returned to productive forest use and, given the regeneration cycle of 40 years, critical timber shortages may occur. It was considered that the proposed Forest Practices Act should relate to all Tasmanian forests.

The Report recommended that the proposed Act clearly define forest lands and classify water courses within the State. The Board has defined forest lands to include 'all those lands capable of supporting a merchantable stand of timber

and which are not actively being employed for a use which is incompatible with timber growing'. Classification of permanent water courses should be into the categories: 'major, significant, minor and non-significant for the purposes of deciding the most appropriate measures to preserve or enhance their quality through forest practices'.

The Report recommended that the proposed Act relate to the following forestry practices: (i) forest regeneration; (ii) logging practices; (iii) site preparation and planting; (iv) application of chemicals; (v) clearing of classified forest lands; (vi) treatment of logging wastes; (vii) silvicultural operations; (viii) streamside management practices; (ix) drawing up forest working plans; (x) registration of foresters; (xi) use of fire; (xii) game control; and (xiii) aesthetics. It should be based on the following criteria:

- (a) The encouragement of the largest net sum benefits;
- (b) Maintenance of productivity consistent with environmental protection;
- (c) Recognition of regional forest variations;
- (d) Co-ordination with related forestry regulations and programs;
- (e) Definition of the forest land to which a Forest Practices Act applies;
- (f) Separation of actual detailed regulations from the body of the Act;
- (g) Latitude for the forest landowner so that administrative requirements are capable of execution by him;
- (h) Administrative boards, advisory bodies, etc. to be constituted of a majority of members knowledgeable in the scientific management of forests;
- (i) Forest practices regulations under the Act to be developed from a wide range of sources, including the public;
- (j) Need for a single State agency with adequate staffing and forestry expertise to enforce the regulations;
- (k) Adequate provision for 'due process of law' in an effective and expeditious way; and
- (l) Rights of legitimate conversion of land to other uses should be preserved.

The Board envisaged that, 'Although the Act should set out the objects, broadly specified procedures and sanctions and provide for an inspectorial system, the details of the practices required, methods of operation and means of implementation should be developed on a regional basis.' Minimising the wastage of timber and environmental effects such as soil erosion, ecological damage to animals and subordinate vegetation distributions and populations, and hydrological damage are prime objectives of the proposed Act.

Administrative Machinery

The Board found that further administrative machinery was necessary to foster private forestry development. Conscious of the problems associated with an increase in the size of any bureaucracy, it recommended the following guidelines:

- (i) utilisation of existing bureaucracy with as little disruption as is possible to existing arrangements;
- (ii) a private forest administrative framework separate (where possible) from the State forest administration framework;
- (iii) State and private forestry should not compete destructively but be co-ordinated in pursuance of their respective policies;

- (iv) an Inspectorate should be re-established within the existing Forestry Commission with the primary function being to monitor the operation of the proposed Forest Practices Act; and
- (v) private forestry organisational headquarters should be based in Launceston (associated with forestry training).

It was also recommended that Private Forestry Council be established, primarily to enable private foresters to readily express opinions to the Minister for Forests and the Forestry Commission. The proposed council was designed to have Statutory powers and complement the Private Division of the Forestry Commission.

Disincentives

The Board recognised the following existing disincentives to the development of private forests:

- (i) State probate duty and Federal estate duty;
- (ii) income and sales tax affecting private forestry management;
- (iii) low royalty payments; and
- (iv) difficulty in obtaining finance.

The recommendation in respect of (i) was that 'State probate duty be abolished in respect of trees growing on land assessed for duty under the *Deceased Persons' Estates Duties Act 1931* and that the State Government, through its membership of the Australian Forestry Council, urge the Commonwealth Government to make a similar amendment to the *Estate Duty Assessment Act 1914* in respect of Federal estate duty.'

The Board, in recommending the abolition of these two duties believed that this would provide a suitable incentive for long term investment in private forests and would aid the regeneration process. The revenue derived from State probate duty on standing timber was seen to be minimal and the removal of the duty would remove the psychological investment disincentive to private forest growers. Subsequently, in the State Budget brought down on 1 September 1977, probate duty in respect of standing timber was abolished.

The Board saw the basic problem in the income tax area as the failure to distinguish forest capital from forest income and this had led to a situation where only two alternatives existed—either the creation of industrial forest where a company owns forest land or use of timber grown on Crown land which is not subject to income taxation. It was recommended that an income tax reform proposal should be submitted to the Federal Government by the State Government and the Southern Chapter of the Australian Forest Development Institute. Reform of Federal sales tax policies in relation to equipment and machinery used in private forestry was also recommended.

The Board found that royalties paid for privately grown timber, particularly pulpwood, were too low. It recommended that action should be taken to put wood prices on the basis of a cost-of-production component plus a royalty component ensuring also that sawlog and pulpwood prices bear a well-defined range of ratios to each other. Factors to be considered in the construction of the two components were:

- (a) Cost-of-production component: (i) forest management costs; (ii) forest protection costs; (iii) forest harvesting costs.

- (b) Royalty component: (i) changes in world market prices for key product; (ii) changes in Australian pulpwood prices; (iii) current sawlog royalty rates; (iv) location of supply with respect to processing or export point.

The basic disincentive regarding finance to private forestry was that under the *State Advances Act 1935*, forestry is not included in the definition of rural industry and hence cannot secure advances under that Act. The Board recommended a loan scheme funded by the State Government and a loan guarantee scheme. In principal, the loan scheme was to make available capital sums on a more attractive basis than loans from orthodox lending institutions. The Board examined conceptually similar schemes in New South Wales, Victoria and New Zealand where repayments were geared to periodic income generated from harvesting forests. Stringent conditions associated with their loan schemes have, however, reduced the potential of the schemes. The proposed scheme was to provide assistance in respect of planting, maintenance and management of private forests for both softwoods and hardwoods. The loan guarantee scheme was intended to assist industrial forestry interests, co-operatives, corporate bodies and individuals. The State would guarantee loans granted for appropriate private forestry development.

Incentives

The incentives proposed, particularly in respect of specialised assistance, ' . . . should be viewed as options which can be made available in the light of the circumstances of each case.' The following incentives were recommended:

- (i) The Government should provide direct financial assistance to owners of private land who wish to voluntarily dedicate their land to permanent timber production or other forest use.
- (ii) An 'annuity scheme' providing payments to owner-operator farmers, in effect hiring a farmer's labour and renting his land and increasing State forestry resources, thus assisting the farmer and conserving the capital funds of the Forestry Commission.
- (iii) Direct grants for private forestry development.
- (iv) Specialised assistance to approved co-operatives.
- (v) Establishment of a diploma course in forest technology at the Newnham Campus of the Tasmanian College of Advanced Education.
- (vi) Establishment of an information centre co-ordinated with the proposed Private Forestry Division.
- (vii) Establishment of a Forest Products Laboratory within the proposed Private Forestry Division and investigation by the Government of: (a) amalgamation of forest ecosystem research into one unit of a scientifically viable size; (b) the incentives needed to promote long term independent research; and (c) the establishment of a Soil Survey Unit and expansion of soils research.
- (viii) Expansion of public relations and education programs involving the private sector by the Forestry Commission and the Education Department.

Miscellaneous Recommendations

Other recommendations made were as follows:

- (i) Pulpwood processing companies should be licensed to cut pulpwood from private land resources (other than those of their own freeholds) on the basis of a maximum annual quota, related where appropriate to their entitlement to Crown pulpwood.

- (ii) Amendments to the *Forestry Act* 1920 should be made so as to give the Forestry Commission power to negotiate co-operative management projects with private forest owners.
- (iii) Special studies should be commissioned exploring the practicability of integrated forest products operations on Bruny, King and Flinders Islands.
- (iv) A study assessing the quantitative economic relationship between road and rail transport of timber in Tasmania should be undertaken.

Appendix

VALUE OF PRODUCTION, PRIMARY INDUSTRIES

Introduction

The statistics contained in this appendix are compiled annually and include gross and local values of production for agricultural commodities, forestry, fishing and hunting.

Forestry, Fishing and Hunting

Estimates of gross and local value of production are calculated for forestry, fishing and hunting and are included with statistics for agricultural commodities in a table below. Because of difficulties and the cost involved, it is not practicable to collect statistics on an integrated economic census basis for these industries and therefore comparisons can not be made with the mining, manufacturing, etc. industry sectors.

Agricultural

It has not been practicable until recent years to collect annual statistics of farm income and expenditure direct from farmers. Instead, estimates have been made of the gross and local values of farm production each year, the basis of these estimates being, in the main, commodity data obtained from the census of rural holdings conducted annually on 31 March. Notes below indicate the scope of these estimates and sources of information as well as definitions of the terms *gross* and *local* value of production.

Advances in computer processing have now made it feasible to conduct, on a sample basis, an annual agricultural finance survey and results of these surveys have already been published by the Australian Statistician for the years 1971-72 to 1975-76 and are also included in this publication (see Chapter 7). These surveys are based on new data concepts which enable comparisons to be made between the agricultural sector and other industries such as mining, manufacturing, etc., which are included in integrated economic censuses. 'Value added' for the various industry sectors covered by the integrated economic censuses are compared with value added for the agricultural sector (based on agricultural finance surveys) in the section 'Integrated Economic Censuses' in Chapter 18.

With the introduction of these annual surveys, the 'Value of Production' series of statistics is being scaled down so that as from 1975-76, only estimates of *gross* and *local* value of production of farm products will be produced, i.e. *net* values of production will not be calculated.

No estimates of net value of production for 1974-75 or earlier years are included in this publication, but are available upon request. For 1974-75, estimates of net value of production have been calculated for the 'Agricultural

industry' in total only; separate estimates for 'Crops', 'Pastoral', 'Dairying', 'Poultry' and 'Bee-farming', which were calculated in previous years, have not been made for 1974-75.

Definition

The following uniform definitions, where appropriate, are employed for primary industries:

- (i) *Gross Value of Production* is the value placed on recorded production at the wholesale prices realised at the principal markets. In cases where primary products are consumed at the place of production, or where they become raw material for a secondary industry, these points of consumption are presumed to be the principal markets. Subsidies and bounties paid by the State and Federal Governments to primary industries are, in general, included in gross value of production.
- (ii) *Marketing Costs* include freight, cost of containers, commission and other charges incidental thereto.

Sources of Information

Primary Production, Agriculture

The data used are those concerning quantity of agricultural production (supplied principally by farmers, etc.) together with information collected from various sources on prices realised in the principal markets for different products and the costs of marketing these products. Price and cost data are obtained from statutory authorities (e.g. Australian Wheat Board), market reports, special returns collected from wholesalers, brokers, auctioneers, etc., and from overseas and interstate trade statistics.

Primary Production, Other

(i) *Hunting*: Principal data are derived from export of skins and information on the annual mutton bird catch.

(ii) *Forestry*: Principal value data are available from the annual factory census, since forestry products are the basic raw material for sawmills, newsprint and paper mills, etc.

(iii) *Fishing*: Quantity data are supplied by fishermen and prices are collected from fish wholesalers and agents.

Period Covered

Primary, Agriculture: Generally the year ended 30 June but includes current season's production harvested after 30 June, e.g. potatoes.

Primary, Other: Year ended 30 June.

The Agricultural Industry

The Agricultural industry, for value of production purposes, is divided into: (i) crops; (ii) livestock slaughterings and other disposals; and (iii) livestock products.

Crops

The following table shows gross values for the crops sector:

Fisheries

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Crops: Gross Value (a)
(\$'000)

Crop	1971-72	1972-73	1973-74	1974-75	1975-76
Cereals for grain	2 066	1 896	2 916	3 164	2 261
Legumes mainly for grain.. .. .	258	147	376	525	163
Crops for hay (a)	167	426	394	530	146
Orchard tree fruit	12 430	17 312	14 473	14 910	13 138
Berry and small fruit	1 037	r 960	949	r 1 406	794
Vegetables for sale for human consumption	8 648	10 863	13 374	15 071	17 438
Other crops (b)	3 352	3 953	4 765	3 064	4 450
Pasture harvested for hay	5 612	4 405	8 839	10 470	5 628
Pasture harvested for seed	179	79	562	269	74
Total	r 33 748	r 40 041	r 46 649	r 49 409	44 092

(a) Excludes crops and pasture harvested for green feed or silage.

(b) Excludes harvested pasture.

The next table shows quantity and value details for the main items comprising the crops sector. Also included in the table is the average value per unit of production.

Crops: Gross Value 1975-76

Crop	Unit of quantity	Production	Gross value	
			Per unit	Total
			\$	\$'000
Crops (excluding pasture harvested)—				
Cereals for grain—				
Barley	tonne	18 389	98.83	1 817
Oats	tonne	3 497	78.80	276
Wheat	tonne	1 728	97.31	168
Total cereals for grain .. .. .	..	..	..	(a) 2 261
Legumes mainly for grain—				
Beans, navy	tonne	152	308.00	47
Peas, field	tonne	586	155.33	83
Total legumes mainly for grain .. .. .	..	..	..	(a) 163
Crops for hay (b)	tonne	5 004	29.17	146
Fruit—				
Orchard tree fruit—				
Apples	bushel	3 817 000	3.29	(c) (d) 12 546
Pears	bushel	143 000	3.43	489
Total orchard tree fruit .. .. .	..	..	..	(a) 13 138
Berry and small fruit—				
Currants	kg	470 272	0.50	234
Loganberries	kg	153 605	0.47	72
Raspberries	kg	655 542	0.50	328
Strawberries	kg	71 627	1.60	115
Total berry and small fruit .. .. .	..	..	..	(a) 794
Vegetables for sale for human consumption—				
Beans, French and runner	tonne	10 077	144.39	1 455
Peas, green (ex-shell)	tonne	20 680	183.22	3 782
Potatoes	tonne	95 615	76.76	7 340
Total vegetables for sale for human consumption .. .. .	..	..	..	(a) 17 438

Crops: Gross Value 1975-76—continued

Crop	Unit of quantity	Production	Gross value	
			Per unit	Total
			\$	\$'000
Other crops—				
Hops (dry weight)	tonne	1 129	1 395.07	1 575
Other .. .. .	..	..	..	2 875
Total other crops .. .. .	..	..	..	4 450
Total (excluding crops from pasture)	..	..	..	38 390
Pasture (e) harvested—				
Pasture harvested for—Hay	tonne	322 235	17.47	5 628
Seed	kg	316 776	0.23	74
Total crops from pasture .. .. .	..	..	..	5 702
Total all crops .. .. .	..	..	..	44 092

(a) Includes other crops not specified in the table.

(b) Excludes pasture for hay.

(c) Adjusted for Government Stabilisation Subsidy: plus \$2 540 000 for apples and plus \$19 000 for pears.

(d) Includes payments under the *Apple Industry (Assistance) Act* of \$742 000.

(e) Includes lucerne.

Average Unit Gross Values: In the next table, average unit gross values for the principal crops are shown for a five-year period. The unit values have been calculated for the principal agricultural products by dividing the total quantity produced into the total gross value of production for each crop. They therefore represent weighted average 'prices' of the product in all markets (including the farm itself where quantities are retained for farm use) and indicate trends rather than prices actually paid to farmers.

Average Unit Gross Values: Principal Crops
(**\$**)

Crop	Unit of quantity	1971-72	1972-73	1973-74	1974-75	1975-76
Cereals for grain—						
Barley	tonne	47.29	52.53	77.00	91.78	98.83
Oats	tonne	43.18	71.52	87.11	77.53	78.80
Wheat	tonne	54.04	52.20	103.97	103.51	97.31
Legumes mainly for grain—						
Beans, navy	tonne	117.37	120.40	160.00	308.00	308.00
Peas, field	tonne	94.03	104.11	184.46	165.12	155.33
Crops for hay	tonne	12.84	24.38	30.11	63.95	29.17
Vegetables for sale for human consumption—						
Beans, French and runner ..	tonne	109.83	111.03	97.03	118.64	144.39
Peas, green (ex-shell) ..	tonne	115.31	106.14	115.72	163.27	183.22
Potatoes	tonne	37.32	57.23	86.92	59.43	76.76
Turnips	tonne	106.02	105.22	93.98	115.24	193.66
Orchard tree fruit—						
Apples	bushel	1.97	2.30	2.29	2.82	3.29
Apricots	bushel	3.51	4.91	3.90	7.56	4.84
Pears	bushel	2.39	3.48	2.34	3.61	3.43

Average Unit Gross Values: Principal Crops—*continued*

(\$)

Crop	Unit of quantity	1971-72	1972-73	1973-74	1974-75	1975-76
Berry and small fruit—						
Blackberries	kg	0.23	0.24	0.27	0.41	0.40
Currants	kg	0.34	0.35	0.39	0.47	0.50
Gooseberries	kg	0.20	0.22	0.24	0.31	0.32
Loganberries	kg	0.35	0.34	0.38	0.46	0.47
Raspberries	kg	0.35	0.35	0.41	0.53	0.50
Strawberries	kg	0.83	0.95	1.02	1.73	1.60
Hops	kg	1.88	1.96	1.65	0.86	1.40
Pasture (a) for hay	tonne	12.84	20.43	19.72	27.85	17.47
Pasture (a) for seed—						
Clover	kg	1.02	1.23	1.02	1.34	1.14
Other	kg	0.31	0.45	0.49	0.45	0.21

(a) Includes lucerne.

Livestock Slaughterings and other Disposals

For the main categories of livestock sold for slaughter, the first of the next two tables shows average prices paid, and the second table the gross value of production (including an adjustment for net exports).

Average Livestock Prices (a)

(\$)

Livestock	1971-72	1972-73	1973-74	1974-75	1975-76
Cattle (other than calves) ..	104.10	108.60	145.20	71.10	71.24
Sheep	3.00	5.80	9.60	3.50	2.51
Lambs	5.40	8.30	14.20	7.90	8.10
Pigs	31.70	31.40	43.10	54.90	58.27

(a) Estimated average prices, on the hoof, of livestock sold for slaughter.

Livestock Slaughterings and Other Disposals (a): Gross Value

(\$'000)

Particulars	1971-72	1972-73	1973-74	1974-75	1975-76
Cattle and calves	19 329	28 799	41 314	17 753	20 740
Sheep and lambs	5 634	8 622	10 209	6 359	5 710
Pigs	5 254	4 821	4 992	5 625	5 481
Poultry	1 251	1 320	1 505	1 970	2 121
Total	31 468	43 562	58 019	31 707	34 052

(a) Includes an adjustment for net export of live animals.

Livestock Products

A wide range of goods are manufactured in Tasmanian factories from livestock products, but the number of such livestock products is very limited. The two major ones are wool and milk and in terms of gross value, in 1975-76 accounted for 44 and 45 per cent respectively.

Details of gross values for livestock products for the years 1971-72 to 1975-76 are shown below.

**Livestock Products: Gross Value
(\$'000)**

Particulars	1971-72	1972-73	1973-74	1974-75	1975-76
Wool—					
Shorn (including crutchings)	(a)17 044	35 291	30 226	22 930	27 139
Fellmongered and exported on skins ..	957	2 191	1 747	960	1 281
Total	18 001	37 481	31 973	23 890	28 420
Dairy products, whole milk used for—					
Processing	19 369	17 297	17 369	22 407	21 085
Human consumption and other purposes	5 071	5 252	5 775	6 951	7 669
Total dairy products	24 440	22 549	23 144	29 358	28 754
Eggs	4 373	4 502	4 548	4 903	6 239
Honey	159	213	322	423	446
Beeswax	7	7	8	14	21
Total livestock products ..	46 980	64 750	59 995	58 588	63 880

(a) Includes Government wool deficiency payment of \$1 258 000.

All Primary Industries (Excluding Mining)

In the table that follows *gross* and *local* values of production for all primary industries (excluding mining) are brought together for a five-year period.

**Tasmanian Primary Production: Gross and Local Value
(\$'000)**

Particulars	1971-72	1972-73	1973-74	1974-75	1975-76
CROPS (a)					
Gross value of production	r 33 748	r 40 041	r 46 649	r 49 409	44 092
Less Marketing costs	9 705	11 780	9 680	9 739	7 742
Local value of production	r 24 043	r 28 261	r 36 969	r 39 670	36 350
LIVESTOCK SLAUGHTERINGS AND OTHER DISPOSALS					
Gross value of production	31 468	43 562	58 019	31 707	34 052
Less Marketing costs	2 512	3 199	4 019	2 624	3 010
Local value of production	28 956	40 363	54 000	29 083	31 042
LIVESTOCK PRODUCTS					
Gross value of production	46 980	64 750	59 995	58 588	63 880
Less Marketing costs	1 847	3 098	2 733	4 461	2 847
Local value of production	45 133	61 652	57 262	54 127	61 033

Tasmanian Primary Production: Gross and Local Value—*continued*
(\$'000)

Particulars	1971-72	1972-73	1973-74	1974-75	1975-76
TOTAL AGRICULTURE (a)					
Gross value of production	r 112 196	r 148 353	r 164 663	r 139 704	142 024
Less Marketing costs	14 064	18 077	16 432	16 825	13 599
Local value of production ..	r 98 132	r 130 276	r 148 231	r 122 879	128 425
FORESTRY					
Gross value of production	21 927	30 922	43 273	50 022	46 991
Less Marketing costs	3 734	5 562	7 393	7 160	6 317
Local value of production ..	18 193	25 360	35 880	42 862	40 674
FISHING					
Gross value of production	5 929	5 739	7 014	6 928	8 511
Less Marketing costs .. ..	..	..	..	..	..
Local value of production ..	5 929	5 739	7 014	6 928	8 511
HUNTING					
Gross value of production	259	415	470	428	531
Less Marketing costs	19	28	31	29	31
Local value of production ..	240	387	439	399	500
TOTAL PRIMARY (EXCLUDING MINING) (a)					
Gross value of production	r 140 311	r 185 429	r 215 420	r 197 082	198 057
Less Marketing costs	17 817	23 667	23 856	24 014	19 947
Local value of production ..	r 122 494	r 161 762	r 191 564	r 173 068	178 110

(a) Excludes crops and pastures harvested for green feed and silage.

Chapter 9

MANUFACTURING, ELECTRICITY AND GAS

INDUSTRIAL DEVELOPMENT

Primary-Secondary Relativity

Prior to World War II, there were few large manufacturing establishments in Tasmania. The economy of the State was dominated by primary industries which, in 1938-39, accounted for 60 per cent of the net value of production of all recorded industries.

By today's criteria, pre-war operations of manufacturing establishments were on a small scale but some enterprises have since emerged as national leaders in particular fields. Despite the limitations of geographical isolation and a relatively small domestic market, the State went through a period of important industrial development following World War II; the cessation of hostilities released a world-wide demand for goods and services, and a number of new Tasmanian factories were established to take advantage of the situation.

Post-war expansion of factory activity has made the State an important supplier of manufactured goods and processed materials. Major factories which have been established since World War II include producers of chemicals, woodpulp, textiles, processed foods, industrial equipment, refined aluminium, manganese alloys, iron ore pellets and woodchips.

Since the early 1950s, the manufacturing sector has been predominant in terms of its economic significance to the State. (See the section 'Integrated Economic Censuses' in Chapter 18 for an inter-sector comparison of various industry sectors.)

Tasmania as a Site for Industry

Tasmania has certain advantages which have attracted new industrial enterprises. The principal factors are:

Hydro-Electric Power: The availability of cheap, bulk electricity for power intensive industries (e.g. in metal smelting and refining, heavy chemicals, paper and paper pulp making) has had a significant influence on Tasmania's industrial development and is discussed in greater detail below.

Water Resources: In some parts of the world, water resources are inadequate; shortage of water and the high cost of conservation, re-use and 'purification' have become major problems in the expansion of industry. This is not the situation in Tasmania where water is abundant. The terrain favours the economical construction of high-level storages, while run-of-the-river pumping schemes are feasible at many sites.

Industrial Land, Harbours and Shipping: The decentralized nature of the State and a policy of making provision for industry in each main region has enabled industrial land to be both readily available and cheap. Its proximity to deep-sea ports is another factor influencing the expansion of industry in and around the four main centres of population (Hobart, Launceston, Burnie and Devonport). The associated ports are fully equipped to handle unitised, containerised, roll-on/roll-off and orthodox cargoes, as well as cargo in bulk form. They are served by overseas and interstate ships using modern cargo handling techniques.

Stability of the Workforce: Tasmania has established a record over many years for having less industrial disputes and almost always, has fewer days lost per employee each year due to strikes, than any other Australian state. The Tasmanian workforce also exhibits a more stable pattern in terms of duration of employment.

The policy of the State Government is to encourage the establishment and growth of industries in Tasmania and to promote trade as provided by the *Industrial Development Act 1954*. This Act is administered by the Director of the Department of Planning and Development under the Minister for Planning and Development.

The Department of Planning and Development gives advice, information and assistance on a wide range of important industrial matters. It is empowered to provide financial assistance, including loan guarantees, to help the expansion of existing industries and the establishment of new enterprises. As a service to industry, the Department has officers specialising in the areas of finance, trade, development, research and the publication of information, and they are supported by the resources and expertise of Federal and other State Government departments and instrumentalities. A Trade Officer operates from the offices of the Agent-General for Tasmania in London. (A short article on the role and functions of the Department of Planning and Development is included in Chapter 18.)

Electric Power and Industrialisation

The key to the large scale industrial development of Tasmania was its abundant water at high level in the Central Plateau and the State's industrial revolution may be thought of as beginning in 1916 when the Waddamana turbines below the Great Lake began operating; from the initial 7 500 kW then developed, the hydro-electric system has expanded to a capacity of 1.4m kW (excluding gas turbines at Bell Bay with a generator capacity of 240 000 kW). The availability of cheap electric power resulted in the establishment of new types of industry, some on a very large scale; examples are: electrolytic zinc production, 1916; carbide manufacture, 1918; fine paper production, 1938; aluminium production, 1955; ferro-manganese production, 1962. The introduction of pulp and paper manufacture is a special case to the extent that changes in technology made possible the use of native hardwoods for the first time; the production of suitable pulp from eucalypts was pioneered in Tasmania before plants were established in other Australian states.

Major Industries

Source of Data: In normal circumstances, the Bureau of Statistics does not publish information relating to any single enterprise or establishment, and treats any such information it collects as strictly confidential. It does, however, publish statistical aggregates where they do not directly or indirectly reveal the operations of any single informant. A description of industrial development without men-

tioning individual organisations is not very illuminating; therefore, the *State Department of Planning and Development* has prepared the following section and accepts responsibility for the information given.

Brief descriptions of some of the major factories operating in Tasmania are given below (see the section 'Mining', in Chapter 8 for descriptions of some major mining companies operating in the State):

Associated Pulp and Paper Mills Ltd (Burnie, Wesley Vale, Long Reach): This group of companies is a major Australian integrated forest products complex and Australia's principal producer of fine printing and writing papers, magazine papers and coated papers. In Tasmania the Company operates major manufacturing complexes at three centres: (i) *Burnie*—where it commenced paper production in 1938; present annual capacity of the Burnie plant is 121 000 tonnes. Hardboard is also produced at the Burnie complex by the associate company, *Hardboards Australia Ltd.* (ii) *Wesley Vale*—In 1970 the first stage of an integrated pulp and paper complex was completed when the first paper machine commenced production. The machine has an annual capacity of 35 500 to 41 000 tonnes of paper. Production at Wesley Vale is mainly of magazine papers. A particle board factory, run by the subsidiary *Burnie Timber Pty Ltd*, also operates at Wesley Vale; annual production exceeds 2.5m square metres. (iii) *Long Reach*—A.P.P.M. completed its woodchip plant and made its first export shipment in 1972. The Company has two contracts for the export of woodchips to Japan: 900 000 tonnes per annum from 1972 to 1978; and 600 000 tonnes per annum from 1978 to 1983.

Australian Newsprint Mills Ltd (Boyer): Since beginning operations in 1941, this Company has, through a series of expansion programs, increased its annual production of newsprint from 27 400 tonnes to its present capacity of 205 000 tonnes. The construction of a \$10.5 million thermo-mechanical pulping plant, to produce pulp for the production of newsprint from *Pinus radiata* chips, began early in 1977 and was expected to be completed by December 1978. In conjunction with the construction of the new pulping plant, the Company is installing two modern grinders at a cost of approximately \$2 million to increase capacity and replace obsolete machines.

Cadbury Schweppes Australia Ltd (Claremont): In 1921 an association of three British confectioners established their Australian plant at Claremont, near Hobart. Today, the plant is the largest cocoa and confectionery factory in Australia. In conjunction with H. P. Bulmer and Co., a plant was installed at Claremont in 1974 for apple juice extraction and concentration for export. During 1976 production capacity increased when a new chocolate refining layout was commissioned.

Cascade Group of Companies (Statewide): Operates the Cascade Brewery in Hobart (established in 1824), the Boag's Esk Brewery in Launceston and cordial, fruit juice and apple cider making companies.

Coats Patons (Aust.) Ltd (Launceston): This Company first produced yarns in 1923 and steady expansion has followed. Their factory at Launceston produces knitting yarns, both wool and synthetic and annual production is approximately 1.5 million kilograms.

Comalco Aluminium (Bell Bay) Ltd (George Town): An aluminium smelter and alumina refinery commenced production in 1955 at Bell Bay under Federal Government ownership. In 1961 the plant and facilities were acquired by the present Company which, by successive expansion programs, has increased production of aluminium nine-fold. Refinery operations ceased in 1974 and alumina



Lake Pedder viewed from Mt Cullen

[By courtesy of the Hydro-Electric Commission]



*Mt Anne seen from the
Scott's Peak Road*

[Dr K. Doran]

[Photos by courtesy of the Hydro-Electric Commission]

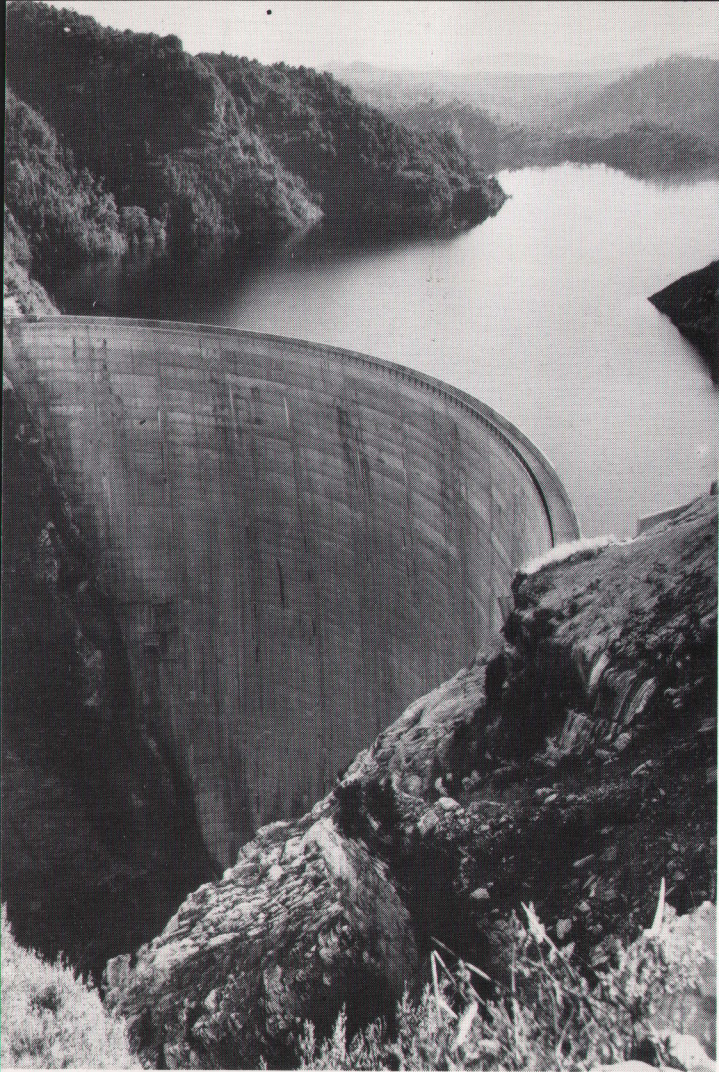
*Tasmania's only
thermal electricity
generating station
at Bell Bay*





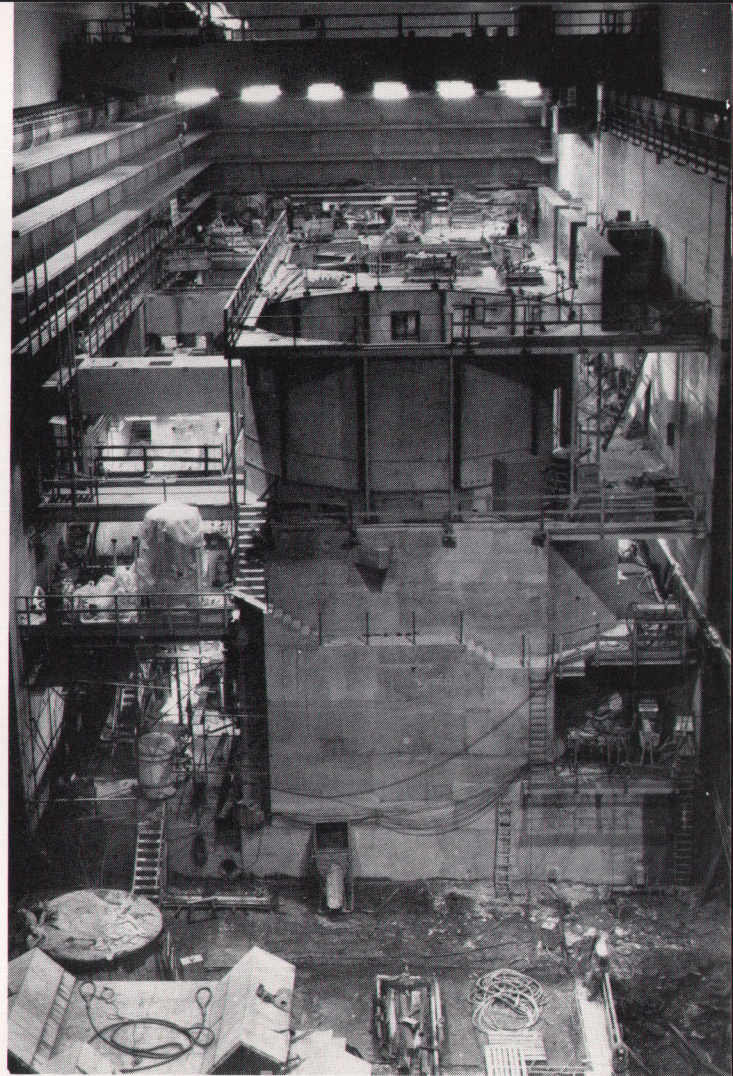
Mobile pea viners at work on the North-West Coast

[The Advocate, Burnie]



The Gordon Dam, largest structure of its kind in the Southern Hemisphere and a focal point in the Gordon River Power Development, Stage I

[By courtesy of the Hydro-Electric Commission]



Installation of the first two generating machines in the Gordon Power Development was well advanced by late 1977. The massive concrete casing for the turbines and generators can be seen in this picture taken nearly 200 metres underground.

for smelting is now imported from Queensland. The smelter is now the largest in Australia. A \$20 million expansion program was completed in 1977 which lifted production capacity from 95 600 tonnes to 114 500 tonnes per annum.

Edgell, Division of Petersville Ltd (Devonport and Ulverstone): The Company is Tasmania's leading processor of frozen and canned vegetables. For 1976-77 the joint Ulverstone and Devonport production expenditure of Edgells is expected to rise to \$20 million and capital expenditure on replacement and new production facilities should total approximately \$900 000.

Electrolytic Zinc Company of A/asia Ltd (Risdon and Rosebery): Established in 1916, the factory at Risdon is the largest producer of zinc in Australia and the second largest electrolytic zinc plant in the world. It exports an extensive range of zinc and zinc alloys to over 30 countries. The Risdon plant has the capacity to produce approximately 600 tonnes of zinc per day. Apart from zinc and zinc alloys the Company also produces cadmium, sulphuric acid, superphosphate, sulphate of ammonia and aluminium sulphate. Production capacity at the Company's mining complex at Rosebery is 610 000 tonnes of silver-lead-zinc ore per annum. The zinc plant supplies a large proportion of Australia's total requirements.

General Jones Pty Ltd (Smithton): On 1 April 1976, the frozen food division of Henry Jones (IXL) and Cottee's General Foods combined and formed this independent Company. The amalgamation involved a \$13.7 million expansion program to double the output of the existing Smithton factory. A consequent increase in the area of vegetables for processing is expected as development progresses.

Goliath Portland Cement Co. Ltd (Railton): Formed in 1928 to take over a small plant, the Company began production in 1930 with an annual output of 66 000 tonnes of cement a year. Annual production capacity increased to 94 000 tonnes by the end of the decade. Production capacity has since increased rapidly, passing the 100 000 tonnes mark in 1952 and reaching 200 000 tonnes in 1968 and 300 000 tonnes one year later. Plant expansion in 1970 lifted annual production capacity to over 500 000 tonnes.

Humes Ltd (Statewide): Produces pre-cast concrete pipes and products as well as clay pipes and fittings. A subsidiary company, *Steel Mains Pty Ltd*, manufactures water, steam and oil lines up to six metres in diameter. This Company also manufactures pressure vessels, spheres, bulk storage tanks etc. A field crew operates throughout the State and installs all types of structural steel, pipelines and mechanical items.

Johns Phoenix (Launceston, Derwent Park, Wynyard): This Company is one of the largest general engineering companies in Tasmania and employs approximately 450 persons. The products and services include steel and steel alloys, castings, fabricated steelwork, general machining, installations and the erection of plant and equipment.

Repco Bearing Company Pty Ltd (Launceston): In 1949 this Company was established to manufacture engine bearings for the Australian automotive spare parts trade. The factory has since expanded and diversified its range of products and is now the largest bearing manufacturing company in Australia. There were significant expansions in 1973 and 1974.

The Stanley Works Pty Ltd (Moonah): Originally established in 1945 as the Titan Manufacturing Company Pty Ltd, the Company is Tasmania's only manufacturer of hand tools. Resulting from mergers, the Company name was changed to Stanley-Titan Pty Ltd in 1963 and to its present title in 1971. Completion of

a construction project recently commenced will increase the works area from approximately 200 to 1 400 square metres. The full project will be completed in three stages and will lift capacity from 700 000 to 2 million units of the present product mix. Work is expected to be completed mid-1978.

Tasmanian Electro Metallurgical Co. Pty Ltd (Bell Bay): The Broken Hill Co. Pty Ltd established a plant in 1962 to produce high carbon ferro-manganese for the Australian steel industry, with an initial annual output in excess of 26 000 tonnes. Silico-manganese alloys are now also being produced and a recent \$40 million expansion program increased capacity from 77 000 tonnes to about 150 000 tonnes a year. This expansion also enabled production of ferro-silicon in Tasmania for the first time.

Tioxide Australia Pty Ltd (Burnie): Production of titanium dioxide pigments began in 1948 with a plant capacity of more than 1 500 tonnes per annum. The production capacity was increased from 25 400 tonnes to 32 000 tonnes during 1976. The bulk of titanium pigments produced will continue to be used within the Australian paint, plastics and paper industries.

Tootal of Australia (Devonport): The first operations in 1952 used piece-goods imported from the U.K. to make textiles. The factory was expanded in 1953 to include the weaving, dyeing and finishing of locally produced fabrics. The Company now manufactures a wide range of woven and knitted fabrics from man-made fibres.

United Milk Products (Smithton): Is one of the State's principal producers of dairy produce. Production recently reached approximately the levels shown: butter (salted and unsalted), 3 000 tonnes; cheese (cheddar), 6 500 tonnes; milk powders (skim, full cream and buttermilk), 3 000 tonnes; and casein (acid), 400 tonnes per annum. The Company also operates an abattoir exporting 90 per cent of the output overseas.

Universal Textiles Australia Ltd (Derwent Park): This Company is part of the textile division of the Dunlop (Aust.) Group. The Hobart manufacturing division commenced operations in 1948. Additional machinery has since been installed and the Company now supplies printed fabrics in silk, polyester, nylon, rayon and cotton. Production also includes woven fabrics for: heavy, wide furnishings; light furnishings; apparel; sailcloth; printed sheets; and shower screens.

MANUFACTURING STATISTICS

Principal Articles Manufactured

The articles listed below do not include the following important Tasmanian products: aluminium, automotive engine bearings, carbide, cement, confectionery, ferro-manganese alloys, hand tools, hardboard, iron ore pellets, particle board; printing, writing and wrapping papers; starch, titanium di-oxide; canned, dehydrated and quick frozen vegetables; woodpulp, woollen manufactures, and other textile products. Where there are only one or two producers or where one producer dominates, it is not possible to publish details for articles that are important and would otherwise be included. Some articles, although principal manufactures, such as cakes, pastry and pies, wooden furniture and joinery (excluding doors) are not included, as value details only are collected for such items.

The following table lists the principal articles manufactured in Tasmania (with the exceptions detailed above). To give some indication of changes in production, quantity details are given for 1938-39, and for recent years:

Principal Articles Manufactured: Quantities

Article	Unit	1938-39	1972-73	1973-74	1974-75	1975-76
Acid, sulphuric	tonnes	14 385	652 513	570 156	517 052	466 817
Aerated waters	'000 litres	1 537	15 236	15 751	14 845	16 219
Apples, preserved (solid pack)	tonnes	1 049	5 955	7 669	5 824	6 255
Bacon and ham	tonnes	878	1 902	1 931	2 169	2 356
Bricks, blocks, etc.	'000	14 541	50 422	58 505	56 378	66 682
Butter (a)	tonnes	4 118	12 947	12 398	12 196	10 762
Cheese	tonnes	1 443	7 218	8 475	12 387	13 332
Concrete, ready mixed	'000 m ³	..	199 791	236 407	247 343	277 082
Electricity, total generated	m kWh	567	5 902	6 010	6 095	6 008
Fertilisers—						
Sulphate of ammonia	tonnes	..	48 654	33 191	54 701	23 040
Superphosphate	tonnes	30 569	177 192	180 458	103 253	57 896
Flour	tonnes	17 764	31 698	34 643	34 938	30 691
Paper, newsprint	tonnes	..	199 053	200 852	196 240	206 228
Timber—						
Sawn, peeled or sliced (b)—						
Hardwood	'000 m ³	197.0	403.8	398.2	388.3	349.7
Softwood	'000 m ³	3.6	12.4	16.1	21.8	23.8
Dressed—						
Floorboards	'000 m ³	12.1	77.3	76.7	58.6	49.7
Weatherboards	'000 m ³	4.5	5.2	4.8	2.6	2.2
Other	'000 m ³	2.7	58.4	62.5	59.7	60.4
Woodchips, etc. (green weight) (c)	'000 tonnes	..	2 191	3 043	2 947	2 436
Zinc, refined	tonnes	70 946	193 782	182 749	152 749	137 637

(a) Includes butter equivalent of butter oil.

(b) Includes timber to be further processed.

(c) Defined in forestry section of Chapter 8.

Manufacturing Censuses

Annual censuses of factories were conducted by the Bureau from almost the start of the present century; the last 'old style' factory census covered the year 1967-68. For 1968-69 simultaneous integrated economic censuses were undertaken in respect of manufacturing and four other sectors (mining; wholesale trade; retail trade; and electricity and gas production and distribution).

The 1968-69 integrated economic censuses were fully described in Appendix A of the 1972 *Year Book* in which there also appears an explanation of the factors which made necessary the termination of 'old style' factory censuses and the start of a new series, based on new reporting units and data concepts. In the following section, the results of the manufacturing census for 1974-75 are given.

Definitions and data concepts introduced by the integrated economic censuses will be found in Chapter 18 of this edition. A summary of factory statistics relating to the years preceding the integrated censuses is set out in Chapter 9 of the 1973 *Year Book*. Results from manufacturing censuses are compared with those from integrated economic censuses covering other industry sectors in the section 'Integrated Economic Censuses' in Chapter 18.

Census Results

Manufacturing Establishments Classified According to Industry

The table that follows contains a summary of the principal manufacturing statistics by industry sub-division. Single establishment enterprises employing less than four employees at 30 June 1975 are excluded from this table:

Manufacturing Establishments: Operations by Industry Sub-division 1974-75

ASIC code (a)	Industry sub-division Description	Establishments operating at 30 June	Employment (including working proprietors)— average over whole year			Wages and salaries	Turn- over
			Males	Females	Persons		
		no.	no.	no.	no.	\$'000	\$'000
21,22	Food, beverages and tobacco ..	118	4 283	1 815	6 098	36 350	209 139
23	Textiles	17	1 319	1 275	2 594	14 748	53 868
24	Clothing and footwear	10	80	187	267	1 158	2 738
25	Wood, wood products and furniture	202	4 196	325	4 521	26 358	129 629
26	Paper and paper products and printing	42	4 798	785	5 583	43 018	152 123
27	Chemical, petroleum and coal products	17	1 243	107	1 350	10 326	45 173
28	Non-metallic mineral products ..	51	956	87	1 043	7 199	31 960
29	Basic metal products	12	3 431	134	3 565	32 424	210 311
31	Fabricated metal products	80	1 291	207	1 498	8 745	33 031
32	Transport equipment	24	1 038	144	1 182	7 950	19 634
33	Other industrial machinery and equipment and household appli- ances	39	832	59	891	5 198	13 445
34	Miscellaneous manufacturing	16	232	28	260	1 408	4 604
	Total manufacturing	628	23 699	5 153	28 852	194 883	905 656

Manufacturing Establishments: Operations by Industry Sub-division 1974-75—continued
(\$'000)

ASIC code (a)	Industry sub-division Description	Stocks		Purchases, transfers in and selected expenses	Value added	Fixed capital expen- diture (b)
		Opening	Closing			
21,22	Food, beverages and tobacco ..	23 808	33 335	142 279	76 387	6 956
23	Textiles	16 856	13 602	25 408	25 205	660
24	Clothing and footwear	364	149	1 239	1 284	-33
25	Wood, wood products and furniture	18 240	27 317	70 036	68 670	6 149
26	Paper, paper products and printing	16 992	27 666	91 837	70 960	3 061
27	Chemical, petroleum and coal products	6 771	11 002	31 261	18 142	3 982
28	Non-metallic mineral products	2 695	3 592	16 259	16 599	2 046
29	Basic metal products	37 483	58 315	145 686	85 457	28 174
31	Fabricated metal products	4 506	6 933	18 630	16 829	418
32	Transport equipment	4 633	4 743	7 276	12 468	374
33	Other industrial machinery and equipment and household appliances	1 809	2 468	6 506	7 598	899
34	Miscellaneous manufacturing	712	978	2 213	2 657	460
	Total manufacturing	134 870	190 099	558 632	402 255	53 146

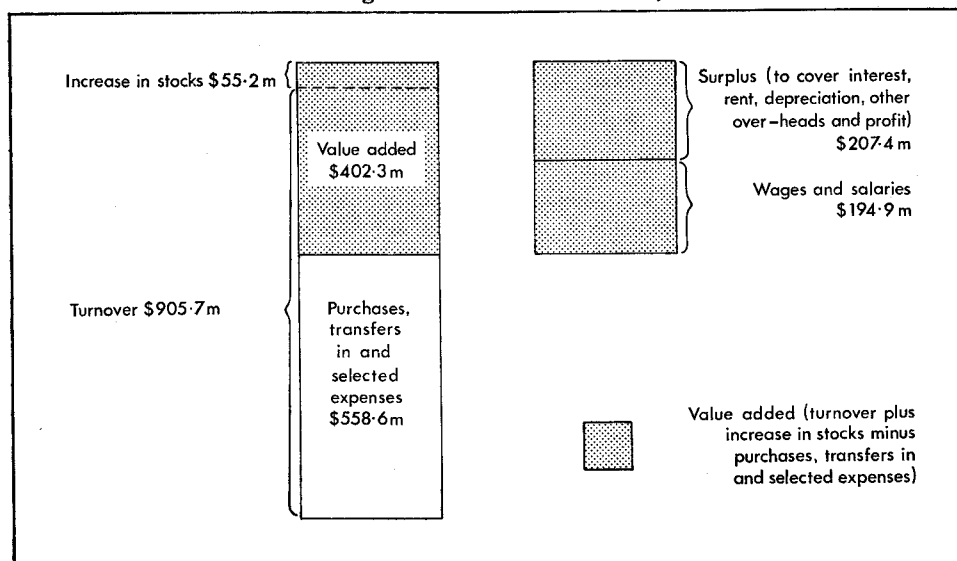
(a) Australian Standard Industrial Classification number.

(b) Outlay on fixed tangible assets less disposals.

Tasmania-Australia Comparison

The Tasmanian share in 1974-75 of Australian employment in manufacturing was 2.32 per cent; and of Australian 'value added' in manufacturing 2.64 per cent. (Tasmania's mean population as a proportion of Australia's for 1974-75 was 2.94 per cent.)

Manufacturing Establishments: Tasmania, 1974-75



Manufacturing by Statistical Division

The next table shows, as a time series, the chief measures of manufacturing operations by statistical divisions:

Manufacturing Establishments: Main Items by Statistical Division (a)

Main items	Unit	Year ended June	Statistical divisions			Tasmania
			Hobart and Southern	Northern	Mersey-Lyell	
Number of establishments	no.	1972	397	327	209	933
		1973	391	324	197	912
		1974	406	324	205	935
		1975	255	223	150	628
Employment (b)—Males	no.	1972	10 591	7 452	6 813	24 856
		1973	10 322	7 590	6 756	24 668
		1974	10 321	7 905	6 977	25 203
		1975	9 712	7 224	6 763	23 699
Females	no.	1972	2 179	2 546	1 426	6 151
		1973	2 127	2 501	1 388	6 016
		1974	2 302	2 442	1 580	6 324
		1975	2 181	1 609	1 363	5 153
Persons	no.	1972	12 770	9 998	8 239	31 007
		1973	12 449	10 091	8 144	30 684
		1974	12 623	10 347	8 557	31 527
		1975	11 893	8 833	8 126	28 852

Manufacturing Establishment: Main Items by Statistical Division (a)—continued

Main items	Unit	Year ended June	Statistical divisions			Tasmania
			Hobart and Southern	Northern	Mersey-Lyell	
Wages and salaries	\$'000	1972	48 379	35 992	35 040	119 411
		1973	52 075	40 751	37 877	130 703
		1974	61 484	50 861	49 039	161 386
		1975	76 828	59 142	58 916	194 883
Value added	\$'000	1972	96 425	73 543	75 100	245 068
		1973	114 757	82 693	85 969	283 420
		1974	139 940	100 709	99 601	340 250
		1975	151 862	128 525	121 871	402 255
Fixed capital expenditure ..	\$'000	1972	8 295	15 081	2 569	25 944
		1973	6 617	12 259	6 016	24 893
		1974	9 911	6 505	8 383	24 798
		1975	15 091	28 998	9 058	53 146

(a) 1974-75 figures exclude details for single establishment enterprises employing less than four persons at 30 June.

(b) Includes working proprietors; figures are average over whole year.

Tasmania in Comparison with Other Australian States

A comparison of Tasmanian manufacturing activity with that of the other Australian states and territories is shown in the following table. Applying the appropriate population relativity factors to the figures, it will be seen that, on most indicators, Tasmania is relatively more industrialised than Queensland, Western Australia, Northern Territory and the Australian Capital Territory and approaches the level of South Australia.

Tasmania-Australia Comparison of Manufacturing Activity, 1974-75

State or territory	Population relativity (a)	Establishments	Wages and salaries	Turn-over (b)	Stocks at 30 June		Purchases, etc. (c)	Value added
					1974	1975		

ACTUAL VALUES

		no.	\$m	\$m	\$m	\$m	\$m	\$m
N.S.W.	12.1	10 134	3 365	13 238	2 053	2 529	7 815	5 900
Vic.	9.2	8 925	2 960	11 730	1 919	2 344	7 024	5 131
Qld	5.1	3 009	735	4 046	395	503	2 553	1 601
S.A.	3.1	2 128	792	2 998	494	634	1 805	1 332
W.A.	2.8	1 974	434	2 032	218	297	1 332	780
Tasmania	1.0	628	195	906	135	190	559	402
N.T.	0.2	68	22	95	18	34	61	50
A.C.T.	0.5	104	27	95	9	10	47	49
Total Australia ..	34.0	26 970	8 531	35 139	5 241	6 542	21 195	15 245

Tasmania-Australia Comparison of Manufacturing Activity, 1974-75—continued

State or territory	Population relativity (a)	Estab-lish-ments	Wages and salaries	Turn-over (b)	Stocks at 30 June		Pur-chases, etc. (c)	Value added
					1974	1975		
VALUES RELATIVE TO POPULATION (d)								
N.S.W.	838	278	1 094	170	209	646	488
Vic.	970	322	1 275	209	255	763	558
Qld	590	144	793	77	99	501	314
S.A.	686	255	967	159	205	582	430
W.A.	705	155	726	78	106	476	279
Tasmania	628	195	906	135	190	559	402
N.T.	340	110	475	90	170	305	250
A.C.T.	208	54	190	18	20	94	98
Total Australia	793	251	1 034	154	192	623	448

- (a) Tasmania's total mean population for 1974-75 is expressed as 1.0; other state populations in proportion to 1.0.
- (b) Sales, transfers out and other operating revenue.
- (c) Purchases, transfers in and selected expenses.
- (d) Figures are calculated by dividing the actual figures by the appropriate population relativity factor. They do not represent direct per head of population details but merely a comparison of the relative degree of manufacturing activity in each state.

CENSUSES OF ELECTRICITY AND GAS ESTABLISHMENTS

Until 1968-69 factory production statistics contained details for Class XVI (Heat, Light and Power); in the 'old style' annual factory censuses, of which the last covered 1967-68, this class was confined to the *production* of electricity and gas and such operations were treated as a particular type of factory activity. For 1968-69 simultaneous economic censuses were undertaken in respect of electricity and gas production and distribution and four other sectors (manufacturing; retail trade; wholesale trade; and mining). Details relating to the 1968-69 census of electricity and gas establishments are included in the 1973 *Year Book*; results from censuses conducted for 1969-70 and 1971-72 may be found in the 1974 and 1977 editions of the *Year Book*, respectively. Details from the 1974-75 census for Tasmania cannot be released because of confidentiality.

GOVERNMENT HYDRO-ELECTRIC POWER

The Tasmanian Electricity Generating System

Until 1971 Tasmania was unique among Australian states in that its electric power system was based predominantly on hydro-electric installations, but in 1971 a thermal oil-fired station commenced operations at Bell Bay opening a new phase in the development of the generating system. Other Australian states rely principally on thermal plants while hydro-electric power, if available, is used only to supplement the basic supply. The Snowy Mountains Hydro-Electric Scheme, which feeds power to Victorian and N.S.W. grids, is not designed to cope with the base load demand in these states, and its essential function is to provide the extra power necessary to meet peak loads, and also to supply water for irrigation purposes. The Tasmanian system, despite its lower installed capacity, produces more power than the Snowy Scheme. The total generator capacity of the Tasmanian hydro-electric system at the end of 1977 was 1.40 million kilowatts which is 85 per cent of the generator capacity of the overall system.

Early Development and Current Generating Capacity

Hydro-electric power for public use was first introduced in 1895 with construction of the 450 kW *Duck Reach* station on the South Esk River near Launceston. This was a purely municipal supply and work on Tasmania's state-wide system did not begin until 1911 with the exploitation of the Great Lake catchment waters and diversion of the Ouse and Shannon Rivers.

The concentration on water as a source of power in Tasmania has resulted in the need to follow a policy of water conservation, to regulate the high winter and spring run-off. Emphasis in the power developments has been on the creation of large storages and successive use of the impounded waters (e.g. water from Lake St Clair may pass through eight power stations before reaching the tidal waters of the Derwent River at New Norfolk.)

By May 1916 *Waddamana 'A'* station (7 000 kW), the first stage of the Great Lake scheme, was commissioned. *Shannon* station was opened in 1934 and in 1944 the third stage of the scheme, *Waddamana 'B'* station (48 000 kW) commenced generation. When *Poatina* station was commissioned in 1965, the *Waddamana 'A'* and *Shannon* stations were closed down, *Waddamana 'B'* being retained only for emergency and peak-load generation.

The following table outlines the current status of the Tasmanian generating system:

Tasmanian Power Generating System

Station	Year of commission	Head (in metres)	Generator capacity (kW)
COMPLETED STATIONS			
Waddamana 'B' (a)	1949	344	48 000
Tarraleah	1951	299	90 000
Butlers Gorge	1951	56	12 200
King Island	1951	(b)	1 400
Trevallyn	1955	126	80 000
Tungatinah	1956	306	125 000
Lake Echo	1956	173	32 400
Wayatinah	1957	62	38 250
Liapootah	1960	110	83 700
Catagunya	1962	43	48 000
Poatina	1965	829	(c) 300 000
Tods Corner	1966	41	1 600
Meadowbank	1967	29	40 000
Cluny	1967	16	17 000
Repulse	1968	27	28 000
Rowallan	1968	49	10 450
Flinders Island	1968	(b)	300
Lemonthyme	1969	159	51 000
Devils Gate	1969	69	60 000
Wilmot	1971	251	30 600
Bell Bay (Stage 1)	1971	(d)	120 000
Cethana	1971	99	85 000
Paloona	1972	31	28 000
Fisher	1973	651	43 200
Bell Bay (Stage 2)	1974	(d)	120 000
Gordon (Stage 1)	(e)	186	144 000
Total	..	..	1 638 100

Tasmanian Power Generating System—continued

Station	Year of commission	Head (in metres)	Generator capacity (kW)
STATIONS UNDER CONSTRUCTION			
Gordon (Stage 1)	(e)	186	576 000
Mackintosh	1981	68	72 000
Rosebery	1983	63	76 500
Pieman	1985	93	270 000
Total .. .. .	..	..	994 500

(a) Reserve plant only.

(b) Diesel generators.

(c) Additional generator installed in the existing station in early 1977 increasing generator capacity by 50 000 kW.

(d) Thermal oil-fired station.

(e) Stage 1 of the Gordon power development involves the progressive installation of five generators, each with a generating capacity of 144 000 kW. Initially two generators are to be installed, this being completed by mid-1978. The remaining generators will be installed as peak loads demand greater installed capacity. The first generator was commissioned during November 1977.

Completed Schemes

Tarraleah-Butlers Gorge

The Tarraleah development with headwaters regulated by raising Lake St Clair (1937) and the man-made Lake King William (1949) was commenced in 1934 and first generated power in 1938. The capacity of *Tarraleah* was progressively expanded to 90 000 kW and the station was completed in 1951 with the installation of a sixth generator; *Butlers Gorge* station (12 200 kW) commenced generation on the completion of the Clark Dam in 1951.

Tungatinah-Lake Echo

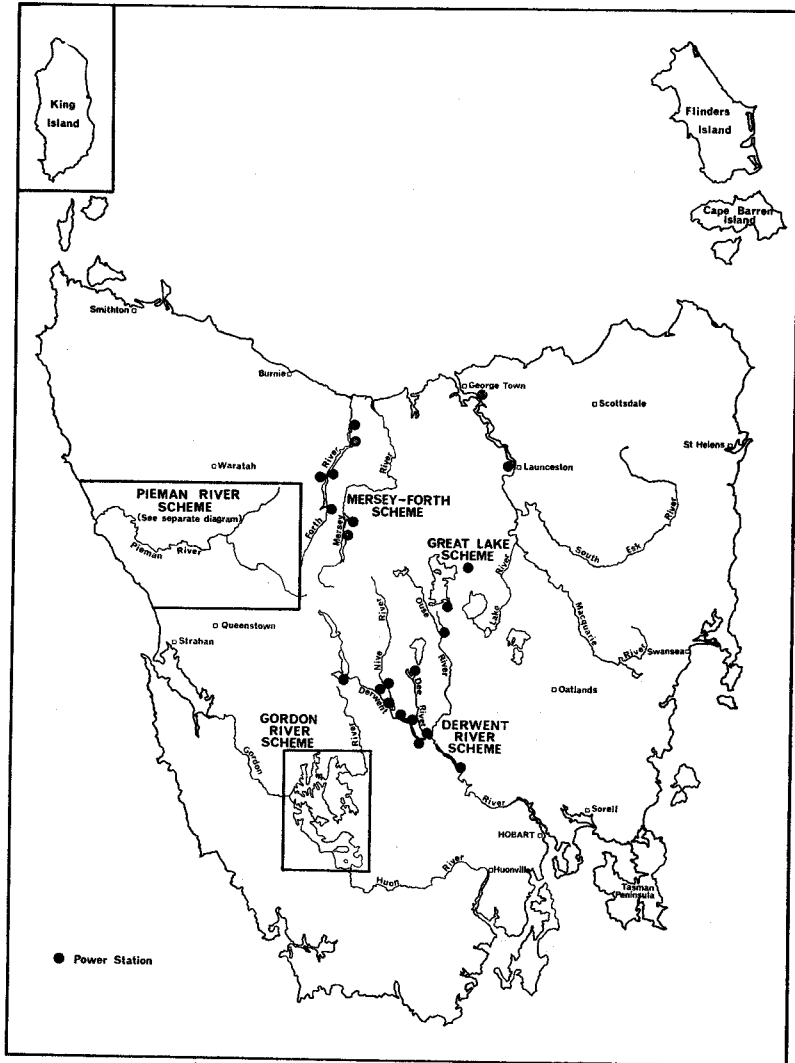
Built to regulate run-off from the extensive area between Great Lake and Lake St Clair, the 32 400 kW *Lake Echo* and 125 000 kW *Tungatinah* stations were commissioned in 1956.

Great Lake-South Esk

The *Poatina* station (300 000 kW), the largest station in the Tasmanian hydro-electric system, had been developed to a capacity of 250 000 kW, by 1965. The station utilises the waters of Great Lake which have been diverted into the South Esk River system. A sixth generator of 50 000 kW capacity was commissioned in 1977 bringing the total installed capacity of the station to 300 000 kW. The *Poatina* tailrace discharges into the South Esk River which feeds the run-of-the-river *Trevallyn* station (80 000 kW) located near Launceston.

Derwent River Power Developments

Two systems in the middle and lower Derwent River utilise the waters of the Derwent and its major tributaries, the Nive and Florentine. In the middle Derwent system the *Wayatinah* station (38 250 kW) was completed in 1957, followed by the 83 700 kW *Liapootah* station (1960) and the 48 000 kW *Catagunya* station (1962). The lower Derwent stations *Meadowbank* (40 000 kW), *Cluny* (17 000 kW) and *Repulse* (28 000 kW) were completed during 1967 and 1968.



The Tasmanian Generating System

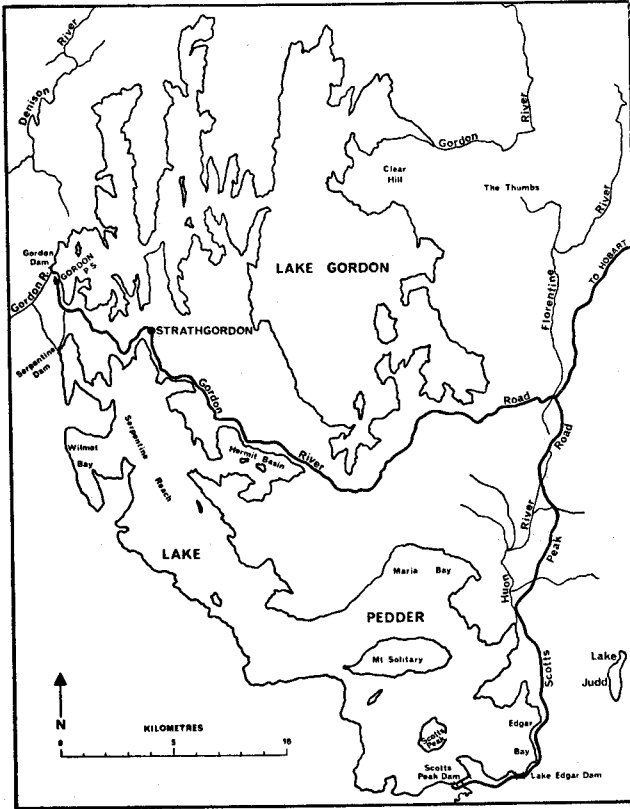
The Mersey-Forth Scheme

Construction of the Mersey-Forth development in north-western Tasmania was completed in 1973. Four rivers, the Fisher, Mersey, Wilmot and Forth, have been exploited by a combination of seven power stations and seven large dams. The power stations are *Rowallan* (10 450 kW), *Fisher* (43 200 kW), *Lemonthyme* (51 000 kW), *Wilmot* (30 600 kW), *Cethana* (85 000 kW), *Devils Gate* (60 000 kW) and *Paloona* (28 000 kW).

All seven power stations are designed for fully automatic operation and are remotely controlled from a centre near Sheffield.

Bell Bay Thermal Station

This station was originally designed to accommodate two oil-fired steam driven 120 000 kW generators. Installation of the second turbo-generator was completed in 1974.



Gordon River Development—Stage 1

Present Developments

Gordon River Power Development—Stage I

Initial development, to be completed by mid-1978, has created the largest fresh-water storage in Australia, six times the volume of the Great Lake, and three times the volume of Lake Eucumbene, the largest lake in the Snowy Mountains' Hydro-Electric Authority Scheme.

The Gordon River Power Development comprises two lakes joined by the McPartland Pass canal, with a total surface area of about 510 sq km. Lake Gordon (1974) was created by a 137 metre high dam on the Gordon River; three dams, one on the Serpentine River (1971) and two on the Huon River (1972), created the greatly enlarged Lake Pedder.

From Lake Gordon water will be carried by a vertical shaft to the power station 186 metres underground. Access to the Gordon Power Station will be via the busbar and lift shaft or by road tunnel. The station will be operated by remote control from Hobart, 161 kilometres away.

The accompanying map shows Stage I of the Gordon River power development:

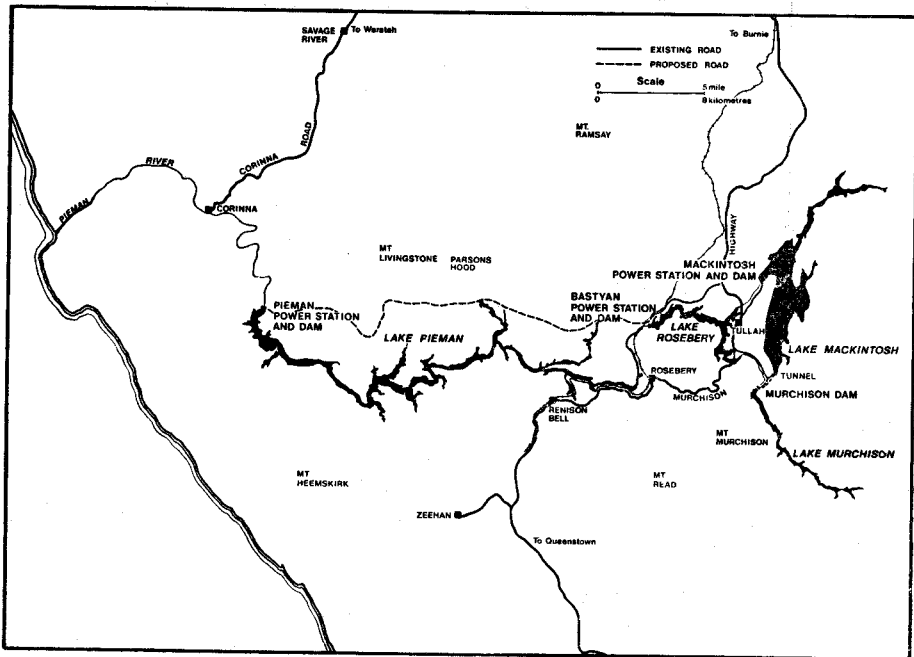
Pieman River Power Development

In a report presented to Parliament on 21 October 1970, the Hydro-Electric Commission announced a power development in the Pieman River catchment of the west coast. The total capital cost was estimated at \$134m (1970), the total installed capacity at 418 500 kW, and the eventual average output at 1 770 million kilowatt hours per annum. Completion of the scheme is expected by 1985.

Location: The Pieman River flows from the confluence of the Murchison and Mackintosh Rivers, entering the sea below Corinna (see map). The catchment area of 2,678 square kilometres is mostly rugged, mountainous Crown land, experiencing annual rainfall between 2 300 mm and 3 560 mm. Only two per cent (62 square kilometres) of the catchment area will be inundated.

Power Stations: The development will comprise three elements each including a power station:

(i) **Mackintosh.** This scheme will include a dam over 91 metres high on the Murchison River; a 2 072 metres long tunnel from Lake Murchison to Lake Mackintosh; a dam 76 metres high on the Mackintosh River about three kilometres downstream from the Sophia River junction and the subsidiary Tullibardine Dam (24 metres high) together creating the main storage of the entire development; and a 72 000 kW power station below the Mackintosh Dam through which the combined flows of the Mackintosh and Murchison Rivers will pass.



Pieman River Development

(ii) **Bastyan.** Will include: a dam about 73 metres high, located on the Pieman River upstream from the Rosebery township, creating a lake extending up the Mackintosh River to the Mackintosh Power Station and up to the Murchison River to just downstream of the Murchison Dam; a power station immediately below the Bastyan Dam (installed capacity 76 500 kW); the relocation of two kilometres of the Murchison Highway including new bridges over the Murchison and Mackintosh Rivers; and the relocation of about three kilometres of the Emu Bay Railway, including a new bridge over the Pieman River.

(iii) *Pieman*. Will comprise: a dam about 119 metres high located on the Pieman River immediately upstream from its junction with Stringer Creek; a subsidiary dam 15 metres high; a 270 000 kW power station, located at the junction with Stringer Creek; and a main access road, the Pieman Road, 54 kilometres long, from the Murchison Highway to the dam site, about 10 kilometres upstream from Corinna.

Proposed Future Developments

In June 1977, the Hydro-Electric Commission released details of two alternative schemes which it considered would provide the best means of developing the hydro-electric power potential of the Lower Gordon, King and Franklin River systems on Tasmania's west coast. These two alternatives were based on the findings of preliminary investigations; a firm proposal favouring one or other of them (possibly with some modifications) would be submitted to Parliament for consideration in approximately two years time, following more detailed engineering and scientific studies. The H.E.C. calculated that even if the State's electrical energy demand continued to increase at only the rate of growth experienced over the last three years, demand would double by 1995. Following completion of the Pieman River Scheme, the Lower Gordon region will present the only remaining undeveloped area of the State suitable for large-scale hydro-electric development. An outline of each of the two alternative schemes is given below.

Integrated Development

This scheme would involve integration of the flows of the King, Franklin and Lower Gordon Rivers through construction of at least three dams and two power stations. The Tofft and Franklin Dams (see map) would back up the combined waters of the King and Franklin Rivers. A power station below the Franklin Dam could then be built with the capacity to generate almost 1 170 million kilowatt hours of electrical energy per annum. A dam constructed on the Lower Gordon River, a short distance downstream from its present confluence with the Franklin River, would back up the water passing through the Franklin Dam power station together with the flow of the Gordon River. A power station below this second dam would be capable of generating almost 1 800 million kWh per annum.

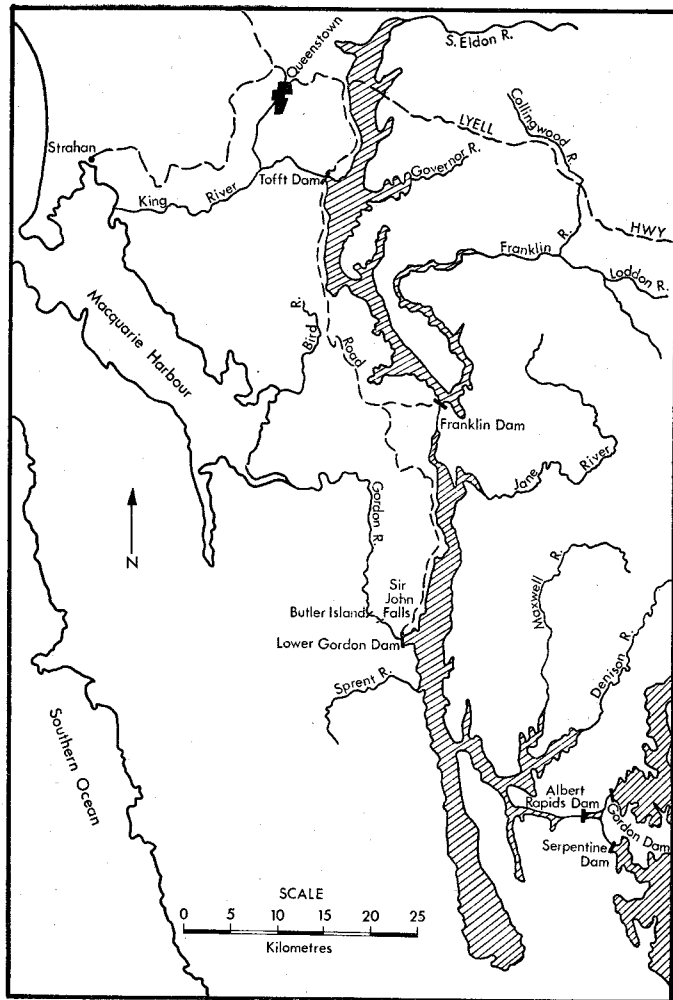
In addition, a dam and power station at Albert Rapids (see map) could add 245 million kWh, and diversion of the Davey River into the Lower Gordon via the Olga-Hardwood Saddle 236 million kWh output per annum to the scheme. The total average annual output of this scheme would then be approximately 3 450 million kWh.

Separate Development

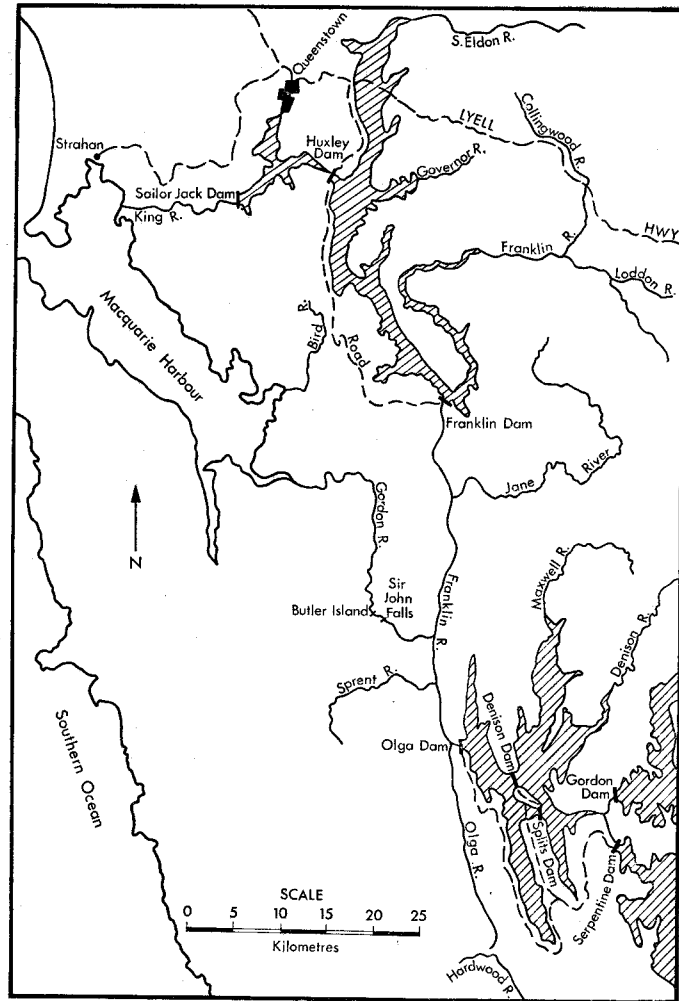
This scheme would involve construction of four (or possibly five) dams and three power stations to develop: (i) the combined flow of the Franklin and King Rivers; and (ii) a separate development on the Lower Gordon.

A dam on the Franklin River would be constructed as in the 'Integrated Development' scheme but the combined flow of the Franklin and King River catchments would be discharged into the King River via a dam and power station near Mt Huxley. A second dam and power station would be constructed further downstream on the King River at Sailor Jack. The combined annual generating capability of these two stations would be approximately 1 740 million kWh.

LOWER GORDON: PROPOSED HYDRO-ELECTRIC SCHEMES



Integrated Development



Seperate Development

On the lower Gordon, a dam and power station would be built just upstream from its confluence with the Olga River. This would back water right up to the power station below the existing Gordon Dam and produce approximately 1 070 million kWh of electricity per annum. A sub-alternative to a separate development would be a dam across the Gordon River at Splits (just upstream from its junction with the Denison River) plus a dam and power station on the Denison River to produce approximately 895 million kWh per annum.

The total average annual output of this scheme would be approximately 2 800 million kWh (Olga Dam) or 2 630 million kWh (Splits and Denison Dams sub-alternative).

Impact

The Lower Gordon Dam ('Integrated Development' scheme) is the furthest downstream proposed for the Gordon River but is well upstream from the Sir John Falls and the normally navigable limits of the river. Investigations carried out by mid-1977 indicated that neither scheme would have any marked effect on the Gordon River and its environs below the dam site. Environmental studies to assess the likely impact of each scheme are to be continued in addition to the detailed engineering studies required (as the basis for a firm proposal) which are not expected to be completed until at least 1979.

Growth of the Electricity Generating System

The following table shows the growth of the system in recent years:

Hydro-Electric Commission: Operating Statistics

Year	Total rating of alternators ^(a)	Units generated	Peak loading	Average loading	Peak load ratio ^(b)
	kW	million kWh	kW	kW	per cent
1966	849 150	3 951	624 100	451 047	73.5
1967 (c)	866 150	3 902	636 900	445 490	73.5
1968 (c)	904 600	3 944	628 000	449 028	69.4
1969	1 015 600	4 873	735 500	556 249	72.4
1970	1 015 600	5 166	778 700	589 718	76.7
1971	1 251 200	5 552	842 900	633 838	67.4
1972	1 279 200	5 659	856 200	646 000	66.9
1973	1 322 400	5 850	891 100	667 822	67.4
1974	1 443 800	5 994	917 300	684 236	63.5
1975	1 443 800	5 773	891 500	659 020	61.7
1976	1 443 800	6 373	943 400	725 543	65.3

(a) At 31 December.

(b) Peak loading expressed as a percentage of the total alternator rating (generator capacity).

(c) Industrial power rationing introduced. H.E.C. water storages reached a record low of 14 per cent of capacity in March 1968.

Load Factor

The alternator rating (i.e. installed generator capacity) is necessarily much higher than the peak loading since some generating plant must be held in reserve against the possibility of breakdown. Also reliability varies according to the state of the water storages.

A power system must be designed to meet both the peak loading (the demand component) and the average loading (the energy component). Peak loading tends to represent high demand for relatively short periods, i.e. it has relatively little energy associated with it. The obvious design and operational problem is to

create sufficient capacity to meet peak loading and, at the same time, to encourage the use of power so that the highest possible average loading is obtained. The cheapest system, from the consumer's point of view, will be the one with the highest load factor. By world standards, the load factors in the previous table indicate a high standard of design and operational efficiency.

The Hydro-Electric Commission

The Hydro-Electric Commission is an autonomous statutory authority, responsible almost entirely for the conduct of its own affairs. The 'Minister Administering the Hydro-Electric Commission Act' is answerable to Parliament for the activities of the Commission, but the Commission is not directed by nor responsible to the Minister as is a government department. In other words, the Commission is envisaged as a trading or business organisation, and the purpose of the legislation that created it was to remove it from day-to-day political control. The power exerted by Parliament is mainly financial, not over the ordinary revenue and expenditure of the authority, but over the supply of loan moneys for new capital works.

Two other restrictions on the Commission can be listed: (i) it cannot change its tariff charges for the supply of electricity to consumers except with the approval of the Governor-in-Council; and (ii) in certain of its dealings, such as in real estate, the Commission must obtain the approval of the Minister.

The status of the Commission was described thus by the High Court of Australia in a judgment delivered in 1950: 'In the eye of the law the corporation is its own master and is answerable as fully as any other person or corporation. It is not the Crown and has none of the immunities or privileges of the Crown. Its servants are not civil servants and its property is not Crown property.'

Organisation

Under the Commission, with its full-time Commissioner and three part-time Associate Commissioners, there are five branches:

(i) *Civil Engineering Branch.* Responsible for: survey of water resources; design and construction of all civil works involved in power development and allied projects.

(ii) *Electrical Engineering Branch.* Responsible for: studies of load growth and system development; design and construction of all electrical engineering works in conjunction with the Civil Engineering Branch.

(iii) *Power Branch.* Responsible for: operation and maintenance of completed power developments; generation and transmission of power in bulk.

(iv) *Retail Supply Branch.* Responsible for: distribution of electricity to consumers; operation and maintenance of the distribution system; inspection of installations and equipment; consumer advisory activities; sale of electrical appliances; licensing of wiremen and contractors.

(v) *Secretarial.* Responsible for general administrative business of the Commission with subsections dealing with accounts, law, personnel, transport, stores and purchasing, medical services, central records, public relations and other services.

Technical Details

Generation

The total installed generator capacity of the Commission's 25 power stations is 1 638 100 kW. All stations generate alternating current at a frequency of 50 cycles per second. The power is stepped up at each station to the voltage required for transmission.

Transmission

Power is conveyed from the power stations by 220 000, 110 000 or 88 000 volt transmission lines to major sub-stations at various load centres. All power stations (except those on King and Flinders Islands) and major sub-stations are linked into a grid system thereby increasing the reliability of supply to all parts of the State.

Distribution

Power is distributed from the major sub-stations by a network of 44 000, 33 000, 22 000, 11 000 and 6 600 volt feeder lines from which power is stepped down at zone sub-stations to a lower feeder voltage and/or finally at distribution sub-stations to 415/240 volts for supply to individual consumers. Some consumers take supply at feeder voltage.

Bruny Island is connected to the main power supply by a submarine cable; King and Flinders Islands are partly supplied by diesel-generation stations operated by the Commission at Currie and Whitemark, respectively.

Retail Distribution

In the early days of the Commission's operation, consumers of electric power received it from three sources: from municipalities with their own generating capacity; from municipalities retailing power bought from the Commission; and from the Commission direct. Gradually uniformity was achieved, municipalities stopped generating and retailing and the one authority became the sole supplier, both of bulk power to industry and retail power to homes, shops, businesses, etc. One effect has been uniformity in tariff charges for retail power so that the farmer on the most remote holding is charged no more than dwellers in the principal cities. Tasmania has achieved an Australian record figure for distribution of electric power—it is estimated that nearly 99 per cent of homes and farms are now connected. Tariff charges are also the lowest in Australia.

Finances of Hydro-Electric Commission

The table that follows shows the Commission's income and expenditure:

Hydro-Electric Commission: Income and Expenditure
(*\$'000*)

Particulars	1972-73	1973-74	1974-75	1975-76
INCOME				
Sales—Bulk	20 053	21 581	23 382	24 380
Retail	28 683	30 136	36 208	45 443
Other income	775	1 013	2 705	2 876
Total	49 511	52 730	62 295	72 699

Hydro-Electric Commission: Income and Expenditure—continued
(\$'000)

Particulars	1972-73	1973-74	1974-75	1975-76
EXPENDITURE				
Operation, distribution, administration	16 589	19 385	24 646	27 871
Interest on loans and reserves	27 369	28 899	32 008	37 552
Less interest capitalised ..	-3 657	-5 298	-7 782	-10 040
Depreciation provision ..	5 505	5 760	5 984	6 184
Superannuation contribution and retirement benefits	1 662	2 968	4 530	5 784
Contribution to consolidated revenue	1 251	1 362	1 430	1 712
Fuel cost equalisation provision .. .. .	..	..	..	2 000
Other expenditure	578	950	1 054	1 249
Net profit or loss	214	-1 296	425	387
Total	49 511	52 730	62 295	72 699

All annual charges (interest, depreciation, operation, etc.) are borne by the Commission out of its revenue from the sale of electricity.

Sales and Prices of Electric Power

The following table shows comparative average prices for power in Australia:

Price of Electric Power: Tasmania and Other States, 1975-76 (a)
(Cents per Kilowatt Hour)

State or territory	Residential sales	Commercial sales	Industrial sales	Average all sales (b)
New South Wales	2.74	(c)	(c)	2.78
Victoria	2.64	3.99	2.17	2.73
Queensland	3.33	5.26	2.68	3.22
South Australia	2.32	3.70	2.12	2.59
Western Australia	4.04	(c)	(c)	3.93
Tasmania	2.21	3.72	0.93	1.30
A.C.T.	1.97	(c)	(c)	2.30
Average	2.79	n.a.	n.a.	2.76

(a) Source: 'Statistics of the Electricity Supply Industry in Australia' (published by Electricity Supply Association of Australia).

(b) Includes power for traction, public lighting, etc. not specified in first three columns.

(c) Not recorded separately.

The Tasmanian average is the *lowest* and the householder pays less per unit (kWh) on the average than his counterparts in other states. The economy of hydro-electric generation can be best obtained by comparing the prices charged to industrial users.

The following table shows the amount of power sold in Australia:

Sales of Electric Power: Tasmania and Other States, 1975-76 (a)
(Million Kilowatt Hours)

State or territory	Residential sales	Commercial sales	Industrial sales	Total sales (b)
New South Wales	9 069	(c) 12 339		21 999
Victoria	6 093	2 746	5 505	14 754
Queensland	3 023	1 306	2 711	7 089
South Australia	2 065	909	1 707	4 718
Western Australia	1 368	(c) 1 957		3 362
Tasmania	1 182	150	4 004	5 356
A.C.T.	502	(c) 414		940
Total	23 302	(c) 33 748		58 218

(a) Source: 'Statistics of the Electricity Supply Industry in Australia' (published by the Electricity Supply Association of Australia).

(b) Includes power for traction, public lighting, etc. not specified in first three columns.

(c) Not recorded separately.

ROBBINS PTY LTD

(This article was contributed by the Company)

Historical

Robbins Pty Ltd, is a wholly-owned subsidiary of the Robbins Company of Seattle, U.S.A., an organisation specialising in the design and manufacture of tunnel boring and raise drill machines.

The parent Company's association with Tasmania dates back to 1960 when the Hydro-Electric Commission purchased a 4.9 metre (16 foot) diameter Robbins tunnel boring machine for the construction of the Poatina Tunnel. The object of establishing the Tasmanian subsidiary in 1970 was to provide the facility to develop a Tasmanian designed hydraulic motor and to manufacture, on a limited scale, consumable parts (cutters) for Robbins machines operating in Australia.

The first year of operations was directed from offices in Beach Road, Kingston Beach with a staff of five. In 1971 a workshop and administration building with a total area of 600 square metres was established at Browns Road, Kingston and the number of employees increased to nine. Over the next few years the scale of operations was gradually expanded and today the Company employs 30 people, most of them having specialised skills, in a variety of occupations. The total installation area has been increased to 950 square metres.

Manufacturing Operations

The Company's workshop has been designed to provide high precision machining capability appropriate to the needs of its manufactured products and includes the following: jig boring, turning (up to 86 cm swing), surface and cylindrical grinding, milling, drilling and light fabrication.

Workshop employees have been hand picked for their aptitude in precision machining. This fact, in conjunction with the strict quality control exercised by the Metrology Section, insures the maintenance of the high standards demanded by the design specifications for the Company's products.

Items manufactured at the Kingston plant include spares and cutters for Robbins tunnel boring and raise drilling machines. Originally all spares and cutter parts were imported, but the Company is gradually implementing a program of total manufacture of these U.S.A. designed components. All operations involved in the manufacture of the Robbins hydraulic motor, with the exception of casting and gear cutting, are carried out at Kingston.

The manufacture of the motor housing accounts for a large portion of the total production hours involved. The individual steps in this process are as follows:

- (i) The original rough but complex iron casting is produced in Melbourne and sea freighted to Hobart.
- (ii) The casting is rough machine turned.
- (iii) The internal cavities are shot blasted to remove any residual sand particles left after removal of casting cores.
- (iv) Heat treatment removes the stresses set up during the casting process.
- (v) Final machining includes the following processes: turning to tolerances of plus or minus 0.0025mm (0.0001 of an inch); drilling; milling; jig boring; and final drilling.
- (vi) Metrology.

After assembly each motor is individually tested on a dynamometer under the supervision of the Metrologist and must comply with a predetermined set of performance characteristics.

Some machining capacity in the workshop is utilised to meet the needs of customers with specialised machining requirements that are not readily catered for elsewhere.

Products and Sales

Imported Robbins machines can range from 9.1 metre (30 foot) diameter tunnel boring machines valued at \$5 million to 20.3 cm (eight inch) drills valued at \$200 000.

Locally manufactured hydraulic motors are used in many of the parent Company's machines being operated throughout the world. In the past three years the volume of exports of these hydraulic drives to the United States and South Africa has been significant. The number of units sold in the years 1973-74, 1974-75 and 1975-76 were 33, 30 and 50, respectively. In Australia, these drives are used in sand mining dredges, quarry conveyors, fishing boat and construction site winches, raise drills and, in one instance, to power a vehicular ferry.

The sales and service staff travel to areas as widely dispersed as northern Queensland and central Western Australia. All members of the executive staff visit the parent Company in Seattle in the normal course of their duties to enable them to gain first hand knowledge of the latest developments in the sales, administration and technical fields.

Warehousing

A total of approximately 4 000 individual items of machine spares are warehoused at Kingston or on consignment at various mine sites throughout Australia at any one time. The recording of stock movement is achieved by the use of a small computer. This computer also handles all the accounting processes of the Company and provides the necessary data for management of finance.

The utilisation of a consigned stock of spares in the field has to a great extent overcome the customers' problem of lost production time due to large and expensive machines being unserviceable while waiting for the delivery of spare parts. (Machines supplied by the Company usually operate in remote and relatively inaccessible areas.) Most spares are air freighted from Tasmania to Melbourne and then forwarded by road or by air, depending on the urgency.

Engineering

A small design section, working in conjunction with a technical consultant, directs the Company's hydraulic drive development program. This section also provides all the engineering and working drawings required for the Company's manufacturing operations.

Future Expansion

It is anticipated that, in the future, expansion in all facets of the Company's present structure will take place including:

- (i) sales and service of heavy tunnelling machinery;
- (ii) sales, service and design of hydraulic systems; and
- (iii) the manufacture of spares and consumable parts for the Company's machines.

The present location at Browns Road, Kingston provides ample room for future expansion of the production and warehousing facilities.

Chapter 10

TRADE AND DISTRIBUTION

OVERSEAS AND INTERSTATE TRADE

Historical

The *Statistical Returns of Van Diemen's Land* and the *Statistics of Tasmania* provide a continuous series of total trade statistics dating from 1824 to 1909. Until the foundation of the Commonwealth in 1901, trade with other parts of Australia was recorded as originating from or being destined for 'British Colonies'; in other words, all Tasmanian sea trade was regarded as overseas. From Federation to 1909, statistics were collected and compiled by the newly formed federal Customs Department for *all* sea trade, but since 1910 only direct *overseas* trade has been recorded by Australian Customs. In an island state, it became apparent that statistics of overseas trade alone were inadequate to record economic activity and, from 1922-23, the Government Statistician collected and published details of interstate trade; the collection of these data, now undertaken by the State Office of the Australian Bureau of Statistics, is carried out independently of Australian Customs and depends primarily on documents made available by Tasmanian port authorities. In brief, there is a *total* trade series (1824-1909), an *overseas* trade series 1910 to 1921-22) and a *total* trade series (1922-23 to today).

In the immediate post-war period, there was a marked expansion of commercial aviation; the freight being carried was a component of interstate trade and steps were taken to record it, the first published figures appearing for 1949-50. Thus, the total trade of Tasmania is now recorded in three categories: by sea, overseas; by sea, interstate; by air, interstate.

Values of Trade from 1824

Note on Currency

The pre-Federation details were recorded in sterling; subsequent details were recorded in £A which had parity with sterling until 1930 when devaluation made £A1.25 equal to the £ sterling. In 1949 the £ sterling was devalued by 30.5 per cent and the £A was correspondingly devalued to preserve the 1930-1949 relativity. In 1966 Australia changed to decimal currency, with \$A equal to £A0.5. In late 1967, the £ sterling was devalued from an equivalency of \$A2.51 to \$A2.15. The \$A was devalued by approximately 2.25 per cent against the £ sterling in 1971. The exchange rate between the \$A and the £ sterling is no longer fixed and from December 1971 the \$A has been quoted in terms of \$U.S. Later changes in the exchange rate appear in Chapter 12, Private Finance. In the tables in this section, pre-1966 recorded figures have been converted to \$A by simply doubling the originals, *irrespective of their year of occurrence* and no account has been taken of changes in exchange rates. Post 1966 figures similarly have not been adjusted to take account of changes in exchange rates.

Due to considerable and persistent changes in the purchasing power of money, it is extremely difficult to satisfactorily interpret any long-term statistical series expressed in money terms. The following table is therefore of interest historically

but subject to all the disabilities (including changes in the value of Australian currency) associated with long-term money series.

Total Value of Trade by Sea and Air: Historical Summary
('\$000)

Year	Value of imports				Value of exports			
	By sea		By air	Total	By sea		By air	Total
	Overseas	Interstate	Interstate		Overseas	Interstate	Interstate	
1824	<i>n.a.</i>	<i>n.a.</i>	..	124	<i>n.a.</i>	<i>n.a.</i>	..	30
1860	1 686	450	..	2 136	1 544	380	..	1 924
1880	738	2 000	..	2 738	1 568	1 456	..	3 024
1900	1 402	2 746	..	4 148	3 078	2 144	..	5 222
1910	1 662	(a)	..	<i>n.a.</i>	1 040	(a)	..	<i>n.a.</i>
1919-20 ..	1 626	(a)	..	<i>n.a.</i>	4 022	(a)	..	<i>n.a.</i>
1929-30 ..	3 668	16 028	..	19 696	4 978	13 198	..	18 176
1939-40 ..	3 188	21 780	..	24 968	4 852	20 954	..	25 806
1949-50 ..	18 704	51 218	(b) 10 670	80 592	29 936	42 672	(b) 3 996	76 604
1959-60 ..	27 606	130 014	19 210	176 830	47 730	137 530	20 818	206 078
1969-70 ..	(c) 46 998	257 441	20 551	(c) 324 989	143 470	286 083	26 287	455 840
1975-76 ..	76 262	503 497	27 882	607 641	250 580	441 391	36 280	728 251

(a) Collection discontinued for period 1910 to 1921-22.

(b) First collected in 1949-50.

(c) From 1965-66 the value of outside packages is included in the value of overseas imports. The recorded value of these outside packages was \$566 000 in 1969-70 and \$758 653 in 1975-76.

Definition of 'Overseas' and 'Interstate'

Statistics of overseas trade of Tasmania include details of goods landed directly from overseas or shipped directly to overseas ports; and, in addition, details of goods transhipped through other Australian states, *provided that the overseas import or export document has been lodged with Customs in Tasmania*. Statistics of interstate trade include details of goods landed in or shipped from other Australian states; and, in addition, details of goods transhipped through other Australian states, *provided that the overseas import and export document has been lodged with Customs in another Australian state*.

By way of example, a new Japanese car transhipped in Melbourne and discharged in Tasmania is classified as an item of interstate trade. Victoria, not Japan, is classified as the place of origin, provided that the overseas import document has been lodged with Customs in Victoria.

Effect of Motor Vehicles on Total Value of Imports and Exports

Import and export details of motor cars and commercial vehicles include tourist vehicles entering and leaving the State. The inauguration of a vehicular ferry service in October 1959 resulted in a sharp increase in the transport of vehicles as is suggested in the following table.

Motor Cars and Commercial Vehicles (a): Value of Imports and Exports
('\$000)

Particulars	1959-60	1971-72	1972-73	1973-74	1974-75	1975-76
Imports ..	29 148	63 016	64 943	75 231	98 110	104 305
Exports ..	13 100	28 229	28 537	28 997	32 524	34 854

(a) As well as new and used vehicles, includes business and tourist vehicles moving to and from the State.

Since Tasmania does not carry out motor vehicle assembly on any extensive scale (and certainly not for export), it follows that total import and export values for 1975-76 are both inflated by approximately \$35m worth of vehicles, principally tourist, which entered and left the State. If vehicle exports are offset against imports, the net import figure will still include some used as well as new vehicles.

Source of Trade Statistics

Overseas trade statistics are compiled from documents obtained under the *Federal Customs Act 1901* and supplied to the Australian Bureau of Statistics by the Australian Customs. *Interstate sea* trade statistics are compiled from documents required under the authority of the *Marine Act 1921* and made available to the Tasmanian Office of the Bureau by the various port authorities. Statistics of *interstate air* trade are compiled from returns furnished direct to the Tasmanian Office of the Bureau by all those who use this medium for the transportation of goods in commercial or industrial operations.

Values

The cost of importing goods into any country will theoretically contain four elements: (i) the 'original' price at door of factory, warehouse, etc.; (ii) the cost of delivering goods to the ship 'free on board'; (iii) sea freight and associated charges between ports; and (iv) cost of delivery from port to buyer.

Trade statistics base values on the first two elements but exclude the third and fourth as set out in the following definitions:

The basis of value for overseas imports is 'transaction value actual (*f.o.b.*)' or 'domestic value (*f.o.b.*)' if higher. Overseas exports are valued *f.o.b.* at the Australian port of shipment as follows: (i) for goods sold before export—the price at which the goods were sold; or (ii) for goods shipped on consignment—the current price offering for similar goods of Australian origin in the principal markets of the country to which the goods were despatched. Interstate imports and exports are valued *f.o.b.* at the port of shipment.

Tasmanian Ports

Although there are seven port authorities (usually called marine boards) in Tasmania, overseas trade is restricted to the ports of Hobart, Launceston, Burnie, Devonport and Stanley. (Exports of iron ore from Port Latta are credited to Stanley and exports of woodchips from Spring Bay are credited to Hobart.) The names of ports in subsequent tables refer to the towns in which the controlling port authorities are located. Thus 'Hobart' includes Port Huon, Spring Bay, Howden and Strahan, 'Launceston' includes Bell Bay, Inspection Head and Long Reach; 'Stanley' includes Port Latta; 'Currie' includes Naracoopa and Grassy; and 'Lady Barron' includes Whitemark.

This chapter deals only with the imports and exports passing through these ports. For a description of the major ports and for the financial operations of the port authorities, see Chapter 11.

Total Trade of Tasmania

The following table shows Tasmanian total trade and its components in recent years. It will be observed that interstate trade is the major element both in imports and exports (but includes some goods transhipped through other Australian ports—see definitions above).

Total Trade
(\$'000)

Year	Imports				Exports			
	By sea		By air	Total imports	By sea		By air	Total exports
	Overseas	Interstate	Interstate		Overseas	Interstate	Interstate	
1970-71 ..	45 719	269 022	19 777	334 519	143 198	277 669	27 103	447 970
1971-72 ..	39 749	281 576	20 622	341 947	178 950	302 608	29 374	510 932
1972-73 ..	45 045	289 862	21 238	356 145	218 712	320 910	30 626	570 247
1973-74 ..	69 277	357 805	24 760	451 843	259 745	404 382	34 566	698 692
1974-75 ..	100 616	402 081	26 850	529 547	226 154	379 933	31 699	637 786
1975-76 ..	76 262	503 497	27 882	607 641	250 580	441 391	36 280	728 251

The next table shows the balance of trade (excess of exports over imports):

Balance of Trade (Sea and Air)

Year	Balance of trade (excess of exports)		Year	Balance of trade (excess of exports)	
	Total (\$'000)	Per head of mean population (\$)		Total (\$'000)	Per head of mean population (\$)
1964-65	78 957	215.51	1970-71	113 451	r 290.65
1965-66	72 926	197.31	1971-72	168 985	r 429.92
1966-67	58 347	156.31	1972-73	214 102	r 541.90
1967-68	51 845	137.37	1973-74	246 850	r 620.07
1968-69	93 404	244.23	1974-75	108 239	r 268.85
1969-70	130 851	338.74	1975-76	120 610	296.85

Overseas Trade by Sea

Details of Tasmania's trade with overseas countries for the past six years are shown in the following table:

Total Value of Trade by Sea With Overseas Countries
(\$'000)

Year	Value of imports from—				Value of exports to—			
	Japan	New Zealand	United States of America	Other Overseas Countries	Japan	United States of America	Indonesia	Other Overseas Countries
1970-71 ..	5 419	5 108	7 269	27 923	54 999	18 427	1 873	67 899
1971-72 ..	5 049	5 801	4 655	24 244	55 997	27 062	2 945	92 946
1972-73 ..	7 003	7 732	5 986	24 324	75 231	35 434	3 858	104 189
1973-74 ..	12 462	8 252	8 930	39 633	104 880	46 819	7 195	100 851
1974-75 ..	12 931	10 865	14 718	62 102	99 549	33 257	5 710	87 638
1975-76 ..	11 836	10 182	10 039	44 205	110 670	34 339	12 112	93 459

In 1975-76 Japan was Tasmania's major overseas supplier of imports, followed by New Zealand and the United States of America.

Trade with Selected Countries

The principal countries of origin together with values (in \$m) for overseas imports shipped direct to Tasmania in 1975-76 were: Japan, 11.8; New Zealand, 10.2; United States of America, 10.0; United Kingdom, 8.6; Canada, 8.1; and Federal Republic of Germany, 5.2. The principal countries of destination for overseas exports shipped direct from Tasmania (value in \$m) were: Japan, 110.7; United States of America, 34.3; Indonesia, 12.1; United Kingdom, 11.0; Thailand, 8.9; and Hong Kong, 5.6.

Trade With Overseas Countries
('\$000)

Country of origin or destination	Imports (a)			Exports		
	1973-74	1974-75	1975-76	1973-74	1974-75	1975-76
Algeria .. .. .	..	..	..	..	..	760
Belgium-Luxembourg	170	255	119	1 585	458	5 012
Canada	8 866	7 903	8 131	1 971	1 221	185
China Excl. Taiwan Province	75	141	98	622	419	3 507
China Taiwan Prov. only ..	1 893	1 721	1 503	5 715	3 749	5 370
Christmas Island	673	605	347	..	..	..
Denmark	298	693	344	1 452	1 018	513
France	235	700	823	4 742	2 868	3 692
German Dem. Republic	6	76	2	36	10	1 436
Germany, Federal Republic	1 733	7 657	5 218	4 488	3 658	3 281
Gilbert and Ellice Islands ..	..	412	381	..	..	..
Hong Kong	929	860	2 444	4 448	4 857	5 550
India	98	90	22	7 518	11 036	3 326
Indonesia .. .. .	..	..	5	7 195	5 710	12 112
Iran	1 841	2 936	..	1 665	2 084	701
Italy	757	1 913	1 048	3 022	1 876	3 261
Japan	12 462	12 931	11 836	104 880	99 549	110 670
Malaysia	41	56	60	4 738	8 115	5 340
Mexico	325	..	..	388	70	860
Morocco .. .. .	..	..	..	..	..	838
Netherlands	355	2 759	548	2 847	1 529	4 522
New Zealand	8 252	10 865	10 182	2 895	3 096	3 497
Norway	279	1 757	642	276	198	378
Philippines	119	28	13	3 714	3 290	3 329
Poland	14	229	27	1 711	2 508	1 971
Singapore	926	2 511	109	3 267	4 111	3 184
South Africa	170	317	563	67	251	833
Sweden	1 765	4 513	3 206	1 994	1 242	1 163
Tanzania .. .. .	..	..	45	925	115	651
Thailand	6	22	34	7 086	7 249	8 852
United Kingdom	10 237	8 714	8 612	19 514	14 867	11 026
U.S.A.	8 930	14 718	10 039	46 819	33 257	34 339
U.S.S.R.	14	41	..	5 517	2 129	4 049
Yemen, People's Democratic Republic of	980	2 820	2 244	..	..	..
Yugoslavia	3	27	16	4 707	1 048	579
Other Countries	6 771	12 329	7 518	3 890	4 443	5 049
*For orders' (b) .. .. .	..	..	..	51	9	23
Unknown	41	..	..	..	114	721
Australia (re-imported) ..	13	17	83	..	..	..
Total	69 277	100 616	76 262	259 745	226 154	250 580

(a) Value of outside packages included: 1973-74, \$562 000; 1974-75, \$886 345; 1975-76, \$758 653.

(b) Country of consignment not determined at the time of export.

The preceding table shows the trade of Tasmania with selected overseas countries; countries selected are those for which imports or exports approached or exceeded \$0.5m in any one of the three years under review, with the exception

of countries for which figures are confidential. It should be noted that some goods are received from, or sent to, overseas countries by transshipment through other Australian states; no data are available on such transactions.

Tasmanian and Australian Overseas Trade

The following table compares Australia's total overseas imports and exports with the corresponding values for Tasmania; by using a per capita comparison, certain conclusions can be drawn about the relative importance of Tasmania's overseas exports bearing in mind that Tasmania's figures are understated (and the remaining state's correspondingly inflated) in respect of transshipments not recorded as *overseas* trade for Tasmania.

Value of Overseas Trade: Tasmania and Australia

Particulars	1971-72	1972-73	1973-74	1974-75	1975-76
IMPORTS					
Australia—Total .. \$'000	4 008 365	4 120 727	6 085 004	8 083 099	8 240 187
Per head .. \$	r 306.6	r 310.3	r 451.2	r 590.2	595.1
Tasmania—Total .. \$'000	39 749	45 045	69 277	100 616	76 262
Per head .. \$	r 101.1	r 114.0	r 174.0	r 249.9	187.7
EXPORTS					
Australia—Total .. \$'000	4 893 368	6 213 704	r 6 914 395	8 672 762	9 600 748
Per head .. \$	r 374.8	r 468.0	r 512.7	r 633.3	693.4
Tasmania—Total .. \$'000	178 950	218 712	259 745	226 154	250 580
Per head .. \$	r 455.3	r 553.6	r 652.5	r 561.7	616.7

The relatively low value of overseas imports per head of Tasmania's mean population is due largely to the transshipment of goods in other Australian ports. Since some goods go overseas from Tasmania by transshipment and are therefore *not* recorded as Tasmanian overseas exports, the export comparisons *per head* of Australian and Tasmanian mean populations suggest that the State plays an important role as an earner of export income for Australia.

Interstate Trade by Air

No data are compiled to show state of origin or state of destination for trade by air; most planes carrying commercial freight, to and from Tasmania, take off from, or land in Victoria. The following is a summary of Tasmania's air trade for recent years:

Value of Interstate Air Trade
(\$'000)

Particulars	1971-72	1972-73	1973-74	1974-75	1975-76
Imports	20 622	21 238	24 760	26 850	27 882
Exports	29 374	30 626	34 566	31 699	36 280
Total	49 996	51 864	59 327	58 550	64 162

Trade and Distribution

Interstate Trade by Sea

As might be expected with Melbourne being the closest major port to Tasmania, the bulk of the island's interstate trade is transacted with Victoria. The next table shows the value of interstate sea trade with other Australian states. Imports include the value of some goods imported into other states from overseas and transhipped to Tasmania; exports include the value of some goods exported to other states for transhipment overseas.

Value of Interstate Sea Trade
(\$'000)

Australian state or territory of origin or destination	Imports			Exports		
	1973-74	1974-75	1975-76	1973-74	1974-75	1975-76
New South Wales	52 961	59 391	80 158	133 763	128 923	150 890
Victoria	257 220	273 228	331 290	230 357	213 858	247 707
Queensland	(a) 18 493	(a) 25 962	(a) 35 118	13 881	14 870	14 076
South Australia	28 379	42 951	55 922	19 554	18 069	24 625
Western Australia	752	549	1 009	5 803	4 037	4 057
Northern Territory	n.p.	n.p.	n.p.	1 023	175	36
Total	357 805	402 081	503 497	404 382	379 933	441 391

(a) Includes the value of manganese ore imported from the Northern Territory. Details are not available for separate publication.

Sea Trade of Tasmanian Ports

In the following table, the total value of interstate and overseas imports and exports by sea is shown for each port:

Total Value of Sea Trade Classified According to Port
(\$'000)

Port	Imports		Exports		Total sea trade	
	1974-75	1975-76	1974-75	1975-76	1974-75	1975-76
Burnie	88 272	88 472	139 252	167 099	227 525	255 572
Devonport	100 987	108 389	90 117	101 663	191 105	210 052
Hobart	179 422	197 579	212 245	224 334	391 667	421 913
Currie	3 149	4 789	8 899	12 076	12 047	16 864
Launceston	130 662	173 873	125 982	149 739	256 645	323 611
Stanley	165	6 588	28 783	36 413	28 947	43 000
Lady Barron	41	69	808	648	848	717
Total	502 697	579 759	606 086	691 971	1 108 784	1 271 730

The decline in the proportion of sea trade attributed to Hobart since 1958-59 is related to the increased use of 'sea-road' facilities available through the ports of Devonport, Launceston and Burnie. The vessels involved regularly in the 'sea-road' service to northern and north-western ports are the *Melbourne Trader* and *Empress of Australia*, while Hobart is served by the *Seaway Prince* and *Seaway Princess*. The *Princess of Tasmania* inaugurated this type of service between Devonport and Melbourne in October 1959, the *Seaway Queen* began a 'sea-road' service between Hobart and Melbourne in June 1964, and a Hobart-Sydney service was commenced by the *Seaway King* in September 1964. In July 1975, the new *Seaway Prince* replaced the *Seaway Queen* and in February 1976 the *Seaway Princess*, a sister ship to the *Seaway Prince*, replaced the *Seaway King*.

The *Empress of Australia*, which had provided a regular service since January 1965 with Sydney-Hobart-Sydney as one route and Sydney-Bell Bay-Burnie-Sydney as the other, was withdrawn in April 1972 for re-fitting prior to replacing the *Princess of Tasmania* on the Bass Strait run. The *Empress of Australia* was replaced immediately by the *Australian Trader* which had served northern ports regularly since mid-1969. However, the *Australian Trader*, which had provided overnight accommodation for passengers, was withdrawn from Tasmanian service from August 1976 due to substantial losses being made on this run and was subsequently sold to the Royal Australian Navy.

In October 1971 another roll-on roll-off type vessel, the *Mary Holyman*, commenced a regular service between South Australia and Tasmania with Port Adelaide-Hobart as one route and Port Adelaide-Burnie as the other. In January 1973 the *Darwin Trader*, a bulk carrier-container vessel, inaugurated a regular service with Darwin-Launceston as one route and Hobart-Darwin, via Melbourne, Sydney and Brisbane as the other. Another vessel, the new *Bass Trader*, commenced a regular service between Northern Tasmania and Queensland in August 1976. Several other vessels (e.g. *Sydney Trader*, *Brisbane Trader*, *Townsville Trader*) provide, as required, irregular sea-road services between the four main Tasmanian ports and other Australian states.

The *Straitsman* operated on a regular Melbourne-Grassy-Stanley service during May and June 1972 and again from October 1973 until 23 March 1974 when she rolled over and sank in the River Yarra. Temporary replacement vessels then maintained the service until October 1975 when the *Straitsman*, following a complete refit, recommenced the service.

In May 1976 a regular direct service between Tasmania and Western Australia was re-introduced by the *Beroona* with Burnie and Fremantle as the ports of call. In June 1977 this service was extended to include Hobart. The vessel *Wambiri* is also used on this Tasmania-Western Australia service as a back-up when required.

The next table compares the proportion of total sea trade values attributed to each port (using 1958-59 for comparison):

**Total Value of Sea Trade: Port Proportions
(Per Cent)**

Port	1958-59	1971-72	1972-73	1973-74	1974-75	1975-76
Burnie	15.3	21.7	20.8	21.2	20.5	20.1
Devonport	6.8	16.5	18.7	18.3	17.2	16.5
Hobart	50.8	(a) 33.6	32.9	32.5	35.3	33.2
Currie	0.5	1.3	0.3	0.9	1.1	1.3
Launceston	23.5	23.4	23.9	24.0	23.1	25.4
Stanley	0.6	3.4	3.2	2.9	2.6	3.4
Strahan	2.4	(b) ..	..	..	..	..
Lady Barron .. .. .	..	0.1	0.2	0.2	0.1	0.1
Total	100.0	100.0	100.0	100.0	100.0	100.0

(a) Includes Strahan from 1971-72.

(b) Included in Hobart (on 1 October 1970 the port of Strahan came under the control of the Marine Board of Hobart).

Air Trade of Tasmanian Airports

Although Tasmania has a number of airports, only six are used on a regular basis for interstate trade and of these, two accounted for 88 per cent of total air trade in 1975-76. Launceston's airport accounted for 58 per cent of the total

value of air trade in 1975-76 while Hobart's airport accounted for a further 30 per cent. The following table shows the value of interstate air trade passing through Tasmanian airports:

Total Value of Interstate Air Trade Classified According to Airport
(\$'000)

Airport	Imports		Exports		Total air trade	
	1974-75	1975-76	1974-75	1975-76	1974-75	1975-76
Hobart	13 024	13 643	4 905	5 705	17 929	19 348
Launceston	8 374	8 521	24 893	28 662	33 267	37 184
Devonport	2 033	2 230	415	394	2 448	2 624
Wynyard (a)	2 365	2 315	294	388	2 659	2 702
King Island	729	861	989	946	1 718	1 807
Flinders Island	325	311	203	185	528	496
Total	26 850	27 882	31 699	36 280	58 549	64 162

(a) Includes Smithton.

Commodities Carried by Air

It will be observed that the value of trade by air is about five per cent of the value of total overseas and interstate trade by sea and air combined. In 1975-76 the total value of air trade to and from Tasmania was \$64.2m compared to the total value of sea and air trade of \$1 335.9m. With regard to exports by air (valued at \$36 280 000 in 1975-76), the major group was 'textiles and yarns' valued at \$33 217 000; exports of all foodstuffs (meat, rock lobster, fruit, etc.) accounted for a further \$1 909 000. For imports there is a much greater range of commodities involved, the chief group being 'clothing and footwear' valued at \$17 483 000.

The annual values of both imports and exports by air have not increased greatly over the past 10 years, which means that the quantities of goods involved have almost certainly declined because of the general increase in prices over the period. A possible explanation is the improvement in sea carriage techniques (roll-on roll-off vessels, container vessels, etc.) and improved shipping schedules.

The following table shows the value of imports to and exports from Tasmania by air for the past 10 years:

Air Trade: Value of Interstate Imports and Exports
(\$'000)

Year	Imports	Exports	Year	Imports	Exports
1966-67	20 311	25 680	1971-72	20 622	29 374
1967-68	20 590	26 941	1972-73	21 238	30 626
1968-69	21 051	25 825	1973-74	24 760	34 566
1969-70	20 551	26 287	1974-75	26 850	31 699
1970-71	19 777	27 103	1975-76	27 882	36 280

Imports of Principal Commodities

The next table shows the value of the principal commodities imported into Tasmania by sea and air for a four-year period:

Imports of Principal Commodities by Sea and Air: Values
('\$000)

Commodity	1972-73	1973-74	1974-75	1975-76
Beer, wine and spirits	4 052	4 400	5 225	5 724
Aluminium oxide and hydroxide	<i>n. p.</i>	<i>n. p.</i>	<i>n. p.</i>	<i>n. p.</i>
Clothing and accessories	16 515	19 704	26 473	30 998
Cocoa beans and cocoa butter	<i>n. p.</i>	<i>n. p.</i>	<i>n. p.</i>	<i>n. p.</i>
Confectionery	3 467	4 082	4 000	4 814
Footwear	3 983	4 408	4 790	6 324
Machinery—Electrical	12 091	14 817	22 886	27 098
Other	24 309	33 296	31 336	39 370
Metal manufactures	7 893	9 134	10 243	12 854
Metals	15 274	20 050	20 552	22 939
Motor vehicles—New	37 428	47 389	65 557	69 735
Other (a)	27 902	28 805	33 823	35 439
Ores and concentrates—Zinc	12 856	20 330	30 886	38 144
Other	3 930	4 434	5 587	5 182
Paper and paper manufactures	7 474	11 215	11 690	12 713
Petroleum products—Motor spirit	9 527	10 653	12 657	20 804
Fuel oils	12 210	12 445	18 402	25 939
Other	7 521	8 263	11 199	17 917
Pulp for paper-making	10 354	12 348	19 042	16 429
Rubber manufactures	5 448	6 574	7 292	7 686
Sugar, refined	4 142	4 909	5 436	5 100
Textile yarn and fabrics	15 799	23 690	20 836	20 683
Tobacco and cigarettes	11 158	13 601	14 730	15 679
Wheat	2 783	5 074	6 588	6 938
Other (b)	100 029	132 222	140 317	159 132
Total imports	356 145	451 843	529 547	607 641

(a) Mainly tourist and other motor vehicles imported as personal effects.

(b) Includes value of items marked 'n. p.'.

The table that follows shows the quantities of the principal commodities imported and has been compiled, as far as this is practicable, to match the preceding table of values.

Imports of Principal Commodities by Sea and Air: Quantities

Commodity	Unit of quantity	1972-73	1973-74	1974-75	1975-76
Alcoholic beverages—					
Ale, beer, stout and cider	'000 ℓ	2 065	1 692	1 749	1 529
Wine	'000 ℓ	2 670	2 970	3 236	3 352
Spirits and liqueurs—Overseas (a)	'000 ℓ al	36	45	41	86
Interstate	'000 ℓ	836	828	910	879
Aluminium oxide and hydroxide	kg	<i>n. p.</i>	<i>n. p.</i>	<i>n. p.</i>	<i>n. p.</i>
Cocoa beans and cocoa butter	kg	<i>n. p.</i>	<i>n. p.</i>	<i>n. p.</i>	<i>n. p.</i>
Confectionery	'000 kg	2 686	2 897	2 556	2 713
Iron and steel	t	100 570	120 378	115 954	116 458
Motor vehicles—New	no.	16 589	19 740	20 902	19 223
Other (b)	no.	16 754	17 200	18 688	18 919
Ores and concentrates—Zinc	t	333 803	274 732	275 433	227 866
Other	t	403 324	212 158	167 792	188 351
Petroleum products—					
Motor spirit	'000 ℓ	365 569	357 525	361 523	378 127
Fuel oils	'000 ℓ	639 537	547 938	478 237	505 949
Pulp for paper-making	t	84 582	83 657	94 578	74 134
Sugar, refined	'000 kg	23 245	26 623	26 664	23 484
Tobacco and cigarettes	'000 kg	823	936	912	10 505
Wheat	t	49 359	76 092	83 006	74 748

(a) Overseas imports of spirits and liqueurs are recorded in 'litres alcohol'.

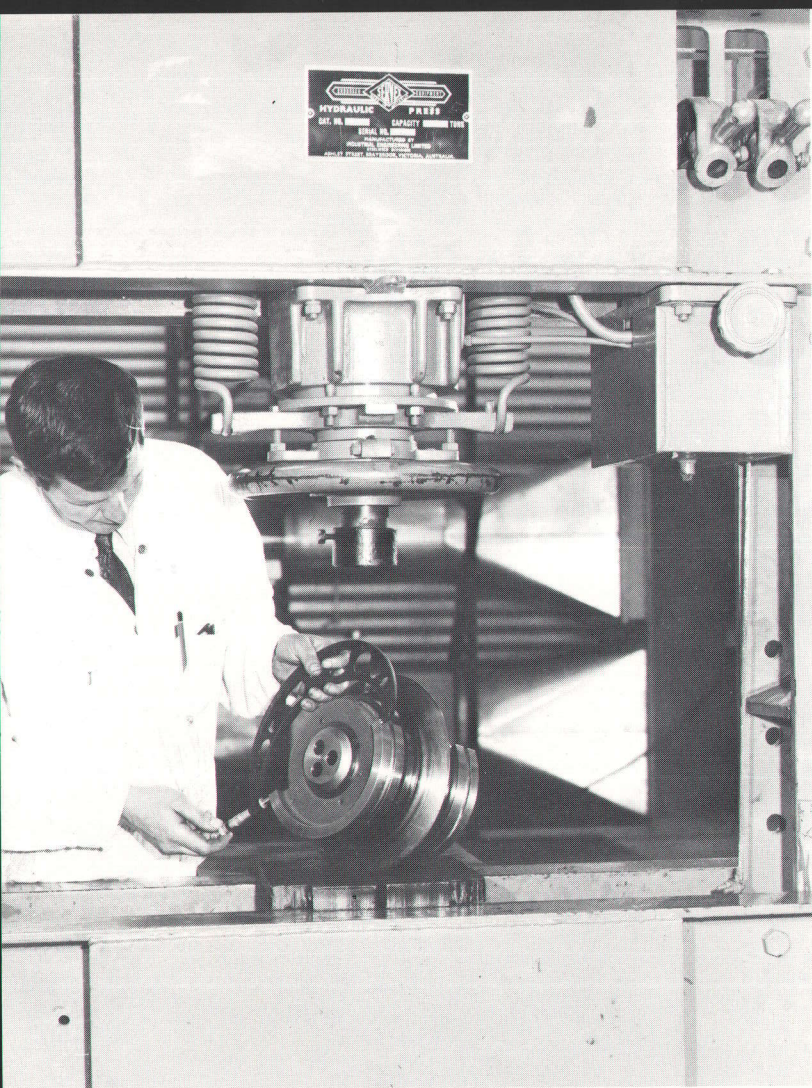
(b) Mainly tourist and other motor vehicles imported as personal effects.

Imports from Principal Overseas Countries

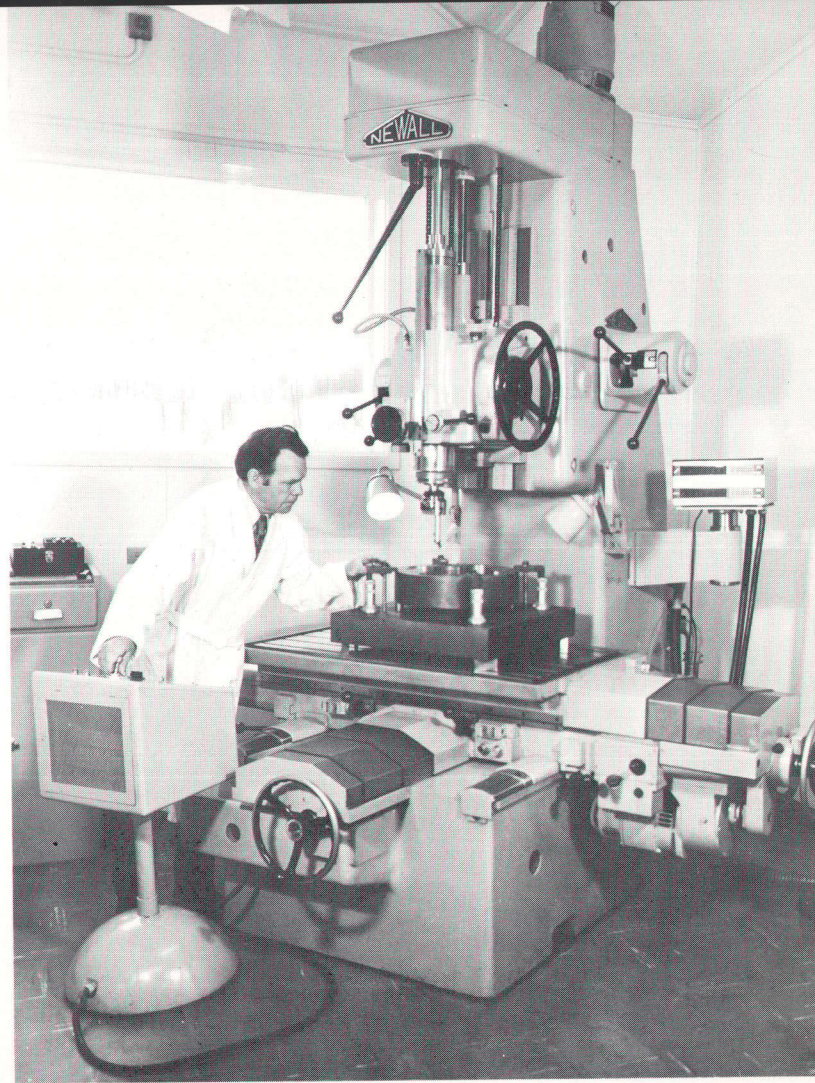
The next table shows the value of imports, by commodities, from principal overseas countries. As can be seen from the table, Japan replaced the United States of America as Tasmania's principal source of imports in 1975-76. In this year the value of imports from Japan (\$11.8m) accounted for 16 per cent of the total value of imports from overseas countries (\$76.3m), while New Zealand and the United States of America each accounted for 13 per cent, and the United Kingdom and Canada 11 per cent.

Value of Imports from Principal Overseas Countries
(\$'000)

Commodity	1970-71	1971-72	1972-73	1973-74	1974-75	1975-76
JAPAN						
Chemicals	1 420	856	558	879	1 368	1 160
Commercial vehicles	231	381	809	775	1 392	2 456
Machinery	1 008	908	1 172	2 266	2 916	2 095
Passenger motor vehicles	653	719	1 081	2 141	3 129	2 397
Textiles	1 121	1 569	2 566	3 579	1 902	2 319
Motor cycles	166	160	242	500	853	583
Other (a)	820	456	575	2 322	1 371	826
Total	5 419	5 049	7 003	12 462	12 931	11 836
NEW ZEALAND						
Chemicals	155	144	200	357	383	81
Machinery	115	189	99	253	428	385
Paper and paper board	403	395	273	1 765	1 883	1 958
Textiles	791	1 170	2 548	1 464	554	904
Woodpulp	3 260	3 324	4 055	3 801	6 561	6 150
Other	384	579	557	612	1 056	704
Total	5 108	5 801	7 732	8 252	10 865	10 182
UNITED STATES OF AMERICA						
Chemicals	167	199	333	556	1 090	729
Clays	210	395	422	396	1 023	685
Coke of coal	278	63	45	87	315	148
Commercial vehicles	322	1	37	550	1 287	258
Machinery	1 886	895	2 362	2 329	4 182	2 503
Petroleum coke	1 680	1 666	1 073	946	2 535	2 858
Woodpulp	1 839	957	1 070	2 094	2 463	1 372
Other	887	479	644	1 972	1 823	1 486
Total	7 269	4 655	5 986	8 930	14 718	10 039
UNITED KINGDOM						
Chemicals	456	633	687	725	735	510
Food, beverages and tobacco	207	178	178	149	441	358
Machinery	2 051	2 400	1 406	4 004	2 561	3 130
Metal manufactures	451	632	503	521	646	611
Printed matter	251	284	288	275	547	789
Textiles	1 148	924	1 192	1 763	1 394	1 499
Tyres and tubes	247	212	187	196	463	249
Other	1 287	1 615	1 559	2 604	1 927	1 466
Total	6 098	6 878	6 000	10 237	8 714	8 612

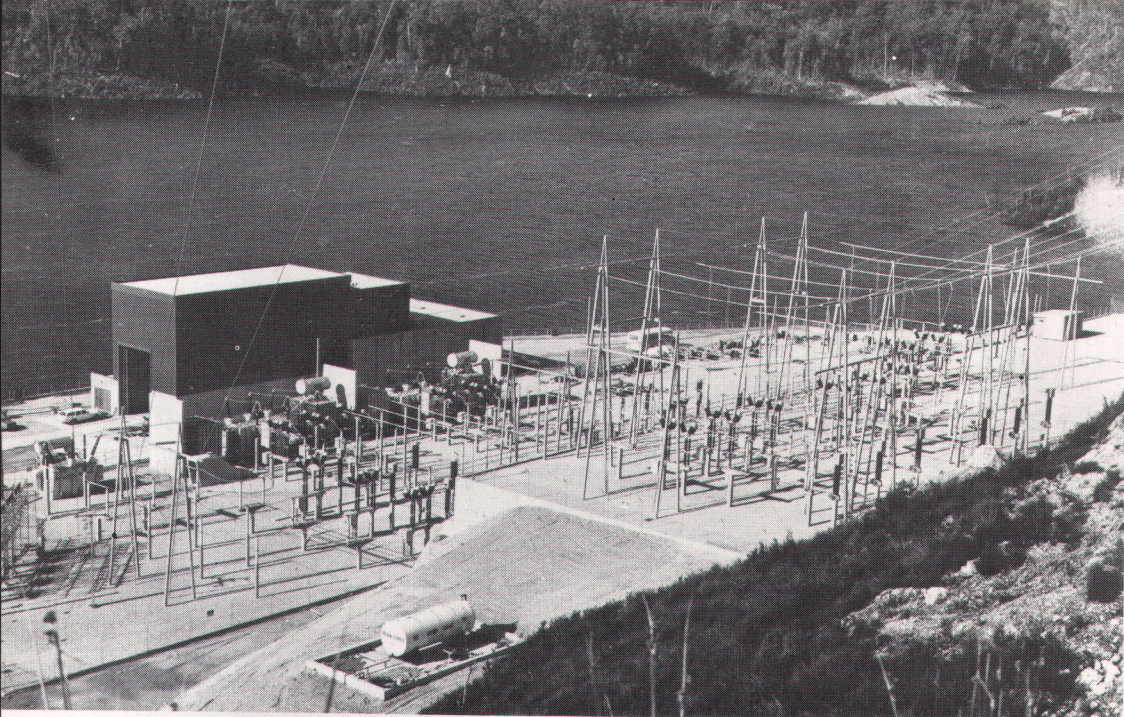


Metrology of a cutter assembly at Robbins Pty Ltd, Kingston
[Tasmanian Film Corporation]



R.A.C. jig borer at Robbins Pty Ltd

[Robbins Pty Ltd]



The control building and switchyard for the Gordon River Power Development—Tasmania's newest hydro-electric power generating station

[By courtesy of the Hydro-Electric Commission]

The power tunnel which carries water from Lake Gordon into the underground hydro-electric power generating system





*The Lower Gordon
River upstream from
Butlers Island*

[Photos by courtesy of the Hydro-Electric Commission]

*The Sentinels from
the Gordon River
Road*





Devil's Gate Dam (84 metres) holding back the waters of Lake Barrington on the River Forth

[By courtesy of the Hydro-Electric Commission]

Value of Imports from Principal Overseas Countries —continued
('\$000)

Commodity	1970-71	1970-71	1972-73	1973-74	1974-75	1975- 76
CANADA						
Machinery	646	105	100	176	120	725
Textiles	86	102	97	118	150	107
Woodpulp	3 293	3 276	3 666	4 729	5 599	6 993
Other	776	295	478	3 843	2 034	306
Total	4 801	3 778	4 341	8 866	7 903	8 131

(a) Includes value of items not available for separate publication.

Exports of Principal Commodities

The following table shows the value of principal commodities exported (inter-state and overseas) from Tasmania by sea and air:

Exports of Principal Commodities by Sea and Air: Values
('\$000)

Commodity	1973-74	1974-75	1975-76
Butter (including butter oil)	6 441	4 460	7 527
Cheese	5 930	7 922	7 633
Fertilisers, manufactured	1 852	1 899	2 155
Fish, crustaceans and molluscs	7 206	6 333	4 939
Fruit—Apples (fresh)	15 419	9 885	8 440
Juices and syrups	1 316	1 198	1 065
Other	3 976	3 138	2 689
Hides and skins (cattle, calf, horse and sheep)	5 211	3 892	4 871
Hops	819	1 996	1 447
Live animals	10 284	2 209	1 402
Machinery	5 056	3 581	4 983
Meat—Beef and veal	18 818	9 183	13 648
Lamb and mutton	1 942	1 650	2 504
Other	1 747	1 602	1 238
Metal manufactures	9 503	7 632	4 599
Metals, refined—Cadmium	2 500	1 985	2 815
Zinc	77 143	74 298	74 926
Motor cars and commercial vehicles (a) ..	28 997	32 524	34 854
Ores and concentrates—Copper	35 170	20 088	22 021
Iron	25 352	28 882	32 531
Lead	11 303	11 634	12 169
Tin	17 967	23 583	17 428
Tungsten	4 589	7 053	8 439
Sulphuric acid	6 958	6 947	7 083
Tallow	2 049	1 293	2 065
Textile yarn, fabrics and made-up articles	41 174	31 454	41 656
Timber—Dressed	7 753	8 303	12 511
Undressed	18 403	14 387	13 568
Vegetables, fresh and preserved	20 296	19 297	23 872
Woodchips	31 019	35 212	35 524
Wool, greasy	38 319	26 640	31 232
Commodities not available for publication (b)	216 681	198 716	244 863
All other exports	17 499	28 910	41 554
Total	698 692	637 786	728 251

(a) Mainly tourist and other motor vehicles exported as personal effects.

(b) Commodities comprising this item are: aluminium, alumina, beadings and mouldings, paper, hard-board, cement, ferro-manganese, silicon-manganese, confectionery, cocoa and chocolate, food beverages, paper pulp, metal scrap, calcium carbide, titanium oxides, plywood, rutile, zirconium, particle board and asbestos-cement articles.

The next table shows the quantities of the principal commodities exported and has been compiled, as far as possible, to match the preceding table of values:

Exports of Principal Commodities by Sea and Air: Quantities

Commodity (a)	Unit of quantity	1973-74	1974-75	1975-76
Butter (including butter oil)	'000 kg	8 269	5 012	9 720
Cheese	'000 kg	7 730	10 386	9 026
Fertilisers, manufactured	t	31 752	23 682	35 694
Fish—Abalone	'000 kg	1 018	1 104	978
Rock lobster	'000 kg	1 423	1 020	524
Other	'000 kg	1 549	1 054	715
Fruit—Apples (fresh)	'000 kg	87 141	55 735	45 705
Juices and syrups	'000 l	1 726	1 832	1 496
Other	'000 kg	12 275	9 851	8 838
Hides and skins (cattle, calf and sheep) ..	'000 kg	7 183	7 014	8 306
Hops	'000 kg	478	1 408	918
Live animals—Cattle	no.	53 461	16 376	8 612
Sheep	no.	146 894	116 876	93 467
Meat—Beef and veal	'000 kg	17 197	12 935	15 324
Lamb and mutton	'000 kg	2 534	3 376	3 969
Pork	'000 kg	1 330	1 019	301
Other	'000 kg	1 106	1 127	1 289
Metals, refined—Cadmium	'000 kg	485	323	626
Zinc	t	190 293	139 253	138 243
Motor cars and commercial vehicles (b) ..	no.	17 314	17 956	18 553
Ores and concentrates—Copper	t	115 693	81 690	85 530
Iron	'000 t	2 341	2 061	2 025
Lead	t	45 311	41 974	37 311
Tin	t	11 031	13 146	9 340
Tungsten	t	1 614	2 261	2 708
Timber—Dressed	m ³	60 117	60 985	106 075
Undressed	m ³	210 131	152 443	149 560
Vegetables—Fresh	'000 kg	23 571	17 035	35 285
Preserved	'000 kg	49 478	46 743	57 736
Woodchips	'000 t	2 138	2 031	1 734
Wool, greasy	'000 kg	16 963	15 947	17 435

(a) Principal commodities not available for publication comprise: aluminium, alumina, hardboard, cement, ferro-manganese, silicon-manganese, confectionery, cocoa and chocolate, food beverages, paper-pulp, metal scrap, calcium carbide, titanium oxides, plywood, rutile, zirconium, particle board and asbestos-cement articles.

(b) Mainly tourist and other motor vehicles exported as personal effects.

Export of Selected Commodities

The following table shows, in summary form, total exports of some important commodities for selected years since 1939-40:

Exports of Selected Commodities by Sea and Air

Commodity	Unit of quantity	1939-40	1949-50	1959-60	1969-70	1975-76
QUANTITY						
Apples and pears, fresh	'000 kg	74 373	56 911	80 683	109 384	47 114
Butter (including butter oil)	'000 kg	2 816	2 179	7 864	12 611	9 720
Hops	'000 kg	719	802	1 340	1 368	918
Meat, fresh, chilled or frozen	'000 kg	2 534	957	9 225	17 048	20 883
Ores and concentrates	'000 t	137	6	28	2 175	2 160
Timber, dressed and undressed	'000 m ³	120	148	178	207	256
Woodchips	'000 t	.. .. .	.. .. .	.. .. .	.. .. .	1 734
Wool, greasy	'000 kg	5 110	5 228	12 690	16 513	17 435
Zinc, refined	t	72 047	81 998	115 680	163 847	138 243

Exports of Selected Commodities by Sea and Air—*continued*

Commodity	1939-40	1949-50	1959-60	1969-70	1975-76
VALUE (\$'000)					
Apples and pears, fresh	2 270	4 348	9 490	14 905	8 756
Butter (including butter oil)	742	1 277	5 390	6 950	7 527
Meat, fresh, chilled or frozen	310	312	3 801	11 774	17 192
Ores and concentrates—Copper .. ..	..	2	40	8 369	22 021
Iron .. ..	..	..	..	25 286	32 531
Lead	595	386	2 956	7 358	12 169
Tin	688	723	1 507	16 207	17 428
Textile yarn and fabrics	2 674	5 540	17 524	27 784	41 656
Timber, dressed and undressed	1 238	2 930	8 952	16 238	26 079
Woodchips .. ..	..	..	..	..	35 524
Wool, greasy	1 376	6 202	15 254	17 821	31 232
Zinc, refined	2 856	9 964	22 922	42 625	74 926

Exports to Principal Overseas Countries

Details for commodities exported to principal overseas countries are given in the next table:

Exports to Principal Overseas Countries

Commodity	Unit of quantity	Quantity			Value (\$'000)		
		1973-74	1974-75	1975-76	1973-74	1974-75	1975-76
JAPAN							
Abalone	'000 kg	513	606	708	1 133	1 241	1 832
Cheese	'000 kg	2 154	5 098	4 257	1 518	4 194	3 904
Copper ores and concentrates	t	91 517	60 787	71 576	31 030	14 280	16 791
Hides and skins (cattle and calf)	'000 kg	1 106	1 064	3 053	693	491	1 561
Iron ores and concentrates	'000 t	2 334	2 051	1 980	25 268	28 783	31 910
Meat and bone meal	t	3 121	1 962	3 466	606	191	310
Meat, fresh, chilled or frozen	'000 kg	3 662	1 823	5 062	4 281	1 206	4 539
Milk, dried	'000 kg	1 747	270	903	649	142	287
Pulpwood	t	27 706	37 484	54 000	521	967	1 078
Woodchips	'000 t	2 138	2 031	1 730	31 018	35 212	35 442
Wool, greasy	'000 kg	2 023	2 043	2 067	4 894	3 428	3 505
Other (a) .. ..	..	..	..	..	3 267	9 414	9 511
Total .. ..	..	..	..	..	104 880	99 549	110 670

UNITED STATES OF AMERICA

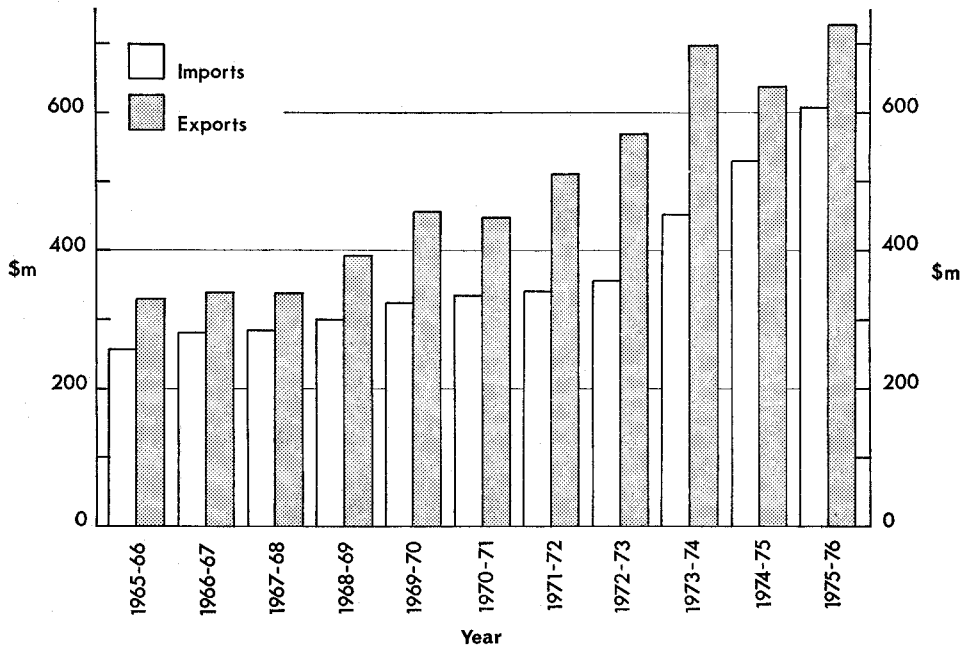
Cadmium	'000 kg	42	19	92	224	112	377
Cheese	'000 kg	3 542	640	1 539	3 149	543	1 477
Lead ores and concentrates	t	40 137	31 372	33 125	11 078	10 954	10 950
Lead slags and residues	t	32 427	17 717	15 161	5 261	1 064	839
Meat, fresh, chilled or frozen	'000 kg	9 917	9 267	9 464	11 430	6 370	8 372
Oil seeds	'000 kg	257	192	592	87	118	579
Wheat gluten	'000 kg	1 015	645	892	473	362	411
Wool, greasy	'000 kg	45	40	204	104	63	426
Zinc, refined	t	22 209	19 537	15 162	10 935	11 631	9 493
Other .. ..	..	..	..	..	4 078	2 040	1 415
Total .. ..	..	..	..	..	46 819	33 257	34 339

Exports to Principal Overseas Countries—continued

Commodity	Unit of quantity	Quantity			Value (\$'000)		
		1973-74	1974-75	1975-76	1973-74	1974-75	1975-76
INDONESIA							
Apples, fresh	'000 kg	1 700	1 251	1 103	288	242	238
Cement, Portland	t	..	2 004	19 011	..	71	598
Hardboard	'000 m ²	331	320	469	108	66	246
Milk, dried	'000 kg	..	..	350	..	..	263
Zinc, refined	t	15 031	8 290	17 152	6 548	5 021	10 143
Other (a) .. .. .	..	..	..	..	251	310	624
Total .. .. .	..	..	..	..	7 195	5 710	12 112
UNITED KINGDOM							
Apples, fresh	'000 kg	33 151	15 846	14 417	6 128	2 648	2 386
Fruit juices	'000 £	479	946	379	347	680	272
Hides and skins	'000 kg	134	246	217	148	187	166
Meat, fresh, chilled or frozen	'000 kg	2 684	1 755	1 633	2 164	872	807
Pears, fresh	'000 kg	2 577	596	599	553	108	111
Tin ores and concentrates	t	927	2 742	1 456	554	2 628	1 172
Wheat gluten	'000 kg	541	1 030	198	336	632	102
Wool, greasy	'000 kg	648	685	1 306	1 229	901	2 072
Zinc, refined	t	20 015	15 675	9 595	7 024	5 545	3 397
Other .. .. .	..	..	..	..	1 031	666	541
Total .. .. .	..	..	..	..	19 514	14 867	11 026

(a) Includes item(s) for which details are not available for separate publication.

Total Imports and Exports, Tasmania, 1965-66—1975-76



RETAIL TRADE IN TASMANIA

Censuses of Retail Establishments

Historical

Before the Integrated Economic Censuses of 1968-69, retail censuses were undertaken for the years ended 30 June 1948, 1949, 1953, 1957 and 1962. The information collected in each census was extensive and provided details of retail trading in local government areas, in statistical divisions, and in special 'statistical retail areas'. The census information was also used as a bench-mark for designing a sample, representative of all retail establishments, for the purpose of inter-censal quarterly surveys which are the basis for calculating estimates of the quarterly value of retail sales.

In 1968-69 simultaneous economic censuses for five sectors were undertaken: retailing; manufacturing; mining; wholesaling; and electricity and gas. Results of these censuses appear in the section 'Integrated Economic Censuses' in Chapter 18; definitions of concepts and terms appear in Appendix B, 'Economic Censuses'.

Retail Census—1973-74

A retail census was conducted covering trading in 1973-74 but there were no data items collected for purchases, stocks or capital expenditure (as there had been in the 1968-69 census); also certain types of establishment were excluded: bread and milk vendors; footwear repairers; motion picture theatres; and laundries and dry cleaners. The aim of the census was to provide an up-to-date framework for the quarterly retail surveys; therefore the types of establishment included and the financial data collected were limited to serve this rather narrow purpose. The following table gives results for Tasmania of the 1973-74 retail census. Direct comparisons with the results of previous censuses cannot be made because of changes in the scope of the census.

Census of Retail and Selected Service Establishments, 1973-74
Summary of Operations by Industry Group

Industry group	ASIC code (a)	Establishments operating at 30 June	Persons employed (b)			Wages and salaries \$m
			Males	Females	Persons	
		no.	no.	no.	no.	
Department, variety and general stores	481	80	677	2 089	2 766	8.8
Food stores	482	1 441	2 660	3 454	6 114	10.7
Clothing, fabric and furniture stores	484	529	935	1 768	2 703	7.7
Household appliances and hardware stores	485	291	819	535	1 354	4.1
Motor vehicle, petrol and tyre retailers	486	955	4 663	1 020	5 683	17.4
Other retailers	487	571	754	1 400	2 154	4.6
Total retail establishments	..	3 867	10 508	10 266	20 774	53.2
Restaurants and licensed hotels	921	417	2 315	3 422	5 737	15.8
Licensed clubs	922	163	501	172	673	1.9
Hairdressing and beauty salons	932	256	127	646	773	1.4
Total selected service establishments	..	836	2 943	4 240	7 183	19.1
Grand total .. .. .	..	4 703	13 451	14 506	27 957	72.3

(a) Australian Standard Industrial Classification.

(b) At last pay day in June; includes working proprietors and unpaid helpers working at least 15 hours during the week.

Census of Retail and Selected Service Establishments, 1973-74
Summary of Operations by Industry Group—continued

Industry group	Retail sales (c)	Whole-sale sales (c)	Other operating revenue (c)	Turnover
	\$m	\$m	\$m	\$m
Department, variety and general stores ..	56.7	0.9	1.7	59.3
Food stores	137.5	0.7	0.9	139.2
Clothing, fabric and furniture stores ..	64.5	0.1	0.6	65.1
Household appliances and hardware stores..	29.7	0.4	3.0	33.1
Motor vehicle, petrol and tyre retailers ..	160.1	9.5	21.7	191.4
Other retailers	36.1	0.6	0.4	37.1
Total retail establishments ..	484.6	12.3	28.3	525.2
Restaurants and licensed hotels	41.9	..	25.0	66.9
Licensed clubs	7.7	..	1.3	9.0
Hairdressing and beauty salons	0.1	..	3.3	3.5
Total selected service establishments	49.7	..	29.6	79.3
Grand total	534.3	12.3	57.9	604.5

(c) Components of turnover in the last column.

In the next table, details are given of establishment, persons employed and value of retail sales by statistical divisions:

Number of Retail and Selected Service Establishments, Persons Employed and Value of Retail Sales by Statistical Division, 1973-74

Statistical division or sub-division	Retail and selected service establishments	Persons employed (a)	Value of retail sales (b)
	no.	no.	\$'000
Hobart	1 741	12 527	237 003
Southern	326	1 099	16 058
Northern—			
Tamar	1 198	6 991	139 779
North Eastern	226	819	10 420
Total	1 424	7 810	150 199
Mersey-Lyell—			
North-Western	1 074	5 812	120 140
Western	138	709	10 900
Total	1 212	6 521	131 040
Total Tasmania	4 703	27 957	534 306
Urban Hobart	1 527	11 663	221 225
Urban Launceston	892	5 900	121 388

(a) At last pay day in June; includes working proprietors and unpaid helpers working at least 15 hours during the week.

(b) These figures refer to the total value of all commodities sold retail by all retail establishments and similar sales by selected service establishments.

Sales by Commodity: Classifications by industry or by region of the sales of commodities shown in the next table are available from the Bureau.

Number of Retail and Selected Service Establishments Reporting Retail Sales, and Value of Sales by Commodity Item, 1973-74

Commodity item	Establishments	Retail sales	Proportion of total sales
	no.	\$'000	per cent
Groceries	1,169	63 775	11.94
Fresh meat	384	26 154	4.90
Confectionery, ice cream, soft drinks, etc. ..	1 512	14 570	2.73
Other food (a)	1 007	21 255	3.98
Beer, wine and spirits	492	47 823	8.95
Cigarettes and other tobacco products	1 794	15 874	2.97
Clothing and drapery	621	65 754	12.31
Footwear	295	10 338	1.94
Domestic hardware (b)	489	14 397	2.69
Radios, television sets, musical instruments, etc. (c)	224	10 965	2.05
Household electrical appliances (d)	186	13 531	2.53
Furniture (e)	125	11 477	2.15
Floor coverings (f)	120	9 931	1.86
Cosmetics, perfumes, toilet preparations	479	9 629	1.80
Prescription and patent medicines (g)	247	10 532	1.97
Newspapers, books and stationery	516	13 116	2.46
Goods not elsewhere classified (h)	720	15 419	2.89
New motor vehicles, new and used motor cycles, etc. (i)	142	61 445	11.50
Used motor vehicles	172	48 802	9.13
New and used parts and accessories, petrol, oil, etc.	723	49 523	9.27
Total .. .. .	..	534 306	100.00

(a) Includes fresh fruit and vegetables, bread, cakes and pastry, fish (fresh or cooked), chips, hamburgers and cooked chicken.

(b) Includes china, glassware, jewellery, watches and clocks and garden equipment but excludes basic building materials, builders' hardware and supplies such as tools of trade, paint, etc.

(c) Includes radiograms, tape recorders, records, sheet music, etc.

(d) Includes domestic refrigerators and freezers, washing machines, stoves, household heating appliances, bottled liquid petroleum gas, etc.

(e) Includes mattresses, blinds, etc. and installation and repairs.

(f) Includes carpets, lino, etc. and laying of floor coverings.

(g) Includes therapeutic appliances.

(h) Includes photographic equipment and supplies, sporting goods, bicycles, toys, antiques, disposal and secondhand goods, cut flowers, garden seeds, shrubs, travel goods and brief cases, etc.

(i) Includes new and used boats and caravans.

Quarterly Estimates of Value of Retail Sales

Each quarter, returns of retail sales are collected from a fraction (or sample) of all retail businesses recorded in the most recent census of retail establishments, the fraction being selected to represent the field covered by the census. This sample is varied annually to make provision for 'new' establishments opening up, 'old' establishments closing down and 'old' establishments changing type ('old', in this context, relates to business as recorded at the most recent census of retail establishments).

Retail Sales of Goods, Tasmania

The following table sets out details of estimated value of retail sales, by commodity groups, for recent periods.

Retail sales relate principally to sales to the final consumer of new and used goods for personal and household purposes and the survey is intended primarily as an indicator of such sales.

Estimated Value of Retail Sales of Goods by Commodity Groups (a)

Commodity group	1975-76		Six months ended December 1976	
	Value	Proportion of total	Value	Proportion of total
	\$m	%	\$m	%
Groceries	87.1	16.4	54.7	17.3
Butchers' meat	30.9	5.8	18.0	5.7
Other foods	49.4	9.3	29.1	9.2
Beer, wine and spirits	68.8	13.0	38.9	12.3
Clothing and drapery	86.2	16.3	51.8	16.4
Footwear	14.4	2.7	7.7	2.4
Domestic hardware, china and glass-ware	22.1	4.2	13.4	4.2
Electrical goods	48.1	9.1	31.1	9.8
Furniture	31.6	6.0	18.2	5.8
Chemists' goods	27.2	5.1	15.4	4.9
Newspapers, books, stationery, etc.	20.0	3.8	11.4	3.6
Other goods (b)	43.7	8.3	26.6	8.4
Total (b)	529.5	100.0	316.3	100.0

(a) Based on sample from the 1973-74 Integrated Census.

(b) Excluding motor vehicles, parts, petrol, etc.

Retail Sales of Goods, Australia

The following table gives details of the estimated value of retail sales of goods for recent years and quarters for Australia at current (actual prices paid) and constant (average 1974-75) prices. The constant prices series is derived from the original series by using specially constructed price indexes for various commodity groups in order to eliminate the direct effects of price changes.

Estimated Value of Retail Sales of Goods: Australia (a)
(\$ million)

Year or quarter	Food and drink		Other (b)		Total (b)	
	Current prices (c)	Constant prices (d)	Current prices (c)	Constant prices (d)	Current prices (c)	Constant prices (d)
1974-75	7 397.4	7 397.4	8 817.9	8 817.9	16 215.3	16 215.3
1975-76	8 623.3	7 586.3	10 259.1	9 039.2	18 882.4	16 625.5
1975-76—						
September	1 978.5	1 854.4	2 357.7	2 186.6	4 336.2	4 041.0
December	2 270.8	2 009.2	2 957.8	2 620.3	5 228.6	4 629.5
March	2 159.4	1 851.1	2 304.6	2 006.9	4 464.0	3 858.2
June	2 214.6	1 871.6	2 639.0	2 225.2	4 853.6	4 096.8
1976-77—						
September	2 306.8	1 911.7	2 675.6	2 229.3	4 982.4	4 141.0
December	2 633.9	2 116.2	3 345.4	2 709.0	5 979.3	4 825.2

(a) Excludes Northern Territory and Australian Capital Territory.

(b) Excludes motor vehicles, parts, petrol, etc.

(c) Original prices.

(d) Average 1974-75 prices—see text preceding table.

Household Expenditure

The section 'Household Expenditure Survey' in Chapter 18 of the 1977 *Year Book* included details relating to household expenditure in Hobart (dissected by type of payment and weekly household income group) for 1974-75.

WHOLESALE TRADE

Censuses and surveys of retail trade were introduced by the Bureau in the late 1940s; a continuous quarterly series shows retail sales for the last 25 years or so in terms of broad commodity groups. Developments in this field occupied all the resources available and the problem of creating a matching wholesale series had to be deferred. However, a pilot census was conducted covering wholesale trading in 1963-64, the aim being to identify the various categories of wholesalers and to discover the various types of operation.

The results of the pilot census were not published but they served to show the definitional framework necessary for a full-scale census, and to highlight differences between retail and wholesale operations (e.g. the greater relative importance in the wholesale sector of sales on commission).

The decision was taken to defer any full-scale wholesale census until 1968-69 when simultaneous censuses were being held in other sectors of the economy, the more relevant being those covering manufacturing and retailing. The link between wholesaling and these two sectors is easily apparent; manufacturers often market through wholesalers, and the wholesalers in turn are suppliers of goods to retailers. The inclusion of all three sectors in three simultaneous integrated economic censuses meant that there were no overlaps or gaps in coverage.

Details from the 1968-69 Census of Wholesale Establishments may be found in the 1972 to 1977 editions of the *Tasmanian Year Book*.

The main aggregates are summarised and compared with integrated economic census results for other industry sectors in the section 'Integrated Economic Censuses' in Chapter 18 of this edition.

Chapter 11

TRANSPORT AND COMMUNICATION

PORT AUTHORITIES

Introduction

Tasmania has a number of ports capable of accommodating overseas vessels; they are sited on the Derwent and Huon Rivers in the south (Hobart and Port Huon); in Spring Bay on the east coast; on the Tamar in the north (Inspection Head, Long Reach and Bell Bay); on the Mersey (Devonport), in Emu Bay (Burnie) and at Port Latta, all in the north-west. All these ports provide depths of approximately 9 metres or more of water at berths; Port Latta provides a depth of 16 metres nearly one and a half kilometres off-shore.

Interstate and intrastate trade passes through the main ports and operates as well through ports at Strahan, Stanley, Ulverstone, Currie (on King Island) and Lady Barron (on Flinders Island).

This section deals primarily with the authorities which control the harbours but a brief description is given of the main ports.

Port of Hobart

Location

The approach to the Derwent and the Port of Hobart is made through a very wide strait between Cape Queen Elizabeth (Bruny Island) and Cape Raoul (Tasman Peninsula), approximately 50 kilometres south-east from the city. The mouth of the Derwent, five and a half kilometres wide, lies 19 kilometres south-east of the port which is built upstream on the western bank in a U-shaped cove; the opposite bank lies two and a half kilometres away to the east. The shores of the Derwent and the arms of the cove act as natural breakwaters.

Description

The present main port of Hobart is extremely compact, being U-shaped with only 610 metres or less separating the southern and northern arms. The southern arm is devoted to Princes Wharf with berths numbered one to four; the centre contains Elizabeth Street Pier and Kings Pier while the northern arm is made up of the Macquarie Wharf complex. The Elizabeth Street Pier was converted for use as a ferry passenger terminal in early 1975 following the collapse of the Tasman Bridge. A tanker berth, formerly sited at Macquarie Point, was decommissioned in 1971 and the whole area was redeveloped to provide additional berths (Macquarie Wharves five and six). The 'Seaway' class vessels use the new Macquarie berths.

Princes No. 1 and No. 4 Berths are specialised terminals with a drive-on ramp and vehicle marshalling areas. The berths accommodate the 'Trader' class coastal vessels and the roll-on roll-off vessel *Mary Holyman* which operates on the Hobart-Adelaide service.

The most striking feature of the Port of Hobart is the ease with which large vessels can be brought to berth. Tides present no problem, the maximum rise and fall being 1.37 metres (average approximately 0.61 metres), and dredging of approach channels has never been necessary.

Subsidiary Ports

In addition to the main port in the heart of the city, there are a number of subsidiary outlets serving the south of the State. Port Huon wharf, located on the west bank of the Huon River near Geeveston, is in the centre of the principal orcharding area and used mainly for fruit exports. Also based on the Huon River (at Hospital Bay) is the A.P.M. Ltd private wharf (for export of paper pulp). At the port of Spring Bay, near Triabunna on the east coast, accommodation has been provided for bulk carriers loading woodchips for Japan. In the Derwent itself, four kilometres upstream from the main port, is a tanker berth at Sels Point where bulk petrol and oil are stored; tankers pass under the 47 metre high navigation span of the Tasman Bridge on their way to Sels Point.

The Sels Point area has been developed as a petroleum products storage area and has replaced the Macquarie Wharf facilities as Hobart's petroleum installation. One and a half kilometres upstream from Sels Point is the Electrolytic Zinc Company Ltd private wharf at Risdon. At Boyer, located nearly 32 kilometres upstream from the main port, is the Australian Newsprint Mills Ltd plant. Newsprint is ferried to the main port by barge.

Administration

The Marine Board of Hobart is the authority controlling the main ports of Hobart, Port Huon and the Port of Spring Bay. When the Marine Board of Strahan ceased to function on 30 September 1970, Parliament extended the responsibilities of the Marine Board of Hobart to cover the control and operation of the Port of Strahan. The Board's jurisdiction covers the west, south and east coasts of Tasmania between the parallel of $41\frac{1}{2}^{\circ}$ south latitude and Cape Portland.

Works Program

The 1976-77 works program saw the continued construction of the new Macquarie No. 4 Berth. Due for completion in December 1977, the 243 metre berth will be capable of accommodating the largest container and conventional vessels afloat. The program also allows for the sealing of 3.4 hectares of cargo marshalling area. A rail spur to the State's main rail network will be installed in the marshalling area as well as provision for the holding of refrigerated containers.

Port of Launceston

Location

The Port of Launceston is situated on the River Tamar, which originates at the confluence of the North and South Esk Rivers at the City of Launceston and flows 60 kilometres to Bass Strait where deep water and broad expanses of river provide a valuable natural harbour. In this area, encompassing Bell Bay, Inspection Head and Long Reach, are located the major activities of the Port of Launceston. A tidal range of between three and 3.6 metres creates strong tidal currents, which by natural scour eliminate the need for any maintenance dredging in the lower reaches of the river.

Because extensive areas of deep water frontage are available, the development of the port is decentralised with the main operations located as follows:

- (i) *Bell Bay*: Wharves include two tanker berths, a general cargo and bulk berth, a passenger berth, roll-on roll-off facilities and a special bulk berth serving Comalco Aluminium Ltd. One roll-on roll-off berth serves Australian National Line vessels and a common-user roll-on roll-off berth is also available. The Bell Bay site is on the eastern shore, some 13 kilometres upstream from the mouth of the Tamar. The Bell Bay and Long Reach areas are linked to the railway system.
- (ii) *Long Reach*: Port facilities have been developed upstream from Bell Bay, the main function being export of woodchips from adjacent plants.
- (iii) *Inspection Head*: Overseas berths on the western bank, opposite Bell Bay, for shipment of fruit, frozen meat and general cargo. Large cool storage and freezer facilities are provided as well as bulk storage and special loading facilities for tallow.
- (iv) *Kings Wharf, Launceston*: Berths for inter and intrastate trade; facilities also include a graving dock and fitting-out berths for small ship docking and repair.

Description

All berths and facilities now in service in the port have been constructed since about 1950 and are, therefore, of modern standard.

Channel and lighting improvements in the lower reaches have been carried out over recent years, permitting vessels drawing up to 11.1 metres to work the river for 16 kilometres from Bass Strait to the site of the new woodchip berths in Long Reach. The channel improvement works have been designed to provide for the rapidly growing industrial complex at Bell Bay which is creating an ever increasing demand for large bulk carriers.

Administration

The port is administered by the Port of Launceston Authority whose jurisdiction covers the full length of the River Tamar, together with the northern coastline westward to Badger Head and eastward to Cape Portland.

Port of Devonport*Location*

The Port of Devonport is situated on the Mersey River within two kilometres of the coast. The entrance is sheltered by Mersey Bluff on the west and by a retaining wall extending over half a kilometre northward from the eastern shore of the river. The river was always a natural harbour for small craft and its development as a major port by extensive dredging and engineering works has resulted in a secure harbour for large ships.

Description

The main harbour is formed around two turning basins each 259 metres in diameter with wharves on both banks providing 1 067 lineal metres of berthage.

The western bank contains four overseas and interstate berths and one specialised cattle jetty. These berths are provided with storage sheds, oil pipelines, wheat silos, bulk cement silos and bulk tallow silos, as well as one of the largest and most modern cold storage facilities in the State. Provision has also been made for the handling of bulk commodities and heavy lifts while all berths are connected to the railway network.

Two terminals for roll-on roll-off and container cargo are located on the eastern bank; one is leased to the Australian National Line and the other is a common-user facility. Both are equipped with stern loading ramps and cranes for lift-on lift-off cargo. Extensive vehicle marshalling and cargo assembly areas are provided, with land available for expansion. Approximately 115 000 passengers pass through the No. 1 Terminal each year. In July 1972 the *Empress of Australia* replaced the *Princess of Tasmania* on the passenger run to and from Melbourne. The A.N.L. vessels *Melbourne Trader*, *Sydney Trader*, *Brisbane Trader*, and *Townsville Trader* maintain a regular cargo service from both terminals.

A 30-tonne portal travelling crane at No. 2 Berth is capable of handling all types of cargo units. For the speedy handling of bulk cargoes a 14-tonne grab and 40-tonne capacity hopper are available as auxiliaries to the crane. A 30-tonne portainer crane operates at No. 1 Berth. Further extensions of port facilities will depend on proposed expansion by major industries in the area.

Port of Burnie

Location

The ports of Hobart, Launceston and Devonport all lie within the shelter of rivers but the Port of Burnie, on Emu Bay, was built out into the open sea in the lee of Blackmans Point. Protection from the potentially rough seas of Bass Strait is afforded by two large breakwaters. Burnie is a deep-water port with no tidal restrictions, except occasionally for the larger vessels, and is virtually fog-free. It is in operation 24 hours every day, and vessels can be at full speed 20 minutes after departure. All wharves are connected to the State railway system.

Description

The shelter necessary for all-weather use of the port is provided by a 380 metre breakwater extending from Blackmans Point in a south-easterly direction. The wharves are thus protected by the point and by the breakwater from swells coming in from the west or north, the two quarters from which heavy seas are feared. Ocean Wharf is constructed immediately in the lee of the breakwater, the two structures appearing as one. Other berths are provided by piers parallel to the breakwater but lying further south.

An island breakwater sited north-east from the end of Ocean Wharf and consisting of concrete caissons 488 metres long, is orientated south-east and is calculated to give ample protection for up to 610 metres of berthage south of existing piers. An interesting feature is the use of the lee of the island breakwater for a tanker berth for both petroleum and sulphuric acid, the fuel being pumped to the land along a submarine pipe, and the sulphuric acid pumped to the berth over a bridge spanning the gap between the two breakwaters.

A modern passenger and roll-on roll-off cargo terminal handles 640 000 tonnes of general cargo shipped annually by Australian National Line vessels servicing Melbourne, Sydney and Queensland ports. The terminal is equipped with a 40 tonne portal crane plus a 25 tonne auxiliary hoist. A further roll-on roll-off berth at North McGaw pier handles general cargo for the Adelaide service.

Burnie has six other berths in regular use. Ocean wharf, North McGaw and North Jones Pier (old) are conventional berths used for general cargo and the handling of L.A.S.H. barges. South McGaw Pier is used primarily for inward bulk cargoes such as ilmenite and clay and is equipped with one 12 tonne and one 14 tonne crane. New Jones Pier North is a bulk cargo berth, capable of handling vessels up to 240 metres in length and 10.0 metres draft. It is transversed

by a conveyor loader, owned by the Emu Bay Railway Company Ltd, with a loading rate of 1 270 tonnes per hour. It handles zinc, lead and copper concentrates from the west coast mines, and calcines from the Wivenhoe Acid Plant. New Jones Pier South is the port's major general cargo berth, used by quarter ramp R.O.R.O. vessels, L.A.S.H. vessels of up to 250 metres length and 9·8 metres draft, and cellular container vessels. It has two large transit sheds, incorporating a cool store. Adjacent to this berth is a container compound with a capacity of 250 standard 'T.E.' units, of which 96 may be reefer. There is additional storage area close by for a further 250 units, and also a bulk tallow installation servicing both North and South berths.

Circular Head (Port Latta)

A deep-water offshore terminal, capable of accommodating bulk ore carriers, has been constructed at Port Latta for the export of iron ore pellets to Japan. The loading facility consists of a 1.2 metre wide conveyor belt which carries pellets to two swivel loaders located 1.6 kilometres offshore. Vessels moor in 15.8 metres of water to take on pellets, the system having a discharge capacity of about 3 050 tonnes per hour.

Constitution of Port Authorities

Election of Wardens

The present system of choosing port authority wardens is summarised in the following table:

Port Authorities: Election of Wardens

Authority	Number of wardens	System of election of wardens
Hobart Marine Board	9	Special electorate of ship-owners, importers and exporters Electors of Launceston, Beaconsfield and George Town as for local government elections
Port of Launceston Authority ..	5	
Burnie Marine Board	8	} Municipal electors within proclaimed areas
Devonport Marine Board	11	
Circular Head Marine Board ..	5	
King Island Marine Board	5	
Flinders Island Marine Board ..	3	Municipal electors

Boards of Hobart and Launceston

The wardens of the Hobart Marine Board are elected by a special electorate of ship-owners, importers and exporters. The number of votes that each importer and exporter may exercise is proportional to the value of goods he imports or exports, while ship-owners' voting rights are proportional to the tonnage of their vessels. Three wardens retire each year; the Master Warden is elected by Board members.

In the case of the Port of Launceston Authority, marine board electors are those qualified to vote at elections for aldermen of the City of Launceston or for councillors of the municipalities of Beaconsfield and George Town.

Navigation and Survey Authority of Tasmania

The authority was constituted in 1963 to implement sections of the *Marine Act 1921* relating to the safety of life and property at sea. Member marine boards contribute equally to the costs of running the Authority; the income is derived from survey and service fees.

Finances of Port Authorities

The following table gives details of revenue and expenditure for each port authority in 1975-76.

Port Authorities
Receipts and Expenditure: All Funds, 1975-76
(\\$'000)

Particulars	Authority							Total
	Hobart	Launceston	Devonport	Burnie	Circular Head	King Island	Flinders Island	
REVENUE FUNDS								
Receipts—								
Wharfage charges ..	1 522	1 568	1 146	1 432	96	76	25	5 865
Other service charges	1 208	2 436	518	517	73	14	5	4 771
Plant hire	847	615	124	302	9	6	..	1 903
Government grants..	..	..	..	..	..	14	13	27
Other (a)	151	188	109	131	1	6	2	588
Total	3 728	4 807	1 897	2 382	179	116	45	13 154
Payments (b)—								
Administration ..	514	619	239	381	14	31	2	1 800
Debt charges—								
Interest	731	641	521	725	74	6	14	2 712
Redemption and sinking fund contributions ..	565	434	319	352	37	6	4	1 717
Works and services..	1 899	2 794	662	705	48	30	24	6 162
Other	519	465	40	168	7	13	5	1 217
Total	4 228	4 953	1 781	2 331	180	86	49	13 608
LOAN FUNDS								
Receipts, loan raisings, etc.	2 164	492	1 000	284	94	..	..	4 034
Payments (c)	2 725	791	1 507	553	121	..	3	5 700

(a) Includes interest receipts, sundry licences, fines and discounts received.

(b) Excludes amounts applied from reserves for capital purposes.

(c) Includes amounts applied from reserves for capital purposes.

The principal sources of revenue of the port authorities are shipping tonnage rates and import and export wharfage rates; other sources are charges for pilotage services and the hiring of equipment. Expenditure is summarised under the heading 'works and services' which includes the provision of ordinary port services (e.g. pilotage, tug assistance, etc.), the maintenance of the port (e.g. dredging, etc.) and the improvement of the port (e.g. new wharves, new berths, etc.). To raise the additional funds required to finance port improvements, the authorities borrow money subject to State Treasury approval, the Treasury acting on behalf of the Australian Loan Council.

The next table summarises the transactions of all port authorities for recent years:

Transport and Communication

Port Authorities
Receipts and Expenditure: Summary
(\$'000)

Particulars	1971-72	1972-73	1973-74	1974-75	1975-76
REVENUE FUNDS					
Receipts—					
Wharfage charges	3 881	4 419	4 830	5 455	5 865
Other service charges	2 098	2 380	2 602	4 580	4 771
Plant hire	1 268	1 481	1 562	1 686	1 903
Government grants	57	107	48	87	27
Other (a)	449	620	1 117	627	588
Total	7 752	9 007	10 159	12 435	13 154
Payments (b)—					
Administration	861	911	1 146	1 664	1 800
Debt charges—					
Interest	1 738	2 021	1 961	2 194	2 712
Redemption and sinking fund contributions	1 106	1 202	1 401	1 515	1 717
Works and services	2 928	2 761	3 785	5 031	6 162
Other	562	472	1 017	910	1 217
Total	7 194	7 367	9 310	11 314	13 608
LOAN FUNDS					
Receipts—					
Loan raisings	4 590	3 455	3 061	2 930	3 835
Other	7	2	r 6	285	199
Total	4 597	3 457	3 067	3 215	4 034
Payments (c)					
	5 261	4 805	3 150	4 693	5 700

(a) Includes interest receipts, sundry licences, fines and discounts received.

(b) Excludes amounts applied from reserves for capital purposes.

(c) Includes amounts applied from reserves for capital purposes.

The following table gives the loan debts of port authorities at the end of each financial year for recent years:

Port Authorities
Loan Debt of Principal Authorities at End of Year
(\$'000)

Authority	1970-71	1971-72	1972-73	1973-74	1974-75	1975-76
Hobart	4 378	5 885	6 627	8 399	9 721	11 256
Launceston	6 504	7 441	9 196	9 219	9 412	9 487
Devonport	6 921	7 118	7 160	7 374	7 589	8 290
Burnie	12 462	12 950	12 722	12 377	12 083	11 974
Other	792	1 254	1 268	1 287	1 328	(a) 1 368
Total	31 057	34 648	36 973	38 656	40 133	42 375

(a) Comprised: Circular Head, \$1 096 000; Flinders Island, \$180 000; King Island, \$92 000.

The next table shows a summary of annual borrowings, aggregate debt and the provision for loan redemption.

Port Authorities
Loan Raisings, Loan Debt and Provisions for Redemption
(*\$'000*)

Particulars	1970-71	1971-72	1972-73	1973-74	1974-75	1975-76
Loan raisings during year (a)	4 471	4 590	3 455	3 061	2 930	3 835
Loan debt at 30 June ..	31 057	34 648	36 973	38 656	40 133	42 375
Provisions for loan redemption at 30 June (b) ..	874	999	1 151	1 315	1 507	1 622

(a) No loans were raised from the State Government during the period covered by the table.

(b) Balance of sinking funds and loan redemption provision accounts at end of year.

SHIPPING AT TASMANIAN PORTS

System of Record

The shipping statistics contained in this section were compiled on a new basis from 1 July 1966 and are not fully comparable with statistics published for previous periods. Prior to this date, shipping statistics were compiled from details assembled and supplied by the Department of Customs and Excise and by State port authorities. Since 1966-67 Tasmanian shipping statistics have been compiled from details submitted by shipping companies or their representatives, through the Australian Bureau of Customs, for each arrival and each departure of a vessel. Not all vessels which arrived at, and departed from, ports in Tasmania are included in the new series of shipping statistics; the following are now excluded:

- (i) naval vessels;
- (ii) yachts and other craft used for pleasure;
- (iii) foreign fishing vessels that neither load nor discharge cargo;
- (iv) Australian-registered fishing vessels operating from Tasmanian ports;
- (v) geographical, seismic and oceanographic survey vessels;
- (vi) offshore oil drilling rigs and vessels servicing them; and
- (vii) vessels of 200 registered net tons and under.

Movements of Vessels

The inward and outward movements of vessels using Tasmanian ports were classified according to type of voyage and not according to the type of vessel prior to 1969-70. Each movement of a vessel was allocated to one of the following:

- (i) overseas direct;
- (ii) overseas via other state;
- (iii) interstate direct;
- (iv) overseas via port in Tasmania;
- (v) interstate via port in Tasmania; and
- (vi) intrastate.

Addition of the first three classifications (overseas and interstate movements) gives an unduplicated total for Tasmania. The inclusion of the other three classifications (intrastate or coastal movements) must be taken into account to reflect the volume of shipping arriving at, or departing from, individual ports in Tasmania.

However, in 1969-70, it was decided that classification by type of voyage alone was unsatisfactory in two particular categories, namely:

- (ii) overseas via other state; and
- (iii) interstate direct.

While vessels confining their operations to Australian waters could never be associated with category (ii), it was nevertheless possible for vessels engaged in overseas voyages to undertake movements classified under category (iii). For example, a ship bound for the U.K. could be sailing Sydney-Hobart-Melbourne-London. The arrival in Hobart, under the pre-1969-70 classification, could be called 'interstate direct' as would the arrival in Melbourne.

For 1969-70 and following years, the classification has been varied so that categories (ii) and (iii) are based on the type of vessel, not on the type of movement. Thus, in terms of the previous example, the U.K.-bound ship's arrival both in Hobart and Melbourne would be classified 'overseas via other state', and not 'interstate direct'.

Tonnage of Vessels

Statistics of vessels are compiled in terms of registered net tonnage. This is an international unit of measurement of a vessel's carrying capacity. (There is no recognised equivalent of net tonnage in the metric system.) Net tonnage is expressed in units of 100 cubic feet (i.e. 100 cubic feet equals 1 net ton) and it represents the volume of enclosed space which can be utilised for cargo or passengers.

Overseas and Interstate Shipping

The classification 'overseas' in the following table is now much more meaningful since, from 1969-70, the category 'interstate direct' is not used to describe movements of ships engaged in overseas travel voyaging from one Australian state to another; the category now used is 'overseas via other state'. The details are also restricted to entries classified as overseas and interstate movements and in each case the figures are lower than those shown in a later table which includes intrastate movements.

Vessels Entered Ports in Tasmania (a), 1975-76

Port of entry	Overseas				Interstate direct		Total vessels entered	
	Direct		Via other state		No.	Net tons ('000)	No.	Net tons ('000)
	No.	Net tons ('000)	No.	Net tons ('000)				
Hobart	66	735	115	462	218	485	399	1 682
Burnie	7	31	76	589	225	634	308	1 254
Currie .. ..	..	..	9	2	13	9	22	11
Devonport	9	19	24	63	310	917	343	998
Lady Barron .. ..	..	..	..	..	3	1	3	1
Launceston	50	1 016	58	222	239	820	347	2 058
Stanley	31	655	58	36	25	37	114	728
Total	163	2 457	340	1 373	1 033	2 903	1 536	6 733

(a) Excludes intrastate shipping.

The following table has been compiled to show the country of registration of vessels entering all ports in Tasmania. The number of vessels and net tonnage figures shown in this table cannot be added to arrive at a State total as some vessels may have called at two or more ports within the State during the same voyage and are therefore subject to double, triple, etc., counting.

Country of Registration of Vessels Entered Tasmanian Ports: Overseas, Interstate and Intrastate

Country of registration	Vessels entered Tasmanian ports					
	1973-74		1974-75		1975-76	
	Number	Net tons	Number	Net tons	Number	Net tons
Argentina .. .. .	..	..	..	..	1	6 151
Australia	1 307	3 477 540	1 264	3 291 093	1 209	3 607 816
Bahama Islands	5	2 035	..	..	..	..
Belgium-Luxembourg .. .. .	..	..	..	5 304	..	..
Brazil .. .. .	..	..	..	..	1	2 705
Cyprus	1	4 983	..	..	..	..
Denmark	15	84 712	11	63 267	6	25 412
Germany, F.R.	9	28 248	11	33 855	9	23 432
Greece	20	335 067	19	211 169	13	191 014
Hong Kong	6	12 804	..	..	1	13 977
India	13	58 669	8	36 705	4	22 641
Indonesia	6	14 645	2	4 882	1	2 441
Israel	4	14 121	1	3 103	2	7 915
Italy	6	74 161	8	59 128	2	25 178
Japan	57	1 128 711	58	1 001 883	66	990 283
Korea, Republic of	1	6 169	1	7 257	..	..
Liberia	57	872 117	49	734 963	49	820 733
Maldives, Republic of the .. .. .	..	..	..	..	3	3 251
Morocco .. .. .	..	..	1	6 077	..	..
Nauru	8	73 947	4	39 484	..	..
Netherlands	32	160 668	54	176 976	17	79 576
New Zealand	21	41 698	14	27 661	13	24 882
Norway	15	142 258	19	139 391	17	205 680
Panama	15	288 622	27	493 598	35	401 133
Papua New Guinea	1	1 737	..	..	..	..
Philippines	1	1 647	..	..	..	..
Poland	11	43 186	9	39 182	11	47 653
Singapore	18	40 755	22	61 466	24	63 855
Spain .. .. .	..	..	1	11 348	..	..
Sweden	22	120 823	9	53 662	9	52 453
Tonga .. .. .	..	..	9	4 380	19	7 733
United Kingdom	186	702 196	261	736 854	224	616 481
United States of America	20	374 120	26	470 678	24	426 472
U.S.S.R.	5	27 682	15	48 473	15	55 908
Yugoslavia	4	19 200	3	12 972	4	23 172

The next table shows the number and net tonnage of vessels which entered individual Tasmanian ports during 1975-76. The names of ports in this table refer to the cities or towns in which the controlling port authorities are located:

- (i) 'Hobart' includes Port Huon, Port of Spring Bay and Strahan;
- (ii) 'Launceston' includes Bell Bay, Long Reach and Inspection Head;
- (iii) 'Devonport' includes Ulverstone;
- (iv) 'Stanley' includes Port Latta;
- (v) 'Currie' includes Naracoopa and Grassy; and
- (vi) 'Lady Barron' includes Whitemark.

A State total of number of vessels entered and their net tonnage cannot be obtained from the next table by adding the port totals since vessels falling within the categories 'overseas via other Tasmanian port', 'interstate via other Tasmanian port' and 'intrastate' will be counted at each port of entry as a 'vessel entered'.

**Shipping: Overseas, Interstate and Intrastate
Vessels Entered Tasmanian Ports, 1975-76**

Port (a) of entry and type of service (b)		Vessels entered					
		With cargo		In ballast		Total	
		No.	Net tons	No.	Net tons	No.	Net tons
Hobart—	Overseas direct	27	143 112	39	592 116	66	735 228
	Overseas via other state ..	111	449 352	4	12 494	115	461 846
	Overseas via other Tasmanian port	42	295 741	3	25 826	45	321 567
	Interstate direct	182	422 999	36	61 632	218	484 631
	Interstate via other Tasmanian port	3	3 209	..	..	3	3 209
	Intrastate	9	16 558	7	28 068	16	44 626
	Total Hobart	374	1 330 971	89	720 136	463	2 051 107
Burnie—	Overseas direct	5	20 319	2	10 907	7	31 226
	Overseas via other state ..	63	521 658	13	67 168	76	588 826
	Overseas via other Tasmanian port	8	59 824	7	38 677	15	98 501
	Interstate direct	192	572 747	33	61 355	225	634 102
	Interstate via other Tasmanian port	32	163 221	..	..	32	163 221
	Intrastate	8	34 327	3	18 317	11	52 644
	Total Burnie	308	1 372 096	58	196 424	366	1 568 520
Currie—	Overseas via other state ..	9	1 863	..	..	9	1 863
	Overseas via other Tasmanian port	13	2 691	1	207	14	2 898
	Interstate direct	13	9 425	..	..	13	9 425
	Interstate via other Tasmanian port	1	11 178	..	..	1	11 178
	Intrastate	19	11 877	1	294	20	12 171
	Total Currie	55	37 034	2	501	57	37 535
Devonport—	Overseas direct	3	7 725	6	11 199	9	18 924
	Overseas via other state ..	16	46 814	8	15 939	24	62 753
	Overseas via other Tasmanian port	2	14 453	..	..	2	14 453
	Interstate direct	254	846 640	56	70 168	310	916 808
	Interstate via other Tasmanian port	13	120 992	..	..	13	120 992
	Intrastate	3	9 610	..	..	3	9 610
	Total Devonport	291	1 046 234	70	97 306	361	1 143 540
Lady Barron—	Interstate direct	3	882	..	..	3	882
	Intrastate	3	882	1	294	4	1 176
	Total Lady Barron	6	1 764	1	294	7	2 058
Launceston—	Overseas direct	10	73 512	40	942 922	50	1 016 434
	Overseas via other state ..	48	186 088	10	35 513	58	221 601
	Overseas via other Tasmanian port	3	19 656	..	..	3	19 656
	Interstate direct	238	815 278	1	4 978	239	820 256
	Interstate via other Tasmanian port	35	132 042	..	..	35	132 042
	Intrastate .. ..	..	..	1	725	1	725
	Total Launceston	334	1 226 576	52	984 138	386	2 210 714

**Shipping: Overseas, Interstate and Intrastate
Vessels Entered Tasmanian Ports, 1975-76—continued**

Port (a) of entry and type of service (b)		Vessels entered					
		With cargo		In ballast		Total	
		No.	Net tons	No.	Net tons	No.	Net tons
Stanley—	Overseas direct	6	55 713	25	599 071	31	654 784
	Overseas via other state	58	36 603	..	..	58	36 603
	Overseas via other Tasmanian port	15	3 105	..	..	15	3 105
	Interstate direct	25	37 081	..	..	25	37 081
	Interstate via other Tasmanian port	7	5 075	..	..	7	5 075
	Intrastate	5	3 107	..	..	5	3 107
	Total Stanley	116	140 684	25	599 071	141	739 755

(a) See introduction to this table.

(b) Type of service ('overseas direct', etc.) is defined under 'Movements of Vessels' at the beginning of this section.

The next table gives a ten-year summary:

**Shipping: Overseas and Interstate (a), Summary
Vessels Entered Ports in Tasmania**

Year	Overseas				Interstate direct		Total vessels entered	
	Direct		Via other state		No.	Net tons ('000)	No.	Net tons ('000)
	No.	Net tons ('000)	No.	Net tons ('000)				
1966-67	87	321	160	715	1 437	3 049	1 684	4 085
1967-68	67	252	146	635	1 463	3 215	1 676	4 102
1968-69	81	580	134	672	1 580	3 393	1 795	4 645
1969-70 (b)	113	996	462	2 035	1 184	2 543	1 759	5 574
1970-71	110	952	297	1 467	1 232	2 920	1 639	5 338
1971-72	117	1 209	267	1 443	1 370	3 285	1 754	5 937
1972-73	172	2 156	308	1 531	1 308	3 552	1 788	7 239
1973-74	173	2 703	238	1 435	1 220	3 085	1 631	7 223
1974-75	190	2 669	260	1 224	1 161	2 928	1 611	6 820
1975-76	163	2 457	340	1 373	1 033	2 903	1 536	6 733

(a) Excludes intrastate shipping.

(b) Not fully comparable with previous years; see beginning of this section for explanation.

In the previous table, breaker bars are inserted to show the break in comparability between 1968-69 and 1969-70. However, there is no break in comparability affecting the columns under 'total vessels entered'. The effect of the definitional change is simply to transfer certain movements of overseas vessels from 'interstate direct' to the category 'overseas via other state'.

The following table shows, in summary form, the number and net tonnage of vessels which entered Tasmanian ports during the last three years:

Transport and Communication
Shipping: Overseas, Interstate and Intrastate
Vessels Entered Tasmanian Ports

Port (a) of entry	1973-74		1974-75		1975-76	
	Number	Net tons	Number	Net tons	Number	Net tons
Hobart	556	2 108 833	524	1 997 946	463	2 051 107
Burnie	359	1 315 168	344	1 397 747	366	1 568 520
Currie	18	24 100	78	48 329	57	37 535
Devonport	448	1 299 116	422	1 246 813	361	1 143 540
Lady Barron	19	5 604	32	9 408	7	2 058
Launceston	420	2 496 163	413	2 313 629	386	2 210 714
Stanley	46	903 537	95	760 939	141	739 755

(a) See explanation in introduction to previous table.

In the next table, details are given of the cargo handled at each port in Tasmania. The classifications 'overseas' and 'interstate' relate either to the origin or destination of the cargo.

Cargo handled at ports is recorded in terms of units of weight or units of volume depending on the basis on which freight is charged. In these statistics separate details are shown in tonnes for cargo that was recorded in units of weight and in cubic metres for cargo that was recorded in units of volume.

Cargo Discharged and Shipped (a)
Individual Tasmanian Ports, 1975-76

Port	Overseas		Interstate		Total	
	Tonnes weight	Cubic metres	Tonnes weight	Cubic metres	Tonnes weight	Cubic metres
DISCHARGED						
Hobart	121 011	6 797	665 961	199 014	786 972	205 811
Burnie	53 234	650	240 638	333 086	293 872	333 736
Currie .. .. .	..	..	4 191	7 820	4 191	7 820
Devonport	2 362	22	131 521	623 799	133 883	623 821
Lady Barron .. .. .	..	..	55	..	55	..
Launceston	54 305	9 255	670 969	416 955	725 274	426 210
Stanley	50 124	..	8 429	63 269	58 553	63 269
Total	281 036	16 724	1 721 764	1 643 943	2 002 800	1 660 667
SHIPPED						
Hobart	764 572	2 978	473 979	154 628	1 238 551	157 606
Burnie	160 690	733	342 057	240 819	502 747	241 552
Currie .. .. .	..	..	7 079	8 641	7 079	8 641
Devonport	29 903	1 027	175 504	638 853	205 407	639 880
Lady Barron .. .. .	..	..	..	352	..	352
Launceston	1 156 155	22 133	167 319	336 895	1 323 474	359 028
Stanley	1 857 681	..	1 585	32 833	1 859 266	32 833
Total	3 969 001	26 871	1 167 523	1 413 021	5 136 524	1 439 892

(a) Cargo statistics are compiled in units of weight or volume depending on the units in which the details were originally reported. It is therefore *not* possible to provide statistics for total cargo using a single unit of measurement.

The following table gives a summary of overseas and interstate cargo discharged and shipped at Tasmanian ports:

Cargo Discharged and Shipped, All Tasmanian Ports (a)

Year	Overseas		Interstate		Total	
	Tonnes weight	Cubic metres	Tonnes weight	Cubic metres	Tonnes weight	Cubic metres
DISCHARGED						
1966-67	378 729	46 301	1 507 095	948 843	1 885 824	995 144
1967-68	264 914	46 736	1 607 425	1 034 153	1 872 339	1 080 889
1968-69	246 826	53 225	1 752 557	1 088 925	1 999 383	1 142 150
1969-70	327 242	51 102	1 682 528	1 240 547	2 009 770	1 291 649
1970-71	414 304	29 664	1 702 148	1 228 912	2 116 452	1 258 576
1971-72	375 197	17 852	1 825 406	1 350 451	2 200 603	1 368 303
1972-73	516 891	18 883	1 684 286	1 438 171	2 201 177	1 457 054
1973-74	508 988	13 690	1 574 158	1 520 697	2 083 146	1 534 387
1974-75	483 644	33 867	1 666 193	1 592 071	2 149 837	1 625 938
1975-76	281 036	16 724	1 721 764	1 643 943	2 002 800	1 660 667
SHIPPED						
1966-67	223 702	208 792	629 498	758 517	853 200	967 309
1967-68	277 379	282 402	696 318	855 309	973 697	1 137 711
1968-69	1 618 480	264 051	817 726	913 968	2 436 206	1 178 019
1969-70	2 585 794	104 238	935 089	907 559	3 520 883	1 011 797
1970-71	2 577 912	84 002	991 636	985 409	3 569 548	1 069 411
1971-72	2 919 672	184 107	1 188 696	1 134 175	4 108 368	1 318 282
1972-73	4 417 232	37 232	1 237 236	1 181 601	5 654 468	1 218 833
1973-74	4 891 948	67 779	1 283 131	1 316 286	6 175 079	1 384 065
1974-75	4 309 155	87 523	1 122 309	1 386 133	5 431 464	1 473 656
1975-76	3 969 001	26 871	1 167 523	1 413 021	5 136 524	1 439 892

(a) Statistics for total cargo using a single unit of measurement are not available.

TRANSPORT COMMISSION

Functions of the Commission

The functions of the Commission are as follows:

- (i) the regulation and licensing of commercial road transport (i.e. of 'public vehicles');
- (ii) the registration and taxation of motor vehicles and the licensing of drivers;
- (iii) the control and operation of the Bruny Island ferry service and the Flinders Island and King Island shipping services;
- (iv) the administration of regulations under the *Traffic Act* concerning road traffic control;
- (v) the administration and control of State aerodromes;
- (vi) traffic engineering associated with the control of traffic; and
- (vii) control and operation of an engineering plant (known as the 'precision tool annexe').

In brief, the Transport Commission emerges as a *business undertaking*, an *administrative body* and a *taxing authority*.

Control of Commission

The Commission, by section 6 (2) of the *Transport Act* 1938, is absolutely free from political control except that the Minister for Transport may, under section 33, appeal to the Governor if dissatisfied with decisions of the Commission. Section 34 allows the Governor, as a form of assistance to industry in certain cases, to direct the Commission to reduce freight charges but, to the extent that such direction causes a revenue loss, the Treasurer is obliged to reimburse the Commission; the formula for reimbursement requires either acceptance of the Commission's original charges as the economic cost of the service or substitution of the Auditor-General's calculation of the economic cost, should the level of the Commission's original charges be considered uneconomic by the Auditor-General.

Commission's Financial Operations

The revenue of the Commission comes from two main sources: (i) own business undertakings—shipping services and an engineering plant ('precision tool annexe'); and (ii) grants from Consolidated Revenue.

The financial transactions of the Commission are summarised in the tables that follow. For simplicity of presentation, the transactions are arranged in two sets of accounts, firstly Trading and Profit and Loss and secondly Taxation, Licensing, etc. It should be noted that the net loss in the trading and profit and loss account for any year becomes a charge on Consolidated Revenue in the following year; also that the proceeds from motor taxation, registration, licensing, etc. are passed to Consolidated Revenue, the Commission being reimbursed the cost of collecting such revenues and the costs and expenses incurred in connection with the provision and maintenance of facilities for the control of motor traffic.

Transport Commission: Trading and Profit and Loss Account
(**\$'000**)

Particulars	1972-73	1973-74	1974-75	1975-76
REVENUE				
Railways (a)	7 373	7 896	8 698	..
Coastal shipping	509	1 262	1 271	1 415
Bruny Island ferry	64	73	72	81
Trans-Derwent ferry .. .. .	..	..	236	501
Tool annexe	347	360	554	720
Other revenue	227	240	295	399
Net loss (b)	7 796	12 129	18 187	4 537
Total	16 315	21 960	29 313	7 654
EXPENDITURE				
Railways (a)	14 493	18 484	23 652	..
Coastal shipping	670	2 119	3 661	4 293
Bruny Island ferry	149	169	200	346
Trans-Derwent ferry .. .. .	..	..	218	1 030
Tool annexe	354	409	558	742
General expenditure	648	778	1 025	1 243
Total	16 315	21 960	29 313	7 654

(a) State railway system controlled by Transport Commission up to 30 June 1975.

(b) To be charged against Consolidated Revenue in the following year.

The remaining transactions can be summarised as follows (road safety accounts are excluded):

Transport Commission: Motor Taxation Collection, Licensing, etc.
(\\$'000)

Particulars	1972-73	1973-74	1974-75	1975-76
REVENUE				
Motor tax	5 539	5 941	6 379	8 371
Public vehicle licensing, fees, etc...	445	459	r 452	623
Registration, licences, etc. ..	1 913	2 234	2 346	3 358
Refunds of stamp duty	-1	-1	-3	-4
Stamp duty on vehicle registrations	514	613	1 873	2 797
Transfers from Consolidated Revenue—				
Road transport administration	795	990	1 170	1 491
Traffic engineering section ..	475	529	595	692
Minister for Transport	27	33	r 39	45
Total	9 707	10 799	r 12 851	17 373
EXPENDITURE				
Profit and loss account (transfers)(a)	82	88	95	104
Paid to Consolidated Revenue ..	8 328	9 159	10 952	15 041
Administration, traffic control, etc.	1 280	1 542	r 1 805	2 221
Total	9 690	10 789	r 12 852	17 365

(a) Receipts from public vehicle licensing paid into profit and loss account.

Annual Loss

In 1968-69 and earlier years the Commission received two grants from Consolidated Revenue: (i) reimbursement of the previous year's loss; and (ii) a grant equal to State Land Tax collections. From 1969-70, the loss incurred by the Commission for the previous year has been reimbursed by a single grant from Consolidated Revenue (\$4 537 478, the loss for 1975-76 reimbursed during 1976-77). The accounts reveal that the Commission's net loss occurred principally in respect of the Coastal Shipping Services.

Transport Commission Shipping Services

The Transport Commission operates a coastal shipping service between King Island, Stanley and Melbourne, and a vehicular ferry service to Bruny Island. During 1975-76 the coastal service was operated by the *Straitsman* and, for a short time, by the *Joseph Banks*.

The *Joseph Banks*, purchased in January 1969, continued to service Flinders and King Islands with bulk cargoes and livestock. While regular superphosphate cargoes were carried up to 31 December 1974, the combined effects of the withdrawal of the superphosphate bounty and the rural decline resulted in only limited employment for the vessel from this date. The vessel was laid up at the Commission's terminal at Prince of Wales Bay in September 1975 and was placed for sale in March 1977. It was sold for \$300 000 in June 1977.

During 1975-76, vessels operated by the Commission made a total of 321 voyages in providing essential services to and from King Island and between Stanley and Melbourne. The shipping services carried 12 271 sheep, 13 657 cattle, 156 553 tonnes of general cargo and 2 343 tonnes of superphosphate.

The Commission continues to operate the vehicular ferries *Mangana* and *Melba* on the Bruny Island Service and recently has called tenders for re-engining and re-conversion of the *Harry O'May* to a vehicular ferry for service to and from Bruny Island. It is expected the *Harry O'May* will commence service by the end of 1977. A new terminal will be provided at Kettering and at a new location on Bruny Island—Roberts Point.

Derwent Ferry Services

Following the Tasman Bridge disaster on 5 January 1975, emergency trans-Derwent ferry services were established between Hobart and Bellerive on the Eastern Shore. The services were provided by the Transport Commission's Bruny Island vehicular ferry *Melba* and the privately-owned passenger ferries *Mathew Brady*, *James McCabe* and *Cartela*. The *Ray Larsson*, a privately-owned ferry was introduced onto a Hobart-Lindisfarne service on 20 January 1975.

In mid-1977, the Hobart-Bellerive ferry service was being provided by: (i) the Transport Commission ferries *Lady Wakehurst* (chartered from the Public Transport Commission of New South Wales), *Kosciusko* and *Harry O'May* (the latter two were both purchased by the State Government); and (ii) five ferries owned and operated by private operators. A Hobart-Lindisfarne service was being provided by three privately-owned ferries in June 1977. During the first twenty-four months following the collapse of the Tasman Bridge, approximately 12.5 million passengers were carried across the Derwent by the combined ferry fleet. In mid-1977 the average number of passengers carried across the Derwent (total, both directions combined) on a week-day was 17 700. This was substantially below the corresponding figure of 25 790 for mid-1975 due to the opening of a temporary Bailey bridge six kilometres upstream from the Tasman Bridge in December 1975 (see the section 'Bridges' later in this chapter). (The restored Tasman Bridge was re-opened to traffic in October 1977.)

RAILWAYS

General

Tasmania has a 1 067 millimetre gauge government railway system based on a route network of 849 kilometres. A private railway of 134 kilometres is operated by the Emu Bay Railway Company Ltd between Burnie and Melba Siding (19 kilometres south of Rosebery).

The first Tasmanian railway was the 72 kilometre Deloraine to Launceston line opened in 1871. A 196 kilometre line from Hobart to Western Junction began operating in 1876. (For a brief historical account of the development of the Tasmanian railway system see this section of the 1977 *Year Book*. Chapter 1 of the same edition includes an article on the construction of the main line railway from Hobart to Launceston.) The following table shows the length of Government-owned railways operating in the State from 1890 to the present:

Government Railways: Route-Kilometres of Lines Open at 30 June

Year	Route-kilometres open	Year	Route-kilometres open	Year	Route-kilometres open
1890 (a) ..	602	1930	1 093	1960	866
1910	756	1940	1 036	1970	805
1920	1 012	1950	987	1976	849

(a) At 1 January 1890.

Closure of Hobart Suburban Services: The Hobart suburban rail service was closed by the State Government from 1 January 1975. The decision to close the service followed a decline in patronage over a long period and an annual loss of about \$1m attributed to suburban services. The service was re-opened for a short period in January 1975 following the collapse of the Tasman Bridge but was again closed due to lack of patronage.

Federal Takeover

Takeover Agreement

Following negotiations with the Federal Government, the State Government passed the *Railways (Transfer to Commonwealth) Act 1975* which provided for the transfer of control of the State's railway system to the Federal Government with effect from 1 July 1975.

The agreement provided for the takeover of the administration, maintenance and control of the railway system by the Australian National Railways Commission and for the transfer of Tasmanian Government Railway employees to the Commission. With the exception of some land and minor buildings and the plant, equipment and materials in the precision tool annexe at Launceston, the National Railways Commission was to take over all the assets of the Tasmanian Government Railways.

Under the agreement, however, the State retains the following rights: (i) to consult with the Federal Government on any proposals to increase freight rates; (ii) to dispute the abolition of any service where in the opinion of the State Government that service is desirable; and (iii) to consult with the Federal Government on the operation of new or existing railways which are of particular concern to the State. The State was also granted representation on the Australian National Railways Commission and the Australian Shipping Commission for an initial period of five years.

Provision was made in the agreement for the Transport Commission to continue to operate the railway after 1 July 1975, subject to direction by the Australian National Railways Commission, for a period known as 'the interim period' during which final arrangements, particularly those relating to the transfer of employees, were to be made. This period was originally expected to be 12 months but was subsequently extended.

Financial Arrangements

The Federal Government agreed to discharge the State from all liabilities and financial obligations connected with the operation of the railways thus freeing the State from the burden of: (i) interest and sinking fund contributions on outstanding loan funds (about \$0.5m annually); and (ii) the operating losses which the service was expected to incur in its continued operation (the operating loss for 1974-75 was \$15.0m).

In consideration of the transfer of railway assets, the Federal Government agreed to pay the State a sum of \$5m before the commencement date of the agreement; this would assist the State in reducing the budget deficit for 1974-75. The State was also to receive additional Financial Assistance Grants. The initial increase in the grants was to be \$3.3m and this would, in turn, increase according to the formula used to calculate the grants.

The Federal Government agreed to reduce Tasmania's loan fund allocations by only \$5m annually which was substantially less than the amount of loan funds the State Government had expected to allocate for railways. This would release

additional loan funds for other capital works in the State. It was estimated that the Federal Government would spend in excess of \$60m in upgrading the railways over a five-year period.

Committee of Inquiry

In september 1976, the Federal Government appointed a committee of inquiry (the 'Joy Committee') to investigate Tasmanian rail operations. The Committee's report was released in November 1976 and a summary of it is included at the end of this Chapter.

Operating and Financial Statistics

The following table shows the principal operating statistics for the Tasmanian system:

Government Railways (a)
Operating Statistics

Year	Route-kilometres open (b)	Train revenue-kilometres	Passenger-journeys	Goods and livestock carried
	kilometres	'000 kilometres	'000	'000 tonnes
1970-71	805	1 764	871	1 221
1971-72	805	1 767	785	1 299
1972-73	831	1 960	752	1 554
1973-74	851	2 154	693	1 828
1974-75	r 849	1 983	(c) 429	1 731
1975-76	849	1 748	151	1 610

(a) Operated by the Tasmanian Government up to 30 June 1975; taken over by the Australian National Railways Commission from 1 July 1975.

(b) At end of period.

(c) The Hobart suburban rail passenger service ceased on 31 December 1974.

The following tables give details of gross earnings and working expenses and of the number of employees, and wages and salaries paid:

Government Railways (a)
Financial Operations

Year	Gross earnings		Working expenses (b)		Net earnings (c)	
	Total	Per train revenue-kilometre	Total	Per train revenue-kilometre	Total	Per train revenue-kilometre
1969-70 ..	\$'000 6 950	\$ 3.66	\$'000 9 031	\$ 4.75	\$'000 -2 081	\$ -1.09
1973-74 ..	7 674	3.56	15 598	7.24	-7 924	-3.68
1974-75 ..	8 266	4.17	19 973	10.07	-11 707	-5.90
1975-76 ..	8 048	4.60	22 087	12.63	-14 038	-8.03

(a) Operated by the Tasmanian Government up to 30 June 1975; taken over by the Australian National Railways Commission from 1 July 1975.

(b) Includes provision for depreciation but excludes interest.

(c) Excess of gross earnings over working expenses.

Government Railways (a)
Number of Employees and Wages and Salaries Paid

Year	Average number of employees (b)		Salaries and wages paid (\$'000)	Year	Average number of employees (b)		Salaries and wages paid (\$'000)
	Salaried	On wages			Salaried	On wages	
1970-71 ..	421	1 701	7 637	1973-74 ..	r 356	r 1 657	11 907
1971-72 ..	404	1 582	7 914	1974-75 ..	r 354	r 1 637	15 198
1972-73 ..	402	1 574	9 197	1975-76 ..	352	1 589	16 839

(a) Operated by the Tasmanian Government up to 30 June 1975; taken over by the Australian National Railways Commission from 1 July 1975.

(b) Excludes construction staff.

Comparison with Other Australian Systems

In the two tables that follow, the Federal Government railway system refers to those railways that cross state boundaries and are run by the Australian National Railways Commission. The Tasmanian government railway system, operated by the State Government up to 30 June 1975 but taken over by the Australian National Railways Commission from 1 July 1975, is shown separately.

The Tasmanian system of government railways is the smallest in Australia and the following table, showing principal operational details, allows a comparison to be made:

Australia: Government Railway Systems, 1975-76 Operating Statistics

System	Route-kilometres open	Train revenue-kilometres	Passenger-journeys (a) (b)	Revenue goods and livestock carried (a)	Revenue net tonne-kilometres
	kilometres	'000 kilometres	'000	'000 tonnes	million
N.S.W.	9 755	54 943	159 872	31 234	8 566.9
Victoria	6 653	33 818	109 669	10 803	3 071.4
Queensland	9 844	30 813	34 278	33 118	10 101.2
S.A. (c)	3 894	10 304	12 672	6 139	1 686.6
W.A.	6 163	12 856	351	17 647	4 542.4
Tasmania (d)	849	1 748	151	1 610	231.8
Federal Government (d)	3 595	5 595	(e) 219	(f) 3 804	2 609.0
Total Australia	40 753	150 078	317 213	104 355	30 809.3

(a) Interstate traffic is included in the total for each system over which it passes.

(b) Based on ticket sales making allowances for periodical tickets. Tickets sold at concession rates are counted as full journeys.

(c) Part operated by the Australian National Railways Commission.

(d) Operated by the Australian National Railways Commission.

(e) Passenger journeys continuing over both the Trans-Australian and Central Australia Railway systems are counted twice. In 1975-76 these numbered 6 414.

(f) Tonnages carried over both the Trans-Australian and Central Australia Railway systems are counted twice. In 1975-76, 173 259 tonnes were counted twice.

The financial operations of the six state railway systems and the Federal Government system are shown below:

Transport and Communication

Australia: Government Railways, 1975-76
Financial Operations
(\$ Million)

System	Gross earnings (a)	Working expenses (b)	Net earnings (c)	Plus other earnings payable to railways (d)	Less other expenses charged to railways (e)	Surplus or deficit
N.S.W.	318.8	472.2	-153.4	4.8	55.2	-203.9
Victoria	147.3	271.9	-124.6	0.2	14.8	-139.3
Queensland	230.5	265.7	-35.2	..	52.9	-88.1
S.A. (f)	49.7	(g) 91.4	-41.7	0.4	1.9	-43.1
W.A.	130.9	(g) 118.6	12.2	1.5	16.8	-3.0
Tasmania (b)	8.0	(g) 22.1	-14.0	0.1	..	-13.9
Federal Government (b)	54.6	(g) 64.3	-9.7	..	..	-9.7
Total Australia	939.8	1 306.1	-366.4	7.0	141.7	-501.1

(a) Excludes government grants and road motor services.

(b) Excludes road motor services.

(c) Gross earnings less working expenses. See notes (a) and (b).

(d) Includes state government grants and road motor earnings.

(e) Includes interest and exchange, sinking fund, road motor expenses and other expenses charged to railways.

(f) Part operated by the Australian National Railways Commission.

(g) Includes provision for depreciation.

(b) Operated by the Australian National Railways Commission.

Financial Comparison

In comparing the financial results of the Tasmanian system with those of other authorities, certain difficulties arise from the treatment of depreciation. In the preceding table, working expenses for the Tasmanian, S.A., W.A., and Federal Government systems include provisions for depreciation. A further complication arises from the fact that interest is not charged against the railways accounts of the Federal Government system and, in the Victorian system, only in respect of loan expenditure since 1 July 1960.

To the extent that there is differing treatment of interest and of depreciation provisions in the various systems, the 'surplus or deficit' shown in the table is not a good basis for making comparisons; however, if due allowance is made for interest charges in the case of the Federal Government system, it will be seen that loss, rather than profit, is characteristic of all Australian systems.

METROPOLITAN TRANSPORT TRUST

The only Government road services in operation since 8 December 1968 (when the Transport Commission road services were discontinued) have been those operated by the Metropolitan Transport Trust at Hobart, Launceston and Burnie. Prior to this date the Transport Commission operated omnibus services throughout the State.

The present service is based entirely on omnibuses, although trolley-buses were in use on some Hobart and Launceston routes as late as 1968. It was in October 1960 that the Trust closed down the last of the tramway services in Hobart; Launceston City had closed down all its tramway services before the city transport system was taken over by the Trust in July 1955. Although increasing motor vehicle ownership provides formidable competition to attracting passengers

to urban public transport, the number of passenger journeys in 1975-76 maintained the level experienced in the previous year, compared with decreases in 1971-72 and 1972-73.

Financial Operations of Trust

The following table shows the income and expenditure of the Metropolitan Transport Trust:

Metropolitan Transport Trust Income and Expenditure (\$'000)					
Particulars	1971-72	1972-73	1973-74	1974-75	1975-76
INCOME					
Traffic operations	2 597	2 612	2 698	2 844	2 865
Other earnings	41	46	52	72	135
Subsidy, State Government ..	1 310	1 692	2 520	3 957	5 156
Total	3 948	4 350	5 270	6 873	8 156
EXPENDITURE					
Traffic operations	2 160	2 407	3 025	3 961	4 390
Maintenance	596	664	800	1 066	1 261
Power and fuel	267	265	310	370	451
Workshop and stores	65	67	71	90	119
Administration and general	516	594	764	1 080	1 358
Debt charges	146	143	143	148	205
Depreciation charges	199	194	169	183	301
Total	3 949	4 333	5 283	6 897	8 084

A break-down of income earned from traffic operations in the three centres for 1975-76 (in \$'000) is as follows: Hobart, 2 108; Launceston, 586; and Burnie, 171.

Loan Debt of Trust

Net advances to the Trust from the State Loan Fund at 30 June 1976 stood at \$4 584 095.

Operating Statistics

The next table shows the principal operating statistics for the Metropolitan Transport Trust:

Metropolitan Transport Trust Operating Statistics					
Particulars	1971-72	1972-73	1973-74	1974-75	1975-76
Route-kilometres (a)	385	402	407	459	453
Vehicle-kilometres	8 647	8 381	8 618	9 091	9 487
Passenger journeys .. '000	19 606	18 728	19 515	20 589	20 512
Fare income per passenger journey (b) \$	0.13	0.14	0.14	0.14	0.14
Working expenses per passenger journey (c) \$	0.18	0.21	0.25	0.32	0.37

(a) At end of period.

(b) Income from fares only—excludes other revenue.

(c) Excludes debt charges and depreciation.

At 30 June 1976 the Metropolitan Transport Trust had a fleet of 332 vehicles comprising 315 passenger buses and 17 maintenance vehicles. Disposition of the fleet was: Hobart, 229 passenger buses and 12 maintenance vehicles; Launceston, 65 passenger buses and four maintenance vehicles; and Burnie, 21 passenger buses and one maintenance vehicle.

ROADS AND BRIDGES

Scope

The details in the following section refer to:

- (i) 'classified' roads;
- (ii) roads of local government authorities; and
- (iii) roads of other government authorities.

A further qualification is that the roads are those normally open to traffic.

Definitions and Road Lengths

(i) *Classified Roads*: These are roads for which the State Government accepts direct responsibility, the construction and maintenance authority being the Department of Main Roads (previously the Public Works Department). The length of classified (or State) roads at 30 June 1976 was 3 611 kilometres (see later section for further details).

(ii) *Roads of Local Government Authorities*: The length of roads for which local government authorities accepted responsibility at 30 June 1976 totalled 12 852 kilometres.

(iii) *Roads of Other Government Authorities*: Roads which were the responsibility of these authorities at 30 June 1976 comprised: roads of the Hydro-Electric Commission, 497 kilometres; Forestry Commission, 4 368 kilometres; total 4 865 kilometres. The Hydro-Electric Commission roads include the Gordon River Road from Maydena to the Gordon River dam site (85 kilometres) and the Scotts Peak Road which runs from the Gordon River Road to Scotts Peak Dam (35 kilometres).

Apart from some new arterial roads constructed by the Department of Main Roads (e.g. Hobart's southern and eastern outlets), works performed by the Department and local government authorities are almost entirely in the upgrading of existing roads or tracks to a higher standard and the maintenance of existing road standards. Recent construction of roads where no previous route existed has been predominantly attributable to the Forestry Commission in its development of forest areas for commercial use, and to the Hydro-Electric Commission in providing access to power development construction sites. The main areas where the Commission's activities have already affected the road systems are in the upper Derwent; Great Lake; Mersey Valley; the Gordon and Pedder lakes; and the Pieman River areas.

Surface of Roads

The following table shows lengths of all roads normally open to traffic classified according to road surface and according to the level of government which accepts responsibility for construction and maintenance. The proportion of classified (State) roads with sealed surfaces has increased from 66.4 per cent at 30 June 1966 to 87.5 per cent in June 1976.

Length of Roads According to Nature of Surface at 30 June

Type of surface	1972	1973	1974	1975	1976
CLASSIFIED STATE ROADS					
Sealed (a) .. kilometres	2 905	2 973	3 013	3 120	3 159
Unsealed (b) .. kilometres	607	548	503	487	452
Total .. kilometres	3 512	3 521	3 516	3 606	3 611
Sealed ratio (c) .. %	82.7	84.4	85.7	86.5	87.5
ROADS OF LOCAL GOVERNMENT AUTHORITIES					
Sealed (a) .. kilometres	3 219	3 363	3 552	3 697	3 849
Unsealed (b) .. kilometres	9 794	9 447	9 311	9 126	9 003
Total .. kilometres	13 013	(d) 12 810	12 862	(e) 12 823	12 852
Sealed ratio (c) .. %	24.7	26.3	27.6	28.8	29.9
ROADS OF OTHER GOVERNMENT AUTHORITIES					
Sealed (a) .. kilometres	167	151	151	121	121
Unsealed (b) .. kilometres	4 005	4 148	4 239	4 442	4 744
Total .. kilometres	4 172	4 299	4 390	4 564	4 865
Sealed ratio (c) .. %	4.0	3.5	3.4	2.7	2.5
ALL ROADS					
Sealed (a) .. kilometres	6 292	6 487	6 716	6 937	7 129
Unsealed (b) .. kilometres	14 405	14 143	14 052	14 055	14 199
Total .. kilometres	20 697	(d) 20 630	20 767	20 993	21 328
Sealed ratio (c) .. %	30.4	31.4	32.3	33.0	33.4

(a) Bitumen or concrete.

(b) Includes roads formed or cleared only.

(c) Sealed roads as a proportion of total roads.

(d) The reduction in length of local government roads in 1973 resulted from revisions based on survey work carried out by the Public Works Department.

(e) The reduction in length of local government roads in 1975 resulted mainly from a transfer of part of the road systems of the Brighton and Richmond municipalities to the State (classified) roads, in order to form part of the new road links made necessary by the collapse of the Tasman Bridge.

Classified (or State) Roads

The next table analyses the length of classified roads according to their description and surface. The principal State highways include the following: (i) *Arthur* (74 kilometres), from Sorell to Port Arthur; (ii) *Bass* (283 kilometres), from Launceston to Marrawah in the far north-west; (iii) *Channel* (95 kilometres), from Hobart to Huonville, via D'Entrecasteaux area; (iv) *Huon* (99 kilometres), from Hobart to Hythe via Dover; (v) *Lake* (150 kilometres), from Deloraine via Great Lake to Melton Mowbray; (vi) *Lyell* (284 kilometres), from Granton, near Hobart, to Strahan; (vii) *Midland* (185 kilometres), from Glenorchy to

Launceston; (viii) *Murchison* (78 kilometres), linking the Zeehan and Waratah Highways; (ix) *Tasman* (423 kilometres), from Hobart to Launceston, via east coast and St Helens; (x) *Waratah* (72 kilometres), from Somerset to Waratah.

Classified (or State) Roads
Description and Length of Roads at 30 June 1976
(Kilometres)

Description	Nature of surface		Total
	Sealed (a)	Unsealed (b)	
Highways	1 846	94	1 941
Main roads	917	148	1 065
Secondary roads	170	122	292
Tourist roads	57	58	115
Developmental roads	168	30	198
Total	3 159	452	3 611

(a) Bitumen or concrete.

(b) Gravel or stone.

Expenditure on Roads

As indicated earlier in this section, the responsibility for road construction and maintenance is placed upon the State Government, local government authorities and two public enterprises. The next table gives a detailed analysis of funds available to the State Government for roadworks and of expenditure from State road funds:

State Road Funds: Receipts and Payments
('\$000)

Particulars	1971-72	1972-73	1973-74	1974-75	1975-76
RECEIPTS					
Motor vehicle taxation, registration, licences, fees, fines, etc.	5 659	5 912	6 338	6 660	8 545
Federal Government grants	10 820	12 150	13 950	18 620	20 097
State Loan Fund	930	540	710	936	633
Contributions by local government authorities	17	19	17	18	19
Other	307	277	441	429	307
Total	17 733	18 897	21 456	26 662	29 602
PAYMENTS					
Construction and reconstruction of roads and bridges	12 960	13 810	15 757	18 936	21 317
Maintenance of roads and bridges	4 475	4 686	4 978	6 494	7 552
Planning and research	189	186	220	363	421
Total	17 624	18 682	20 955	25 793	29 290

Federal Government Roads Grants provide the bulk of the funds with a major contribution also coming from motor vehicle taxation, registration fees, etc.

Receipts and Expenditure, Local Government Authorities

Some of the expenditure appearing in the State Road Funds table consists of grants from the State Government to local government authorities, although such grants are not specifically dissected. In Chapter 4, 'Local Government', details will be found of: (i) grants from the State to local government authorities for road purposes; (ii) road rates collected by local government authorities; and (iii) expenditure on road construction and maintenance by local government authorities from revenue, and from loan funds.

Bridges*The Tasman Bridge*

The Tasman Bridge link between Hobart's eastern and western suburbs was broken on 5 January 1975 following the destruction of two sets of piles by a ship carrying ore upstream. Restoration work commenced in June 1975 following the announcement of reconstruction plans by the specially set up Joint Tasman Bridge Restoration Commission. (The 1976 edition of the *Year Book* includes a special article on the effects of the Tasman Bridge disaster, reconstruction plans and plans for a second Derwent River crossing.) The restored Tasman Bridge, widened to carry five lanes of traffic, was re-opened in October 1977.

Following the Tasman Bridge disaster, a temporary, two-lane, Bailey bridge was erected over the Derwent from Dowsings Point on the western shore to Cleburne Point some six kilometres upstream from the Tasman Bridge. It was opened to traffic on 16 December 1975. In mid-1977, the average usage of the Bailey bridge on a week-day was 17 700 vehicle trips per day (both directions combined). The road distance from the Hobart G.P.O. to the Bellerive Post Office via the Bailey bridge is 22.5 kilometres compared to 6.7 kilometres via the Tasman Bridge. In 1975 it was announced that a second permanent Derwent crossing would be built at a site just slightly north of the temporary Bailey bridge and detailed investigations and design work commenced. The Government announced that the Bailey bridge would remain open until completion of the second permanent crossing.

MOTOR VEHICLE REGISTRATIONS**General**

Statistics in this section deal with: (i) motor vehicles 'on register' at specific dates; and (ii) new motor vehicles registered within a specified period, e.g. a year.

Definitions

Register: To be allowed on the public roads, motor vehicles, except those owned by the Federal Government, are required to be registered with the State Transport Commission; State Government vehicles, as well as privately-owned vehicles, are registered with this authority. Federal Government-owned vehicles, except those belonging to the defence services, are recorded on a separate Federal Government register. 'On the register', in this section, refers to both the State and Federal Government registration records, and to all motor vehicles except those of the defence services. Statistics of new motor vehicle registrations comply with the same definition.

Vehicles Included: The statistics cover cars, station wagons, motor cycles and commercial vehicles. Commercial vehicles as defined include utilities, panel vans, rigid and articulated trucks, other truck type vehicles (i.e. commercial vehicles used for purposes other than freight carrying, e.g. fire engines) and omnibuses. Tractors, trailers and mobile plant and equipment are excluded.

Because of the multi-purpose nature of rear-door sedans it is possible for these types of vehicles to be registered as either cars or station wagons. In these statistics all rear-door sedans are classified as cars.

Vehicles on Register

The following table has been compiled to show, in summary form, the increase in motor vehicles on the register since 1910. To give a convenient measure of this growth, vehicles on the register have been related to the population (vehicles per 1 000 persons), and increases have been expressed as annual averages for each decade.

Motor Vehicles on Register from 1910

At 30 June	Cars and station wagons	Commercial vehicles	Motor cycles	All vehicles		
				Total	Average annual increase (a)	Per 1 000 of population
1910	'000 0.2	'000 (b)	'000 0.2	'000 0.4	'000 ..	no. 2
1920	2.4	(b)	1.7	4.1	0.4	20
1930	12.5	2.2	4.8	19.5	1.5	89
1940	17.6	5.2	3.4	26.2	0.7	109
1950	25.3	12.9	4.9	43.2	1.7	156
1960	63.7	26.4	3.1	93.2	5.0	271
1970	118.6	32.6	3.1	154.3	6.1	398
1976	160.1	37.9	7.2	205.3	(c) 8.5	504

(a) For decade ending in year shown.

(b) Included with cars and station wagons.

(c) For six years ended 30 June 1976.

The next table gives details of motor vehicles on the register during the past decade; annual increases are shown to allow comparison with the average annual increases for each decade appearing in the previous historical table.

Motor Vehicles on Register

At 31 December	Cars and station wagons	Commercial vehicles	Motor cycles	All vehicles		
				Total	Annual increase	Per 1 000 of population
1966	'000 99.5	'000 30.2	'000 1.6	'000 131.3	'000 7.2	no. 352
1967	104.2	30.6	1.8	136.6	5.3	362
1968	110.6	31.6	2.5	144.7	8.1	378
1969	116.1	32.4	2.9	151.4	6.7	391
1970	122.0	32.7	3.3	158.0	6.6	405
1971	128.0	33.3	3.7	165.0	7.0	420
1972	133.6	33.7	4.1	171.5	6.5	434
1973	140.2	34.5	5.3	180.0	8.5	r 452
1974	147.0	35.1	7.4	189.6	9.6	r 471
1975	158.2	36.0	7.7	201.9	12.3	r 496
1976	164.2	38.8	6.4	209.3	7.4	511

Motor Vehicles on Register in Australia

While different concepts of what constitutes 'motor vehicles on register' at a particular point of time may be appropriate for different purposes, for the purpose of obtaining uniform statistics for all states and territories, it is necessary to adopt a common concept of what constitutes 'motor vehicles on register' at a particular date. For this series, the Bureau has adopted the concept of motor vehicles on register at a particular date as being: (i) vehicles whose fees were paid up at that date, in respect of that date; and (ii) vehicles whose fees were not paid up at that date but subsequently were paid retrospectively to that date (or to an earlier date); and excluding all vehicles whose fees were not subsequently paid up in respect of that particular date, even though at that date their registrations may not have been formally terminated.

The following table shows estimated details of motor vehicles on the register for each state and territory at 30 June 1976. The figures are based on the final results of the census of motor vehicles conducted in respect of 30 September 1971. Motor vehicles on register are compiled from data supplied by the various registration authorities and include diplomatic and consular vehicles and all Federal Government-owned vehicles other than those belonging to the defence services.

Australia: Motor Vehicles on Register, 30 June 1976

State or territory	Cars and station wagons	Commercial vehicles	Motor cycles	All vehicles	
				Total	Per 1 000 of population
	'000	'000	'000	'000	no.
New South Wales	1 724.3	392.6	86.4	2 203.3	448
Victoria	1 445.8	287.0	46.9	1 779.6	475
Queensland	728.3	233.6	79.8	1 041.7	493
South Australia	501.1	107.3	32.6	641.0	508
Western Australia	436.8	145.8	29.3	611.9	523
Tasmania	160.1	37.9	7.2	205.3	504
Northern Territory	33.0	21.4	6.7	61.1	603
Australian Capital Territory ..	94.7	15.0	6.7	116.4	573
Total	5 124.1	1 240.6	295.7	6 660.3	479

Registration of New Motor Vehicles

A new motor vehicle classification was introduced from 1 July 1976 for new motor vehicle registration statistics. This classification, which replaces that introduced in January 1972, has as its main features:

- (i) adoption of the principal of accepting vehicle-type data as recorded by the registration authority;
- (ii) allocation of commercial vehicles to the categories 'utilities', 'panel vans' or 'rigid trucks' solely on the basis of recorded body-type; under the previous classification system these commercial vehicles were classified as 'light commercial type' (if having a carrying capacity of less than one tonne) or as 'rigid' (if having a carrying capacity of one tonne or more), the light commercial type then being further sub-divided into 'open' or 'closed'; and
- (iii) the inclusion in 'other truck types' of motorised caravans, ambulances and hearses (previously classified as 'light commercial, closed').

In the following table, which shows details of new motor vehicle registrations for recent years, commercial vehicles registered and classified previously as 'light open', 'light closed' or 'heavy' have been reclassified as 'utilities', 'panel vans' or 'trucks'.

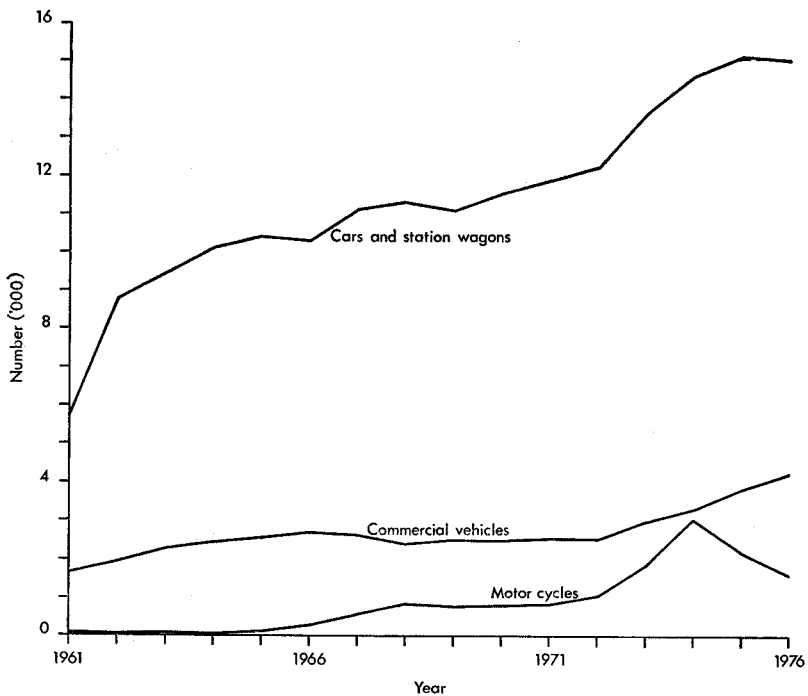
Registrations of New Motor Vehicles

Type of vehicle	1972	1973	1974	1975	1976
Motor cars	11 051	12 269	13 074	13 130	12 614
Station wagons	1 204	1 396	1 591	2 051	2 438
Commercial-type vehicles—					
Utilities	1 054	1 117	1 148	1 228	(a) 1 403
Panel vans	487	706	899	1 249	(a) 1 243
Trucks—					
Rigid	727	876	974	1 004	(a) 1 146
Articulated	147	171	165	133	(a) 159
Other (b)	17	12	15	16	(a) 132
Buses	83	114	138	215	169
Motor cycles	1 089	1 863	3 051	2 254	1 636
Total	15 859	18 524	21 055	21 280	20 940

(a) Revised classification introduced 1 July 1976—see sections preceding this table.

(b) Comprises non-freight carrying vehicles (e.g. tow trucks, fire engines and from 1 July 1976, camper-vans, ambulances and hearses).

Registration of New Motor Vehicles, Tasmania



Registrations of New Motor Vehicles According to Make

The table that follows gives details of Tasmanian registrations of new motor cars and station wagons according to make. It illustrates the present popularity of Holden, Ford, Datsun, Toyota and Chrysler makes which accounted for 81 per cent

of all new motor vehicles of this type registered during 1976. In this table new motor vehicles registered since 1 July 1976 which may be recorded under more than one make name (e.g. Holden or Statesman, Chrysler or Dodge, Volkswagen or Audi) have been classified to the make recorded in the registration documents.

Registrations of New Motor Cars and Station Wagons, 1976
Classified by Predominant Make

Make	Motor cars		Station wagons	
	Number	Proportion of total cars (per cent)	Number	Proportion of total station wagons (per cent)
Alfa Romeo	24	0.2	..	..
B.M.W.	38	0.3	..	..
Chrysler	1 088	8.6	268	11.0
Datsun	1 599	12.7	251	10.3
Fiat	177	1.4	..	..
Ford	2 781	22.0	528	21.7
Holden	3 482	27.6	476	19.5
Honda	221	1.8	2	0.1
Jaguar	22	0.2	..	..
Lancia	40	0.3	..	..
Leyland	265	2.1	..	..
Mazda	506	4.0	232	9.5
Mercedes Benz	64	0.5	..	..
Peugeot	65	0.5	4	0.2
Range Rover .. ..	..	..	33	1.4
Renault	158	1.3	38	1.6
Statesman	48	0.4	..	..
Subaru	108	0.9	138	5.7
Toyota	1 372	10.9	358	14.7
Triumph	111	0.9	..	..
Volkswagen	265	2.1	52	2.1
Volvo	115	0.9	41	1.7
Other	65	0.5	17	0.7
Total	12 614	100.0	2 438	100.0

Scrapping of Motor Vehicles

Apart from the few 'veteran' cars owned by enthusiasts, most vehicles are eventually scrapped. No information is collected on the number scrapped each year but the following table contains information from which some inferences may be drawn:

New Motor Vehicles Registered and Annual Increase in Motor Vehicles on Register ('000)

Particulars	1971	1972	1973	1974	1975	1976
New motor vehicles registered (a)	15.3	15.9	18.5	21.1	21.3	20.9
Annual increase, motor vehicles on register (b) ..	7.0	6.5	8.5	9.6	12.3	7.4

(a) During year ended 31 December.

(b) Annual increase measured at 31 December.

In comparing the two sets of figures in the previous table, it would be wrong to assume that the difference in each year represented scrapped vehicles only; exceptions would include vehicles transferred interstate and vehicles 'on blocks'—the fact that an owner has let a registration expire does not necessarily mean that he intends to scrap his vehicle. Subject to these and similar difficulties of interpretation, it would appear that upwards of about eight thousand motor vehicles have been scrapped annually since 1970.

ROAD TRAFFIC ACCIDENTS IN TASMANIA

Scope of Statistics

With the rapid development of road transport, there has been an increase in the number of road traffic accidents; some merely involve damage to vehicles, but others result in injury or death. To evolve meaningful statistics describing these events, it has been found necessary to narrow the field of observation to those road traffic accidents which involve casualties, since most accidents resulting only in vehicle damage are not required by law to be reported to the police (the drivers might merely exchange names and report to their respective insurance companies). Further, there is the difficulty of fixing, in monetary terms, some valid standard for determining what degree of vehicle damage warrants inclusion of an accident in a long-term statistical series—obviously \$50 or \$200 for repairs in 1950 is not comparable with \$50 or \$200 for repairs now.

For these and other reasons, the statistics in this section are restricted to details of those road traffic accidents involving casualties requiring medical or surgical treatment, or causing death, and which were recorded by the police.

Responsibility for, and Causes of, Accidents

For the purpose of the statistics in this section, the police officer reporting the accident determines, on the basis of the evidence available, the road user or agency responsible, and also the prime cause of the accident. The fact that civil or criminal courts may later make different decisions on these matters is disregarded in these statistics; nor is any attempt made to distinguish between accidents giving rise to subsequent legal action and those not doing so.

Causes of Accidents

Causes of accidents in Tasmania are classified, for statistical purposes, in accordance with a standard list of 76 prime causes (although, in this section, only the most frequent causes are shown). Contributory causes and conflicting or incomplete evidence make precise classification difficult. No provision is made to record and classify such antecedent causes as fatigue, discourtesy, impatience or other driving faults. However, since July 1971 accidents where consumption of alcohol is involved have been given a special classification. Where the blood alcohol level of the road user considered responsible is 0.05 (grams of alcohol per 100 millilitres of blood) or greater, this is recorded separately and no cause for the accident is assigned. The same practice is followed for road users who were reported 'obviously affected by alcohol' by the police and: (i) refused breath and/or blood tests; or (ii) had a blood alcohol level under 0.05; or (iii) were not tested because facilities were not readily available. The double assumption in each such case is: (i) the road user's skills were impaired by alcohol; and (ii) this impairment was a factor contributing to the accident.

Road Traffic Accident Statistics

Summary

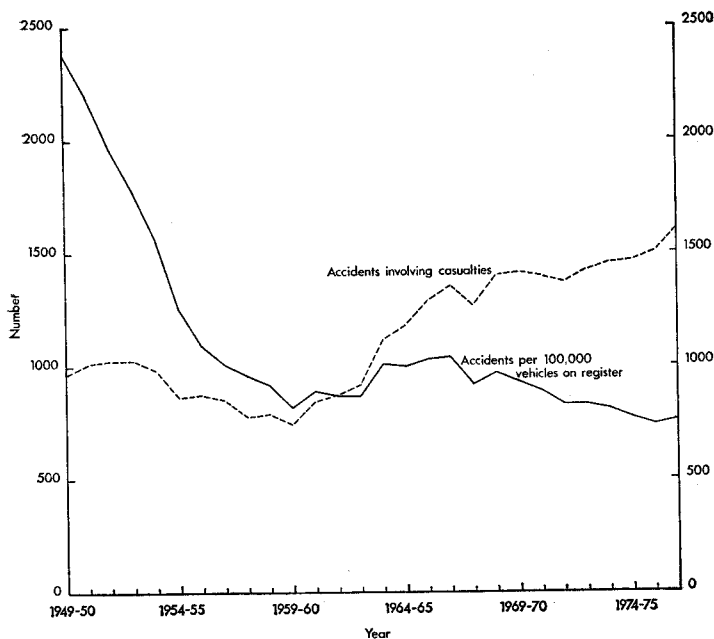
Generally there has been an increase in both the number of road traffic accidents and in the number of persons killed in road traffic accidents in recent years, although the number of persons killed showed a marked decline in 1972-73. The following table summarises the principal statistics of road traffic accidents involving casualties for selected years from 1949-50:

Road Traffic Accidents Involving Casualties, Selected Years from 1949-50

Period	Accidents		Persons			
	Number	Per 10 000 vehicles registered (a)	Killed		Injured	
			Number	Per 10 000 vehicles registered (a)	Number	Per 10 000 vehicles registered (a)
1949-50	969	r 238	64	16.0	1 154	288
1959-60	743	82	79	8.7	1 004	111
1969-70	1 413	93	122	8.0	2 268	150
1970-71	1 396	89	124	7.9	2 031	129
1971-72	1 371	83	118	7.2	1 984	120
1972-73	1 423	83	83	4.8	2 052	119
1973-74	1 454	81	126	7.0	2 046	114
1974-75	1 466	77	120	6.3	2 061	108
1975-76	1 502	74	107	5.3	2 160	107

(a) Based on average number of motor vehicles on register during period. 'Vehicles on register' is defined in the earlier section headed 'Motor Vehicle Registrations'.

Road Traffic Accidents, Tasmania



Location of Accidents

The next table shows the location of accidents in the State:

Road Traffic Accidents and Casualties by Local Government Area, 1975-76

Local government area	Accidents involving casualties	Persons killed	Persons injured
Hobart	264	9	346
Launceston	151	7	190
Glenorchy	173	13	227
Clarence	117	2	159
Burnie	50	..	73
Devonport	66	7	97
Other	681	69	1 068
Total	1 502	107	2 160

Causes of Accidents—Drivers of Motor Vehicles Responsible

The next table analyses accidents for which drivers of motor vehicles were believed responsible:

Road Traffic Accidents Caused by Drivers of Motor Vehicles, 1975-76
Classification by Cause

Principal causes of accidents for which drivers of motor vehicles (excluding motor cycles) were responsible	Accidents involving casualties	Persons killed	Persons injured
Accidents involving alcohol—			
Driver's blood alcohol level 0.05 (a) or greater	268	40	418
Driver refused test	4	..	5
Other cases (b)	41	3	70
Other accidents—			
Excessive speed having regard to conditions	107	9	179
Not keeping to the left	69	8	151
Not giving right of way	189	2	304
Failing to make right-hand turn with due care	87	3	111
Inexperience	31	..	64
Inattentive driving	104	..	153
Reversing without care	8	..	10
Overtaking without sufficient clearance	20	..	31
Following other vehicle too closely	22	..	27
Infirmity of driver	10	2	10
Driver asleep or drowsy	15	2	19
Dazzled by lights of approaching vehicle	3	..	3
Failing to signal intention of turning or stopping	2	..	2
Pulling out from kerb without warning	21	..	27
Crossing railway level crossing without due care	2	..	3
Hit-run (n.e.i.)	15	..	15
Other causes	1	1	..
Total	1 019	70	1 602

(a) Grams of alcohol per 100 millilitres of blood.

(b) Driver reported 'obviously affected by alcohol' by police but blood alcohol level less than 0.05, or not tested because facilities not readily available.

Road Traffic Accidents, Drivers of Motor Vehicles Responsible (a): Summary

Accidents involving casualties	1971-72	1972-73	1973-74	1974-75	1975-76
Drivers of motor vehicles responsible—					
Number of accidents	1 002	1 031	1 053	1 010	1 019
Proportion of total accidents %	73.1	72.5	72.4	68.9	67.8

(a) Excludes riders of motor cycles.

Responsibility for Road Accidents

The next table shows the type of road user or agency believed responsible:

Responsibility for Road Traffic Accidents, 1975-76

Responsibility attributed to—	Accidents involving casualties	Persons killed	Persons injured
Drivers of motor vehicles ..	1 019	70	1 602
Riders of motor cycles ..	140	15	145
Pedal cyclists	21	..	21
Pedestrians	156	12	151
Passengers	6	1	5
Motor vehicle defects ..	35	..	55
Motor cycle defects	3	..	3
Pedal cycle defects	4	1	4
Animals	7	..	10
Road conditions	81	5	124
Weather	5	2	5
Parties not involved (a) ..	24	..	35
Other causes	1	1	..
Total	1 502	107	2 160

(a) e.g. a car collides with another, after swerving to avoid a pedestrian who is not struck.

Alcohol-factor Accidents, Drivers of Motor Vehicles Responsible

The following table shows the blood alcohol level and age group of drivers of motor vehicles (excluding motor cycles) believed responsible for casualty accidents:

**Road Traffic Accidents, Drivers of Motor Vehicles Responsible, 1975-76
According to Blood Alcohol Level and Age Group**

Blood alcohol level (a)	Age group of drivers responsible (in years)								Total
	Under 21	21-24	25-29	30-39	40-49	50-59	60 and over	Not stated	
Less than 0.05	10	7	4	4	1	..	..	..	26
0.05	5	..	..	1	2	2	..	..	10
0.06	4	5	3	2	1	..	..	..	15
0.07	11	5	1	1	..	..	2	..	20
0.08	11	3	6	1	2	..	..	..	23
0.09	3	4	3	4	3	..	..	..	17
0.10	8	9	2	1	..	..	..	..	20
0.11 or 0.12	17	4	4	3	1	1	1	..	31
0.13 or 0.14	10	4	3	6	5	3	..	..	31
0.15 or 0.16	9	9	6	1	2	2	2	..	31
0.17 or 0.18	10	3	6	6	..	..	1	..	26
0.19 or 0.20	2	1	6	4	3	..	1	..	17
0.21 or 0.22	2	5	1	..	..	2	..	..	10
0.23 or 0.24 .. .. .	..	2	3	..	..	1	..	..	6
0.25 or 0.26	1	..	1	..	1	1	..	..	4
0.27 or 0.28	2	..	..	..	2	..	..	..	4
0.29 or 0.30 .. .. .	..	..	..	..	..	..	..	..	..
0.31 or above .. .. .	..	..	..	1	1	1	..	..	3
Refused test .. .. .	..	1	2	1	..	..	..	..	4
Test facilities not available	4	5	2	2	..	..	2	..	15
Total	109	67	53	38	24	13	9	..	313

(a) Grams of alcohol per 100 millilitres of blood.

Of the 313 'driver responsible' casualty accidents in which alcohol was considered to be the possible prime or antecedent cause, 176 accidents (i.e. 56.2 per cent) involved drivers under 25 years of age.

Causes of Accidents—Pedestrians Responsible

The table below analyses road traffic accidents for which pedestrians were held responsible:

Road Traffic Accidents, Pedestrians Responsible, 1975-76
Classification by Cause

Principal causes of accidents for which pedestrians were responsible	Accidents involving casualties	Persons killed	Persons injured
Accidents involving alcohol—			
Pedestrian's blood alcohol level 0.05 (a) or greater ..	6	2	6
Pedestrian refused test .. .. .	..	..	..
Other cases (b)	2	..	2
Other accidents—			
Walking across roadway without due care	64	7	59
Running across roadway	39	1	40
Passing behind or in front of moving or stationary vehicle or object	15	..	15
Stepping off kerb without due care	6	..	6
Children under seven years of age not under, or breaking away from, the supervision of an older person ..	20	2	18
Other causes	4	..	5
Total	156	12	151

(a) Grams of alcohol per 100 millilitres of blood.

(b) Pedestrian reported 'obviously affected by alcohol' by police but blood alcohol level less than 0.05, or not tested because facilities not readily available.

Drivers Involved in Accidents, Age Group and Licence Type

During 1975-76 a total of 2 030 drivers of motor vehicles (excluding motor cycles) were involved in casualty accidents which were reported to the police. Of these, 25 per cent (517) were under 21 years of age and a further 31 per cent (629) were from 21 to 29 years of age.

The age group and type of driving licence held by these drivers at the time of the accident are shown in the next table:

Road Traffic Accidents, Drivers of Motor Vehicles Involved, 1975-76
According to Licence Type and Age Group

Type of driving licence	Age group of drivers involved (in years)								Total drivers involved
	Under 21	21-24	25-29	30-39	40-49	50-59	60 and over	Not stated	
Learner	23	1	3	..	3	3	1	..	34
Provisional	411	94	40	30	12	11	7	..	605
Ordinary	39	214	216	270	203	169	122	1	1 234
Interstate or international	6	18	17	13	3	5	1	..	63
No licence	37	20	4	7	6	1	..	..	75
Not known	1	1	1	1	..	..	..	15	19
Total	517	348	281	321	227	189	131	16	2 030

Road Features and Accidents

The following table analyses all accidents involving casualties according to road features at the site and shows that, in 1975-76, 38 per cent of accidents occurred on a straight section of road.

Features of Roadways on Which Accidents Occurred, 1975-76

Feature of roadway	Accidents involving casualties	Persons killed	Persons injured
At intersections—			
Controlled	61	..	76
Uncontrolled	407	12	585
Other than at intersections—			
Straight road	573	46	752
Bend or curve	452	49	732
Bridge, culvert or causeway	8	..	13
Other locations	1	..	2
Total	1 502	107	2 160

Road Users Killed or Injured

The next table analyses the type of road user killed or injured:

Type of Road User Killed or Injured, 1975-76

Type of road user involved	Killed			Injured		
	Males	Females	Persons	Males	Females	Persons
Drivers of motor vehicles ..	36	7	43	624	217	841
Motor cyclists	15	..	15	244	9	253
Pedal cyclists	3	..	3	33	3	36
Passengers—						
Motor vehicle	18	8	26	362	462	824
Motor cycle	2	..	2	13	13	26
Pedal cycle .. .. .	..	..	..	..	..	..
Pedestrians	11	7	18	102	77	179
Other .. .. .	..	..	..	..	1	1
Total	85	22	107	1 378	782	2 160

Types of Accidents

Most accidents arise from collisions between vehicles, followed by accidents in which vehicles overturn or leave the road, as shown in the following analysis:

Types of Accidents, 1975-76

Types of accidents	Accidents involving casualties	Persons killed	Persons injured
Collisions between vehicles—			
Angle	399	9	603
Head on	159	24	329
Rear end	110	3	143
Side swipe—Same direction	54	3	73
Opposite direction	59	3	104
Vehicle—			
Overturning or leaving road	465	45	646
Colliding with—Fixed object (incl. parked vehicle)	55	1	64
Pedestrian	187	18	181
Animal	7	..	11
Passenger accidents	6	1	5
Other types of accidents	1	..	1
Total	1 502	107	2 160

Age and Responsibility

Drivers of motor vehicles (excluding motor cycles) were believed responsible for 1 019 out of the 1 502 accidents involving casualties which were reported to the police during 1975-76.

Drivers under 25 accounted for 487 or 32.4 per cent of these accidents (male drivers under 25, 408; female drivers under 25, 79).

Casualties associated with accidents attributed to drivers under 25 were: killed, 38; injured, 813.

The following table analyses the age and sex of the drivers responsible:

Road Traffic Accidents, 1975-76
Age and Sex of Drivers of Motor Vehicles Responsible

Age group of drivers responsible (in years)	Male driver			Female driver		
	Accidents involving casualties	Persons killed (a)	Persons injured (a)	Accidents involving casualties	Persons killed (a)	Persons injured (a)
Under 17 ..	13	1	23	2	..	3
17-20	249	22	440	47	2	77
21-24	146	13	223	30	..	47
25-29	106	10	157	23	..	33
30-39	104	7	153	28	..	49
40-49	76	5	118	15	2	18
50-59	68	2	107	23	..	28
60 and over ..	57	3	85	20	3	28
Not stated (b) ..	11	..	11	1	..	2
Total ..	830	63	1 317	189	7	285

(a) The age groups relate to the driver who may or may not be included in the casualty figures.

(b) Includes accidents for which hit-run drivers were responsible.

Age and Sex of Road Users Killed

The next table shows the age and sex of the various types of road user killed:

Road Traffic Accidents, 1975-76
Age and Sex of Road Users Killed

Age group (in years)	Type of road user killed					All road users
	Drivers of motor vehicles	Motor cyclists	Pedal cyclists	Passengers (all types)	Pedestrians	
MALES						
Under 7 ..	..	..	..	..	1	1
7-16	1	3	3	3	1	11
17-20	11	7	..	10	1	29
21-29	12	3	..	3	1	19
30-39	1	1	..	..	1	3
40-49	5	1	..	..	1	7
50-59	3	3
60 and over ..	3	4	5	12
Not stated
Total ..	36	15	3	20	11	85

Road Traffic Accidents

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Road Traffic Accidents, 1975-76 Age and Sex of Road Users Killed—*continued*

Age group (in years)	Type of road user killed					All road users
	Drivers of motor vehicles	Motor cyclists	Pedal cyclists	Passengers (all types)	Pedestrians	
FEMALES						
Under 7 ..	..	..	..	..	1	1
7-16 ..	..	..	..	2	1	3
17-20 ..	2	..	..	1	1	4
21-29 ..	1	..	..	..	..	1
30-39 ..	..	..	..	2	..	2
40-49 ..	1	..	..	2	1	4
50-59 ..	..	..	..	1	1	2
60 and over ..	3	..	..	..	2	5
Not stated ..	..	..	..	..	..	..
Total ..	7	..	..	8	7	22

Days of the Week on Which Accidents Occurred

The following table shows accidents and casualties according to the day of the week on which they occurred:

Road Traffic Accidents, 1975-76 Days of the Week on Which Accidents Occurred

Day of the week	Accidents involving casualties	Persons killed	Persons injured
Monday	159	14	199
Tuesday	165	13	233
Wednesday	179	9	240
Thursday	213	10	285
Friday	258	21	361
Saturday	308	22	501
Sunday	220	18	341
Total	1 502	107	2 160

Source of Data

Details of each road traffic accident reported to the police, or investigated by the police are recorded on a standard form and copies are made available to the Transport Commission and to the Australian Bureau of Statistics; at the Bureau, quarterly statistics are compiled only from those reports describing accidents involving casualties. The Transport Commission employs the reports it receives in connection with road engineering, the location of traffic signs and signals, the pin-pointing of dangerous locations, traffic engineering, and accident prevention in general.

No-Fault Third Party Insurance

'No-fault' third party insurance was introduced in Tasmania on 1 December 1974 under the *Motor Accidents (Liabilities and Compensation) Act 1973*. Prior to the introduction of the 'no-fault' scheme, motorists were compelled to insure

with insurance companies against claims by other persons resulting from motor vehicle accidents. The success of a claim was dependent upon the claimant proving negligence (or fault) on the part of the driver of a motor vehicle. 'No-fault' insurance, however, entitles a person to compensation for injuries sustained in a motor vehicle accident without regard to who was at fault. The extent of the compensation is determined by the scheduled benefits outlined in the Act. The operation of the scheme does not, however, preclude the individual from suing for damages should it be felt that the scheduled benefits are insufficient compensation and that the accident was the result of negligence. Insurance is compulsory under the Act.

Premiums

Premiums vary according to the type of vehicle and the purpose for which it is used. On 1 December 1977, the annual premium for most private passenger type motor vehicles was reduced to \$44.00 from \$56.00, while premiums for motor cycles were increased substantially. Premiums are subject to review annually by the Premiums Board of Tasmania which is established under the Act to recommend rates of premiums to the Minister responsible.

Scheduled Benefits

The more important of the scheduled benefits prescribed in the Act are:

- (i) Medical, hospital and ambulance expenses.
- (ii) Weekly disability allowance for employed and self-employed persons and housewives.
- (iii) Dependant's allowance.
- (iv) Death benefits.
- (v) Funeral benefits.

Motor Accidents Insurance Board

The Motor Accidents Insurance Board, set up to administer the Act, consists of five members who are appointed by the Governor. The chairman, a legal practitioner, is appointed directly and the other four members are each appointed on the recommendation of one of the following organisations: (i) the Tasmanian Government Insurance Board; (ii) participating insurers other than the Tasmanian Government Insurance Board; (iii) the Transport Commission; and (iv) the Royal Automobile Club of Tasmania (representing the interests of motor vehicle users). The Board may enter into agreements with insurance companies to allow them to act as agents in the administration of the Act.

AIR TRANSPORT IN TASMANIA

Introduction

In mid-1976, Ansett Airlines of Australia and Trans-Australia Airlines were operating the greater percentage of passenger traffic to and from the Tasmanian mainland with 93 jet aircraft and 60 prop-jet aircraft per week. PAGAS (Port Augusta Air Services Pty Ltd) operated a commuter service between Melbourne and Flinders Island for five days per week.

Supplementary intrastate services began during 1964 and in 1976 Executive Airlines operated a commuter service between Launceston and Flinders Island and Launceston and King Island via Wynyard and Devonport.

Air freight is carried regularly between Melbourne and the major Tasmanian airports and islands in a variety of aircraft ranging from Lockheed Electras of Ansett Airlines of Australia and quick-change Fokker F27 aircraft of Trans-Australian Airlines, to the Argosy, DC3 and Bristol Freighters of the major charter operators.

Administration

Administration of the Air Navigation Act and Regulations in Tasmania

The Federal *Air Navigation Act* 1920-1974 and associated regulations are administered for Tasmania by the Regional Director, Department of Transport, Victoria-Tasmania Region. The authority is the Federal Department of Transport. The Department's more important functions include the provision and maintenance of government aerodromes and associated facilities, the licensing of aircraft and pilots and a responsibility for supervising all aspects of air safety.

Classification of Flying Activities

Flying activities are classified by regulation into the following well-defined categories:

- (i) *Private Operations*: Private use of aircraft may be gauged by the fact that there were 531 licensed private pilots in the State in June 1976.
- (ii) *Aerial Work Operations*: These operations refer to aircraft used for aerial survey; spotting; photography; agriculture; advertising; flying training; ambulance service; or for the cartage of goods owned by the pilot, the owner or hirer, for the purposes of trade. Within Tasmania there are four licensed flying training organisations and two aerial agricultural organisations carrying out most of the aerial work activities.
- (iii) *Charter Operations*: These refer to aircraft hired for passenger or freight movement, but not according to fixed schedules, or to and from fixed terminals. There were 11 licensed charter operators based in Tasmania in June 1976.
- (iv) *Commuter Operations*: These are charter operations on a fixed schedule, and to or from fixed terminals; they are authorised by an exemption granted under Air Navigation Regulations. Tasmania has one approved operator.
- (v) *Regular Public Transport*: This refers to aircraft carrying freight and passengers according to fixed schedules, and operating on specified routes. All services of this kind are provided in Tasmania by T.A.A. and Ansett Airlines.

Tasmanian Aerodromes

The major aerodromes in Tasmania are owned and operated by the Federal Government through the Department of Transport. Since 1957 the Federal Government policy has been that aerodromes (except capital city airports) should be owned and operated by local authorities under the local ownership plan. The following describes both Federal Government-owned and other aerodromes in Tasmania.

Federal Government-owned Aerodromes

Hobart Airport: Ranks seventh in the volume of passengers handled at Australian terminals. It was completed in 1956. Extension and strengthening of the runway, taxiway and aprons to take DC9 and Boeing 727 aircraft at full weight

was completed in 1966. The airport is equipped with complex aviation aids. New terminal and communication buildings were completed in 1976. It lies 18 kilometres by road from the city. A helicopter charter service operates between the airport and the city.

Launceston Airport: 16 kilometres south-east of Launceston, it ranks next after Hobart in passenger volume but handles considerably more freight. The area control centre provides air traffic control for Tasmania via repeater stations, south on Mt Wellington and north on Mt Barrow. The airport is also used for flying training, light aircraft charter and aerial work operations.

Devonport Airport: This was originally constructed in the early 1930s. In 1950 it was developed to handle DC3, DC4 and Viscount type aircraft. Regular passenger services (using F27 aircraft), aerial and charter work, flying training and private operations are carried on from this location.

Wynyard Airport: This has one sealed runway of 1 341 metres and one 1 189 metres long for regular public transport operations, charter, aerial work and private operations and ranks next to Devonport in number of passengers carried.

King Island Airport: Is located six kilometres north-east of Currie. It has three gravel runways, night lighting and radio navigational equipment.

Flinders Island Airport: Is located five kilometres north of Whitemark. There are two gravel and one grass landing strips plus an apron, taxiway, terminal and navigation aid facilities.

Cambridge Airport: This was constructed during the early period of aviation and has four runways. The proximity of hills prevent further development and after completion of the Hobart Airport, Cambridge became a centre for light aircraft activities.

Locally Owned Aerodromes

Smithton Airport: Located three kilometres west of Smithton, it is owned by the Transport Commission. It has a sealed main runway plus lesser gravel strips and is used for itinerant charter and private flights.

St Helens Airport: The aerodrome is owned and operated by the Municipality of Portland. A grassed strip 1 189 metres long and 91 metres wide is of sufficient dimension to permit operations by DC3 and F27 type aircraft. The aerodrome currently serves the charter, aerial work and private operation requirements for the area and has a non-directional beacon for instrument navigation.

Queenstown Airport: The Municipality of Queenstown provided an authorised landing area for light aircraft in 1937. In 1963 work was commenced on the construction of a runway suitable for the operation of DC3 type aircraft at Queenstown under the local ownership plan; this was opened on 17 April 1966.

Strahan Airport: This airport, together with Queenstown Airport, serves the west coast of Tasmania. Opened for regular public transport operations in 1964, Strahan aerodrome was constructed under the aerodrome local ownership plan and is owned by the Municipality of Strahan.

Aircraft, Passenger and Freight Movements

The following table shows the number of scheduled aircraft movements at the principal airports in Tasmania during recent years. For the purposes of the statistics in this table a take-off is regarded as one movement and a landing as another.

Aircraft Movements: Principal Airports

Year	Hobart (a)	Launceston	Devonport	Wynyard	King Island	Flinders Island
1971	6 404	11 165	4 039	4 056	1 221	609
1972	6 254	10 581	4 147	4 144	1 283	591
1973	7 061	11 297	4 982	4 769	1 279	604
1974	7 599	10 982	5 409	5 148	1 079	(b) 349
1975	7 365	9 856	4 775	4 334	732	..
1976	7 543	9 532	4 224	3 899	693	..

(a) The phasing-out of turbo-prop aircraft and the introduction of pure jet aircraft has increased carrying capacity and reduced the number of flights required.

(b) Regular public transport operated by Ansett Airlines of Australia ceased from October 1974.

The next table shows the volume of passengers and freight handled at each airport; the following definitions apply:

Passengers: The figures are for fare-paying passengers only at each airport and are the sum of embarkations and disembarkations.

Freight: The figures are the sum of all revenue freight (including excess baggage) loaded and unloaded at each airport.

Passenger and Freight Movements: Principal Airports (a)

Year	Hobart	Launceston	Devonport	Wynyard	King Island	Flinders Island
PASSENGERS ('000)						
1971	226	205	76	71	23	10
1972	236	216	76	69	23	11
1973	345	271	95	82	26	12
1974	392	294	107	91	22	(b) 7
1975	371	287	100	90	15	..
1976	399	299	88	85	13	..
FREIGHT (Tonnes)						
1971	6 749	9 730	333	286	471	161
1972	6 487	9 701	318	266	401	118
1973	6 449	12 368	434	304	287	118
1974	7 130	12 131	404	343	220	(b) 60
1975	7 040	11 646	337	335	122	..
1976	8 111	13 324	363	316	114	..

(a) See definitions preceding this table.

(b) Regular public transport operated by Ansett Airlines of Australia ceased from October 1974.

The increase in the total number of passengers carried by the principal airports (as shown in the above table) in 1976 over 1975 was only 2.4 per cent. However, the total freight carried showed an increase of 14.1 per cent in 1976 compared to 1975.

Comparison of Principal Australian Airports

The next table shows the volume of activity at the principal Australian airports in terms of the number of passengers, freight and aircraft movements. Details of international services have been excluded so that comparisons are purely in terms of domestic traffic (international services are centred on Melbourne, Sydney, Brisbane and Perth).

Australia: Principal Airports
Passengers, Freight and Aircraft Movements (a), 1976

Airport	Passengers	Freight (tonnes)	Aircraft movements
Sydney (b)	4 774 318	46 462	81 143
Melbourne	4 114 456	60 113	66 537
Brisbane	2 096 765	23 417	33 803
Adelaide.. .. .	1 538 332	17 966	24 071
Canberra	871 338	3 704	16 898
Perth (b)	659 835	11 769	10 854
Hobart	399 172	8 111	7 543
Launceston	299 136	13 324	9 532

(a) See definitions earlier in this section.

(b) Partially estimated.

FREIGHT EQUALISATION

In April 1974, Mr J.F. Nimmo was appointed by the Federal Government as Commissioner of a 'Commission of Inquiry into Transport to and from Tasmania'. The Commission's report (the 'Nimmo Report') was presented to the Government in March 1976. A summary of the report is included in the 1977 *Year Book*.

The Commission was appointed because of the widely held view that Tasmania suffered a considerable disability with regard to freight and passenger rates to and from Mainland Australia compared to other states.

Following release of the Commission's report, the Federal Minister for Transport, on 9 June 1976, announced a radical new freight equalisation scheme for Tasmania that was to operate from 1 July 1976. The main points of the scheme are as follows:

- (i) Introduction of a freight equalisation subsidy of at least \$16 million per year on cargo shipped from Tasmania to the Mainland. Payment of the subsidy for eligible cargoes was to be directly to the consignor, rather than to the shipping companies and was designed to place sea freight rates on cargo shipped from Tasmania to the Mainland on a par with rail freights over similar distances on the Mainland. Eligible cargoes include most goods produced in Tasmania.
- (ii) Doubling the annual subsidy on the *Empress of Australia* passenger service from \$1 million to \$2 million.
- (iii) Discontinuance of Australian National Line passenger services between Sydney and Tasmania.
- (iv) Termination of the previously existing \$4.5 million a year subsidy to the Australian National Line.
- (v) Australian National Line freight and passenger rates were to be brought up to economic levels. This was to involve: doubling the north-bound freight rates (which had been frozen in 1974); an increase of approximately 20 per cent in south-bound rates; and an increase of about 15 per cent in *Empress of Australia* passenger fares (Devonport-Melbourne services).

The Minister said that the freight equalisation scheme was based largely on the Nimmo Report and that other aspects of the Report would be considered later. A re-assessment of the subsidy would be made in 18 months time and the whole scheme would be reviewed by not later than 1980.

Soon after the freight equalisation scheme was announced, the Australian National Line published increased freight rates to apply to its Tasmanian general coastal cargo from 1 July 1976. The Line also announced that its cargo carrying capacity to and from Tasmania would be increased by 50 per cent from 1 July 1976. The Chairman of the Australian Shipping Commission said that this increase in capacity was in expectation of a growth in sea traffic to and from Tasmania which would be encouraged by the Government's freight equalisation scheme.

The Federal Government announced details of a south-bound freight subsidy scheme for Tasmania in November 1976. Goods eligible for the subsidy, which was to apply retrospectively from 1 July 1976, were to be producers' material and equipment which represented more than five per cent of the factory door cost of finished products. In common with the north-bound scheme, bulk cargoes are not eligible for subsidy.

The north-bound scheme involved subsidies totalling in excess of \$16m in respect of goods shipped during 1976-77, while payments in respect of south-bound goods were expected to be in excess of \$3m. The 1977-78 Federal Budget provided \$23m for Tasmanian freight equalisation: \$17m for the north-bound scheme and \$6m for the south-bound scheme.

POSTAL AND TELECOMMUNICATIONS SERVICES

Introduction

Prior to 1 July 1975 the Postmaster-General's Department provided and controlled postal and telecommunications services in Tasmania, supported by engineering, finance and accounting, supply, personnel and administrative establishments. From 1 July 1975 control of these services has been vested in two commissions: the Australian Postal Commission (Australia Post) and the Australian Telecommunications Commission (Telecom). The activities of these bodies in Tasmania are outlined below.

Australia Post

Apart from its obvious role of providing postal services, Australia Post also acts as an agent for a number of other instrumentalities in transactions which include: Commonwealth Savings Bank deposits and withdrawals; Telecom Australia account payments; Defence Home repayments; sale of State duty stamps and sale of income taxation instalment stamps.

Postal Money Orders

From 21 November 1977 the postal order and money order services were replaced by a postal money order service. As well as providing a money transfer service by mail, postal money orders can also be sent by telegraph. Charges are 20 cents for amounts up to one dollar and 50 cents for amounts over one dollar up to \$500. Orders for overseas are limited to \$100 and a remitter may send only one such order in any week. The charges are five per cent of the postal money order with a minimum charge of \$1.50.

The Postal Service

The first long-distance overland mail service in Australia was started between Hobart and Launceston in 1816, the carrier walking both ways and taking a fortnight for the round trip.

The number of individual postal articles handled in Tasmania in 1975-76 amounted to 51 million compared to 60 million in 1974-75. Australia Post handled 2356 million articles throughout Australia in 1975-76 compared to 2682 million in the previous year.

Postal Services (a)

Particulars	Unit	1970-71	1971-72	1972-73	1973-74	1974-75	1975-76
Post offices—							
Official ..	no.	50	46	46	46	46	46
Non-official ..	no.	307	288	284	251	234	268
Postal traffic (b)—							
Standard letters ..	'000	66 556	61 553	63 187	63 272	59 644	44 829
Non-standard articles ..	'000						
Parcels ..	'000	353	352	358	289	308	220
Registered articles	'000	313	268	228	203	193	132
Total ..	'000	67 222	62 173	63 773	63 764	60 145	50 709

(a) Controlled by Postmaster-General's Department up to 1 July 1975.

(b) Number of separate articles handled.

All mail to and from Tasmania and the Mainland is carried by air as far as Melbourne, priority being given to priority paid mail, standard articles and mail on which airmail fees have been paid. The balance is forwarded on an 'Air Opportunity' basis. A local priority paid mail service was introduced in November 1975 and provides guaranteed delivery within Hobart and suburbs on the next working day. This service is also available between Hobart, Launceston, Devonport, and Burnie. An overnight parcel service, introduced towards the end of 1976, provides for next working day delivery of all mail throughout the State, with only minor exceptions.

Australia Post also provides courier services for urgent items in Hobart with an intrastate network extending to Launceston, Devonport, Ulverstone and Burnie and an interstate network which includes all state capitals, as well as Canberra.

At 30 June 1976 Australia Post had a full-time staff in Tasmania of 841, 72 persons were employed part-time, 245 were employed at non-official post offices (and paid on the basis of the volume of business transacted) and 161 had mail service contracts with Australia Post. There were 524 street posting boxes in the State and 220 street delivery circuits were operated.

Australian Telecommunications Commission (Telecom Australia)

Development of Telecommunications

Hobart and Launceston were linked by a telegraph line in 1857 and two years later a Bass Strait cable was in operation, only to fail in 1861. By 1869 a second cable was laid and communication with overseas countries became possible in 1872 when the Overland Telegraph was established between Adelaide and Darwin.

The first telephone line in Tasmania linked Hobart and Mt Nelson signal station in 1880, both Hobart and Launceston having exchanges by 1883. However, no link with Victoria or overseas countries was provided until 1936.

The State is now served with a network of high-capacity, high-quality trunk channels which are extended to other Australian states and linked with the Seacom and Compac cables connecting Australia to overseas countries. There are also

links to the Overseas Telecommunications Commission earth satellite stations at Carnarvon, Ceduna and Moree. The State is divided into three districts (which coincide with the S.T.D. area code districts), each in the charge of a District Telecommunications Manager.

Telegraph: The teleprinter exchange (TELEX) had only one Tasmanian subscriber in 1957 but 627 were connected by 30 June 1977. The TELEX service is fully automatic and subscribers can now contact each other without an exchange operator's assistance. Calls can be made automatically to many overseas countries tied in with Australian telegraphic services, while the remainder can be contacted through an exchange operator. Extensive use is made of the long established picturegram service by the press; organisations such as the Bureau of Meteorology and private companies have a similar service available for the transmission of charts and documents.

Telephones: The Commission completed the conversion to automatic working of all the telephone exchanges in Tasmania on 15 June 1977. There were then 198 automatic exchanges in the State. Tasmania became the first Australian State to have a fully automatic telephone system.

Telephone and Telegraph Services

The following tables analyse telephone and telegraph services in Tasmania:

Telephone Services at 30 June: Operating Services (a)
(*000)

Particulars	1972	1973	1974	1975	1976	1977
Services in operation—						
Business	37.3	37.9	37.8	37.4	34.5	35.6
Non-business	43.2	46.4	50.5	57.4	63.8	68.8
Public telephones	1.1	1.1	1.1	1.1	1.1	1.1
Instruments in operation	112.6	118.4	126.8	133.0	139.5	146.4

(a) Telecommunications services controlled by Postmaster-General's Department prior to 1 July 1975.

Telecommunications (a)

Particulars	Unit	1971-72	1972-73	1973-74	1974-75	1975-76	1976-77
Telephone—							
Automatic service subscribers ..	'000	76	80	86	93	98	104
Manual service subscribers ..	'000	5	4	3	2	1	..
Subscribers with access to S.T.D.	'000	71	77	84	93	98	104
Automatic exchanges	no.	178	183	189	191	195	198
Manual exchanges	no.	60	47	35	21	11	..
Value of calls made—							
Metered (local and S.T.D.) ..	\$'000	7 263	8 430	10 354	12 666	17 150	19 313
Trunk	\$'000	2 477	2 562	2 585	2 297	2 062	2 099
Public telephone (local and trunk)	\$'000	510	558	601	721	974	1 146
Telegraph—							
Phonograms lodged	'000	231	259	256	221	194	173
All telegrams lodged (b)	'000	494	473	472	424	356	298

(a) Telecommunications services controlled by Postmaster-General's Department prior to 1 July 1975.

(b) Includes telegrams lodged by telephone (i.e. phonograms).

The installation, in recent years, of the high-capacity trunk channels, known as the Broadband System, together with modern trunk switching exchanges, has enabled the Commission to provide Subscriber Trunk Dialling (S.T.D.) facilities for the direct dialling of trunk calls. This facility enables subscribers to make

direct long-distance calls to anywhere in Australia by simply dialling the required number. All telephone subscribers in Tasmania have access to S.T.D. which avoids the delays associated with manually-operated exchanges. Charges are based on actual time used and there is no minimum time period as with manually booked trunk calls.

Facilities for Data Transmission are also available from the Commission in Tasmania. An extension in the use of UHF (ultra-high frequency) radio to provide mobile telephone services from vehicles is foreseen and the introduction of a radio paging system is under development.

RADIO COMMUNICATION

Stations in Tasmania

To establish and operate radio communication equipment, it is necessary to obtain a licence from the Postal and Telecommunications Department. This Department is responsible for overall management of the radio frequency spectrum involving the following radio regulatory functions: (i) frequency allocation; (ii) frequency measuring and radio monitoring; (iii) determination of equipment standards; (iv) conduct of examinations for Radio Operators' Certificates of Proficiency; (v) inspectorial functions; and (vi) licensing formalities. The radio frequency spectrum is a national resource although it is somewhat different from other resources such as minerals, water, fuels, fisheries, forestry, etc. The radio frequency spectrum is used and not consumed and it is wasted when not used correctly. It is for this reason that the Postal and Telecommunications Department makes every effort to ensure interference-free operation for all services.

Some examples of the use to which this form of communication is put include: (i) mobile radiotelephone networks operated by governmental and semi-government bodies including Tasmania Police, the Hydro-Electric Commission, Forestry Commission, fire brigades, municipal councils, etc.; (ii) mobile radiotelephone networks operated by private enterprises such as transport and taxi companies, building contractors, etc.; (iii) coastal radio services to ship stations at sea provided by stations operated by the Overseas Telecommunications Commission; (iv) coastal radio services for fishing boats provided by stations operated by private enterprises engaged in the fishing industry at various ports around the Tasmanian coastline; and (v) coastal radio stations in the International VHF Maritime Mobile Radiotelephone Service operated by various Marine Boards for ship-to-shore communications with overseas ships.

In addition, the Citizens Radio Service (commonly referred to as 'C.B. radio') became legal for licensed amateur operators from 1 July 1977. (Prior to this, licences had been restricted to certain specialised users.) The Citizens Radio Service showed a rapid growth in popularity and by 31 December 1977, 3 250 licences had been granted in Tasmania. The Postal and Telecommunications Department is responsible for issuing licences, detection and prosecution of unlicensed operators and for ensuring that proper standards are maintained by operators. Citizens Radio operators are permitted to use specified channels in the high frequency (HF) and ultra high frequency (UHF) bands. There were 18 HF channels allocated within the frequency range 27.015 to 27.225 megahertz. In the UHF range, 40 channels were allocated from 476.425 to 477.400 MHz but the use of channels 11 to 35 was initially restricted.

The next table relates to radio communication stations only; particulars of broadcasting stations are specifically excluded and are dealt with in a subsequent section.

**Number of Authorised Radio Communication Stations at 30 June
(Two-way Services)**

Particulars	1972	1973	1974	1975	1976	1977
Fixed stations (a)—						
Outpost (b)	17	16	14	11	10	9
Other	92	103	110	108	118	113
Total	109	119	124	119	128	122
Land stations (c)—						
Aeronautical	8	8	7	7	7	8
Base stations for—						
Land mobile services ..	478	523	627	684	726	798
Harbour mobile services	8	7	8	12	14	30
Coast (d)	32	36	37	38	37	38
Special experimental ..	18	16	16	17	17	27
Total	544	590	695	758	801	901
Mobile stations—						
Aeronautical	42	48	52	54	57	57
Land mobile services ..	4 201	4 606	4 562	5 223	5 674	6 039
Harbour mobile services ..	70	69	82	116	162	464
Outpost	72	43	45	48	45	46
Ships	625	691	781	789	805	802
Total	5 010	5 457	5 522	6 230	6 743	7 408
Amateur stations	229	224	229	240	243	256
Grand total	5 892	6 390	6 570	7 347	7 915	8 687

(a) For exchange of radio messages with other similar stations.

(b) Stations established in remote localities for communication with control stations, e.g. the lighthouse service.

(c) For exchange of radio messages with mobile stations.

(d) Land stations for communication with ocean-going vessels.

RADIO AND TELEVISION SERVICES

Radio broadcasting and television falls within the jurisdiction of the Federal Government and is one of the responsibilities of the Minister for Post and Telecommunications. Federal bodies which are directly involved include the Postal and Telecommunications Department, the Australian Broadcasting Commission, the Australian Broadcasting Tribunal, the Australian Telecommunications Commission and a special Authority for ethnic broadcasting.

Types of Services

Basically the Australian broadcasting and television system consists of three types of service comprising:

- (i) national broadcasting and television stations funded by the Federal Government;
- (ii) commercial broadcasting and television stations operated by companies under licence; and
- (iii) public stations operated by corporations under licence on a non-profit basis.

Regulation

Provisions contained in the *Broadcasting and Television Act 1942* govern the establishment and operation of all stations. The *Postal and Telecommunications Department* is responsible for planning of the overall system, for the submission of planning proposals for consideration by the Minister, for all matters relating to the technical operation of stations and for the investigation of interference to the transmission and reception of programs.

In relation to the national service, the *Australian Broadcasting Commission* is required to provide programs for transmission over stations made available by the *Australian Telecommunications Commission* and to supply and operate the studio equipment necessary for the purpose. The *Australian Broadcasting Tribunal* is responsible for the licensing and supervision of the operation (other than the technical equipment) of all stations other than national stations. In particular, the Tribunal is required to conduct public inquiries into the granting of licences following the invitation of applications by the Minister, and into the renewal of licences, the setting of standards of broadcasting practices, alleged breaches of licence conditions and such other matters as the Minister may direct. Subject to the conduct of such inquiries, the Tribunal is empowered to grant, renew, suspend or revoke licences and to determine program and advertising standards applicable to licensed stations.

The National Services

The national services (both radio and television) are provided by the Australian Broadcasting Commission which has sole responsibility for program material; the actual transmitters are operated by the Australian Telecommunications Commission.

Commercial Broadcasting

Commercial radio and television broadcasting stations are operated by companies under licences granted by the Australian Broadcasting Tribunal. Their technical operating conditions are determined by the Postal and Telecommunications Department. The stations obtain income from the broadcasting of advertisements. The fee for a licence is \$200 plus an amount based on the gross earnings from advertising during the preceding financial year, assessed on a sliding scale varying from 1 per cent for amounts up to \$0.5m to 4.5 per cent on amounts exceeding \$3.5m.

Hours of Transmission

At 30 June 1977, eight commercial radio stations were operating in Tasmania: two in the Hobart area each averaging 168 hours weekly; six elsewhere in the State averaging 116.5 hours weekly.

Broadcasting Standards

Commercial radio and television stations are required to maintain standards set by the Australian Broadcasting Tribunal. These standards include requirements relating to the acceptability of program material, duration and suitability of advertisements and special provisions relating to children's programs.

Category of Television Programs

The following table shows, as varying proportions of transmission time, the types of programs televised in Tasmania:

**Category of Television Programs by
Proportion of Transmission Time: Tasmania, 1976-77
(Source: Australian Broadcasting Tribunal)**

Program category	Commercial programs	National programs
	per cent	per cent
Cinema movies	15.4	3.7
Other drama	33.5	18.7
Light entertainment	14.0	9.0
Sport	9.2	12.1
News	4.2	6.9
Children	4.1	21.5
Family activities	3.9	1.4
Information	1.6	7.3
Current affairs	1.1	8.5
Political matter	0.1	0.1
Religious matter	1.3	1.8
The arts .. .. .	..	1.1
Education .. .. .	..	7.9
Advertising	11.6	..
Total	100.0	100.0

Television Stations in Operation

The next table gives details of the television stations in operation:

Television Stations in Operation, 30 June 1977

Call sign and channel	Area	Transmitter location	Height above sea level—top of aerial (metres)
NATIONAL			
ABT 2	Hobart	Mt Wellington	1 344
ABNT 3 (a)	N.E. Tasmania	Mt Barrow	1 457
ABKT 11 (a)	King Island	Gentle Annie Hill	245
COMMERCIAL			
TVT 6	Hobart	Mt Wellington	1 323
TNT 9	N.E. Tasmania	Mt Barrow	1 419

(a) Transmits programs originating from ABT 2.

Relay of Television Programs from Other States

Tasmania is linked with Victoria by a broadband radio link installed by the Australian Telecommunications Commission which enables the direct relay of television programs from the mainland states.

Microwave Links, Intrastate Relays and Translator Stations

The prime sources of programs in Hobart are the commercial and national studios which are linked to their Mt Wellington transmitters (TVT6 and ABT2) by micro-wave links; the commercial studio in Launceston feeds programs to its Mt Barrow transmitter (TNT9) by the same method. As there is no national studio at Launceston, the transmitter on Mt Barrow (ABNT3) relays the Hobart national programs through the broadband radio link. This service is also available to commercial stations.

Tasmania, due to its terrain, has areas where television reception direct from the Mt Wellington or Mt Barrow transmitters is either difficult or impossible. To provide good reception in such areas, translator stations, which are low-powered stations receiving signals from a parent station and re-transmitting on a different frequency to areas with poor reception, have been installed as shown in the following table. Translator stations cannot broadcast directly.

The next table shows translator stations in operation and the areas served:

Television Translator Stations in Operation at 30 June 1977

Area served	Parent station		Local channel	
	National	Commercial	National	Commercial
Burnie	ABNT 3	TNT 9	(a) 4	10
Derby .. .. .	.. .. .	TNT 9	..	11
Fingal Valley	ABNT 3	TNT 9	(b) 1	(c) 11
Lileah	ABNT 3	TNT 9	8	6
Maydena .. .. .	.. .. .	TVT 6	..	8
Queenstown-Zeehan	ABT 2	TVT 6	4	8
Rosebery-Renison Bell	ABT 2	TVT 6	1	10
Savage River-Luina	ABNT 3	TNT 9	4	7
Smithton	ABNT 3	TNT 9	(a) 4	11
South Launceston	ABNT 3	TNT 9	1	11
St Helens	ABNT 3	.. .. .	0	..
St Mary's	ABNT 3	TNT 9	(b) 1	(c) 11
Strahan	ABT 2	.. .. .	10	..
Strathgordon	ABT 2	TVT 6	5	8
Swansea-Bicheno	ABT 2	TVT 6	4	8
Taroona .. .. .	.. .. .	TVT 6	..	8
Waratah	ABNT 3	TNT 9	2	10
Wynyard	ABNT 3	TNT 9	1	5A

(a) (b) (c) A single translator serves both areas.

Radio Stations in Operation

The following table gives details of the radio stations in operation in Tasmania:

Radio Stations in Operation at 30 June 1977

Call sign	Classification	Location	Hours of service (weekly)
7ZL	National	Hobart	133.00
7ZR	National	Hobart	133.00
7NT	National	Launceston	133.00
7QN (a)	National	Queenstown	133.00
7FG (a)	National	Fingal Valley	133.00
7SH (a)	National	St Helens	133.00
7HO	Commercial	Hobart	168.00
7HT	Commercial	Hobart	168.00
7AD	Commercial	Devonport	116.30
7BU	Commercial	Burnie	113.30
7EX	Commercial	Launceston	137.00
7LA	Commercial	Launceston	134.00
7QT	Commercial	Queenstown	98.30
7SD	Commercial	Scottsdale	116.30
7CAE (b)	Non-profit	Hobart	15.00

(a) Transmits, in the main, programs originating from 7ZL and 7NT.

(b) F.M. station operated by the Tasmanian College of Advanced Education.

Tasmania's first F.M. (frequency modulated) station, 7CAE Hobart, began regular broadcasting in February 1977 on a frequency of 92.1 MHz. In mid-1977, broadcasts were made on weekdays only, from 1 to 2 p.m. and from 7 to 9 p.m.

Although there are areas of poor reception due to difficult terrain, most of Tasmania receives a satisfactory radio service from one or more of the above stations. In addition, the northern part of the State receives a service from some mainland stations. The structure and population distribution in the State has given rise to a regional pattern of radio stations with concentrations in Hobart and Launceston and outlying stations in the north-east, north-west and west.

COMMITTEE OF INQUIRY INTO THE TASMANIAN RAILWAY SYSTEM (JOY COMMITTEE)

(The following is based on the 'Joy' Committee's report)

Introduction

In 1975 the Tasmanian and Federal Governments passed legislation which transferred control and responsibility for the Tasmanian railway system to the Australian National Railways Commission (A.N.R.C.). The transfer became effective from 1 July 1975. The Commonwealth accepted full financial responsibility for the Tasmanian railways thus relieving the Tasmanian Government of annual expenditure of about \$15m. (The 1974-75 operating loss was \$15.0m and that for 1975-76, \$13.9m.)

The high losses on the small Tasmanian system prompted the Federal Government to set up a committee of inquiry to investigate Tasmanian rail operations. The August 1976 Budget established the committee with the following terms of reference:

- ' (i) To examine and report on the Tasmanian Rail System and the options that are available from an economic point of view, including the possibility of a transfer of traffic to road.
- (ii) The report should have regard to the provisions of the Transfer Agreement and enabling legislation, the contractual commitments of the railways and the social implications of the recommended option.
- (iii) To recommend the optimal timing of the suggested option.
- (iv) The report to be presented to the Minister for Transport within two months of the establishment of the review team.'

The Committee members (Messrs Joy, Hicks and Kershaw) were appointed in September 1976 and the report was completed in November. The Committee first met on 9 September and spent 19 per cent of its sitting days in Tasmania inspecting railway facilities and operations and in discussions with railway and Transport Commission officials, other government bodies and trade unions.

The Inquiry

The Tasmanian Rail System

The Tasmanian rail network is 849 km of narrow gauge (1 067 mm) track; most of the branches have been closed so that only the main lines remain. The system is almost exclusively a freight carrier—in 1975-76 the system carried 1.6m tonnes or 231.8m tonne-km at an average revenue of 3.1 cents per tonne-km. The only passenger service of note is the Tasman Limited which runs from Wynyard to Hobart six days per week.

Restrictive curve and gradient standards on all lines limit the train loads and hence the cost effectiveness. Added to this is the fact that average hauls are short (100 km in Tasmania against 275 km for Victoria in 1974). This pushes up terminal costs as a proportion of total haul cost and creates a strong incentive for shippers to use road transport. Short hauls are, however, less a problem with bulk traffic as long as a reasonable number of trips can be obtained per crew shift; in Tasmania low speeds are a limiting factor. Also the density of traffic flow over the system is low—the necessary cargoes to allow maximum utilisation of the system's potential are not available. The densest traffic flow on the system (about 800 tonnes per day) is movement of cement from Railton to Devonport.

The Problem

'The size of the problem faced by the Tasmanian Railways is measured by its large and growing annual deficit.'

However, deficits are almost universal for government operated railways. The cost of road competition is felt in the railway deficits, since, as hauliers' traffic has increased, it has not been possible to adjust Tasmanian Railways' costs in step with decreasing rail volumes. Tasmanian Railways, in accordance with Government and management's wishes, has continued to carry on as a universal transport mode when in fact for most non-bulk items there exists a more efficient and cheaper competitor (i.e. road transport). Consequently, Tasmanian Railways has not adjusted to its more limited role, and with the transfer of ownership its role needed examining and determining.

The Committee also considered whether Tasmanian Railways should remain open at all. The answer, in the short-term, was a categoric *yes*. To close the system would put almost 2 000 persons out of a job. These workers would have little chance of finding alternative employment. Furthermore, the Federal Government had given a commitment that railway staff would not be disadvantaged by the transfer. In the longer term the question is more one of economics. The Committee believed that for the foreseeable future Tasmanian Railways would be capable of carrying bulk traffics more efficiently than any other transport mode. Continuation of the railways also had its social benefits—it kept down the number of heavy trucks with their associated problems of noise, hazards to other users and damage to the roads.

The Traffics

Tasmanian Railways' cargoes are mainly bulk commodities—eight main commodities comprised 87 per cent of total tonnage and contributed 67 per cent of total revenue.

Five of the eight commodities move substantially under contract or agreements which give favourable rates to the respective shippers. The estimated quantity moving under contract or agreement was 103m tonnes or 64 per cent of total commodity tonnage. However, despite the size of bulk contract tonnage, total revenue generated by it in 1975-76 was only \$2.4m (one third of total rail revenue). This is to be expected due to the bulk nature of this traffic and the regularity of its movement. However, nearly all contract traffics cost more to move than the revenue received. In the words of the Commission:

'The most oppressive contracts, from the point of view of the railways, are those to carry woodchip logs for APPM and Northern Woodchips to their plants at Longreach. These logs currently travel at an average 1.46 cents per tonne-km. The escalation clauses of the two contracts mean that rate increases in each period do not cover even half of the increases in rail costs. The rates are already well below the cost of road haulage and will fall progressively further behind.'

'There may be special cases for subsidising Tasmanian industries through lowered freight rates . . . If subsidies are necessary, then they should be governmentally determined and directly paid.'

Tasmanian Railways: The Eight Main Commodities Carried, 1975-76

Commodity	Amount (^{'000} tonnes)	Revenue (\$ ^{'000})	Tonne-km	Revenue per tonne-km (cents)
Woodchip logs	362	1 010	69 310	1.46
Cement	285	1 074	24 978	4.30
Pulpwood and firewood	254	528	14 839	3.56
Containers, interstate	144	810	32 563	2.49
Coal	130	621	25 935	2.39
Sulphuric acid	101	92	1 325	6.97
Timber	77	365	12 859	2.84
Manures and fertilisers	46	407	13 796	2.95
Total eight main commodities ..	1 400	4 906	195 605	(a) 2.51
Total all commodities.. .. .	1 610	7 175	231 819	(a) 3.10
The eight commodities as a proportion of all commodities per cent	87	68	84	..

(a) Weighted average.

The Committee recommended that the A.N.R.C. should determine conditions under which all railway contracts and concessional rates are to be set. Contracts longer than one year or requiring significant changes to railway operations should require explicit approval of the Commission. The Committee believed that in future contracts the rate must be reasonable to both shipper and the Railways. To achieve this requires:

- (i) identification of specific movement costs of carrying the commodity (e.g. crew costs, locomotive wagon and guard van operating costs, maintenance and depreciation costs);
- (ii) identification of terminal costs associated with the commodity (e.g. loading, unloading, storage costs);
- (iii) track costs;
- (iv) assessment of the rate charged for carriage by alternative modes and the nature of the service provided.

Non-bulk freight is the most labour intensive and least economic for the Railways to handle. Tasmanian Railways cannot compete with road transport in this sphere and have been left with the non-bulk items that road hauliers do not want. The rates charged by the Railways are far below the cost of moving these goods.

The Railways are also involved in costly haulage of primary produce. This also is a diminishing traffic; in 1975-76 the amount of agricultural produce moved was 23 400 tonnes; in 1969-70, 50 400 tonnes were moved. One of the largest declines was in the tonnage of livestock carried—in 1969-70 14 775 tonnes but only 1 252 tonnes in 1975-76. Despite this dramatic decline the Tasmanian Railways continued to maintain 103 livestock wagons and 60 stockyards at a cost of almost \$36 000. The Committee concluded that with the addition of haulage, shunting, etc. costs the total cost of moving the livestock far exceeded the revenue generated.

After an examination of the movement of interstate containers by Tasmanian Railways a similar picture emerged—declining tonnage at increasing cost. The traffic had grown rapidly up to 1973-74 when 210 600 tonnes were carried; by 1975-76 the volume had fallen to 144 100 tonnes. The Tasmania-Mainland freight equalisation scheme has reduced the volume of containers moving between Hobart and northern ports and road hauliers, protected by Section 92 (free trade between the states) of the Constitution, can offer competitive rates unhindered by State regulations. The railways are unable to compete economically with road transport in this sphere. The Committee recommended that the Railways' proposals for construction of a fleet of wagons and associated containers to handle the interstate traffic be dropped. (The estimated cost of the proposal was \$5.6m.)

The Committee also looked at the carriage of small consignments. The cost of handling these consignments exceeded \$2m in 1975-76 and returned only \$691 000 in revenue.

The Tasman Limited

The *Tasman Limited*, the pride of Tasmanian Railways, was found to be a costly luxury. The Committee observed that even with fares about 25 per cent below those of buses it continues to lose patrons while bus services gain.

Comparison of Coach and Rail Service, Hobart-Launceston

Item	Coach	Rail (Tasman Limited)
Single fare \$	7.05	5.60
Frequency of service (per week day) no.	3	1
Scheduled service time hours	3½	5
Number of days per week service provided no.	7	6

The Committee observed that the claim that 200 passengers were carried per day could not be substantiated. It found that passengers consist largely of school children, pensioners, rail employees and tourists on special package tours. Furthermore, many of the passengers merely travelled short distances along the north-west coast. The *Tasman Limited* generated about \$250 000 in revenue and its estimated cost to the system exceed \$850 000. The conclusion of the Committee was:

'The *Tasman Limited* should be withdrawn as soon as possible. This will bring an important side-benefit in terms of freeing route capacity on the South and the Western routes for daylight freight operations or mid-week track maintenance.'

Terminals

Tasmanian Railways list 170 stations of which 57 are manned. Of the 170 stations, only 27 handled more than 1 000 tonnes of freight per month. To achieve an economic operation the number of stations and hence terminal costs need to be drastically reduced.

Locomotives and Rolling Stock

The Committee found that much of the equipment was obsolescent. In view of under utilisation of some older equipment plus the need to re-assess the Railways' role and concentrate on areas where reasonably efficient and economical results can be obtained, a rationalisation of equipment must be carried out. The Committee believed that the low capacity four-wheeled wagons should be withdrawn immediately from operation. These wagons limit freight train speeds and increase shunting and train make-up times. The Committee further noted that ' . . . a railway cannot

achieve unit costs of freight movement competitive with road hauliers if it attempts to move its traffics in wagons which are smaller than the typical competitive motor truck.'

Examination of the rolling stock fleet revealed that 46 per cent of the wagons were obsolete four-wheel wagons with an average carrying capacity of only 9.4 tonnes. Of the fleet of 2 173 wagons, only 295 were modern centre-coupled bogie wagons. All the older wagons are fitted with couplings that are dangerous to operating staff and have brake handles on only one side. The dissimilar rolling stock units further mitigate against efficient operations.

Tasmanian Railways has a surplus of motive power for its present and likely future needs. In November 1976 it had 50 main line locomotives and 21 shunting locomotives. Of the fleet, 32 were older X class locomotives which are costly to maintain compared to the Z class engines. Comparative costs were:

- X Class—\$3.15 per 1 000 tonnes per km;
- Z Class—\$0.92 per 1 000 tonnes per km.

The Permanent Way

In the whole system only 60 km of track were laid to a high standard. Problems included: formation that was invariably too narrow; use of low quality ballast; use of poor quality sleepers; rails and fastenings generally poor. The Committee concluded that if the Railways were to continue to function then rehabilitation is necessary. Such rehabilitation would also reduce future track maintenance costs. The following table outlines the rehabilitation proposals:

Proposed Permanent Way Rehabilitation Lengths

Line	Section	Type of rehabilitation proposed (km)			
		Complete re-rail	Major	Minor	Nil
South	Hobart—Parattah	..	87.5	..	1.0
	Parattah—Western Junction	29.8	70.5	..	7.2
West	Launceston—Western Junction	..	3.0	..	14.7
	Western Junction—Wiltshire Junction	42.3	197.0	..	..
Derwent Valley ..	Bridgewater Junction—Boyer	..	..	13.5	..
	Boyer—Florentine	..	55.5	..	..
Fingal	Conara Junction—Duncan	47.5	8.0	..	..
	Duncan—St Marys	..	..	19.5	..
North East ..	Coldwater Creek Junction—Legerwood	..	..	106.0	..
	Legerwood—Herrick	..	..	..	30.5
Bell Bay	Coldwater Creek Junction—Bell Bay	..	..	..	44.0
Mole Creek ..	Lemana Junction—Mole Creek	..	..	25.5	..
Stanley—Smithton	Stanley—Smithton	..	..	..	35.5
	Total	119.6	421.5	164.5	132.9

The estimated cost of the rehabilitation was put at almost \$20m, however, it would result in considerably lower permanent way maintenance costs.

Employment

At the end of September 1976 Tasmanian Railways employed 1 955 staff; a decline of 1 000 since 1955. Recruiting is currently banned for all but the most vital vacancies. A problem that will be more apparent as Tasmanian Railways becomes fully integrated with the A.N.R.C. is the administrative section. It is too large for the size of the work force being managed. The Committee also saw the need for a substantial reduction in the number employed at the Launceston workshop. The Committee proposed a long-term target of 250 employees at the workshops to carry out maintenance on locomotives and rolling stock and recommended that no out-depot maintenance be carried out. Station, shunting and goods depot staff also need to be substantially reduced. Rationalisation will also mean reductions in the number of train running staff. In September Tasmanian Railways employed 362 staff to run trains—with rationalisation and elimination of the Tasman Limited 72 positions could be cut out. The long-term total expected reduction is between five and eight hundred.

The Recommendation and Conclusions

The Committee concluded that the Tasmanian Railways slid into its present loss situation (almost \$3 for every \$1 revenue) because of increasing road competition for traditional traffic and from entering into some bulk freight contracts on unfavourable terms. It further concluded that Tasmanian Railways will never make a profit but that it should be possible in a few years to reduce the deficit, in real terms, to about half its present level. Tasmanian Railways is unlikely to achieve more traffic and additional investment will not alter this fact.

Principal recommendations of the Committee were:

- (i) Tasmanian Railways should concentrate its activities in areas where the efforts of the staff will have the most useful effect, and traffics in which rail cannot compete under Tasmanian conditions should be left to the most efficient mode.
- (ii) Early expenditure of \$23m on rehabilitation should be sufficient for the foreseeable future; no further expenditure could be justified on economic or social grounds.
- (iii) The 'common carrier' obligation should be terminated and Tasmanian Railways should be given the right to reject traffics which they cannot economically handle.
- (iv) No major truncation of routes is considered desirable but the scope of services should be restricted.
- (v) The Tasman Limited should be withdrawn as soon as possible.
- (vi) For smalls and parcels a profit centre should be created to measure results; if break-even cannot be achieved this part of the business should be run down as quickly as possible.
- (vii) For remaining non-bulk commodities substantial freight rate increases should be implemented combined with a radical simplification of the freight tariff.
- (viii) Scrap obsolete wagons and convert older wagons to modern standards. This will then allow rationalisation of the Launceston workshops.
- (ix) Reduce the number of terminals.
- (x) If in the future the Tasmanian Government should wish to have a higher level of service or lower freight rates than can economically be justified, then the cost of these should be specifically determined and reimbursed to the A.N.R.C.

Chapter 12

PRIVATE FINANCE

INSURANCE

General

Definitions

The following data on insurance are divided into life insurance and insurance other than life; i.e. fire, marine and general insurance. No distinction is made between insurance and assurance, the former term being used in all contexts.

Legislation

Section 51 of the Federal Constitution confers the necessary powers on the Federal Parliament to legislate with respect to 'insurance other than state insurance; also state insurance extending beyond the limits of the state concerned'. The principal Federal legislation affecting current insurance business is as follows:

Life Insurance Act 1945: This Act provides for uniform control throughout Australia of life insurance business other than business transacted by state government insurance offices, friendly societies and trade unions providing benefits for members or dependants. Also excluded is business in relation to superannuation benefits provided wholly by an organisation established by employers, employees or both.

Under the Act each company must maintain at least one office in each State or Territory in which it conducts life insurance business. Companies are also required to set up statutory funds in respect of their life insurance business in Australia and all amounts received in respect of this business must be paid to, and form part of, the assets of these funds. The assets of the statutory funds can only be used to meet liabilities or expenses relating to the life insurance business and, in certain circumstances, the payment of dividends to shareholders.

Insurance Act 1973: This Act restricts the right to carry on insurance business to authorised companies and Lloyds' underwriters and makes arrangements aimed at ensuring that these are at all times financially sound. Insurance business carried on by the Federal Government, a state government or by a number of named government or semi-government authorities is exempt. The Act does not extend to life insurance business, registered medical or hospital benefits organisations and certain other bodies.

Life Insurance

Since 1947 returns lodged under the *Life Insurance Act 1945* have been used to compile life insurance statistics. In Tasmania, the Government Insurance Office does not transact life insurance business so that tables that follow refer to operations of enterprises exclusively in the private sector. The transactions in the next table are concerned with Tasmania as the 'State of issue' of the policies, not necessarily as the 'State of risk'.

Private Finance

Life Insurance Transactions (Excluding Annuities)

Particulars	1971-72	1972-73	1973-74	1974-75	1975-76
ORDINARY BUSINESS					
New policies issued—					
Number	19 016	18 710	17 179	16 300	14 394
Sum insured \$'000	128 738	143 697	158 395	188 795	200 372
Annual premiums \$'000	2 914	2 953	2 794	3 020	2 929
Policies discontinued or reduced—					
Number	12 429	12 432	10 440	15 028	15 451
Sum insured \$'000	49 543	52 647	59 557	76 436	87 742
Annual premiums \$'000	1 153	1 258	1 327	1 682	1 905
INDUSTRIAL BUSINESS (a)					
New policies issued—					
Number	3 709	3 648	3 127	2 243	1 716
Sum insured \$'000	5 470	6 694	6 577	5 639	4 465
Annual premiums \$'000	185	213	204	181	151
Policies discontinued or reduced—					
Number	5 091	6 124	4 490	5 534	5 190
Sum insured \$'000	3 465	3 983	4 349	5 020	4 606
Annual premiums \$'000	129	138	142	176	163
SUPERANNUATION BUSINESS					
New policies issued—					
Number	1 903	1 785	2 220	2 845	3 200
Sum insured \$'000	38 011	61 799	73 880	98 218	127 735
Annual premiums \$'000	1 205	1 162	2 150	2 907	3 704
Policies discontinued or reduced—					
Number	2 074	2 900	1 436	1 769	1 744
Sum insured \$'000	17 080	27 464	28 339	33 569	45 933
Annual premiums \$'000	515	653	718	962	1 225
TOTAL BUSINESS					
New policies issued—					
Number	24 628	24 143	22 526	21 388	19 310
Sum insured \$'000	172 220	212 189	238 853	292 648	332 571
Annual premiums \$'000	4 305	4 330	5 146	6 103	6 784
Policies discontinued or reduced—					
Number	19 594	21 456	16 366	22 331	22 385
Sum insured \$'000	70 088	84 095	92 245	115 026	138 279
Annual premiums \$'000	1 797	2 051	2 189	2 818	3 288
NEW LOANS PAID OVER (EXCLUDING ADVANCES OF PREMIUMS)					
On mortgage of real estate .. \$'000	2 293	2 779	2 503	4 876	2 893
On companies' policies \$'000	2 211	1 606	1 634	2 392	2 266
On other securities \$'000	52	45	278	211	188
Total \$'000	4 555	4 428	4 418	7 479	5 350

(a) Industrial business refers, in the main, to policies on which the premiums are collected as regular instalments by agents on commission.

Fire, Marine and General Insurance

Information on insurance, other than life, is compiled from returns provided by insurance companies transacting fire, marine and general insurance business in Tasmania (including the Tasmanian Government Insurance Office). Statistics that follow relate to financial years of companies ending within the period shown and to policies issued in Tasmania and not necessarily to those for which the risk is situated in Tasmania.

Definitions

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 during the year. They are not adjusted to provide for premiums unearned at the end of the year.

Claims include payments made during the year, plus estimated amount of outstanding claims at end of year, less estimated amount of outstanding claims at beginning of year.

Contributions to fire brigades, commission and agents' charges, and expenses of management are those amounts actually paid during the year.

Taxation represents payments made during the year and includes pay-roll tax, licence fees, etc. Stamp duty and income tax are included in this item up to 1973-74, but excluded from 1974-75.

The following table should not be construed as a profit and loss statement; selected revenue and expenditure items only have been used.

Fire, Marine and General Insurance
(\$'000)

Particulars	1971-72	1972-73	1973-74	1974-75	1975-76
Premiums (less returns, rebates and bonuses)	27 984	30 825	34 958	r 44 762	51 199
Interest, dividends, rents	639	660	771	(a)	(a)
Total (selected revenue items) ..	28 623	31 485	35 729	r 44 762	51 199
Claims (less amounts recoverable) ..	15 285	18 249	23 507	r 29 979	29 552
Contributions to fire brigades	(b) 815	979	1 069	r 1 371	1 529
Commission and agents' charges	2 696	2 999	3 330	r 4 002	4 509
Expenses of management	5 856	6 364	6 875	r 8 102	8 100
Taxation	738	780	1 041	r (c) 376	336
Total (selected expenditure items) ..	25 390	29 371	35 822	r 44 217 (c) (d)	44 238 (d)

(a) From 1974-75 figures for this item are available only for Australia as a whole due to a change in collection methods.

(b) Contribution formula changed by law.

(c) Refer to definition of Taxation above. Figures for 1974-75 are not comparable with previous years.

(d) Includes other underwriting expenses of \$386 000 in 1974-75 and \$212 000 in 1975-76.

Types of Insurance

The next table shows premiums and claims according to the class of insurance business transacted in 1975-76. ('Premiums' and 'Claims' have been compiled in accordance with the definitions introducing the section.)

Fire, Marine and General Insurance
Premiums and Claims for Each Type of Insurance, 1975-76 (a)
 (\$'000)

Class of business	Premiums	Claims	Class of business	Premiums	Claims
Motor vehicle comprehensive (b)	13 693	8 489	All risks/baggage	397	188
Employers' liability	10 708	6 278	Plate glass	163	114
Compulsory third party (c)	9 282	7 518	Professional indemnity ..	77	-1
Fire and sprinkler leakage	5 082	1 410	Livestock	75	54
Houseowners' and householders' comprehensive	4 524	2 308	Contractors' all risks ..	73	113
Marine (hull and cargo) ..	2 229	1 608	Guarantee	27	..
Personal accident	1 415	582	Product liability	14	3
Loss of profits	1 320	276	Fruit crop and hailstone	7	..
Public liability	723	147	Aviation	(d)	(d)
Burglary	447	104	Other	525	144
Boiler, engineering and machine breakdown ..	414	214			
			Total	51 199	29 552

(a) Not strictly comparable with figures published for earlier years due to minor changes in classification.

(b) Includes motor cycles.

(c) Motor vehicles only. The Motor Accident Insurance Board accepted all rights, obligations and liabilities in respect of Compulsory Third Party Insurance from 1 October 1974.

(d) Confidential—included in 'Other'.

Ratio of Claims to Gross Premiums: The following table shows the ratio of claims to premiums for the more important classes of business over a three-year period:

Fire, Marine and General Insurance
Ratio of Claims to Premiums (a)
 (Per Cent)

Class of business	1973-74	1974-75	1975-76
Motor vehicle comprehensive (including motor cycles)	66.5	72.4	62.0
Employers' liability	67.1	84.2	58.6
Compulsory third party (b)	149.1	73.5	81.0
Fire and sprinkler leakage	31.0	22.6	27.7
Houseowners' and householders' comprehensive ..	41.1	50.5	51.0
Marine (hull and cargo)	181.4	98.9	72.1
Personal accident	37.7	42.3	41.1
Loss of profits	12.8	19.7	20.9
Public liability	41.5	129.1	20.3
Burglary	50.6	30.3	23.3
Boiler, engineering and machine breakdown ..	39.2	79.0	51.7
All classes	67.2	66.9	57.7

(a) See beginning of section for definition of claims and premiums.

(b) Motor vehicles only.

BANKING AND EXCHANGE RATES

Types of Banks

General

Banks in Tasmania can be classified by ownership as follows: (i) Government—The Reserve Bank of Australia, the Commonwealth Development Bank of Australia, the Commonwealth Trading Bank of Australia and the Commonwealth

Savings Bank; (ii) Private—the private trading banks and the private savings banks; and (iii) Trustee—The Savings Bank of Tasmania (previously the Hobart Savings Bank) and the Launceston Bank for Savings. The Agricultural Bank is *not* a bank for the purpose of these statistics.

For statistical purposes such a classification is not helpful since banks, both government and private, may be engaged in the same type of activity. Hence, the classification in use is one which groups banks according to their type of activity, not according to their ownership. The major banking statistics for the State are presented in two distinct series under the headings 'Trading Banks' and 'Savings Bank'.

Trading Banks

The following seven institutions in Tasmania are classified, for statistical purposes, as 'trading banks': Commonwealth Trading Bank of Australia; Australia and New Zealand Banking Group; Bank of New South Wales; The Commercial Bank of Australia Ltd; The Commercial Banking Company of Sydney Ltd; The National Bank of Australasia Ltd; and The Bank of Adelaide.

Savings Banks

In the 1950's, only three savings banks operated branches in Tasmania: Hobart Savings Bank (now The Savings Bank of Tasmania), Launceston Bank for Savings (both trustee savings banks) and the Commonwealth Savings Bank. The trustee savings banks date from early colonial days, the Launceston Bank opening in 1835, and the Hobart Bank in 1845.

In recent years, private trading banks have opened savings bank subsidiaries in the State, the current list of such banks being: 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; C.B.C. Savings Bank Ltd; and The National Savings Bank Ltd.

Savings banks also offer cheque facilities to customers; however, for statistical purposes their cheque operations are included in 'savings bank statistics'.

Transactions of Trading Banks

The accompanying table summarises the principal statistics relating to all trading banks in Tasmania for a five-year period. The following definitions apply:

- (i) Deposits—a bank liabilities item. The figure is the average, for the year, of *balances* read at weekly intervals.
- (ii) Loans, advances and bills discounted, etc.—a bank assets item. The figure is the average, for the year, of *balances* read at weekly intervals.
- (iii) Debits to customers' accounts—mainly the total of all cheques drawn by customers during a given period. The figure is the average, for the year, of such weekly entries.

Transactions: All Trading Banks in Tasmania

Particulars	1971-72	1972-73	1973-74	1974-75	1975-76
NUMBER					
Branches open (a)	104	103	103	101	104

Transactions: All Trading Banks in Tasmania—continued

Particulars	1971-72	1972-73	1973-74	1974-75	1975-76
WEEKLY AVERAGES (\$'000)					
Deposits—					
Federal and state governments ..	1 210	3 029	3 573	6 499	12 919
Other—					
Fixed	54 940	64 743	93 961	112 543	133 357
Current—Bearing interest ..	7 273	8 915	10 162	11 031	14 617
Not bearing interest ..	71 676	82 454	99 343	99 781	116 486
Total	135 099	159 141	207 040	229 851	277 377
Loans, advances and bills discounted (b) ..	88 098	99 192	121 077	137 189	157 951
Debits to customers' accounts (c) ..	69 970	85 291	103 041	119 447	150 536

DEBITS TO CUSTOMERS' ACCOUNTS (c): WEEKLY AVERAGES (\$'000)

July	66 582	82 465	104 799	124 844	137 573
August	69 053	75 412	90 398	108 103	136 611
September	65 259	73 670	93 145	109 645	137 514
October	66 151	81 079	104 710	114 603	144 389
November	71 738	82 304	102 197	120 800	147 195
December	74 431	92 456	114 328	139 914	172 364
January	60 180	73 132	88 608	98 287	121 639
February	67 406	81 262	103 674	118 235	145 352
March	72 446	90 043	104 276	127 038	157 455
April	68 674	97 751	111 611	114 590	156 383
May	78 518	103 184	110 055	132 369	167 794
June	76 504	95 639	113 295	131 302	173 915
Weekly average for year	69 970	85 291	103 041	119 447	150 536

(a) At end of year.

(b) Excludes loans to authorised dealers in the short-term money market.

(c) Excludes debits to Federal and state government accounts at Hobart branches. In addition to trading bank transactions, those of the Rural Credits Department of the Reserve Bank and the Commonwealth Development Bank are included in this item.

The table below gives a classification of trading bank advances outstanding within Tasmania by type of borrower resident within Australia.

Trading Banks: Classification of Advances Outstanding Within Tasmania to Borrowers Resident Within Australia
((\$'000))

Type of advance	At second Wednesday in July			
	1973	1974	1975	1976
Business advances—				
Agriculture, grazing and dairying—				
Sheep grazing	5 297	5 548	6 700	7 589
Dairying and pig raising	6 204	6 937	6 723	7 185
Other r	9 738	10 829	13 189	14 738
Total	21 239	23 314	26 612	29 512

**Trading Banks: Classification of Advances Outstanding Within Tasmania to Borrowers
Resident Within Australia—continued**
(\$'000)

Type of advance	At second Wednesday in July			
	1973	1974	1975	1976
Business advances—continued				
Manufacturing	23 642	30 846	24 728	29 207
Transport, storage and communication ..	3 029	3 023	3 420	4 289
Finance—				
Building and housing societies ..	697	468	425	624
Pastoral and finance companies ..	5	1 211	728	472
Hire purchase and other finance companies	483	1 041	1 117	916
Other	1 147	1 248	801	886
Total	2 332	3 968	3 071	2 898
Retail and wholesale trade	17 600	22 608	21 541	33 337
Building and construction	3 809	4 203	4 407	6 916
Other business	14 288	22 095	25 703	27 387
Unclassified	559	861	739	539
Total business advances ..	86 498	110 919	110 221	134 085
Advances to public authorities (excl. Federal and state governments)	92	537	1 159	1 372
Personal advances—				
Building or purchasing own home (individuals)	6 379	8 266	9 420	12 337
All other	17 461	23 643	25 223	39 933
Total personal advances	23 840	31 909	34 643	52 270
Advances to non-profit organisations ..	1 080	1 410	1 498	1 816
Total advances to resident borrowers	111 510	144 776	147 521	189 543

The next table shows trading bank advances outstanding within Tasmania to borrowers not resident within Australia and total advances outstanding to all borrowers, for recent years:

Trading Banks: Advances Outstanding within Tasmania to all Borrowers
(\$'000)

Advanced to—	At second Wednesday in July			
	1973	1974	1975	1976
Borrowers non-resident with Australia ..	7	35	23	6
Borrowers resident within Australia ..	111 510	144 776	147 521	189 543
All borrowers	111 517	144 812	147 544	189 549

Interest Rates and Security Yields

The next table shows the interest rates available on fixed deposits, the interest yield from treasury notes and the yield from government securities:

Interest Rates and Security Yields
(Per Cent Per Annum)

Particulars	Rate		
	June 1974	June 1975	June 1976
Trading banks (maximum rate)—			
Fixed deposits (less than \$50 000)—			
3 months and less than 6 months ..	6.75	8.00-9.00	7.00-8.25
6 months and less than 12 months ..	6.75	8.25-9.50	7.25-8.75
12 months and less than 18 months ..	7.50	8.25-9.50	7.25-8.75
18 months and less than 2 years ..	7.50	8.25-9.50	7.25-8.75
2 years to 4 years	7.50	8.00-9.50	8.25-9.50
Fixed deposits (\$50 000 and over)—			
30 days to 4 years (a)	8.00	10.00	10.00
Federal Government securities yield—			
Non-rebateable bonds (b)—			
2 years	10.80	8.49	8.47
10 years	9.52	9.50	9.99
20 years	9.49	9.50	10.20
Treasury notes (issue yield)—			
13 week notes	10.75	7.81	6.98
26 week notes	10.76	8.01	7.25

(a) Subject to this maximum, actual rates are a matter for negotiation between banks and their customers.

(b) Yields shown are average for week centred on last Wednesday of month and exclude effect of brokerage.

Savings Banks

The following table summarises the principal statistics relating to savings banks in Tasmania. Deposits are compiled on a basis different from that used in the case of trading banks. 'Deposits lodged' is the total inflow of deposits during the year, and 'depositors' balances' is a single liability reading taken at the end of the year.

The number of operative accounts excludes school bank accounts and small inoperative accounts. The other items in the table relating to depositors' balances etc., relate to all accounts including school bank accounts and small inoperative accounts.

All Savings Banks

Particulars	1971-72	1972-73	1973-74	1974-75	1975-76
Branches open (a) no.	151	155	155	153	159
Operative accounts (a) '000	507	529	561	591	606
Deposits lodged \$'000	333 667	419 885	542 651	707 421	797 315
Interest added \$'000	9 406	10 469	13 371	17 085	20 878
Excess of deposits over withdrawals \$'000	15 787	35 660	25 677	37 213	27 412
Depositors' balances (a) \$'000	242 856	288 986	328 029	382 326	430 618
Per head of population—					
Depositors' balances (a) \$	r 617	r 729	r 820	r 944	1 057

(a) At end of year.

The next table gives details of housing finance transactions by savings banks in Tasmania. Figures for this activity are not available for years prior to 1969-70.

Savings Banks: Housing Finance Transactions

Period	Loans approved to individuals for—					Cancellation of loans previously approved to individuals for housing (a)		
	Dwellings not previously occupied		Dwellings previously occupied		Alterations and additions	Total	Number	Amount
	Number (b)	Amount (c)	Number (b)	Amount (c)	Amount	Amount		
1970-71	578	\$'000 4 853	1 281	\$'000 8 989	242	\$'000 14 085	113	\$'000 1 151
1971-72	630	5 718	1 580	12 171	409	18 298	125	999
1972-73	776	7 953	2 037	18 108	569	26 630	135	1 350
1973-74	860	10 534	1 782	18 422	753	29 709	140	1 314
1974-75	689	9 695	2 291	28 394	957	39 046	202	2 302
1975-76	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	(d)	<i>n.a.</i>	187	2 637

(a) Includes amounts cancelled as a result of periodic examination of undrawn commitments.

(b) Number of loans for dwelling units approved for first mortgage finance only.

(c) Includes second mortgage finance to complete original purchase or construction.

(d) Details not collected.

At 30 June 1976, the balances outstanding on housing loans made by savings banks to individuals and to building societies were \$134 845 000 and \$1 722 000 respectively.

Interest Rates

The next table shows the maximum rates of interest paid to depositors or charged to borrowers with home mortgages by The Savings Bank of Tasmania. Interest rates paid to depositors or charged to borrowers with home mortgages by the Launceston Bank for Savings, the Commonwealth Savings Bank and the savings bank subsidiaries of the private trading banks, may vary marginally from the rates shown in this table.

The Savings Bank of Tasmania: Maximum Interest Rates (a)
(Per Cent Per Annum)

Date of change in rate	On savings accounts (b)	On home mortgages	Date of change in rate	On savings accounts (b)	On home mortgages
June 1964	3.50	5.50	June 1972	(c) 4.50	7.00
April 1965	3.75	5.75	March 1973	(c) 4.00	7.00
June 1966	3.75	6.00	October 1973	(c) 4.00	(d) 8.00
August 1968	4.00	6.25	August 1974	(c) 4.00	(d) 10.00
May 1970	4.25	7.00	April 1975	(e) 4.00	(f) 9.50
May 1971	5.00	7.00	February 1976	(e) 4.00	(g) 10.50

(a) Operative from first day of month shown.

(b) Fixed deposit rates were the same as for trading banks until February 1966. From February 1966 the rates were 0.25 per cent greater than trading banks rates.

(c) Effective on accounts to \$4 000.

(d) Effective for loans to \$12 500.

(e) Effective on accounts to \$4 000. From \$4 001 to \$20 000 the interest rate was 6.25 per cent.

(f) Effective rate for loans to \$12 500. For loans from \$12 501 to \$20 000 the rate was 11.0 per cent. For loans over \$20 000 the rate was 11.5 per cent.

(g) Effective for all loans to \$100 000.

Overseas Exchange Rates

The next table shows average overseas exchange rates operative for recent periods:

Exchange Rates (a): Average for Period Shown, Overseas Currency Relative to Australian Dollar

Country	Unit of overseas currency	1972-73	1973-74	1974-75	1975-76
Belgium (b)	Francs	53.51	57.17	50.69	50.11
Canada (c)	Dollars	1.27	1.44	1.35	1.26
China-excl. Taiwan Province	Renminbi (Yuan)	2.74	2.87	(d)	(d)
France (b)	Francs	6.05	6.31	6.04	5.62
Germany, Federal Republic of	Deutsche marks	3.85	3.71	3.34	3.21
Hong Kong	Dollars	6.94	7.40	6.68	6.25
India	Rupees	9.74	11.48	10.85	11.14
Italy (b)	Lire	828	892	878	925
Japan	Yen	363.49	404.52	401.70	376.06
Malaysia	Dollars	3.37	3.50	(d)	(d)
Netherlands	Guilders	3.92	3.93	3.44	3.34
New Zealand	Dollars	1.031	1.031	1.014	1.191
Pakistan	Rupees	(d)	(d)	(d)	(d)
Singapore	Dollars	3.38	3.50	3.18	3.09
South Africa	Rands	0.957	0.977	0.925	1.038
Sri Lanka	Rupees	8.12	9.56	9.01	9.79
Switzerland	Francs	4.50	4.47	3.66	3.25
U.S.A.	Dollars	1.28	1.47	1.37	1.26
U.S.S.R. (c)	Roubles	1.016	1.1	(d)	(d)
United Kingdom	Pound stg	0.522	0.614	0.581	0.630

(a) Average telegraphic transfer selling rates at Sydney.

(b) Two rates were quoted for France from 20.9.71 to 22.3.74, Italy from 1.2.73 to 22.3.74 and Belgium from 20.9.71. The rate shown for these periods is the financial rate used for trade transactions.

(c) Derived from foreign exchange rates quoted against pound stg in London and against pound stg in Sydney.

(d) Daily quotations available on application to any trading bank.

INSTALMENT CREDIT AND OTHER FINANCING

Finance Companies

Finance Companies: In these statistics finance companies are incorporated companies mainly engaged in providing, to the general public, the following credit facilities: (i) instalment credit for retail sales; (ii) personal loans; (iii) wholesale finance; (iv) factoring; (v) other consumer and commercial loans; (vi) financial leasing of business equipment and plant; and (vii) bills of exchange.

The definitions associated with the statistics are set out in considerable detail in the bulletin *Finance Companies Transactions* published by the Australian Bureau of Statistics, Canberra.

Comparability: This was affected by changes introduced on 1 July 1971, 1 July 1972 and 1 July 1973. From 1 July 1971: (i) the exclusion level for companies with balances outstanding was raised from \$100 000 to \$500 000; and (ii) the basis of valuation of leasing agreements was changed from 'initial capital cost less depreciation to date' to 'gross receivables', i.e., the present value of expected future receipts, including unearned income plus the agreed residual value of the goods at the end of the leasing period.

From 1 July 1972: (i) the category 'Commercial Loans Repayable at Call or Within 90 Days' was discontinued; and (ii) the definition of 'Personal Loans' has been amended to include any loans to persons for alterations and additions to existing dwellings estimated to cost less than \$10 000.

From 1 July 1973: (i) the definition of a 'Finance Company' was altered to include leasing and bill of exchange transactions as qualifying assets; (ii) companies mainly engaged in financing the operations of related companies by directly writing agreements with the general public were included in these statistics; and (iii) the item 'Instalment Credit for Retail Sales' has been redefined to exclude details of financing of 'producer' type goods such as plant and machinery, tractors, earth moving equipment, business machines and motor vehicles other than cars and station wagons.

Finance Companies: Transactions (a)
(**\$m**)

Year	Instalment credit for retail sales	Wholesale finance	Other consumer and commercial loans		Total all contracts
			Contracts including charges (b)	Contracts excluding charges (c)	
AMOUNT FINANCED					
1971-72	34.1	35.5	4.5		74.0
1972-73	38.0	43.1	5.0		86.1
1973-74	36.0	52.3	14.4		102.8
1974-75	44.8	65.7	12.8		123.3
1975-76	52.9	79.7	21.1		153.7

COLLECTIONS AND OTHER LIQUIDATIONS OF BALANCES

1971-72	42.9	34.7	1.8	2.8	82.3
1972-73	47.2	43.8	1.9	4.2	97.0
1973-74	43.1	52.1	12.3	3.2	110.5
1974-75	46.7	64.2	14.6	3.2	128.8
1975-76	61.1	77.1	14.8	4.4	157.4

BALANCES OUTSTANDING AT END OF YEAR

1971-72	52.7	5.6	2.3	5.4	66.0
1972-73	57.3	5.8	2.9	4.5	70.5
1973-74	52.0	7.0	16.4	5.7	81.1
1974-75	64.2	8.2	18.0	6.4	96.8
1975-76	78.8	12.4	23.7	9.6	124.6

(a) See explanatory notes preceding table for explanation of breaks in continuity.

(b) Includes details of personal loans.

(c) Includes factoring.

The value of capital goods (business equipment and plant) leased by finance companies, over a five-year period, is shown in the table below:

Finance Companies: Business Equipment and Plant on Lease
(**\$m**)

Particulars	1971-72	1972-73	1973-74 (a)	1974-75	1975-76
Value of goods leased during period	5.5	7.5	14.5	14.8	18.1
Balances outstanding at end of year	11.8	15.1	21.3	27.3	35.2

(a) Change in definition of a Finance Company; see earlier section 'Comparability'.

In the following table the amount financed in respect of instalment credit for retail sales agreements (a single item in previous tables) is further classified by type of commodity.

Finance Companies: Instalment Credit for Retail Sales
(£m)

Year	Amount financed during year					Cash collections and other liquidations during year	Balances outstanding at end of year
	Motor vehicles, etc.		Plant and machinery	Household and personal goods	Total		
	New	Used					
1971-72 (a) ..	10.5	17.0	2.8	3.7	34.2	43.0	52.7
1972-73	<u>11.9</u>	<u>19.3</u>	<u>3.8</u>	<u>3.0</u>	<u>37.8</u>	<u>47.2</u>	<u>57.3</u>
1973-74 (a) ..	(b) 32.6		..	3.4	36.0	43.1	52.0
1974-75	(b) 40.7		..	4.1	44.8	46.7	64.2
1975-76	(b) 46.1		..	6.9	52.9	61.1	78.8

(a) See earlier section 'Comparability'.

(b) Not available for separate publication.

Instalment Credit for Retail Sales in Tasmania

The collection of data on instalment credit transactions began as a series dealing simply with the hire purchase operations of non-retail finance businesses. The series was then expanded, firstly to cover the hire purchase operations of retail businesses and, secondly, to introduce a concept of instalment credit considerably broader than hire purchase. A further stage in development has now been reached with a redefinition of the term 'instalment credit' and a change in the classification of businesses which operate instalment credit schemes from 'Retail Businesses' and 'Non-Retail Finance Businesses' to 'Finance Companies' and 'Other Businesses'.

As a result of this change in scope in the series, the statistics published in the next table are not strictly comparable with those published prior to 1973-74.

Definitions

The statistics cover operations of all types of instalment credit schemes which relate primarily to the financing of retail sales of goods, whether the credit is advanced by finance companies or other businesses. In general, the item 'instalment credit' is defined as relating to schemes in which repayment is made by regular pre-determined instalments. Types of schemes covered include hire purchase, time payment, budget account and personal loan schemes which relate primarily to financing of retail sales of goods. The term 'retail sales' relates only to retail sales covered by the censuses of retail establishments; from July 1973, other sales of goods to final purchasers (e.g. plant and equipment) are excluded.

Figures for amounts financed exclude interest, hiring charges, insurance, etc. Figures for balances outstanding and collections and other liquidations include these charges. Details are not available of these charges or of other items (e.g. rebates allowed for early payment, late payment charges and bad debts written off) which affect the reconciliation of the three main instalment credit series: amount financed, collections and other liquidations, and balances outstanding.

Statistics of amounts financed are classified by type of goods, defined as follows: (i) motor vehicles, etc.—new and used motor cars and motor cycles, boats, caravans, trailers, and motor parts and accessories; and (ii) household and personal goods—furniture, furnishings and floor coverings, domestic refrigerators, electrical goods, radios, televisions, musical instruments, bicycles, motor mowers, clothing, etc. The category 'plant and machinery' has been discontinued from 1 July 1973 and the category 'motor vehicles, etc.' now *excludes* commercial type vehicles.

Instalment Credit for Retail Sales (a)
(Hire Purchase and Other Instalment Credit)
(\$'000)

Year	Amount financed during period (b)			Balances outstanding at end of period (c)
	Motor vehicles, etc. (d)	Household and personal goods	Total all goods	
FINANCED BY FINANCE COMPANIES				
1973-74	32 555	3 427	35 982	52 032
1974-75	40 712	4 068	44 780	64 186
1975-76	46 054	6 872	52 926	78 826
FINANCED BY OTHER BUSINESSES				
1973-74	457	5 489	5 946	5 621
1974-75	371	5 753	6 124	4 352
1975-76	282	5 752	6 034	4 371
FINANCED BY ALL BUSINESSES				
1973-74	33 012	8 916	41 928	57 653
1974-75	41 083	9 821	50 904	68 538
1975-76	46 336	12 624	58 960	83 197

(a) Includes time payment, budget account, and personal loan schemes relating primarily to the financing of retail sales.

(b) Excludes hiring charges, interest and insurance.

(c) Includes hiring charges, interest and insurance.

(d) Types of goods included are defined under 'Definitions' preceding the table.

OTHER PRIVATE FINANCE

Friendly Societies

Scope

The details that follow refer to 'ordinary' societies, not to 'special' societies. Ordinary societies are those which provide customary sick and funeral benefits and are subject to actuarial valuation. Special societies restrict their membership to employees of industrial parent organisations and are not subject to actuarial valuation.

Friendly Health Services (F.H.S.): This organisation was originally established to administer medical and hospital benefit funds to which members of existing societies could contribute; funds, membership and activities of this descrip-

tion are excluded from statistics of ordinary friendly society activities. F.H.S. later extended its scope to 'ordinary' society activities. Details of the latter only are included in friendly society statistics.

Membership

Friendly societies were a form of social organisation to help members meet the costs of sickness, burial, etc. at a time when government social services were either meagre or non-existent. Membership reached a maximum (over 22 000 in male lodges) in the pre-depression years but has since steadily declined. From the 1950's, there has been rapid development of various government-encouraged insurance schemes to assist families with hospital and other expenses associated with sickness; such schemes have evolved, in general, outside the framework of the friendly society movement.

With F.H.S. excluded from consideration, it was observed that: (i) decline in membership of other ordinary societies has continued (from 6 816 members in 1962 to 3 108 in 1975); (ii) the average age of members has continued to increase (from 36.7 years in 1920 to 67.0 years in 1975).

In the following table male and female members of the F.H.S. Sickness and Assurance Fund and Whole of Life and Endowment Fund have been included.

Friendly Society Membership and Number Who Received Sick Pay, 1975

Particulars	Membership details					Members who received sick pay
	Financial members	Total membership (a)	Average age of members	Admissions	Departures (b)	
	no.	no.	years	no.	no.	no.
All societies (excl. Friendly Health Services)—						
Males	3 034	3 050	67.0	5	331	230
Females	56	58	70.0	..	..	1
Total	3 090	3 108	67.0	5	331	231
Friendly Health Services ..	338	443	33.6	12	34	81
Total all societies ..	3 428	3 551	62.9	17	365	312

(a) Includes financial members but not honorary members.

(b) Includes deaths.

The figures in the next table, which excludes details for F.H.S., show the decline in membership of other ordinary societies:

Societies, Lodges and Membership (a)

(Number)

Particulars	1970	1971	1972	1973	1974	1975
Societies	8	8	8	8	8	8
Lodges—Male	105	103	102	100	(b) 51	47
Female	6	6	5	5	7	7
Benefit members	4 164	3 931	3 726	3 509	3 275	3 108
Financial members	4 104	3 877	3 666	3 461	3 233	3 090

(a) Friendly Health Services excluded.

(b) Revised method of calculation. Previously some amalgamated branches were double-counted.

Revenue and Expenditure

The following tables show the net revenue and expenditure of friendly societies (excluding inter-fund transfers and transfers between districts and lodges) for the financial years which ended in the years shown.

Friendly Societies (a): Net Revenue and Expenditure, 1975
(\$)

Revenue			Expenditure		
Particulars	Total	Per financial member	Particulars	Total	Per financial member
Members' contributions (b)	47 221	13.78	Medical attendance and medicine ..	901	0.26
Interest, rent and dividends ..	102 571	29.92	Sick pay	15 544	4.53
All other income ..	18 894	5.51	Funeral benefits ..	32 709	9.54
			Administration ..	34 554	10.08
			Endowment benefits	16 883	4.93
			Other	20 249	5.91
Total	168 686	49.21	Total	120 840	35.25

(a) Includes Friendly Health Services.

(b) Includes levies.

Friendly Societies (a): Receipts, Expenditure and Accumulated Funds
(\$'000)

Year	Net receipts (b)		Net expenditure (b)				Accumulated funds
	Contributions and levies	Total (c)	Sick pay	Funeral benefits	Other (d)	Total	
1971	64	168	17	41	74	132	1 447
1972	66	175	23	47	89	158	1 463
1973	64	176	25	51	116	192	1 447
1974	56	r 173	24	42	r 73	r 139	1 482
1975	47	169	16	33	72	121	1 529

(a) Includes Friendly Health Services.

(b) Excludes inter-fund transfers and transfers between branches within societies.

(c) Comprises: (i) income from investments; (ii) grants received by Friendly Health Services from the ordinary societies; and (iii) other revenue items not specified in the table.

(d) Includes administration and medical attention expenses and endowment benefits paid by societies to members.

Registered Building Societies

Permanent Societies: These societies are both savings and deposit-receiving institutions which advance funds for home building or purchase against the security of first mortgages. Those who invest by taking shares or by making deposits are in a separate category from those who borrow to build or buy a home. The following table summarises the transactions of permanent building societies:

Permanent Building Societies

Particulars	1971-72	1972-73	1973-74	1974-75	1975-76
	no.	no.	no.	no.	no.
Operating societies	6	6	5	5	5
Investing shareholders	14 347	15 765	26 936	35 971	
Borrowers	6 408	7 514	7 124	6 795	
	\$'000	\$'000	\$'000	\$'000	\$'000
Loans—Advanced	10 097	18 777	17 849	17 145	
Repaid	5 546	7 758	10 144	10 803	
Deposits—Received (a)	38 975	52 625	54 629	71 817	
Withdrawn	36 187	44 491	61 074	64 965	
Liabilities—					
Paid-up capital and subscriptions	23 553	31 169	40 379	55 782	<i>n. p.</i>
Accumulated profits, reserves	1 147	1 363	1 490	1 581	2 043
Deposits	22 630	30 763	24 318	30 002	40 854
Other	822	1 613	2 401	2 151	<i>n. p.</i>
Total	48 152	64 907	68 589	89 517	117 602
Assets—					
Loans on mortgage	39 657	50 676	58 381	64 723	86 805
Land and buildings	928	1 240	1 440	1 781	2 532
Government securities	3 055	4 003	4 149	3 884	7 093
Other investments	4 151	8 508	3 954	18 086	19 908
Cash and current deposits	77	100	129	180	350
Other	283	380	536	863	914
Total	48 152	64 907	68 589	89 517	117 602

(a) Includes interest credited to depositors' accounts.

Co-operative (Terminating) Societies

Terminating Societies are societies which, by their rules, are to terminate at a fixed date or when a result specified in their rules is attained. Societies issue members one class of share and require equated monthly instalments towards share capital from members; when a member borrows to build (and only a member may borrow) he is required to pay additional equated monthly instalments, such addition constituting interest only. The regular instalments in respect of share capital are calculated to amount, with interest to the nominal amount of the member's shares over the life of the society (say 26 or 30 years). If the member takes out shares with a nominal value of \$6 000, then his borrowing ceiling is set at \$6 000—in other words, the member takes out, in nominal share capital, the amount which he wishes to borrow for home-building. In effect, the member is contributing to a sinking fund for the liquidation of his loan. The terminating societies are termed 'co-operative'.

In the following table relating to co-operative (terminating) housing societies, 'Loans from government' and 'Loans due to government' up to 1971-72 refer principally to loan money made available under the Federal-State Housing Agreement. Such funds were advanced to the societies through the Agricultural Bank which acted as agent for the Federal Government in this field. For 1971-72, loans from the Government for co-operative housing societies were allocated from the State Loan Fund. This system of allocation continued to operate during 1972-73. However, from 1 July 1973 funds were again advanced from money made available under a Federal-State Housing Agreement.

The maximum limit of an individual loan has been increased progressively from \$8 000 (prior to August 1969) to \$22 500 (from July 1976). Societies registered prior to 1 July 1976 were bound by previous limits; societies registered after 1 July 1976 may advance up to \$22 500 to each borrower.

The following table summarises the transactions of the co-operative housing societies operating in Tasmania:

Co-operative Housing Societies

Particulars	1970-71	1971-72	1972-73	1973-74	1974-75
	no.	no.	no.	no.	no.
Operative societies	92	98	103	112	116
Shareholders	2 089	2 109	2 212	2 259	2 504
	\$'000	\$'000	\$'000	\$'000	\$'000
Loans—Advanced	1 622	734	1 572	1 568	3 519
Repaid	480	558	888	1 050	624
Loans from—Government	1 333	525	1 553	1 498	3 442
Other lenders	373	258	98	126	210
Repayments to—Government	532	542	799	962	779
Other lenders	237	258	337	303	263
Liabilities—					
Share subscriptions	980	1 087	1 200	1 257	1 379
Reserves	447	522	604	698	876
Loans due to—Government	7 024	7 007	7 761	8 297	10 960
Other lenders (a)	2 897	2 898	2 658	2 481	2 428
Other	170	139	193	185	193
Total	11 518	11 652	12 415	12 917	15 836
Assets—					
Loans on mortgage	11 250	11 425	12 109	12 627	15 522
Other	268	227	306	290	314
Total	11 518	11 652	12 415	12 917	15 836

(a) Includes bank overdrafts for day-to-day running of societies.

Co-operative Societies

The next table summarises the financial transactions of societies registered under Tasmanian law as co-operative industrial societies; excluded are co-operative credit societies which are dealt with in a subsequent section. The activities of co-operative societies include processing of primary products, fish and meat marketing, and wholesaling groceries; profits are distributed among members.

Co-operative Societies

Particulars	1971-72	1972-73	1973-74	1974-75	1975-76
	no.	no.	no.	no.	no.
Societies	16	15	15	18	20
Shareholders	6 695	7 047	7 186	(a) 5 364	5 851
	\$'000	\$'000	\$'000	\$'000	\$'000
Sales	12 346	11 918	10 638	11 523	13 424
Less cost of goods sold	10 506	10 401	9 229	9 773	11 143
Trading profit	1 840	1 517	1 409	1 749	2 281
Add non-operating receipts (b)	670	474	488	293	229
Less expenses—					
Wages and salaries	871	559	502	681	708
Interest	172	142	117	132	204
Administration	316	313	307	300	379
Other	955	798	780	1 072	1 358
Net surplus	196	178	192	-143	-139
Dividends paid	32	26	71	104	82

(a) Decrease in membership due to one large society going into liquidation during the year.

(b) Commissions, discounts, services, etc.

Co-operative Societies: Assets and Liabilities at End of Year
(£'000)

Particulars	1971-72	1972-73	1973-74	1974-75	1975-76
Liabilities—					
Paid-up capital	1 304	1 410	1 425	1 516	1 826
Accumulated profits	788	907	512	285	258
Reserve funds	479	420	966	1 042	1 495
Loans and bank overdraft	2 333	1 633	1 501	2 067	3 342
Sundry creditors	2 022	1 319	1 467	1 359	1 483
Other	279	342	333	1 359	1 654
Total	7 205	6 032	6 203	7 627	10 059
Assets—					
Fixed	2 306	2 067	2 227	2 369	3 629
Stock on hand	1 228	944	922	2 176	2 591
Sundry debtors	2 804	1 484	1 253	1 141	1 498
Investments and loans	296	1 131	1 305	1 256	1 590
Other	572	407	496	684	751
Total	7 205	6 032	6 203	7 627	10 059

Co-operative Credit Societies

The co-operative credit societies (credit unions) are registered under the *Co-operative Industrial Societies Act 1928*. Most credit unions have been established by trade unions (e.g. those serving teachers, hospital employees, etc.) and by church groups. Members contribute capital by taking out shares and making deposits. The aim of the societies is to make loans to members at low rates of interest.

The following table shows the societies' annual transactions:

Co-operative Credit Societies

Particulars	1971-72	1972-73	1973-74	1974-75	1975-76
Operating societies	no. 27	no. 27	no. 27	no. 23	no. 23
Shareholders	19 882	22 918	25 508	24 379	28 604
	£'000	£'000	£'000	£'000	£'000
Loans—Advanced	5 814	(a) 7 664	(a) 7 795	9 400	14 181
Repaid	4 148	(a) 5 284	(a) 6 370	7 539	10 095
Deposits—Received (b)	9 787	(a) 12 780	(a) 13 966	18 334	26 327
Withdrawn	7 862	(a) 10 397	(a) 12 419	15 684	22 485
Liabilities (at end of period)—					
Paid-up capital	174	195	217	219	248
Reserves, accumulated profits	78	72	24	17	271
Deposits	8 233	10 615	12 161	(c) 13 749	18 655
Other	378	500	549	317	694
Total	8 863	11 382	12 952	14 302	19 869
Assets (at end of period)—					
Loans	8 064	10 442	11 868	(c) 12 815	18 039
Cash and current deposits	349	366	285	586	1 018
Other (d)	450	574	800	902	811
Total	8 863	11 382	12 952	14 302	19 869

(a) Partially estimated.

(b) Includes interest credited.

(c) Does not reconcile with data for previous year due to changed collection method.

(d) Includes investments and fixed assets.

Pension and Superannuation Schemes

Private Schemes

Surveys on an Australia-wide basis have revealed superannuation and/or retiring allowance schemes for employees in the private sector as follows: (i) schemes operated through life insurance offices, friendly societies and other organisations such as units trusts; (ii) superannuation, pension and retiring allowance funds constituted by businesses; and (iii) direct payments of pensions and/or retiring allowances by the employer. No details have been released for individual states. Australian data are published in the Bureau's bulletin 'Survey of Selected Private Pension Funds'.

Government, Local Government and Semi-Government Schemes

The levels of government operating in Tasmania are: (i) federal; (ii) state; (iii) local authority; and (iv) semi-government authority. In the section that follows, any pension or superannuation scheme affecting employees of the Federal Government or its instrumentalities is excluded.

Government superannuation and pension schemes are included as part of 'Private Finance' because the funds involved do not belong to any government but are actually trust moneys held on behalf of contributors. Employees of the State Government contribute to separately constituted funds to which the State Government also makes contributions. Employees of local government and semi-government authorities are covered either by separately constituted funds or by schemes operated through life insurance offices.

The first pension and gratuity scheme for State public servants, introduced in 1860, was non-contributory and short-lived, being repealed in 1863. A contributory provident fund was established under the *Civil Service Act* 1900 but this scheme was also short-lived and made way for a contributory but State-subsidised scheme established under the *Public Service Superannuation Fund Act* 1905; a year earlier, a distinct fund had been established with similar principles to serve the teaching service. The *Superannuation Act* 1938 established a new fund to serve both public servants and teachers but some pensions continued to be paid from the two funds established in 1904 and 1905. It was not until 1 July 1968 that the residual assets and pension liabilities of these older funds were transferred to the State Superannuation Fund Board. The assets transferred from the 1904 teachers' fund were \$52 990 and from the 1905 public servants' fund, \$17 103.

State Superannuation Scheme 1971: In December 1970, the *Superannuation Fund Act* 1938 was amended to provide for adjustments to pensions in accordance with movements in the Consumer Price Index. Next, a new scheme was embodied in the *Retirement Benefits Act* 1970, the date of operation being fixed at 1 July 1971. Contributors to the 'old' scheme were given the right of election, i.e. to change to the 'new' scheme or to stay with the 'old'.

The adoption of fixed percentage contributions as the basis for the new scheme overcame the main difficulty with the more traditional type of scheme, namely the prohibitive cost of new units for contributors in the upper age brackets. The other improvement was the provision for automatic adjustment of the pension in accordance with annual Consumer Price Index movements.

Separately Constituted Funds: In the table that follows, the operations of the following schemes have been combined and summarised: (i) State Superannuation Fund; (ii) State Retirement Benefits Fund; (iii) Police Provident Fund; (iv) Metropolitan Transport Trust—Retiring Allowance and Staff Pension Funds; (v) Marine Boards' independent schemes; (iv) University of Tasmania—Non-Assurance

Subscribers' Accumulation and Additional Benefits Funds; (vii) Hobart Corporation Retiring Allowance Funds; and (viii) Milk Board of Tasmania Superannuation Fund.

**State, Local Government and Semi-Government Pension and Superannuation Schemes
Operated Through Separately Constituted Funds**

Particulars	1971-72	1972-73	1973-74	1974-75	1975-76
	\$'000	\$'000	\$'000	\$'000	\$'000
Income—					
Contributions—					
Employees	3 647	4 098	4 945	6 966	8 286
Employing authorities	3 339	3 542	4 122	5 112	6 462
Interest, dividends and rent	2 194	2 513	2 990	3 936	5 040
Other income	152	241	447	562	547
Total	9 332	10 394	12 505	16 576	20 335
Expenditure—					
Pensions	3 572	4 126	4 862	5 910	7 675
Lump sum payments—					
On retirement or death	1 032	755	818	1 202	1 262
On resignation or dismissal	362	530	737	554	1 057
Other expenditure	32	30	47	272	657
Total	4 998	5 441	6 464	7 938	10 650
Total assets at end of year	37 299	42 206	48 274	57 114	66 773
Funds in operation	no. 13	no. 12	no. 12	no. 12	no. 11
Contributors at end of year	14 699	15 087	15 705	16 468	16 969
Number of pensioners at end of year	3 053	3 152	3 249	3 401	3 557

In the previous table, the principal funds included are the State Superannuation Fund and the Retirement Benefits Fund contributed to by all permanent full-time employees of the Public Service, Teaching Service, Transport Commission, Hydro-Electric Commission, Metropolitan Transport Trust, all hospitals subsidised by the State Government and certain police officers (see notes on Police Provident Fund for details). The following table gives principal details of these two funds:

State Superannuation Fund and Retirement Benefits Fund

Particulars at 30 June	Number of contributors	Number of pensioners		Accumulated funds (a) (\$'000)
		Ex-employees	Widows and children	
STATE SUPERANNUATION FUND				
1973	6 255	1 612	1 195	32 611
1974	5 674	1 604	1 180	(b)22 767
1975	3 922	1 626	1 165	25 318
1976	3 616	1 608	1 167	27 733
RETIREMENT BENEFITS FUND				
1973	7 364	240	64	3 748
1974	8 560	329	88	(b) 19 110
1975	11 092	429	121	24 457
1976	11 919	569	151	31 355

(a) Total assets less liabilities.

(b) Assets to the value of \$12 355 344 were transferred from the State Superannuation Fund to the Retirement Benefits Fund during 1973-74.

Police Provident Fund: The Police Provident Fund, a *closed fund* included in an earlier table, had accumulated funds of \$4 591 558 at 30 June 1976. An amendment to the *Superannuation Act* 1938, in 1963, provided that police officers appointed after 31 December 1963 were required to become contributors to the now closed State Superannuation Fund. Police officers appointed prior to 1 January 1964 could continue as contributors to the Police Provident Fund or exercise an option to become contributors to the State Superannuation Fund. Police officers appointed on or after 1 July 1971 contribute to the Retirement Benefits Fund.

Schemes Operated Through Life Insurance Offices: A number of local government and semi-government authorities in Tasmania operate pension and superannuation schemes for their employees through life insurance offices. The next table combines and summarises the operations of such schemes. The following are the main authorities concerned: (i) Semi-government—marine boards, fire brigades, Metropolitan Transport Trust (Launceston and Burnie), University of Tasmania, ambulances, Society for Blind and Deaf, Museum and Art Gallery, Botanical Gardens; and (ii) Local government—the cities and municipalities. Some authorities, e.g. University, Metropolitan Transport Trust, etc., operate schemes on both bases, i.e. some through separately constituted funds, and others through life insurance offices.

Local and Semi-Government Pension and Superannuation Schemes Operated Through Life Insurance Offices

Particulars	1971-72	1972-73	1973-74	1974-75	1975-76
	\$'000	\$'000	\$'000	\$'000	\$'000
Income—					
Contributions—					
Employees	611	653	914	1 168	1 508
Employing authorities	923	994	1 523	1 906	2 446
Surrenders	184	125	237	397	362
Death claims	85	68	156	174	200
Matured policies	120	567	521	511	608
Other income	34	20	155	166	254
Total	1 957	2 428	3 507	4 322	5 378
Expenditure—					
Premiums paid to insurance companies	1 534	1 674	2 192	2 734	3 469
Benefits—					
On death or retirement	217	640	678	813	1 049
On resignation or dismissal	138	121	235	399	268
Other expenditure	(a) 43	7	10	24	36
Total	1 932	2 442	3 115	3 970	4 823
Funds in operation	no. 19	no. 21	no. 22	no. 22	no. 20
Contributors (at end of period)	2 448	2 832	3 061	3 233	3 451

(a) Includes \$29 000 transferred by policy surrender to the Retirement Benefits Fund.

Miners' Pension Fund

In 1943 a bill was introduced into the Tasmanian Parliament to establish a miners' pension fund; the legislation received Royal Assent in 1944. For the purposes of the original legislation and subsequent amending Acts a mine was defined as '... a coal mine or oil-shale mine in this State, and includes a quarry in this State from which coal or oil-shale is obtained, and all the land at or near the entrance to the workings in such a mine or quarry and occupied by the owner in connection with the winning of coal or oil-shale therefrom'.

From the Fund, administered by a three-man board, pensions are paid to miners upon retirement or when incapacitated by injury, etc. and in certain circumstances, to widows and dependants. Contributions to the fund are made by the State Government, mine owners and miners. Details are as follows:

Miners' Pension Fund

Particulars	1971-72	1972-73	1973-74	1974-75	1975-76
	\$'000	\$'000	\$'000	\$'000	\$'000
Income—					
Contributions—					
Employees	2	2	2	2	3
State Government	30	30	50	50	50
Mine owners	12	12	11	12	16
Interest, dividends and rent	10	10	10	13	13
Total	54	54	73	77	82
Expenditure—					
Pensions	56	52	50	58	57
Other expenditure	2	2	4	2	2
Total	59	54	54	60	59
Assets (at end of period)	168	168	187	203	226
	no.	no.	no.	no.	no.
Contributors (at end of period)	53	46	55	66	80
Pensioners (at end of period)	140	132	129	123	115

An actuarial report in 1963 indicated that the fund was deficient to the extent of \$657 098. Amending legislation in 1963 provided for the State to contribute such annual sum, not exceeding \$30 000, as the Treasurer might consider necessary to ensure the solvency of the Fund. Previously the State had matched the mine owners' contributions which were related to coal production. The Act was further amended in 1973 to remove the limit on the Government's contribution.

The Parliamentary Pension and Superannuation Scheme

The *Parliamentary Retiring Allowances Act 1955* was repealed and replaced by the *Parliamentary Superannuation Act 1973*, effective from 1 July 1973.

The previous scheme was purely contributive. It provided for a full basic rate pension for members who retired, or were defeated, after a minimum qualifying period of 15 years. Lesser rate pensions were calculated pro-rata to the length of service expressed as a fraction of 15 years; for service less than eight years, a member received only a refund of his contributions. The pension applicable was an amount equal to \$12.50 weekly, plus 34.5 per cent of Australian average weekly earnings per employed male unit in each year ended March, as calculated from employment and wages data and wages on payroll tax returns.

Parliamentary Superannuation Act 1973

Administration of the Fund, established under the Act, is vested in the Parliamentary Superannuation Trust which consists of the President of the Legislative Council, the Speaker of the House of Assembly and the Under-Treasurer. Contribution to the Fund is compulsory and is payable at the rate of 12 per cent of the member's parliamentary salary.

The annual rate of pension is calculated as a proportion of basic salary, multiplied by the ratio of the total parliamentary salary (excluding allowances) received during the period of service, to the total basic salary payable in respect

of that period. The proportion of basic salary used in the calculation varies with the length of service (from 41.2 per cent for eight years service to 70.0 per cent for 20 years or more service). Members who retire or resign with less than eight years service are only entitled to a refund of their contributions.

Pension Entitlement: A member is entitled to a pension in the following circumstances:

- (i) if he ceases to be a member, for any reason, after 15 years service; or
- (ii) he has been a member for eight years or more but less than 15 years and resigns for reasons which the Trust certifies to be 'good and sufficient'; or
- (iii) he has been a member for eight years or more but less than 15 years, his term of office expires and he fails to be re-elected for one of several reasons specified in the Act; or
- (iv) he is forced to retire for medical reasons (under these circumstances a member with less than eight years service may be entitled to a pension calculated as though he had served for eight years).

These general provisions of contributions and rate of pension may be varied in cases where the Trust sees fit and which are in accordance with the Act. Any appeal against a decision of the Trust is heard by the Supreme Court of Tasmania.

State Parliamentary Superannuation Scheme
(\$'000)

Particulars	1970-71	1971-72	1972-73	1973-74(a)	1974-75	1975-76
Income—						
Members' contribution (b)	43	46	49	86	97	127
Government contribution	49	76	72	140	200	301
Interest .. .. .	..	..	..	..	..	..
Total	92	122	121	227	297	428
Expenditure—						
Pension payments (c) ..	90	93	120	216	295	423
Other (including refunds)	3	29	1	7	3	1
Total	92	122	121	224	299	424
Total assets (at end of period)	..	..	..	6	6	6
<i>Less</i> liabilities .. .. .	..	..	..	2	4	..
Accumulated funds .. .. .	..	..	..	3	2	6

(a) New scheme introduced. See explanatory notes preceding table.

(b) Number of contributors throughout period, 54. Contribution for basic rate pension compulsory.

(c) Number of pensioners at 30 June 1976, 40.

Real Estate Transactions

Title to Land

When acquiring land today, the buyer needs to know whether the documents are under the 'old system' or the 'new system'. The new system dates from the *Real Property Act* 1862 when Tasmania introduced an adaptation of the Torrens system (Sir Robert Torrens' Real Property Act became law in S.A. in 1858). The

Torrens system provides that the matter of title to land shall be a government responsibility. Each piece of separately-owned land is represented by a certificate of title which, with a few minor exceptions, is guaranteed by the State; in Tasmania, the issue and registration of titles is the work of the Lands Titles Office. A statutory assurance fund is maintained to indemnify owners against loss through error.

Land alienated before 1862 was not subject to the provisions of the *Real Property Act* and transactions involving such land are still being recorded under the *Registration of Deeds Act* (the first Tasmanian Deeds Act was made in 1827); this is the old 'system', involving complicated conveyancing, searching, etc. The conveyance is merely evidence of ownership as between the parties to the agreement and lacks the element of conclusive proof inherent in the new system under which the Torrens certificate of title proclaims 'that the person mentioned in it is owner of the land therein described as against all the world'. Put another way, land passing from A to B, and then to C under the old system requires a search to ascertain the validity of B's ownership and then A's ownership; under the new system, C's certificate of title is adequate proof without any reference to A and B.

The dual system persists to this day but the *Local Government (Registered Titles) Act 1966* provided that all new sub-divisions of land should be brought under the *Real Property Act* without charge. Fees on voluntary applications to bring land under the *Real Property Act* have also been abolished to encourage other owners to change to the Torrens systems.

Property Sales and Mortgages

Sales of real estate and mortgages on the security of real estate, involve either certificates of title, under the new system, or deeds, conveyances, etc. under the old system. In the following table sales and mortgages, recorded both under the *Real Property Act* and the *Registration of Deeds Act*, are combined to give a single series showing real estate transactions in Tasmania over a 10-year period:

Real Estate Transactions (a)

Year	Property sales		Mortgages			
	Number	Total consideration	Registered		Discharged	
			Number	Amount	Number	Amount
		\$'000		\$'000		\$'000
1966-67 ..	11 011	65 341	9 408	52 258	7 578	24 990
1967-68 ..	11 626	72 651	10 233	60 980	7 419	25 086
1968-69 ..	10 657	74 069	10 616	67 009	7 009	25 237
1969-70 ..	11 478	87 763	9 877	68 924	7 359	28 490
1970-71 ..	11 092	85 043	9 085	66 468	7 150	32 286
1971-72 ..	11 452	91 435	9 803	71 007	7 813	37 332
1972-73 ..	14 052	135 539	12 134	93 804	9 842	59 796
1973-74 ..	17 685	205 549	13 448	129 787	11 125	61 124
1974-75 ..	14 716	188 436	11 759	120 491	10 127	61 366
1975-76 ..	16 493	289 091	14 323	216 468	11 237	67 872

(a) Registered under the *Real Property Act* and *Registration of Deeds Act*.

Chapter 13

HOUSING AND BUILDING

DWELLING STATISTICS

At the time of each Population Census, a complete count is made of dwellings classified according to type of structure. Only preliminary figures from the 30 June 1976 Census were available at the time of publication. Contained in the preliminary count of occupied and unoccupied dwellings are other dwelling units which are not compatible with the definitions used in this chapter. Previous issues have included details of numbers of occupied and unoccupied houses and other dwellings derived from the census count and estimated for intercensal years. However, these estimates are now subject to revision pending production of final census dwelling figures. Statistics relating to the number of houses and other dwellings at 30 June 1976 and revised intercensal estimates will be included in the next issue of the *Year Book*. Details derived from the 30 June 1971 Census are included in the 1977 *Year Book*.

BUILDING STATISTICS

Scope

For statistical purposes, building relates exclusively to the erection of new buildings (including major new additions to existing buildings); construction work such as the building of railways, bridges, earthworks, water storages, piers, wharves, etc. is excluded. Minor additions, alterations, renovations and repairs to buildings are also excluded because of the difficulty of obtaining lists of persons who undertake this work.

When a dwelling is attached to a new building, the whole unit, both in regard to number and value, is classified according to the type of new building (e.g. a new shop and dwelling is classified simply as a shop). Figures for other dwellings include 'home units' but not conversions of existing buildings into flats. Number of 'other dwellings' refers to the number of new individual dwelling units (e.g. one block of flats containing 10 separate flat units would be counted as 10 dwellings).

Details obtained from government authorities on their construction programs and from building contractors refer to all parts of the State. Details for owner-builders cover only those areas subject to building control by local government authorities; thus some farm buildings are excluded but this does not materially affect the figures.

Change in Series

Minor changes have been made in the scope and presentation of building statistics from 1973-74. For dwellings, separate figures are now shown for the value of new work, and the value of alterations and additions valued at \$10 000

and over. Previously, data were only published for new work and alterations and additions combined. (However, new work and alterations and additions are still combined for 'other building'.) Up to 1972-73, alterations and additions valued at \$10 000 and over were classified as new dwelling units, but are *not* counted as dwelling units from 1973-74. Alterations and additions valued at under \$10 000 are excluded from building statistics. (Statistics relating to value of building approvals appearing in the 1977 *Year Book* included alterations and additions valued at between \$2 000 and \$9 999.)

Source of Data

The main statistics relate to building approvals and to building operations (commencements, completions, etc.). The data are derived as follows:

Building Approvals: These comprise: (i) approvals by local government authorities for the construction of private buildings; (ii) contracts let and day labour projects commenced by governmental authorities; and (iii) private buildings reported by contractors to have been commenced in certain areas of the few rural municipalities where building regulations do not apply to the whole municipality. Details are compiled monthly.

Building Operations: Returns are obtained from: (i) building contractors engaged in the erection of new buildings; (ii) owner-builders; and (iii) federal, state, local and semi-government authorities. Statistics are compiled at quarterly intervals.

Definitions

Contract-built: Includes the operations of all building contractors and government authorities which undertake the erection of new buildings.

Owner-built: An 'owner-built' house is one actually erected or being erected by the owner, or under the owner's direction, without the services of a contractor who is responsible for the whole job.

Commenced: A building is regarded as having been commenced when work on the foundations has begun.

Completed: A building is regarded as having been completed when the contractor has fulfilled the terms of the contract.

With both 'completions' and 'commencements' there is some difficulty in maintaining a uniform classification since the definition of an exact point of time in building operations is involved.

Under Construction: A building is so classified if it is uncompleted at the end of the period, whether or not work on it was actively proceeding at that date.

Values: All values shown exclude the value of land and represent the estimated value of buildings *on completion*. In the case of owner-built dwellings, the owner-builder is required to estimate the value from the cost of the materials and the cost of labour, including his own.

All values shown are *current values*, i.e. no adjustment has been made for the substantial rise in building costs over recent years. Some perspective to the increases in values can be gained from the wholesale price indexes of materials used in house building and of materials used in building other than house building for Hobart, and from increases in average weekly earnings per employed male unit for Tasmania (see table and graphs appearing later in this Chapter).

Building Approvals

The following table shows details of building approvals; a distinction is made between 'private' and 'government' and the information is dissected to give separate figures for statistical divisions. In 1975-76, 52 per cent of the total value of building approvals was attributed to the Hobart Division, four per cent to the Southern Division, 18 per cent to the Northern Division and 25 per cent to the Mersey-Lyell Division.

Building Approvals, by Statistical Division, 1975-76

Particulars	Hobart	Southern	Northern	Mersey-Lyell	Total Tasmania
NUMBER					
New dwellings—Private ..	1 647	264	772	990	3 673
Government	374	8	213	168	763
Total	2 021	272	985	1 158	4 436
VALUE (\$'000)					
New dwellings—Private ..	45 427	4 272	16 071	22 330	88 100
Government	6 771	237	3 581	2 933	13 523
Alterations and additions to dwellings (a)—					
Private ..	1 335	101	486	374	2 295
Government	..	31	..	..	31
Other building—Private ..	9 911	943	7 285	7 078	25 217
Government	19 991	1 504	2 081	7 648	31 224
All building—Private ..	56 673	5 316	23 842	29 781	115 612
Government	26 762	1 772	5 663	10 581	44 777
Total	83 435	7 087	29 504	40 363	160 390

(a) Value at \$10 000 and over.

The next table shows an increase in building approvals for new dwellings from 1971-72 apart from a slump in 1974-75:

Building Approvals, Selected Years

Particulars	1965-66 (a)	1971-72 (a)	1972-73 (a)	1973-74	1974-75	1975-76
VALUE (\$'000)						
New dwellings—Private ..	17 715	28 922	39 436	51 330	48 277	88 100
Government	3 906	6 281	6 411	9 238	12 861	13 523
Alterations and additions to dwellings (b)—						
Private ..	n.a.	n.a.	n.a.	778	1 163	2 295
Government	n.a.	n.a.	n.a.	19	..	31
Other building—Private ..	10 226	16 192	15 834	19 878	21 318	25 217
Government	10 908	18 687	28 740	19 476	29 115	31 224
All building—Private ..	27 941	45 114	55 270	71 986	70 760	115 612
Government	14 814	24 968	35 151	28 733	41 977	44 777
Total	42 756	70 082	90 421	100 719	112 736	160 390

Housing and Building

Building Approvals, Selected Years—*continued*

Particulars	1965-66 (a)	1971-72 (a)	1972-73 (a)	1973-74	1974-75	1975-76
NUMBER						
New dwellings—Private ..	2 286	2 638	3 176	3 404	2 559	3 673
Government	635	755	650	771	800	763
Total	2 921	3 393	3 826	4 175	3 359	4 436

(a) Alterations and additions to dwellings valued at \$10 000 and over are included with the number and value of dwellings.

(b) Valued at \$10 000 and over.

Building Construction

Houses Constructed

The next table shows details of number and value of houses commenced, completed and under construction:

Construction of New Houses (a)

Year	Commenced		Completed		Under construction (b)	
	Number	Value (c)	Number	Value (c)	Number	Value (c)
1965-66 ..	2 202	\$m 17.8	2 260	17.8	1 542	11.6
1971-72 ..	2 231	25.7	2 261	26.2	1 337	14.5
1972-73 ..	2 795	36.4	2 384	29.6	1 735	22.0
1973-74 ..	3 132	49.5	2 819	41.6	2 003	31.2
1974-75 ..	2 497	49.8	2 650	48.2	1 798	35.0
1975-76 ..	3 078	74.9	2 804	63.3	1 981	49.4

(a) Alterations and additions valued at \$10 000 and over are counted as new houses up to 1972-73 but are excluded from 1973-74.

(b) At end of year.

(c) When completed.

Material of Outer Walls: The following table shows the number of new houses completed and their classification according to the material used in their outer walls. Until 1963-64, wood was the predominant material used for outer wall construction. However, since then there has been a continuous fall in the proportion of wooden walled houses completed; in 1975-76, brick veneer houses accounted for 82 per cent of all houses completed.

Number of New Houses Completed Classified by Material of Outer Walls (a)

Material of outer walls	1965-66	1971-72	1972-73	r 1973-74	r 1974-75	1975-76
Brick, concrete, etc.—						
Solid	128	80	75	122	154	144
Veneer	1 126	1 701	1 943	2 383	2 173	2 296
Wood (weatherboard, etc.) ..	932	196	204	157	116	112
Asbestos cement	62	103	125	126	182	177
Other	12	181	37	31	25	75
Total	2 260	2 261	2 384	2 819	2 650	2 804

(a) Alterations and additions valued at \$10 000 and over are counted as new houses up to 1972-73 but excluded from 1973-74.

Government Construction of Houses: The post-war era was notable for the entry of the State Government into the housing field on a large scale; in November 1945, the Federal Government entered into an agreement with the states whereby it would provide finance for housing projects to be built by the state governments. Under the agreement, Tasmania received \$5 670 000 which it repaid on withdrawing from the scheme in August 1950. The Tasmanian Government nevertheless continued to build houses using the resources available from its own Loan Fund. In 1956, the State Government entered into a new agreement with the Federal Government, an agreement renewed with minor modifications in 1961 and 1966. This method of allocating funds to the states ceased at 30 June 1971. Tasmania's aggregate advances under the scheme to 30 June 1971 were \$89 477 000. For 1971-72 and 1972-73 funds for State housing were provided as part of the State's approved loan raisings (i.e. loans raised for housing were credited to the Loan Fund and expenditure was made from the Loan Fund). However, at the June 1973 Premiers' conference the question of allocation of funds for state housing was again discussed and a new Federal-State Housing Agreement was proposed which provided for the states to receive advances for welfare housing during the five years 1973-74 to 1977-78; these advances are in addition to the states' Loan Fund borrowing programs. (In effect the pre 1971-72 situation has been restored.) Tasmania's allocation for 1976-77 under the new Housing Agreement was \$19 376 000.

The following table shows, for Tasmania, the number of houses completed, for a ten-year period and distinguishes between those built for government authorities (all types) and those built for private persons:

Number of New Houses Completed For Government Authorities and Private Persons (a)

Year	For government authorities	For private persons	Total	Year	For government authorities	For private persons	Total
1966-67 ..	627	2 138	2 765	1971-72 ..	466	1 795	2 261
1967-68 ..	737	2 594	3 331	1972-73 ..	542	1 842	2 384
1968-69 ..	735	1 969	2 704	1973-74 ..	586	2 233	2 819
1969-70 ..	683	2 178	2 861	1974-75 ..	548	2 102	2 650
1970-71 ..	627	1 636	2 263	1975-76 ..	793	2 011	2 804

(a) Alterations and additions valued at \$10 000 and over are counted as new houses up to 1972-73, but are excluded from 1973-74.

The principal construction authority in Tasmania is the State Housing Department but 'houses built for government authorities' includes construction by, or for, other State and Federal Government departments, instrumentalities, etc.

Construction of New Houses and Other New Dwellings

The figures for the more recent years show a high level of new dwellings other than houses (individual units) erected. In 1975-76 'Other new dwellings' comprised 24 per cent of the total number of dwellings completed compared to only 9 per cent in 1965-66.

In 1975-76, the value of new houses and other new dwellings completed (including alterations and additions valued at \$10 000 and over) accounted for 54 per cent of the value of all new building work completed. This compares with 59 per cent in the previous year, 55 per cent in 1973-74 and 46 per cent in 1972-73.

In the following table, details are given of completions of new houses and other new dwellings:

New Houses and Other New Dwellings Completed (a)

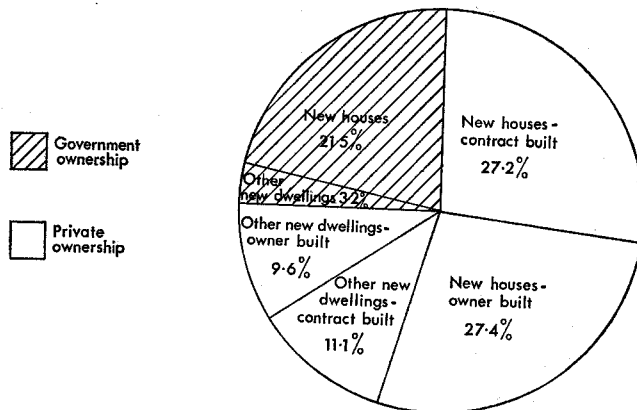
Particulars	1965-66	1971-72	1972-73	1973-74	1974-75	1975-76
NUMBER						
New houses—						
Government ownership—						
Contract-built	309	243	280	290	r 269	465
Day labour	248	223	262	r 296	279	328
Private ownership—						
Contract-built	1 015	1 198	1 117	r 1 255	r 1 093	1 001
Owner-built	688	597	725	r 978	r 1 009	1 010
Total houses	2 260	2 261	2 384	r 2 819	r 2 650	2 804
Other new dwellings (b)	221	767	781	r 700	r 812	879
Total houses and other dwellings	2 481	3 028	3 165	r 3 519	r 3 462	3 683
VALUE (\$'000)						
New houses	17 806	26 165	29 648	r 41 634	r 48 154	63 272
Other new dwellings	1 204	5 534	6 542	r 6 625	r 10 028	13 858

(a) Alterations and additions valued at \$10 000 and over are counted as new houses up to 1972-73 but are excluded from 1973-74.

(b) Individual dwelling units.

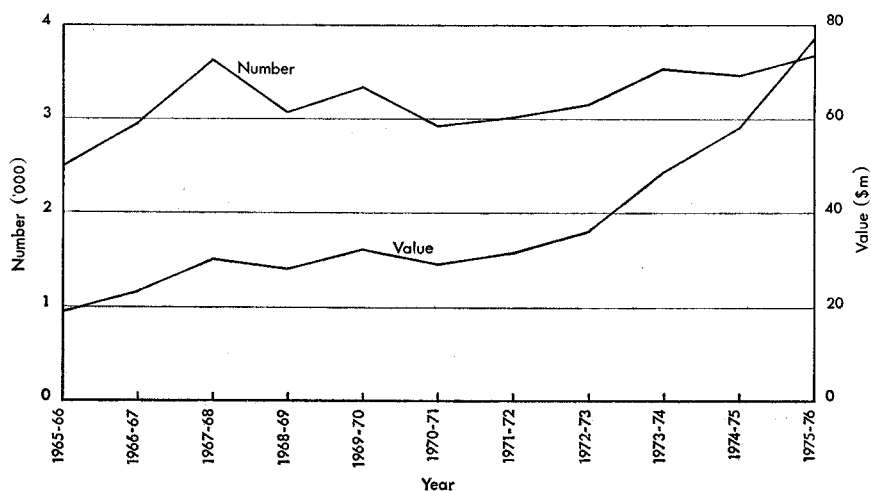
The pie chart below shows the number of new houses and other new dwellings completed, dissected by type of ownership, as a proportion of the total number of dwellings completed:

New Dwellings Completed, 1975-76
(Proportion of Total Number)



The following graph shows the number and value of new dwellings completed from 1965-66 to 1975-76. As noted earlier, all values shown in this section are *current values*. If a series for the value of new dwellings completed adjusted to a constant prices basis (to take account of changes in building construction costs) was available, then, if shown on the graph, it could be expected to follow a trend similar to that shown by the number of dwellings completed.

New Dwellings Completed: Number and Value



The following table dissects the numbers of dwellings commenced, completed and under construction for 1975-76 by statistical division:

Number of Dwellings Commenced, Completed and Under Construction, by Statistical Division, 1975-76

Statistical division or sub-division	Houses			Other dwellings (individual units)			Total number of dwelling units		
	Com-menced	Com-pleted	Under constrn	Com-menced	Com-pleted	Under constrn	Com-menced	Com-pleted	Under constrn
Hobart ..	1 219	1 167	767	661	485	563	1 880	1 652	1 330
Southern ..	212	177	210	18	23	4	230	200	214
Northern--									
Tamar ..	684	676	363	132	136	115	816	812	478
North Eastern	123	109	105	3	9	..	126	118	105
Total ..	807	785	468	135	145	115	942	930	583
Mersey-Lyell--									
North West-ern ..	772	608	435	213	203	86	985	811	521
Western ..	68	67	101	16	23	..	84	90	101
Total ..	840	675	536	229	226	86	1 069	901	622
Total Tasmania	3 078	2 804	1 981	1 043	879	768	4 121	3 683	2 749

Construction of All Buildings

The previous tables in this section have been concerned with the construction of new dwellings. The next table shows the value of all building completed according to type; new houses and other new dwellings are included to allow comparison.

Housing and Building

Value of all Building Completed: Classified According to Type
(\$'000)

Type of building	1965-66 (a)	1971-72 (a)	1972-73 (a)	1973-74	1974-75	1975-76
New houses	17 806	26 165	29 648	41 634	48 154	63 272
Other new dwellings ..	1 204	5 534	6 542	6 625	10 028	13 858
Total new dwellings ..	19 010	31 699	36 190	48 259	58 182	77 130
Alterations and additions to dwellings (b) ..	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	347	642	1 684
Hotels, etc. .. .	264	2 464	7 751	4 488	2 256	3 828
Shops .. .	1 529	2 515	2 470	3 980	3 156	2 056
Factories .. .	2 218	4 124	4 447	3 820	5 670	6 955
Offices .. .	1 454	6 746	7 287	8 381	5 721	15 390
Other business premises ..	2 731	2 854	2 038	2 398	4 296	2 736
Education .. .	5 113	9 240	10 654	13 209	9 980	22 711
Religion .. .	254	162	289	147	825	433
Health .. .	4 086	6 668	4 208	848	3 120	5 835
Entertainment and recreation	666	1 006	1 802	1 322	1 700	2 559
Miscellaneous .. .	2 355	2 238	969	1 747	3 946	3 791
Total other building ..	20 670	38 017	41 915	40 340	40 669	66 295
Total all buildings ..	39 680	69 717	78 105	88 946	99 493	145 109

(a) Alterations and additions valued at \$10 000 and over are included with new houses and other new dwellings.

(b) Valued at \$10 000 and over.

The following table shows the distribution of the value of buildings completed according to type:

Value of Building Completed, by Type of Building, 1975-76
(\$'000)

Statistical division or sub-division	New houses	Other new dwellings	Alterations and additions to dwellings (a)	Hotels, etc.	Offices	Edu- cation	Other building	Total all building
Hobart .. .	28 400	8 129	835	3 386	10 252	9 687	9 924	70 613
Southern .. .	3 048	277	68	170	93	437	1 060	5 152
Northern—								
Tamar .. .	14 383	2 013	415	107	899	5 840	7 979	31 636
North Eastern ..	1 989	97	44	30	..	130	1 262	3 553
Total .. .	16 371	2 111	459	137	899	5 970	9 241	35 189
Mersey-Lyell—								
North Western ..	14 247	2 812	310	135	3 755	5 953	3 123	30 333
Western .. .	1 206	530	12	..	391	665	1 017	3 822
Total .. .	15 453	3 342	322	135	4 146	6 618	4 140	34 155
Total Tasmania	63 272	13 858	1 684	3 828	15 390	22 711	24 365	145 109

(a) Valued at \$10 000 and over.

The following table gives details of the total value of all building commenced, completed and under construction. The items included under 'all building' are specified in the previous table.

Value (When Completed) of All Buildings (a)
(\$m)

Year	Com- menced	Com- pleted	Under construc- tion (b)	Year	Com- menced	Com- pleted	Under construc- tion (b)
1966-67 ..	62.1	48.2	51.3	1971-72 ..	64.3	69.7	61.6
1967-68 ..	63.2	61.9	52.5	1972-73 ..	90.6	78.1	76.5
1968-69 ..	56.2	56.9	51.9	1973-74 ..	107.1	88.9	97.4
1969-70 ..	62.1	66.5	51.0	1974-75 ..	113.2	99.5	116.3
1970-71 ..	70.2	59.7	63.5	1975-76 ..	156.8	145.1	140.5

(a) Includes estimated value of owner-built houses.

(b) At end of period.

Value of Work Done and Changes in Construction Costs

The value of building work done represents the estimated value of the building work actually carried out during the periods shown.

Value of Building Work Done, Wholesale Price Indexes and Average Weekly Earnings

Particulars	1965-66	1971-72	1972-73	1973-74	1974-75	1975-76
Value of work done—						
New houses .. \$'000	17 703	25 329	32 568	46 332	48 757	73 190
Other new dwellings \$'000	<i>n.p.</i>	5 853	6 522	8 010	10 046	16 063
Total new dwellings .. \$'000	<i>n.p.</i>	31 182	39 089	54 342	58 803	89 253
Alterations and additions to dwellings \$'000	(a)	(a)	(a)	444	744	1 883
Other building .. \$'000	<i>n.p.</i>	39 001	39 055	41 098	57 433	69 414
Total building .. \$'000	43 201	70 181	78 145	95 884	116 979	160 551
Percentage increase (b) ..	12.6	7.2	11.3	22.7	22.0	37.2
Wholesale price index (c)—						
Materials used in house building—						
Index number	<i>n.a.</i>	120.7	130.8	145.5	179.1	209.2
Percentage increase (b) ..	..	5.6	8.4	11.2	23.1	16.8
Materials used in building other than house building—						
Index number	<i>n.a.</i>	122.6	129.7	143.8	179.3	210.4
Percentage increase (b) ..	..	6.6	5.8	10.9	24.7	17.3
Average weekly earnings (d)—						
Amount \$	<i>n.a.</i>	87.50	95.20	110.50	140.20	157.80
Expressed as index to base 1966-67 = 100.0 (e) ..	..	149.6	162.7	188.9	239.7	269.7
Percentage increase (b) ..	..	11.5	8.8	16.1	26.9	12.6

(a) Alterations and additions to dwellings valued at \$10 000 and over are included with the value of new dwellings.

(b) Over previous year.

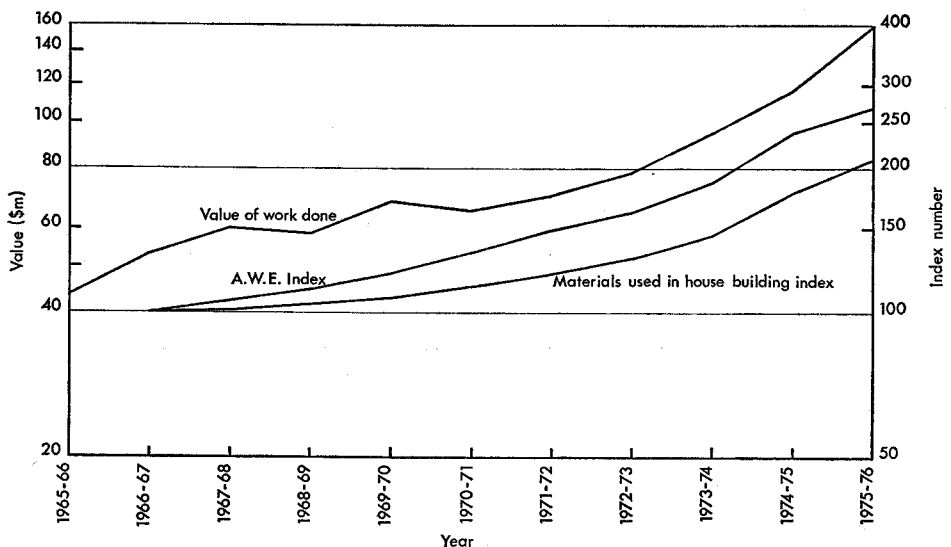
(c) For Hobart, all groups; base of each index: year 1966-67 = 100.0.

(d) Per employed male unit, Tasmania. Includes earnings of salaried employees, overtime earnings, over-award and bonus payments, etc., in addition to wages at award rates.

(e) Average weekly earnings, Tasmania, 1966-67 = \$58.50.

As pointed out in the section 'Definitions' all values shown relating to building jobs are *current values* only; no attempt has been made to adjust values to a constant prices basis so as to allow for increases in construction costs over the periods shown. The next table and accompanying graph include details of the relevant wholesale price indexes (for Hobart) and of average weekly earnings per employed male unit for Tasmania, which give some perspective to the trends shown in the building value series. In the semi-logarithmic graph, equal rates of change (compound percentage rates of growth) are represented by lines of the same angle of slope to the horizontal axis. Therefore, this graph enables ready comparison between the respective rates of growth of the value of building work done and the two indexes shown.

Value of All Building Work Done, Wholesale Price Index of Materials Used in House Building (a) and Average Weekly Earnings Index (b)
(Semi-logarithmic (Ratio) Scale Graph)



(a) All groups, Hobart; base: year 1966-67 = 100.0.

(b) Average weekly earnings per employed male unit for Tasmania adjusted to the base: year 1966-67 = 100.0.

FINANCIAL ASSISTANCE FOR HOUSING

The State Housing Department

General

The Housing Department was established in July 1953 as a separate authority to administer that portion of the *Homes Act* 1935 which relates to the purchase and development of land for housing, and the erection of homes for rental and sale. Funds for these purposes, up to 30 June 1971, were made available under the Federal-State Housing Agreement; allocations of loan funds under the agreement were: (i) in addition to loan raisings credited to State Loan Fund; and (ii) not part of State public debt. For 1971-72 and 1972-73 loans for State housing were credited to State Loan Fund and formed part of public debt. However, for 1973-74 the pre 1971-72 situation was restored when a new Federal-State Housing Agreement became operative. In addition to providing finance for the purchase and development of land and construction of houses, the new Agreement also

provides finance for the purchase, upgrading and renovating of existing dwellings and places certain restrictions on the allocation of homes constructed from Agreement funds. The Department uses both day labour and private contractors and has its own factory for timber storage, milling and joinery manufacture in addition to plumbing and electrical workshops, etc. Most dwellings constructed are now three-bedroom brick veneer units, roofed with tiles or corrugated iron. Flats for elderly persons, multi-unit flats and villa units have also been constructed.

Departmental Construction of Dwellings

During 1975-76, 829 dwellings (745 houses, 30 villa flats, 1 moveable unit and 53 elderly persons' units) were completed. The following table shows the aggregate of dwelling units constructed by the Housing Department (and by an earlier State housing construction authority) since 1944:

Aggregate of Dwellings Constructed by State Housing Department
From 1944 to 30 June 1976 (a)

Type of dwelling	Bed-sitting room	One bedroom	Two bedroom	Three bedroom	Total
Single unit—Timber .. ..	..	..	566	9 308	9 874
Other material .. ..	..	..	93	4 806	4 899
Elderly persons' flatettes ..	462	229	..	..	691
Maisonettes .. .. .	..	..	12	10	22
Multi-unit flats (individual units)	1	129	169	17	316
Villa flats .. .. .	..	7	176	31	214
Total dwelling units ..	463	365	1 016	14 172	16 016

(a) Construction to 30 June 1953 undertaken by Housing Division of Agricultural Bank of Tasmania; subsequent construction by State Housing Department.

Rental of Dwellings

As from 1 August 1976, all Housing Department dwellings have been allotted on a rental basis only. Allocations are made in accordance with the income limits for eligibility stipulated in the *Housing Agreement Act 1973*. The income limit to qualify for a three bedroom home is set at 85 per cent of average weekly earnings per employed male unit for the latest December quarter figure available for Australia. The weekly rental of newly erected three bedroom homes in the Hobart area as at 30 June 1977, was \$37.00. In cases where the occupiers' incomes are insufficient to enable them to meet the full economic rental, rebates may be provided. These are graduated according to the incomes of the occupiers.

Agricultural Bank of Tasmania—Advances to Homebuilders

Housing Function

The Agricultural Bank, as an approved authority, receives an allocation of funds provided under the Federal-State Housing Agreement and provides loans under the provisions of the *Homes Act* to assist borrowers to build or purchase houses for themselves and their families. To be eligible for a loan, an applicant, whose gross income is subject to a needs test is required to represent a family. Loans up to a maximum of \$22 500, or 97 per cent of the Bank's valuation of land and dwelling, whichever is the lesser, were considered on acceptable proposals throughout Tasmania during 1977. Such loans attracted interest of 5.75 per cent or 6.25 per cent during 1977, depending on the application of the needs test. Loans are repayable by equated monthly instalments over periods up to 30 years. State Loan Fund loans are also available subject to a needs test; the current rate of interest is 8.5 per cent.

The following table shows details for recent years:

Agricultural Bank: Advances for Housing (a)

Particulars	1971-72	1972-73	1973-74	1974-75	1975-76	1976-77
Advances approved—						
Number	291	317	490	453	431	393
Value \$'000	2 571	3 018	5 480	6 148	6 100	8 355
Advances outstanding (b) \$'000	22 187	23 219	25 608	30 290	33 481	38 832

(a) Excludes advances to building societies.

(b) At end of period.

The Agricultural Bank also administers the allocation of advances to terminating Co-operative Housing Societies; details of such advances and of the terminating Co-operative Housing Societies appear in Chapter 12, 'Private Finance'.

Defence Service Homes Corporation

General

The Corporation's function is to administer the *Defence Services Homes Act* which was enacted in order to assist certain former and serving members of the Australian Forces and certain other persons to obtain housing with finance made available on a term of up to 45 years at interest rates from 3¾ per cent.

Defence Service Homes Loans

To be eligible for a loan, an applicant must: (i) have volunteered for, or had, overseas service; (ii) be a member or ex-member of the defence forces who has served at least for three years continuous service after 7 December 1972; or (iii) be a National Serviceman who completed the period of service for which he was deemed to have been engaged to serve, on or after 7 December 1972. Also, neither the applicant nor his spouse must be the owner of a home at the time of seeking a loan. The following table shows details of Defence Service Homes activities in the provision of finance for Tasmanian housing. Transfers of loans (and houses) between borrowers are not shown as expenditure, nor are details given of additional loans advanced for alterations, etc., to homes already subject to Defence Service Homes finance.

Defence Service Homes Operations: Homes Financed in Tasmania

Year	Loan applications approved (a)	Homes financed			Expenditure
		Homes purchased (b)	Homes built	Mortgages taken-over (c)	
	no.	no.	no.	no.	\$'000
1971-72	221	144	16	41	1 670
1972-73	203	153	17	47	2 050
1973-74	301	224	7	48	3 200
1974-75	256	190	5	54	3 220
1975-76	195	126	17	58	2 795
1976-77	125	70	8	42	1 882

(a) Loan applications *approved* are not necessarily paid out in the same year. A transfer from one borrower and a resale to another is included as a loan approved but not included elsewhere.

(b) New or existing properties not previously subject to Defence Service Homes finance.

(c) Mortgages, raised by individuals to build homes, taken over by Defence Service Homes on satisfactory completion of the home.

Homes Savings Grant Scheme

Under the Federal *Homes Savings Grant Act* 1976, a grant is payable to people who, on or after 1 January 1977, contract to buy or build, or commence to construct, their first home in Australia. Persons contracting for their first homes during 1977 could receive a grant of up to \$667 depending upon their savings. A maximum grant of \$1 333 applied from 1 January 1978 and \$2 000 is to apply from 1 January 1979.

People who acquired their home on or before 31 December 1976 may be eligible under the *Homes Savings Grant Act* 1964 which provides for the payment of grants to young married couples who acquired homes valued at no more than \$22 500.

The following table gives details for recent years of grants made under the *Homes Savings Grant Act* 1964:

Home Savings Grants in Tasmania

Year	Number of grants approved for homes			Grants	
	Purchased (a)	Contract- built	Owner- built	Number approved	Value (\$'000)
1970-71	638	264	101	1 003	422
1971-72	712	204	86	1 002	421
1972-73	1 109	256	86	1 451	716
1973-74	1 059	252	99	1 410	824
1974-75	840	138	84	1 062	628
1975-76	713	39	44	796	477

(a) Includes flats and home-units.

Housing Loans Insurance Corporation

The Housing Loans Insurance Corporation was established by the *Housing Loans Insurance Act* 1966 to administer the Federal Government's Housing Loans Insurance Scheme under which approved lenders may be insured against losses arising from the making of housing loans. An amendment to the Act in 1977 broadened the scope of the Corporation's activities and, in addition to loans for the purchase of construction of homes for owner occupancy, loans for the purchase of vacant land and commercial housing propositions became insurable.

Owner occupancy loans are insurable without limit on loan amount, interest rate or term. Loans for the purchase of vacant land are insurable where the borrower intends to erect his home at a later date. In the commercial field loans for rental housing ranging from single houses or home units to multi-storey structures, together with loans for the purchase and development of land and the building of project housing including home units, are acceptable.

A once only premium is charged by the Corporation at the time a loan is made. With owner occupancy loans comprising 94 per cent and 95 per cent of the valuation of a home the premium is 1.4 per cent of the amount of the loan. Loans from 95 per cent to 100 per cent of valuation carry a loading of 10 per cent on the 1.4 per cent rate. On loans less than 94 per cent of valuation, the premium falls progressively down to 0.25 per cent on loans of less than 76 per cent of valuation. Premium rates for the purchase of vacant land are as for home ownership plus a loading of 10 per cent and attractive rates apply to commercial housing loans.

The Corporation will insure a loan made to enable a borrower to buy or build a house, to buy a home unit, or to discharge an existing mortgage. Loans for alterations and extensions and loans to meet expenses of providing or improving lighting, sewerage, drainage, fences, roads etc. are also insurable. In addition to loans secured by a registered first mortgage, there is provision for the insurance of second mortgage loans and cover is available for either full-term, fixed-term or five-year loans.

The following table shows the number of loans insured, their purpose and amount, during the past three years:

**Housing Loans Insurance Corporation
Loans Insured in Tasmania**

Purpose of loan	1973-74		1974-75		1975-76	
	Number	Amount (\$'000)	Number	Amount (\$'000)	Number	Amount (\$'000)
Housing—						
Building a new house ..	110	1 645	47	854	69	1 504
Purchase of—						
New house	169	2 382	78	1 425	115	2 571
Established house ..	1 082	12 405	1 009	13 824	1 111	19 074
Discharge of mortgage ..	33	389	39	599	37	605
Home units	25	328	37	655	38	712
Other	10	95	10	159	13	248
Total	1 429	17 244	1 220	17 516	1 383	24 714

Chapter 14

EDUCATION AND CULTURAL ACTIVITIES

SCHOOL EDUCATION

Introduction

In 1869 Tasmania became the first Colony in the British Empire to make education compulsory. The ages for obligatory attendance at school were progressively widened: in 1898 school attendance was made obligatory between the ages of seven and 13 years; in 1912 between six and 14 years; and in 1946 Tasmania became the only Australian state to make attendance compulsory up to the age of 16, the starting age being six.

Education in Tasmania is now provided at primary, secondary and tertiary levels by government institutions and to secondary level by non-government schools.

A period of 82 years in which the State accepted no financial responsibility for non-government education ended in 1967 when amendments to the *Education Act 1932* allowed government grants to independent schools. The assistance is paid on a capitation basis and is dependent upon the level of schooling of the pupil.

The task of Tasmanian educational authorities, as in other Australian states in the post-war period, has been to provide more schools, more teachers and better facilities; the principle factors exerting pressure have been: (i) a rapidly growing school population; (ii) a change in attitude resulting in increased demand for secondary and tertiary education; and (iii) community acceptance in general of the need for better education. A feature of recent years has been the acceptance of greater financial responsibility by the Federal Government in a field which was once exclusively the concern of the State.

The remainder of this section on school education covers the following:

- (i) the State (or Government) school system;
- (ii) the non-government (or independent) schools;
- (iii) teachers and teacher training;
- (iv) examination and Schools Board moderation procedures; and
- (v) functions of the Education Department relating to equipment, libraries, etc.

Schools, Government and Non-Government

In 1946 the Tasmanian Government and non-government systems of education were reorganised to provide a three, four or five-year post-primary course. (The pre-war system of secondary education had comprised two stages, a three-year course followed by a two-year course; with a leaving age of 14, and with *selective entry* to government high schools. The proportion of pre-war pupils taking secondary education was very low.)

The dual nature of educational responsibility in Tasmania and the numbers of pupils in both government and non-government schools, in primary and secondary grades, are shown in the following table:

**Government and Non-Government Schools
Pupils Enrolled at 1 August According to Grade of Education
(Number)**

Particulars	1972	1973	1974	1975	1976
Government schools—					
Primary grades (a)	50 584	49 845	49 515	49 976	50 091
Secondary grades	28 541	28 935	29 347	30 042	30 183
Special (b)	832	925	973	899	908
Total	79 957	79 705	79 835	80 917	81 182
Non-government schools—					
Primary grades	7 815	7 882	7 973	8 204	8 183
Secondary grades	6 266	6 342	6 426	6 393	6 221
Special	17	13	8	..	27
Total	14 098	14 237	14 407	14 597	14 431
Total all schools	94 055	93 942	94 242	95 514	95 613

(a) Includes kindergarten classes; see text below.

(b) Includes pupils in special classes attached to ordinary schools.

Kindergarten Classes and Preparatory Classes

In this chapter, the term *kindergarten* is used to describe all pre-school classes, irrespective of whether they operate attached to other schools or whether they operate as separate entities. Separate figures are shown in a later table for enrolments in kindergartens. *Preparatory* classes, commenced in 1974, are included in 'Primary grades'.

The State (or Government) School System

Introduction

The present system had its genesis in the *Education Act 1885*, under which a department was established, headed by a Director of Education, responsible to a Minister. Under the Act, aid to non-government schools was abolished and only in 1967 was this principle re-introduced (with a system of capitation subsidies).

Education is compulsory between the ages of six and 16 years although, in some cases, special exemptions may be obtained. With two exceptions, all schools are co-educational. Education is secular and free; parents buy their children's books, paints, instruments, etc. Pupils' transport is either provided by the Department or subsidised where daily travel costs on public transport exceed 20 cents. The arrangement of transport has been important in the organisation of district and high schools where educational facilities are concentrated and centralised, thereby eliminating many of the smaller country schools.

Present Organisation

Under a Director-General operate three Directors designated: (i) primary; (ii) secondary; and (iii) technical. Regional directors and superintendents are responsible for specific districts; supervisors assist in administration and provide services to schools. Specialist sections deal with curricula, teaching aids, science equipment, speech education, music, physical education, guidance and welfare, library services, educational planning and research, etc.

Expenditure on Education

The following table shows educational expenditure by the State Government from the public account; expenditure from Trust Funds is made by the State acting mainly as agent for the Federal Government.

Expenditure on Education from Consolidated Revenue, Loan Fund and Trust Funds (\$'000)

Particulars	1973-74	1974-75	1975-76
From Consolidated Revenue—			
General administration, regulation and research	2 091	3 479	4 681
Student transport	2 818	3 347	3 930
Primary and secondary	38 028	53 238	67 351
Technical	3 060	4 841	6 128
University	2 067	13	18
Other higher education	4 871	3 460	4 753
Special schools	696	1 828	1 682
Other	616	1 371	680
Total	54 246	71 576	89 223
From Loan Fund—			
General administration, regulation and research	3 482	3 922	5 953
Primary and secondary (including pre-schools) ..	8 011	14 370	18 062
Technical	1 108	188	1 424
University	1 373	..	..
Other higher education	2 078	..	..
Adult education	57	40	31
Special schools	245	16	320
Total	16 354	18 536	25 792
From Trust Funds—			
General administration, regulation and research	42	27	17
Primary and secondary	2 452	4 673	3 990
University	6 683	13 992	16 380
Other higher education	3 249	11 442	12 565
Adult education	435	663	974
Other	140	310	465
Total	13 001	31 108	34 391
Grand total	83 601	121 220	149 406

It should be noted that the preceding table includes amounts voted under other departmental heads for the provision of educational facilities, principally rental and tenancy charges and water, sewerage and other rates paid by the Lands Department.

Enrolment

Enrolments in government schools in the last five years were:

**Government Schools
Number of Pupils at 1 August**

Pupils	1972	1973	1974	1975	1976
Boys	41 654	41 318	41 299	41 712	41 806
Girls	38 303	38 387	38 536	39 205	39 376
Total	79 957	79 705	79 835	80 917	81 182

Age of Pupils in Each Class

The following table summarises the system of government schooling in Tasmania showing the average ages of pupils in each grade and the type of certificate issued for final year examinations:

Government Schools						
Average Ages of Pupils, Primary and Secondary, in Each Grade, and Certificates Issued						
Primary classes				Secondary classes		
Grade	Mean age at 1.8.76		Grade	Mean age at 1.8.76		Certificate issued
	Years	Months		Years	Months	
Kindergartens—						
Separate	4	11	7 ..	12	10	..
Attached	5	3	8 ..	13	10	..
Preparatory	5	9	9 ..	14	9	Preliminary School Certificate
1	6	9				School Certificate
2	7	9	10 ..	15	8	Higher School Certificate
3	8	8	11 (a)	16	10	
4	9	8	12 (a)	17	10	
5	10	9				
6	11	9				

(a) Secondary grades eleven and twelve indicate pupils in their first or second year at Higher School Certificate level.

Number of Government Schools

The following table shows the number of government schools in Tasmania:

Number of Government Schools at 1 August						
Type of school	1971	1972	1973	1974	1975	1976
Kindergartens (separate)	44	41	39	34	38	34
Primary (a)	144	144	148	155	153	154
Primary with secondary classes	7	8	2	1	..	..
Special (b)	16	16	17	18	18	19
Area (c)	35	34	..	..	..	..
District (c)	6	6	39	36	37	37
High	28	30	30	30	32	33
Matriculation colleges	3	3	5	5	7	7
Total	283	282	280	279	285	284

(a) Many have kindergartens attached.

(b) Includes the correspondence school.

(c) These schools provide both primary and secondary facilities. From 1973 'area schools' became 'district schools'.

Kindergarten Education

Until 1969, pre-schools were established on the initiative of groups of parents, the Department providing the cost of the building but eventually recovering half its outlay from the parents. Commencing in 1969, all new facilities for pre-school education were provided in kindergartens attached to primary schools.

At present, there is a mixture of pre-school facilities, some being provided at primary schools and others constituting separate entities. Pupils at this level of education are shown in the next table:

Enrolments in Kindergartens at 1 August

Particulars	1972	1973	1974	1975	1976
Kindergartens—					
Separate	1 745	1 714	1 449	1 628	1 486
Attached	4 955	5 277	4 538	4 957	5 163
Total (a)	6 700	6 991	(b) 5 987	6 585	6 649

(a) Included in other tables as part of total government school enrolments.

(b) See text that follows for explanation of decrease.

State Primary Schools

General: As mentioned earlier, a preparatory grade was introduced to some schools in 1974. This extra grade will be provided in all primary schools as staffing and accommodation allow. Thus, in future there will be seven primary grades plus kindergarten. The approximate age of entry is four years to kindergarten, five years to preparatory and five and a half to six years to grade 1, at 1 January of each year.

Primary Classes: Most primary schools have six grades, a kindergarten and, increasingly, a preparatory class. Generally parents may select the school they prefer for their children without restriction but, in some areas, zoning directs children to attend a particular primary school.

In addition 37 district schools have primary grades and draw many pupils from outlying localities. Free transport has made this possible and has led to a reduction in the total number of primary schools.

Primary Pupils: The table below shows the ages and numbers of pupils receiving primary education in Tasmanian Government schools:

Ages and Numbers of Pupils Receiving Government Primary Education (a) at 1 August

Age last birthday (years)	1972	1973	1974	1975	1976
Under 5	2 012	2 054	1 888	2 260	2 392
5	4 923	5 418	6 034	6 145	6 456
6	6 264	6 219	6 511	7 019	6 749
7	6 549	6 341	6 289	6 522	6 953
8	7 019	6 502	6 287	6 436	6 736
9	7 089	7 098	6 647	6 320	6 369
10	7 258	7 036	6 939	6 352	6 186
11	7 225	6 972	6 724	6 856	6 269
12	2 104	2 048	2 049	1 960	1 869
13	124	140	124	98	108
14	9	11	13	6	4
15 and over	8	6	10	2	..
Total—Boys	26 288	24 797	25 613	25 711	25 822
Girls	24 296	25 048	23 902	24 265	24 269
Pupils	50 584	49 845	49 515	49 976	50 091

(a) Includes kindergarten classes.

Primary Curriculum: The primary school curriculum has undergone considerable change in recent years both in teaching methods and subject matter. The subjects are English (including reading, spelling, oral and written work), social science, arithmetic, science, art, music, arts and crafts, religious and moral education, and health and physical education.

Pupil Grouping: Promotion within the schools is generally by age at the beginning of the school year, with accelerated progress or repetition of classes at the principal's discretion; grouping may be by ability, where numbers allow, with each child being able to work with his equals in each subject, regardless of age. Differential teaching adapts the school program to meet the widely varying needs and abilities of pupils. The skill subjects of reading, writing, spelling and arithmetic are particularly suited to this method of teaching, testing and grading. The increasing provision of specially designed open plan areas housing two, three or four classes in the space available, provides opportunity for teachers to work as a team and assist in the treatment of individual differences in pupils. Schools now being erected or planned provide both dual and single classrooms. Some schools have experimented with *non-grading*, a method of organisation which allows pupils in certain subjects to work at their own level of competence. A few other schools have adopted this organisation in one or two subjects only.

Special Schools and Special Classes

The Department has special schools, and also special and remedial classes in ordinary schools, for children who are physically handicapped, mentally retarded, or otherwise unable to profit from ordinary class teaching. Instruction varies according to the handicap; where it is physical, the main need is to maintain normal or near-normal individual programs. Many pupils eventually can be transferred to ordinary schools into the grades appropriate to their ages.

Schools and classes for slow learners and mentally retarded children follow the curricula for kindergartens and primary schools but no attempt is made to reach examination standards. The teaching of activities and basic skills is the main concern in these classes which are also to be found in some primary and high schools.

Government Secondary Schools

Almost all children attend secondary classes, starting at an age varying from 11½ to 13 years. If a choice has to be made between a high and a district school a transfer committee considers the matter, taking note of performance in grade 6. High schools are non-selective, comprehensive and, with two exceptions, co-educational.

The differences between the types of secondary schools are related mainly to the level of the final examination or certificate available to students. The levels are: School Certificate endorsed Preliminary (three-year course); School Certificate (four-year course); Higher School Certificate (five or six-year course). The School and Higher School Certificates replaced the Secondary Schools, Schools Board and Matriculation Certificates which were last awarded in 1968.

The essence of the present system is: (i) all assessment and certification come under the authority of the Schools Board of Tasmania; (ii) two certificates only are issued; and (iii) the certificates record achievement in individual subjects. The certificates are:

The School Certificate: Awarded in subjects for three and four-year courses; basis of award is by internal assessment and recommendation by schools.

The Higher School Certificate: Awarded in subjects studied in fifth or sixth secondary year; basis of award is an external examination conducted by the Board. The University is free to determine what constitutes qualification for university entrance and can nominate the subjects and the levels of achievement at the Higher School Certificate examination necessary for entry; the scope of the examination includes subjects not designed primarily for purposes of university entrance.

A more detailed account of the examinations and procedures adopted for awarding the School and Higher School Certificates is contained in a later section, 'Examinations'.

The following table shows the age and number of students in Tasmanian government secondary schools:

Pupils Receiving Government Secondary Education at 1 August, by Age

Age last birthday (years)	1972	1973	1974	1975	1976
11	389	261	246	235	(a) 188
12	4 837	4 902	4 943	4 977	4 920
13	6 682	6 924	7 137	6 710	6 623
14	6 681	6 787	6 848	7 177	6 971
15	5 451	5 640	5 792	6 101	6 630
16	2 800	2 645	2 671	2 742	2 993
17	1 285	1 284	1 231	1 382	1 240
18 and over	416	492	479	718	618
Total—Boys	14 841	14 928	15 067	15 420	15 414
Girls	13 700	14 007	14 280	14 622	14 769
Pupils	28 541	28 935	29 347	30 042	30 183

(a) Includes one boy under 11 years.

The next table shows the number of secondary pupils by sex and grade in all government schools:

Secondary Pupils in Government Schools at 1 August, by Grade

Year	Secondary grade						Total
	7	8	9	10	11	12	
Boys							
1972	3 605	3 542	3 360	2 617	934	783	14 841
1973	3 736	3 565	3 305	2 642	890	790	14 928
1974	3 795	3 693	3 299	2 609	942	729	15 067
1975	3 607	3 760	3 521	2 726	936	870	15 420
1976	3 602	3 575	3 576	2 925	907	829	15 414
GIRLS							
1972	3 453	3 284	3 040	2 426	922	575	13 700
1973	3 473	3 365	3 124	2 458	912	675	14 007
1974	3 438	3 469	3 186	2 530	1 000	657	14 280
1975	3 313	3 429	3 341	2 701	1 071	767	14 622
1976	3 317	3 319	3 292	2 850	1 180	811	14 769

District Schools

Area schools, first established in 1935, were replaced by district schools from the beginning of 1973. The area schools were designed to serve rural areas; however, changing concepts of education and parental demands for a higher level of education more closely related to the levels provided by high schools, led to an upgrading of the level of education offered at country secondary schools and to the creation of district schools.

Subjects for the School Certificate are available to pupils in all district schools and high schools.

Government Matriculation Colleges

At matriculation colleges students are exclusively concerned with Higher School Certificate subjects undertaken as one or two-year courses. The first such college was the Hobart Matriculation College (previously Hobart High School)—no junior students were enrolled after 1961 and by 1965 all students were attempting matriculation. In 1967 Launceston High reached this stage and in 1968 the Elizabeth Matriculation College, in Hobart, was opened and elimination of junior students was completed by 1970. In 1973 the newly constructed Rosny College was opened to serve the eastern shore suburbs of Urban Hobart and the new Don College was opened at Devonport. (The three earlier matriculation colleges had resulted from conversion of existing high schools.) Alanvale College at Launceston was opened in 1975, while the new Hellyer College at Burnie was opened in 1976 to replace Higher School Certificate classes previously available at Burnie High School. As many students do not attempt to matriculate, the word 'matriculation' is not used in the names of the new colleges.

The advantages claimed for these colleges is that they concentrate, in the one centre, teachers who are specialists; further, the students benefit to the extent that the colleges are an intermediate step between the more disciplined high school and the university.

Correspondence School

In 1975, the External Studies Section of the Division of Technical and Further Education took over the work of the Correspondence School. The section offers education by correspondence at primary level, in some School Certificate subjects, some Higher School Certificate subjects and some Technical and Further Education courses.

Non-Government (or Independent) Schools

Non-government schools have played a valuable part in Tasmanian education. Policies are framed by principals in conjunction with their senior staff and with the approval of their governing bodies or church.

Registration

Non-government schools and teachers are subject to the regulations of the Teachers and Schools Registration Board. This Board consists of nine members who hear and determine all applications for registration and keep a record of all teachers and schools not administered by the Education Department. Every school is graded and teachers are registered in one or more classifications or as special subject teachers. 'Provisional' teachers are those gaining qualifications so they can be registered. The Board may prescribe the mode of classifying teachers, the course of study and training required, the examinations to be passed, and the recognition of overseas qualifications. To secure registration, schools must provide for proper access, drainage, light, ventilation and sanitary conveniences, and inspections may be made by officers appointed by the Board. A daily register of attendance has to be kept.

State Assistance to Non-Government Schools and Pupils

The *Education Act 1932* was amended in 1967 to provide for direct payments to non-government schools. The amount paid is based on the number of pupils enrolled at 1 August each year. The 1976-77 expenditure was \$1 919 000, which

included a special grant of \$1 506 000. From the beginning of 1970, the Federal Government also provided per capita grants to independent schools. Details are contained in a later section dealing with Federal Government activities in education. State legislation passed in June 1970 provides for subsidies related to building loans interest. The amount of subsidy paid in 1976-77 was \$250 000.

Apart from these subsidies, benefits include: free or subsidised transport; use of the facilities of the Department's curriculum centre, the media centre, and speech education and guidance branches; attendance at trade and domestic science classes if room is available; and attendance by teachers at Departmental schools of method. Equipment can be purchased through the Supply and Tender Department.

Enrolment at Non-Government Schools

Most non-government school pupils are in schools controlled by religious denominations, as the next table shows:

**Non-Government Schools and Pupils at 1 August
(Number)**

Particulars	Church of England	Presbyterian	Catholic	Seventh-day Adventist	Other schools	All schools
PUPILS						
1972 Boys	835	236	4 677	63	905	6 716
Girls	722	302	5 182	66	1 110	7 382
1973 Boys	852	247	4 633	64	999	6 795
Girls	706	325	5 211	62	1 138	7 442
1974 Boys	875	257	4 651	76	1 066	6 925
Girls	734	349	5 129	76	1 194	7 482
1975 Boys	895	226	4 675	71	1 150	7 017
Girls	818	351	5 156	72	1 183	7 580
1976 Boys	889	211	4 723	85	1 038	6 946
Girls	805	331	5 113	86	1 150	7 485
SCHOOLS						
1976	4	2	39	4	22	71

The following table shows the number of secondary pupils by sex and class in all non-government schools:

Secondary Pupils in Non-Government Schools, by Year, at 1 August 1976

Pupils	Secondary year						Total
	1	2	3	4	5	6	
Boys	639	599	587	577	264	247	2 913
Girls	697	735	735	637	312	192	3 308
Total	1 336	1 334	1 322	1 214	576	439	6 221

Of the 24 schools in 1976 which catered for secondary pupils, 17 had Higher School Certificate classes.

Most independent school pupils are to be found in primary classes, and most of them are in Catholic schools. The following table shows the numbers and ages of all pupils in non-government school primary and sub-primary classes:

Pupils Receiving Non-Government Primary Education at 1 August, by Age

Age last birthday (years)	1972	1973	1974	1975	1976
Under 7	2 106	2 363	2 496	2 773	2 737
7	959	857	946	938	1 039
8	1 073	1 000	906	988	997
9	1 057	1 037	1 044	977	960
10	1 106	1 098	1 090	1 072	1 020
11	1 103	1 131	1 112	1 106	1 091
12	373	367	346	319	312
13	36	26	29	28	25
14	1	3	4	3	2
15 and over	1	..	..	..	..
Total—Boys	3 703	3 750	3 903	4 056	4 024
Girls	4 112	4 132	4 070	4 148	4 159
Pupils	7 815	7 882	7 973	8 204	8 183

The following table shows the ages of pupils in non-government schools at secondary level:

Pupils Receiving Non-Government Secondary Education at 1 August, by Age

Age last birthday (years)	1972	1973	1974	1975	1976
11	118	107	97	84	101
12	942	1 051	1 063	1 059	991
13	1 321	1 283	1 343	1 362	1 266
14	1 309	1 337	1 341	1 344	1 415
15	1 191	1 214	1 231	1 174	1 234
16	790	799	816	866	732
17	484	442	443	425	403
18 and over	111	109	92	79	79
Total—Boys	3 013	3 045	3 022	2 961	2 913
Girls	3 253	3 297	3 404	3 432	3 308
Pupils	6 266	6 342	6 426	6 393	6 221

Teachers and Teacher Training

There is a variety of courses available to trainee teachers in this State. The University of Tasmania awards the Diploma of Education after one year of a post-graduate course in which graduate students train as infant, primary or secondary teachers. Since 1975, a four-year course leading to the degree of Bachelor of Education has been provided. There is also a post-graduate course leading to the degree of Bachelor of Special Education. The Tasmanian College of Advanced Education, with divisions in Launceston and Hobart, provides a basic three-year course with an extension to four years for some selected students. On completion of the three-year course the student is awarded the Diploma of Teaching and on completion of a four-year course the student qualifies for the degree of Bachelor of Education. A course is provided for full-time and part-time graduate students leading to the degree of Master of Education. Both divisions offer courses for training in kindergarten, infant, primary and secondary teaching, but specialist courses are not common to both divisions. Specialisation in physical education, music, art and industrial arts is only possible in Hobart, whereas courses in English, speech and drama, home economics and commercial subjects are only offered in Launceston.

Each year some students are given the opportunity of training in other states in areas for which courses are not available in Tasmania, e.g. speech pathology (at the University of Queensland), Asian languages (at the Australian National University, Canberra) and training for teaching deaf children (at the Glendonald Institute in Victoria).

The following table shows the number of teachers and instructors in Tasmanian government schools (excluding technical colleges):

Number of Government School Teachers and Instructors at 1 August 1976 (a)

Type of school	Full-time			Part-time and casual		
	Males	Females	Persons	Males	Females	Persons
Kindergarten (separate) ..	..	181	181	..	20	20
Special (b)	30	90	120	..	38	38
Primary	338	1 218	1 556	15	436	451
District—						
Primary	51	237	288	2	71	73
Secondary	164	96	260	8	62	70
High	908	654	1 562	16	55	71
Matriculation colleges ..	190	113	303	13	23	36
Total	1 681	2 589	4 270	54	705	759

(a) Excludes teachers in non-teaching positions (e.g. curriculum branch staff, guidance officers, speech education, music and training aid centres).

(b) Includes correspondence school.

The following table shows the number of teachers and teachers-in-training in Tasmania:

Full-Time Teaching Staff in Government Schools (a) and Teachers-in-Training at 1 August

Type of teacher	1972	1973	1974	1975	1976
Head teachers—					
Males	223	235	234	233	232
Females	17	15	16	20	20
Other teachers—					
Males	1 275	1 395	1 405	1 520	1 549
Females	2 391	2 506	2 560	2 657	2 795
Total teachers (a)—Males ..	1 498	1 630	1 639	1 753	1 781
Females ..	2 408	2 521	2 576	2 677	2 815
Teachers-in-training—					
Males	492	473	465	435	445
Females	945	997	1 060	1 130	1 203

(a) Includes teachers in non-teaching positions (e.g. curriculum branch staff, guidance officers, etc.) but excludes supervisors, those engaged in teacher training and technical education, part-time teachers, and those on long service leave.

In primary schools in 1976, 78 per cent of the teachers were females. All subjects are taught by each teacher in these schools but itinerant teachers, when available, take physical education, music and speech classes on a circuit basis with each teacher being responsible for the teaching of the subject in several schools. In the post-primary schools, most teachers are specialists attached to subject departments within each school. In the smaller district schools, one teacher may take several subjects; rural science, home arts and crafts and technical subjects are handled by resident or itinerant specialists as available.

Teacher Training: The institutions where teachers-in-training are studying are shown in the next table:

Teachers-in-Training at 1 August

Institution attended	1972	1973	1974	1975	1976
MALES					
University of Tasmania	243	244	237	217	224
Tasmanian College of Advanced Education	197	229	227	217	218
Other institutions	52	..	1	1	3
Total	492	473	465	435	445
FEMALES					
University of Tasmania	287	308	344	364	411
Tasmanian College of Advanced Education	653	686	704	752	772
Other institutions	5	3	12	14	20
Total	945	997	1 060	1 130	1 203

Examinations

The Schools Board

The Schools Board of Tasmania was constituted on 31 October 1944 by the *Education Act 1944* to devise and govern new systems of awarding school certificates.

In 1946 the school leaving age in Tasmania was raised to 16 years and the Board instituted a four-year course of academic secondary education leading to the Schools Board Certificate. The Intermediate Examination, which had been conducted by the University at third-year secondary school level until 1938, had been replaced by similar examinations conducted by the State Education Department and the Associated Public Schools. These were replaced in 1946 by the Schools Board Certificate, studied at fourth-year level.

The Schools Board Certificate demanded a level of achievement in basic and optional subjects after a four-year course of general education. Secondary schools were allowed the choice between an accrediting system or an external examination.

As a result of the proposals of the Schools Board and the Radford Report, the Schools Board was re-constituted with a membership of 21 on 1 September 1966, to allow the Board to become, in 1969, the sole examining and certifying body at the secondary level. A further amendment to the Act in 1974 made provision for the Council of Advanced Education to nominate members, and increased the membership of the Board to 23 as from 1 July 1974.

An important change of considerable significance to employers, and to the prerequisites they demand of applicants for employment, occurred when new types of certificates were introduced in 1969. There are only two such certificates issued, known as the *School Certificate* and the *Higher School Certificate*. These replaced all previous certificates which were *group* certificates demanding, in varying degrees of detail, certain compulsory subjects or groups of subjects as prerequisites to the award of the certificate. The essential difference is that both of the new certificates are *subject* certificates requiring no compulsory subjects or groups of subjects to be studied.

For the School Certificate there are no external examinations and awards are determined by internal assessment with a wide variety of methods of evaluation. A system of regional moderation (*see later section*) has been implemented by the Schools Board to ensure comparability of standards between schools. Final results of the School Certificate are notified to candidates in December by the principal of the school attended by the candidate. Each candidate receives a printed result slip showing the level of study and the award given in each subject. The formal certificate is issued by the Schools Board of Tasmania during the following year.

The School Certificate

The subjects for this certificate may be taken at various levels and a wide choice is available to cater for different levels of ability and interests. A preliminary award may be granted after the third year of secondary education to those candidates who leave school at this stage. The full award is granted to successful candidates who complete four years of study.

The Higher School Certificate

This is taken at the end of the fifth or sixth year of secondary education. The certificate is awarded as a result of examinations conducted in November or December each year. Subjects may be studied at Level I, Level II, Level III Division 1 or full Level III, but all levels are not necessarily available for all subjects. Requirements for matriculation are determined by the University of Tasmania from the results of the Higher School Certificate examinations conducted by the Schools Board of Tasmania in certain Level III subjects.

In some Level III subjects awards are determined solely on the basis of an external examination. In other Level III subjects awards are determined by the use of an external examination component together with a school assessment component. The Schools Board has ruled that the school assessment component may provide a maximum of 50 per cent of the total result, but the actual proportion of this component to be used for each subject is determined by the Schools Board on the recommendation of the appropriate subject committee. Where an internal assessment component exceeds 10 per cent of the total result, the Board has ruled that the school assessments for each class must be standardised to have the same mean and standard deviation as the external examination results of the members of that class. In Level I, Level II and Level III Division 1 subjects, awards are determined by the candidate's school, after the school has taken part in a consultative system, which aims to provide comparability in standards between schools in the subject. The Board appoints a Subject Adviser in each subject field. The Subject Advisers are responsible to the Schools Board for the co-ordination of assessment procedures in their particular subject field and for ensuring that satisfactory standards are maintained.

In most subjects at Level III a Division 1 syllabus will also be provided for those wishing to undertake a preliminary study of the subject before attempting the full Level III syllabus. It is not necessary to attempt the Division 1 syllabus to obtain full Level III award, nor do results at Level III Division 1 count towards the full Level III award.

Moderation

The Schools Board of Tasmania, as the body responsible for awarding the secondary school awards (the School and Higher School Certificates), is also responsible for ensuring development of satisfactory moderation procedures and the maintenance of subject standards. To this end, the State is divided into seven

moderation regions. Moderation is the method used to ensure reasonable comparability of standards between schools throughout the State. Moderation involves a number of moderation bodies, whose members include members of the Schools Board, superintendents of high schools, high school principals and other high school staff. (Moderation procedures are covered in greater detail in the 1977 *Year Book*.)

Other Education Matters

Various functions of the Education Department are described in the following section; some of these are applicable to both government and non-government schools.

Equipment

The Department maintains an active interest in the development of teaching methods and of teaching aids. The Tasmania Media Centre (formerly known as the Teaching Aids Centre) provides specialised assistance to schools. A library of 16 mm films, film strips, coloured slides and records are distributed on loan. The records are mainly used for music appreciation, poetry and languages. Printed aids, mainly in the form of charts and booklets, are provided. Audio-visual aids (tape recorders, film projectors, centralised radio systems, strip and sound projectors, television receivers, etc.) are bought by the Centre and re-sold to the schools with a \$ for \$ subsidy given by the Department. Repair and maintenance of this equipment is done free of charge by the Centre. Specialised electronic equipment has been developed and produced, e.g. auditory training equipment for deaf students. A talks studio with recording equipment and tape duplicating facilities operates to prepare language laboratory programs and for the recording of school broadcasts.

A number of students' books are produced for sale to schools by both the Education Department and the Australian Broadcasting Commission.

Libraries

A significant development program in this field has been implemented in recent years, particularly in the high schools and matriculation colleges where substantial print and audio-visual resource collections have been built up in attractive and spacious library suites. Teacher-librarians are now appointed to the larger primary and district schools. Grants are made directly to schools on a per capita basis for the purchase of library resources.

The introduction of a post-graduate course in librarianship at the Tasmanian College of Advanced Education has made possible the recruitment and training of approximately ten new teacher-librarians each year.

The Library Services Branch, under the direction of a supervisor of libraries, offers expert bibliographic and technical advice to schools and controls a central cataloguing service to schools.

Radio and Television Programs

Radio: All schools in the State use one or more of the programs provided by the Australian Broadcasting Commission. In most primary schools, programs are taken direct from the air, but secondary schools use a tape service provided by the Tasmania Media Centre. The Centre records all secondary school programs and distributes the tapes on loan to schools which would otherwise have trouble fitting programs into school timetables. Some primary programs are also recorded for schools in poor reception areas.

Television: Tasmania is well advanced in the availability and use of educational television; programs are provided by the A.B.C. Every government and non-government school within a television reception area is equipped with at least one receiver. The schools have a standard issue of one free set each and extra sets may be purchased. For extra sets the State Government provides a subsidy equal to 50 per cent of the purchase price. The maximum use of television is made by primary schools where timetables are quite flexible; many secondary schools have difficulty in planning timetables so that classes may view programs. For this reason great interest is being shown in Departmental experiments with video-recording which, it is hoped, will make television as flexible an educational aid as pre-recorded radio programs.

Selection of Programs: Curriculum officers and teachers are represented on the planning and appraisal committees for all Tasmanian produced programs. The committees also assist with selection of series from other sources.

Staff: Apart from technical staff, the A.B.C. employs a State Supervisor of Education (schools broadcasts), two radio producers, two television producers and associated staff. The Education Department provides a liaison officer and studio teachers, seconded full-time to the A.B.C.

Safety Officers

Transport Commission officers visit the schools regularly to give lectures and practical demonstrations dealing with various aspects of road safety. Driver education courses are given in some schools, a type of training likely to be extended. Periodically students are reminded of the dangers associated with explosives, fire arms and drug abuse.

Parents and Friends Associations

One of the functions of these bodies is fund-raising for the provision of subsidised equipment and library books. They also act as a valuable forum for discussions on education and this role is assuming greater importance.

Migrant Education

This is arranged by the Department at certain schools or by combined radio-correspondence lessons to teach English to migrants. The cost of migrant education is reimbursed by the Federal Government. The Department has separate branches to provide assistance, mainly in English language learning, for both child and adult migrants. (See also 'Federal Government Activities in Education'.)

Financial Assistance

Currently the principle forms of assistance payable to parents or guardians of students are:

- (i) *School Certificate Allowances* payable to parents or guardians of full-time students undertaking their fourth year of secondary education. The allowance, subject to a means test, amounts to \$70 per annum. The number granted during 1976 was 183 and expenditure was \$12 810.

- (ii) *Special Bursaries* awarded in cases of necessitous circumstances. For 1976, 72 special bursaries, involving expenditure of \$4 000 were awarded.
- (iii) *Loan Issue Supplies* provided to assist parents who are unable to meet the cost of text books, materials and subject levies associated with educating their children. Expenditure under this scheme during 1976 was \$175 516.

TECHNICAL AND ADULT EDUCATION

Technical Education

The Education Department administers Technical Colleges at Hobart, Launceston, Devonport, Burnie and Queenstown which provide trade, technical and sub-professional technician courses. Some students also receive tuition at Rosebery and Smithton using the high school facilities. Technical College courses cater for students who are above the age of compulsory school attendance.

Courses

Certificate Courses: These courses cater for middle level vocations that lie between trades and professions. They are designed in consultation with industry to meet the increasing need for sub-professional personnel who are performing many tasks previously carried out by university graduates or diplomates. On successful completion of a course, a certificate is awarded by the Education Department. Courses provided include drafting, engineering, surveying, architecture, building, commerce, business studies, marketing and food services.

Trade Courses: These courses combine theoretical and practical aspects of the trade, and are complementary to employer training given to apprentices. From 1965 apprentices have been required to attend one full day per week for three years and this has practically eliminated evening classes for apprentice training. Since 1968 a system of block training has operated in respect of a number of trades and for apprentices previously taught by correspondence. During the year, periods of two weeks are spent in full-time study in a technical college. On successful completion of the course, a Certificate of Trade Proficiency is awarded. Post-trade courses are available to extend the skill and knowledge of the tradesmen.

Correspondence Tuition: This is administered through the Hobart Technical College and is intended for isolated students. Many apprentice correspondence courses have been replaced by the system of block training.

College Councils

Each technical college has a council comprising local community representatives who have been appointed by the Governor. Members are drawn from trades and industries, professions and municipal councils. They advise the Director of Technical Education on the provision and development of college facilities and courses.

Examinations

These are conducted by the Education Department in July and November each year. Papers are set and marked, or assessments carried out on a State-wide basis except for the first and second year trade subjects in which case each college makes its own arrangements.

Technical Teachers, Students and Expenditure

The following table shows the number of schools, teachers and students in technical education and the yearly expenditure for recent years:

Technical Education: Teachers, Students and Expenditure

Particulars	1972 (a)	1973 (a)	1974	1975	1976
Schools, colleges, etc. no.	7	6	7	9	10
Teachers—Full-time .. no.	172	194	258	294	(b) 335
Part-time .. no.	394	513	653	572	(c) 735
Students (d) .. no.	7 234	7 519	9 826	10 254	11 155
Expenditure (e) .. \$'000	2 607	3 004	3 667	5 775	6 007

- (a) Excludes details for diploma courses provided as a part of the advanced education system. All such courses had been transferred to the College of Advanced Education by 1974.
- (b) 272 males and 63 females.
- (c) 578 males and 157 females.
- (d) *Gross* number enrolled during the year.
- (e) Excludes capital expenditure on new buildings, etc.

Adult Education

Origin and Organisation

Establishment of a mechanics' institute in Hobart in 1827 was the start of adult education in Australia. The mechanics' institute movement which was then just three years old (there were only two other institutes at that time: in London and Glasgow) was the fore-runner of the present adult education organisation in Tasmania which began in 1914.

From 1948 to 1975 adult education was administered by a statutory board established under the *Adult Education Act* 1948. From 1 January 1976, the *Education Act (No. 2) 1975* came into force, which proclaimed an advisory Adult Education Board and a Division of Adult Education within the Education Department. The new Board consists of 11 members; six nominated by the Minister for Education and one each nominated by: the University of Tasmania; the Tasmanian College of Advanced Education; the Board of Technical Education; the Director-General of Education; and the Professional Adult Education Officers' Association. In addition to the Board there is a Director, an Assistant Director, five Regional Principals, six District Principals and a Community Arts Officer.

Hobart has three Adult Education Centres: at the Domain, South Hobart and North Hobart; as well as an inquiries and enrolment centre in the city centre. There are also centres and offices established in Launceston, Devonport, Burnie, Queenstown and in Rosny College, Hobart. 'The Grange', a National Trust home at Campbell Town (south of Launceston), is the Board's residential college.

Operations

Courses: Courses are run throughout the year and vary in duration from one term to three terms. The 1 422 courses undertaken in 1976 attracted 16 192 enrolments requiring 494 part-time tutors. In addition, enrolments in seminars, lectures, weekend and summer schools and art performances totalled 3 796. The range of courses included the arts, practical crafts, homecrafts, languages, physical education, liberal studies and social service courses. The Board, in co-operation with the Federal Department of Education, arranged courses in advanced English for migrants in Hobart and other courses for migrants throughout the State. National Employment and Training Scheme (N.E.A.T.) secretarial retraining courses were conducted in Launceston for the Federal Department of Employment and Industrial Relations.

Schools, Seminars, Special Lectures: During 1976 the Board ran 79 special events and 7 art performances. The sixth Annual String Summer School was held in addition to the Historic Buildings (Midlands) and (South) and the Easter Art Schools. Assistance was given in the organisation of the Festival of Tasmania Art Purchase Exhibition in Hobart and Launceston. The 1976 Morris Memorial Lecture was delivered by the eminent Professor P. K. Karmel, whose subject was 'Roles and Goals of Education'.

Residential College: 'The Grange' Residential College has been leased from the National Trust since 1964. Built in 1848, it is an elegant colonial country house used for both weekend schools and week-long summer schools. The house offers accommodation for 27 students. During 1976, 23 schools were held at 'The Grange'.

Book Discussion Groups: In 1976 there were 47 groups with a total membership of 548 which met throughout the State.

Publications: During the year the Board published: *Occasional Papers* Vols 2 and 3; and *Roles and Goals of Education* (P. K. Karmel).

The following table includes details relating to number of staff, students and expenditure for recent years:

Adult Education: Staff, Students and Expenditure

Particulars	1972	1973	1974	1975	1976
Centres served	72	75	82	87	87
Professional staff	11	11	14	14	14
Clerical staff	15	17	21	21	24
Part-time staff	319	355	481	477	494
Students (a)	12 109	12 084	13 490	14 240	16 740
Attendances (b)	5 216	4 036	4 897	5 052	3 796
Expenditure (c) \$'000	346 621	372 932	558 314	688 126	786 258

(a) Total enrolled for term, semester or year.

(b) At special lectures, one day, weekend or summer schools and seminars.

(c) Excludes capital expenditure on new buildings etc.

TERTIARY EDUCATION

Advanced Education in Tasmania

Concept

Education at tertiary level has been available at universities but there have also been professional courses provided by other institutions; in Tasmania technical colleges provided courses of this type in addition to playing their main role in providing apprentice training, trade courses, etc. So, in effect, the development in recent years of colleges of advanced education does not represent a radical innovation but rather a rationalisation and re-organisation of non-university tertiary courses. The Federal Government, having first accepted some financial responsibility for university education, has now gone further and is actively encouraging the development of colleges of advanced education.

In general terms, the colleges are providing tertiary education and training with a vocational emphasis, as distinct from the academic education provided by universities (though, of course, some university courses in Australia tend to be also vocational, e.g. legal and medical courses). In some states, advanced education is being developed on a base provided by existing institutions but in Tasmania and the A.C.T. separate colleges have been established.

History

Following a national seminar on planning for colleges of advanced education held in Hobart towards the end of 1967, the educational specifications and a master plan for the Mt Nelson College were prepared. In June 1969 the contract for the Resources Materials Centre (stage 1) of the project was let. Appointment of staff to the College commenced in 1971 and during 1972 the first on-site lectures were held at Mt Nelson. In 1973 a campus of the College was established at Newnham (a suburb of Launceston).

Advanced Education Council and College

The *Advanced Education Act* 1968 established the Council of Advanced Education. An amendment to this Act now provides for the appointment of 15 members of whom one shall be the person holding the office of the Principal; two shall be officers of the Advanced Education Service (other than the Principal); and one shall be a person who is undertaking a course of advanced education.

The Tasmanian College of Advanced Education is organised into divisions consisting of the Division of Administrative Studies, the Division of Science and Technology, the Division of Teacher Education, the Division of Educational Services and the Office of the Registrar. In addition, the School of Art and the Conservatorium of Music are part of the College. The campus at Newnham (Launceston) consists of the Division of Teacher Education and General Studies and extensions of the Divisions at the Mount Nelson (Hobart) campus. Some residential facilities exist at Newnham but none are available at Mount Nelson.

A Committee on Post-Secondary Education, appointed jointly by the Federal and State Governments in April 1975, has recommended major changes in the College of Advanced Education including the take-over of the Mount Nelson campus by the University of Tasmania and the establishment of an autonomous Institute of Advanced Education at Newnham. Under the proposals the University would take over most of the courses conducted at Mount Nelson but the School of Art, and environmental design, physical education and art courses, would be transferred to the Newnham campus. The proposal is aimed at widening the range of courses at the University, in Hobart, and establishing the Newnham college as the centre of advanced education in the north of the State. A two-year timetable was recommended for the change-over.

Awards are made at four levels: bachelor degree, diploma, graduate diploma and master degree. In the following table students in some courses have been shown at the bachelor degree level although a number of students will complete them at the diploma level.

Students and Courses

The next table shows total enrolments for a three-year period:

College of Advanced Education: Enrolments
(Number)

Description	1974			1975			1976		
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons
Full-time ..	680	941	1 621	732	1 016	1 748	768	1 056	1 824
Part-time ..	542	98	640	533	154	687	609	209	818
Total ..	1 222	1 039	2 261	1 265	1 170	2 435	1 377	1 265	2 642

College of Advanced Education: Enrolments by Course, 1976
(Number)

Course	Full-time		Part-time		Total	
	Males	Females	Males	Females	Males	Females
Degree courses—						
Accounting	57	14	157	18	214	32
Business administration ..	14	1	41	8	55	9
Engineering	83	2	96	..	179	2
Pharmacy	29	33	5	6	34	39
Public administration ..	4	..	34	..	38	..
Surveying	52	..	11	..	63	..
Applied chemistry (a) ..	14	2	30	2	44	4
Medical technology ..	12	11	23	20	35	31
Education (a)	253	760	96	103	349	863
Music	38	48	9	11	47	59
Environmental design ..	60	12	..	..	60	12
Social work	23	29	..	4	23	33
Total	639	912	502	172	1 141	1 084
Diploma courses—						
Metallurgy (b) .. ..	..	..	5	1	5	1
Visual art	46	49	2	1	48	50
Visual art teaching ..	18	38	1	..	19	38
Art and craft	26	14	9	5	35	19
Old diploma courses (business administration, accounting, public admin- istration) (b) .. ..	..	..	13	..	13	..
Valuation (R.M.I.T.) ..	2	..	2	..	4	..
Total	92	101	32	7	124	108
Post-graduate diplomas—						
Librarianship	8	17	3	8	11	25
Legal practice	23	5	..	..	23	5
Special teacher education ..	2	15	..	..	2	15
Architecture .. ..	..	..	18	2	18	2
Landscape planning ..	..	..	1	1	1	1
Urban planning .. ..	..	..	14	2	14	2
Music	2	3	1	1	3	4
Total	35	40	37	14	72	54
Post-graduate degrees—						
Master of Education ..	1	2	38	16	39	18
Master of Pharmacy ..	1	1	..	..	1	1
Total	2	3	38	16	40	19
Total all courses ..	768	1 056	609	209	1 377	1 265

(a) Students in these courses have been shown at degree level, although many students will complete their course at diploma level.

(b) Courses are being phased out.

Finance

At the June 1973 Premiers' Conference the states accepted the Federal Government's offer to assume full financial responsibility for tertiary education from 1 January 1974. (The amounts of recurrent expenditure saved by the states were deducted from their financial assistance grants.) The Federal Government also announced in its 1973-74 Budget the decision to abolish tuition fees.

Prior to 1972-73 Federal Government grants for colleges of advanced education and for teachers' colleges were provided under separate programs, but since then they have both been absorbed into a wider program of grants for advanced education.

University of Tasmania

Founding

The University of Tasmania was founded in 1890 and was the fourth to be established in Australia. When teaching began in 1893 with three lecturers and six students it occupied 1.6 hectares of land on the Queen's Domain at Hobart.

Residential Colleges

There are five residential colleges in the University. Christ College, affiliated with the University in 1933, was moved to new premises on the University Campus at Sandy Bay in 1962 and provides accommodation in single study-bedrooms for 138 male and female students, eight tutors and a deputy warden. Hytten Hall was opened in 1959 with accommodation for 124 male students. Extensions have raised this figure to 180 male students with about half accommodated in single study-bedrooms and the remainder in double rooms. St John Fisher College, opened in 1962, accommodates 86 male students in single study-bedrooms and is under the direction of the Catholic Church. Jane Franklin Hall was founded by the Tasmanian Council of Churches in 1950 as a hall of residence for women students. The Hall now provides accommodation for 150 male and female students. Ena Waite Women's College was founded in 1968 and accommodates 25 female students.

Buildings

The University site at Sandy Bay was chosen in 1944. Until 1957 temporary huts were used extensively, mainly by the rapidly growing science departments. In 1957 the first permanent building was erected and by 1973 all departments of the eight faculties were housed in permanent buildings.

Since that date the new buildings completed are: a computer centre; a child care centre; a cosmic ray observatory; a sports and recreation centre; and the University Centre which consists of a complex of lecture theatres (which can be combined to form a single 800-seat hall), a fine arts gallery and a classics museum. A major extension to the Arts-Commerce-Education building has been completed as well as a further extension to the Union building.

A pedestrian underpass (provided by the State Government), connecting the Union building with the rest of the University campus, was commenced in November 1976 and was completed in time for the 1977 academic year.

Finance

From 1974 the Federal Government assumed full responsibility for tertiary education and in 1976 it provided \$14.9m towards the University's recurrent expenditure. Tuition fees were abolished as from 1974 and an assistance scheme was introduced to assist full-time students, subject to a means test.

The following table shows the income and expenditure of the University of Tasmania for a four-year period:

Education and Cultural Activities

University Income and Expenditure (a)

(\$'000)

Particulars	1973	1974	1975	1976
INCOME				
Recurrent purposes—				
Federal Government	2 706	9 427	13 107	14 892
State Government	3 866	..	..	..
Fees	1 141	..	..	..
Other	200	413	494	318
Total	7 913	9 840	13 601	15 210
Equipment grants—				
Federal Government	265	265	702	475
State Government	265	..	..	1
Total	530	265	702	476
Other purposes—				
Halls of residence	152	160	191	209
Prizes, scholarships and benefactions	98	83	99	105
Research grants	345	464	470	546
Other	61	49	46	63
Total	656	756	806	923
Total income	9 099	10 861	15 109	16 609
EXPENDITURE				
Recurrent purposes—				
Academic activities (incl. research)	5 410	6 605	8 880	9 801
Academic services	698	1 018	1 377	1 543
Student and staff services	108	131	222	290
General university services	1 626	2 293	2 981	3 224
Other	6	16	74	113
Total	7 848	10 063	13 534	14 971
Equipment grants—				
Academic activities (incl. research)	242	204	168	79
Academic services	173	619	175	130
General university services	10	91	17	36
Total	425	914	360	245
Other purposes—				
Halls of residence	164	195	231	247
Prizes, scholarships and benefactions	30	41	49	272
Research grants	377	434	530	419
Other	75	..	..	23
Total	646	670	810	961
Total expenditure	8 919	11 647	14 704	16 177

(a) Excludes receipts for capital purposes and capital expenditure.

Government of the University

The governing body of the University is the Council, comprising twenty members; seventeen of whom are elected or appointed and three (the Director-General of Education and the Chairman and Deputy Chairman of the Professorial Board) are *ex officio*.

The Vice-Chancellor is the chief academic and executive officer. He presides over the Professorial Board which is the governing body on academic matters.

Staff and Students

The next table shows the courses in which students were enrolled:

University Enrolments, 1977

Course	Students enrolled			
	New enrolments 1977 (a)	Total enrolments		
		Males	Females	Total
Master and Doctor degrees ..	60	213	57	270
Bachelor degrees—				
Agricultural Science	28	44	16	60
Arts	375	531	621	1 152
Commerce (b)	67	121	22	143
Economics	40	106	18	124
Education	73	54	122	176
Special Education	9	5	14	19
Engineering	52	166	2	168
Law (c)	89	151	49	200
Medicine (d)	54	196	75	271
Science	173	399	148	547
Combined B.A./LL.B.	15	43	16	59
Combined B.Ec./LL.B.	15	23	2	25
Total	990	1 839	1 105	2 944
Non-degree courses—				
Education	140	81	97	178
Other (e)	65	86	47	133
Total	205	167	144	311
Total all courses ..	1 255	2 219	1 306	3 525

(a) New enrolments refer to those students who either commenced studies for higher degrees or, being undergraduates, enrolled at the University of Tasmania for the first time in 1977, or transferred from one faculty to another.

(b) Bachelor of Commerce introduced in 1977.

(c) From 1975, students must complete one year in another faculty before starting law.

(d) Students may enrol for an honours degree in Medical Science after completing at least three years of M.B., B.S. course.

(e) Of students classified as 'other' 19 students were enrolled for a master degree qualifying examination. The remainder were enrolled for university subjects but were not proceeding to either a degree or diploma.

The following table shows the number of teaching staff and students:

University Academic Staff (Full-time) and Students Enrolled

Particulars	1971	1972	1973	1974	1975	1976	1977
Academic staff—							
Professors	31	33	32	33	33	35	37
Other	189	215	219	238	247	255	237
Total academic staff ..	220	248	251	271	280	290	274
Individual students enrolled ..	3 444	3 371	3 263	3 414	3 399	3 539	3 525

Degrees Conferred

The following table shows degrees conferred:

University of Tasmania: Degrees Conferred (a) During Year Ended 30 June

Degree	1972	1973	1974	1975	1976	1977
HIGHER DEGREES						
Higher Doctor Males	..	3	1	2	..	..
.. Females	..	..	..	..	..	..
Doctor of Philosophy Males	8	11	14	7	13	7
.. Females	1	2	1	4	2	1
Master Males	8	8	11	8	9	12
.. Females	1	1	2	1	1	2
BACHELOR DEGREES (b)						
Agricultural Science Males	14	9	13	10	8	7
.. Females	..	4	5	5	1	3
Arts Males	121	109	120	96	91	91
.. Females	154	149	169	127	132	119
Economics Males	43	60	67	58	55	53
.. Females	5	7	5	18	5	10
Engineering Males	26	36	34	27	38	22
.. Females	..	..	1	..	1	..
Law Males	20	34	29	17	29	23
.. Females	3	5	7	4	7	6
Medical Science Males	19	21	14	38	25	22
.. Females	6	8	11	5	15	15
Medicine/Surgery Males	12	16	12	15	19	13
.. Females	3	5	10	5	7	9
Science Males	89	83	101	96	98	92
.. Females	22	29	35	38	35	35
Total bachelor degrees— Males	344	368	390	357	363	323
.. Females	193	207	243	202	203	197
.. Persons	537	575	633	559	566	520

(a) Excludes honorary degrees.

(b) Includes bachelor degrees with honours.

FEDERAL GOVERNMENT ACTIVITIES IN EDUCATION

Introduction

The Federal Constitution gives the Federal Government responsibility for providing educational services in the Australian territories while leaving state governments with responsibility for the provision of educational services within their state boundaries.

In recent years the Federal Government has provided the state governments with substantial financial assistance specifically for schools, universities, colleges of advanced education and technical colleges. In addition, the Federal Government has administered Australia-wide schemes of financial assistance for students for many years.

The Federal Government first became directly involved in education when it established an Office of Education in 1945 and a branch was opened in Hobart. However, education remained a state responsibility—the principal functions of the Federal Government's Hobart office were migrant education and administration

of Federal Government university scholarships. In 1951 the Hobart office was closed and its functions were transferred to the Tasmanian Department of Education which acted as an agent for the Federal Government. With increased financial involvement in education the Hobart Office was re-opened in 1964. However, education was still primarily a State responsibility.

The portfolio of the Federal Minister for Education includes the Department of Education, the Tertiary Education Commission, the Technical and Further Education Commission, the Schools Commission, the Curriculum Development Centre, the Commonwealth Teaching Service, the Australian Capital Territory Schools Authority and the Australian Capital Territory Standing Committee for Further Education. The Office of Child Care, which advises the Government on support for child care and pre-school education programs, is located within the Department of Social Security.

Department of Education

The Department provides advice to the Federal Minister for Education on general educational policy measures and the development and investigation of educational policy proposals in new areas. It is involved in planning and evaluation of the effective use of resources in Australian education and co-ordinates programs of advisory commissions and committees.

The Department advises the Federal Government on policy for furthering educational research. It undertakes educational research projects and provides the secretariat for the Education Research and Development Committee. The Committee advises the Minister on priorities in educational research, recommends the award of research grants and assists in the training of research personnel.

The Department is responsible for international relations in education, for example for co-ordinating Australian participation in the educational activities of UNESCO and OECD. It administers schemes of assistance for Australian students and also exchange programs which enable Australians to study overseas and overseas students and educationists to visit Australia. The Department is responsible for the adult migrant education program and the production of language teaching materials. It provides advice on Aboriginal education and administrative assistance for a number of advisory committees including the Australian Council on Awards in Advanced Education.

Secretariat services are provided to a number of advisory bodies including the following:

Australian Council on Awards in Advanced Education: The Council was established in 1971 to promote consistency in the nomenclature used for awards in advanced education and in establishing consistency between the courses and their associated awards.

Education, Research and Development Committee: This Committee was established in 1970 to advise the Minister on priorities in educational research, to recommend the award of research grants and to propose measures for the training of research personnel. The first of the Committee's awards of Educational Research Scholarships and Educational Research Fellowships were made in 1975.

Adult Migrant Education Program

A range of services is available to help adult migrants to learn or improve their English and to inform themselves about life in Australia. These education services commenced in 1947. Since 1951 the Adult Migrant Education Program has been a joint effort by the Federal and State Governments. The Federal Department of Education retains overall responsibility for the program while administrative control of migrant teaching activities is, for the most part, in the hands of state authorities.

The program now includes continuation classes, radio and correspondence courses, full and part-time courses of an intensive nature, courses in industry that provide language instruction at the work site, the home tutor scheme using volunteer tutors on a one to one basis and a colour television series providing English language and other information for migrants. This television program is broadcast in Tasmania over TNT Channel 9 Launceston.

During the 1976-77 financial year the direct expenditure by the Federal Government on the program in Australia was \$8 959 645. Of this, \$91 500 was spent in Tasmania. At 30 June 1977, 17 continuation classes were operating in Tasmania for 115 students of whom 38 were women in special classes. A further 48 students were enrolled in the correspondence course, 75 students attended full-time accelerated courses and 29 migrant women received one-to-one instruction in their homes under the home tutor scheme during the year.

Federal Government Assistance for Tertiary and Secondary Students

The next table shows the number of students in Tasmania who received Federal Government assistance under the various schemes for recent years:

Number of Students in Tasmania Receiving Federal Government Assistance at 30 June

Scheme	1972	1973	1974	1975	1976
Tertiary education assistance	..	..	1 460	1 668	1 770
University	916	920	..	..	..
Advanced education	220	359	..	..	..
Technical	97	108	29	12	2
Secondary	560	274	2	..	..
Adult secondary .. ..	..	..	..	37	39
Senior secondary .. ..	..	739	1 341	670	2
Secondary allowances .. ..	..	..	164	200	260
Post-graduate	52	52	50	54	54
Aboriginal secondary	32	140	241	313	316
Aboriginal study	3	7	16	11	15
Isolated children .. ..	..	805	603	806	731
Other (a)	32	55	37	23	9
Total	1 912	3 459	3 943	3 794	3 198

(a) Includes National Service Vocational Training Scheme, Pre-School Teacher Trainees (from 1973) and Federal Government Teaching Service Scheme.

Brief descriptions of the various schemes are given below:

Tertiary Education Assistance Scheme: This scheme provides means-tested (non-competitive) allowances to full-time, unbonded students attending approved courses at tertiary institutions. Benefits in 1977 included an allowance, subject to a means test, of up to \$1 250 per annum for a dependent student living with his parents; up to \$1 976 per annum for a dependent student living away from home; or up to \$2 236 per annum for an independent student. Dependants' allowances

of \$29 per week for a dependent spouse and \$7.50 per week for each dependent child were payable. Also provided are allowances to assist with student union and other incidental fees. The following incidentals allowances were payable in 1977: for students enrolled at universities, \$100; for students at colleges of advanced education, \$70; and for students at technical colleges, \$30.

Adult Secondary Education Assistance Scheme: Assistance is available under this scheme for adult students who have had a break from secondary studies and who have returned to undertake final year secondary or matriculation studies at secondary schools, technical colleges and other approved institutions. Benefits payable are the same as those provided under the Tertiary Education Assistance Scheme.

Commonwealth Senior Secondary Scholarship Scheme: This scheme offered scholarships to students in the final two years of secondary education. No new awards were offered after 1974.

Secondary Allowances Scheme: Families with limited financial resources are assisted under this scheme to maintain their children at school for the final two years of secondary education. In 1977 an allowance of up to \$550 per annum was provided on a non-competitive basis subject to family income.

Post-graduate Awards: Awards are made annually to enable students to undertake post-graduate studies at an Australian university or college of advanced education. In Tasmania, in 1977, 17 new awards were made available for university studies. Selection is made on the basis of ranking by each university and in the case of Course Awards, the final order of merit list is drawn up by a Central Selection Committee. The award, subject to annual renewal, may be held for a maximum of four years in the case of a doctorate degree candidate or two years in the case of a master's candidate. In 1977 award holders received a living allowance of \$4 000 per annum. Provision is also made for assistance with travel, establishment and thesis costs and married award holders receive a dependants allowance for a dependent spouse and children.

Aboriginal Grants Schemes: The Department of Education administers two schemes of assistance for students of Aboriginal descent, the Aboriginal Study Grants Scheme and the Aboriginal Secondary Grants Scheme. Aboriginal study grants assist Aborigines to undertake training and study after leaving school and provide the full-time student with fees and a living allowance. In 1977, married students or students 18 and over received \$54.50 per week, while unmarried students under 18 received \$45 per week. Other special allowances were also payable. The Aboriginal Secondary Grants Scheme provides assistance to Aboriginal secondary school students to encourage them to obtain a secondary education. The scheme provides a living allowance which, in 1977, was \$308 per annum for students in junior grades and \$440 for senior students. Allowances are also payable for the cost of board, textbooks, uniforms, fares, fees and other items.

Assistance for Isolated Children: This scheme provides financial assistance to enable children living in isolated areas to have improved educational opportunities. Benefits are available for pupils who must live away from home to attend school and those studying through state education department correspondence schools.

Commonwealth Teaching Service Scholarship Scheme: This scheme provides competitive awards to students undertaking full-time courses of teacher education with the intention of becoming teachers in the A.C.T. or the Northern Territory. Benefits are comparable with the maximum amounts payable under the Tertiary Education Assistance Scheme, and not subject to a means test.

Office of Child Care

The Office of Child Care within the Department of Social Security was established in June 1976 to administer programs of assistance which provide for the care and development of young children before they reach school age, and of older children outside school hours.

By supporting a variety of programs carried out both through state governments and, directly by local governments and community groups, the Office of Child Care aims to help families provide adequately for the needs of their children.

The Office also aims to provide a comprehensive integrated approach to children's services which will include family day-care programs, pre-schools, play-groups, after school and holiday care programs, occasional care and emergency care. The emphasis is on providing services to help people join together to make the best use of existing facilities for children.

The Australian Schools Commission

The Schools Commission was created by the Federal Government as a statutory body under the *Schools Commission Act 1973*. The Commission was preceded by the Interim Committee for the Australian Schools Commission, chaired by Professor Peter Karmel. The Interim Committee reported to the Federal Government in May 1973 in a Report entitled 'Schools in Australia', the major recommendations of which were accepted by the Government. As a result of this Report, funding for Australian schools for 1974 and 1975 was made available by the Federal Parliament which enacted the *States Grants (Schools) Act 1973*. Other Federal Government funds continued to be available under the *States Grants (Schools) Act 1972*. Supplementary grants were made in subsequent amendments to both Acts. Over this period some \$760m was made available to Australian schools and school systems under both Acts through Federal Government programs administered by the Schools Commission.

In broad terms, the functions of the Commission are:

- (i) To report to the Federal Minister of Education, after consultation with interested parties, on the needs of primary and secondary schools and on the priorities that should be given to satisfying those needs.
- (ii) To inquire into and report on important aspects of primary and secondary schooling, with a view to improving the quality of education and the efficient use of resources.
- (iii) To carry out, in conjunction with various schools and school systems, studies aimed at finding solutions to educational problems.

State Planning and Finance Committee

The functions of the State Planning and Finance Committee are to:

- (i) Supervise the distribution to non-government schools of Federal Government grants within the State and in particular to recommend subsidy levels for non-systemic schools and report regularly to the Schools Commission on the application of the needs principle in the distribution of block subsidy grants for Catholic systemic schools.
- (ii) Establish priorities based on need and approve applications for building grants from non-government schools.

- (iii) Recommend non-government schools seeking to be declared as disadvantaged for the purposes of the Disadvantaged Schools Program.
- (iv) Advise the Commission on matters affecting the financing and development of non-government schools, and on other matters as referred by the Commission from time to time.

Members are appointed by the Federal Minister for Education with the aim of achieving broadly representative committees in each state competent to make decisions on priorities and levels of funding in individual schools.

The levels of assistance to which a school may be entitled are shown in the following table. (In the case of Catholic systemic schools a block subsidy grant at one of these levels is given to cover all schools in the system.)

Per Capita Grant Rates: Non-Government Schools, 1977
(\$)

Subsidy level	Amount per primary school student	Amount per secondary school student	Subsidy level	Amount per primary school student	Amount per secondary school student
1	88	137	4	176	286
2	117	187	5	205	336
3	147	236	6	241	385

State Innovations Committees

State and Territory Innovations Committees were appointed for the calendar year 1977 by the Minister, each having ten members. They were required to report and make recommendations to the Commission through the National Innovations Committee. They were to be responsible for monitoring and administering support functions at the state level for funded projects as directed by the Commission.

Programs and Funding for 1977

The Commission operated seven programs during 1977. The programs and Tasmania's share of the funds are summarised below.

General Recurrent Grants Program: Tasmania was allocated \$8.766 million to cover staffing and other operating costs during 1977.

Migrant and Multicultural Education: Since April 1970 the Federal Government has provided additional support to both government and non-government schools to assist the children of migrants to gain appropriate benefits from schooling. Until December 1975 this assistance, provided through a program known as the Child Migrant Education Program, was administered firstly by the Department of Immigration and later by the Federal Department of Education. The main aim was to enable migrant children to attain competence in the use of the English language. Since January 1976 responsibility for administration of the Program has been assumed by the Schools Commission, which has, in its 1976-78 and 1977-79 Reports, identified a broader range of needs in the area of migrant and multicultural education. In Tasmania, as in several other states, a Migrant Education Committee, with representatives from all school sectors, advises on policy and acts as a focal point for the interchange of ideas and information. In 1977 Tasmania was entitled to \$0.333m for government schools and \$0.012m for non-government schools for migrant and multicultural education. At 30 June 1977, there were 32 teachers involved with the program in the State and 791 children were attending classes.

Disadvantaged Schools Program: Tasmania was allocated \$0.383 million to help schools declared as disadvantaged to provide additional help for children whose social circumstances make it difficult for them to learn. A new initiative for 1977 was the allocation of \$3.887 million nationally for projects in disadvantaged country areas. Tasmania received \$0.222 million to be used jointly in government and non-government schools.

Special Education Program: Tasmania was allocated \$0.378m towards the education of physically and mentally handicapped children. An additional \$0.039 million was made available for children in institutions.

Services and Development Program: For joint government and non-government schools programs for teacher development, the provision of support services in schools, teacher replacement and teacher managed education centres, Tasmania was allocated \$0.611 million.

Special Projects (Innovations) Program: Nationally \$4.332 million was allocated for the support of innovative educational projects both at school and system levels. This program was administered by the State Innovations Committees.

Capital Grants Program: Tasmania was allocated \$4.624 million for general capital works and for the capital component of other programs.

The following table shows, in greater detail, the grants allocated for the 1977 programs:

Schools Commission: Funding Allocated for 1977 Programs
(\$'000)

Program	Total allocation for Australia	Allocation for Tasmania		
		Government schools	Non-Government schools	Total
GOVERNMENT AND NON-GOVERNMENT SCHOOL PROGRAMS				
Recurrent grants—				
General	330 083	5 354	3 412	8 766
Special assistance	844	..	..	..
Migrant education	24 120	333	12	345
Disadvantaged schools	18 470	333	50	383
Special education	13 277	378	..	378
Total	386 793	6 397	3 474	9 871
Capital grants	159 892	3 929	696	4 624
Total	546 684	10 326	4 169	14 495
JOINT GOVERNMENT—NON-GOVERNMENT SCHOOL PROGRAMS				
Recurrent grants	26 588	<i>n.a.</i>	<i>n.a.</i>	872
Capital grants	345	<i>n.a.</i>	<i>n.a.</i>	..
Total	26 933	<i>n.a.</i>	<i>n.a.</i>	872
ALL PROGRAMS				
Total	573 617	<i>n.a.</i>	<i>n.a.</i>	15 366

Tertiary Education

The Tertiary Education Commission

In April 1977 the *Tertiary Education Commission Act* was passed by Federal Parliament and established the Tertiary Education Commission. The Commission, which commenced operation on 22 June 1977, replaced the three previously existing tertiary commissions—the Universities Commission, the Commission on Advanced Education and the Technical and Further Education Commission.

The role of the Tertiary Education Commission is to develop and recommend policies for Federal financial support to the states across the range of post-secondary institutions. Under its Act, the Commission is required to perform its functions with the object of promoting the balanced and co-ordinated development of the provision of tertiary education in Australia and the diversification of opportunities for tertiary education. The Commission is assisted in its work by three statutory councils: the Universities Council; the Advanced Education Council; and the Technical and Further Education Council.

Funding of Tertiary Education

Universities and Colleges of Advanced Education: Federal Government assistance to the states for the recurrent expenditure of universities dates from 1951-52. Grants were then made on a matching basis (one dollar for each \$1.85 of state expenditure). Assistance for capital purposes was provided on a dollar for dollar basis. Assistance to the states for colleges of advanced education commenced in March 1965 when the Federal Government agreed, as an interim measure, to make capital grants totalling \$5 million during the remainder of the 1964-66 triennium. Grants for recurrent expenditure of colleges were made from the beginning of the 1967-69 triennium. The formula for matching both capital and recurrent grants for colleges with state expenditure was similar to that applied in the case of universities. As from 1 January 1974, the Federal Government assumed full financial responsibility for both universities and colleges of advanced education.

The following table sets out Federal Government payments to Tasmania for university education, advanced education and technical and further education for recent years:

Federal Government Payments to Tasmania for Tertiary Education
(\$'000)

Sector	1971-72	1972-73	1973-74 (a)	1974-75	1975-76	1976-77
University—						
Recurrent	2 105	2 530	6 415	12 274	13 659	(b) 16 427
Capital	665	842	694	1 279	2 589	573
Advanced Education—						
Recurrent	887	1 128	r 3 960	6 888	7 011	r 8 678
Capital (c)	2 035	1 425	292	2 969	5 313	r 404
TAFE—						
Recurrent	380	380	690	430	1 080	2 080
Capital				470	890	1 670

(a) From 1 January 1974 the Federal Government accepted full responsibility for financing universities and colleges of advanced education.

(b) As from 1 July 1976, equipment grants for universities have been included in recurrent grants.

(c) Includes following payments made under *States Grants (Teachers Colleges)* and *(Pre-School Teachers Colleges) Acts* (\$'000): 1971-72, 650; 1972-73, 250; and, from 1973-74, nil.

Technical and Further Education: The Federal Government initially became involved in the provision of direct funding for technical and further education (TAFE) in 1964. A scheme of unmatched special purpose capital grants to the states for the provision of buildings and non-consumable equipment directly related to the training function of technical institutions was begun. These grants continued under the *States Grants (Technical Training) Acts* to 30 June 1974. The Federal Government, acting on the recommendations of the Australian Committee on Technical and Further Education (ACOTAFE), then introduced grants for TAFE recurrent expenditure while continuing its financial support for TAFE capital purposes. These grants were provided under the *States Grants (Technical and Further Education) Act* 1974. For the period July 1974 to December 1976 Tasmania was allocated \$2.38m for TAFE capital purposes and \$2.10m for TAFE recurrent purposes. The *States Grants (Technical and Further Education Assistance) Act* 1976 provided for grants to Tasmania for calendar year 1977 of \$1.27m for TAFE capital purposes and \$1.05m for TAFE recurrent purposes.

STATE LIBRARY OF TASMANIA

General

The State Library of Tasmania was created in 1943 under the *Libraries Act* 1943 from the former Tasmanian Public Library which was formed in 1849. The purpose of the State Library is to provide a comprehensive library and information service to all sections of the Tasmanian community. The State Library offers co-operative services to special groups such as school libraries.

Organisation

Headquarters

The State Library headquarters is located in central Hobart. The following major functions are provided from the headquarters:

State Reference Library: Provides reference and information facilities for the general public and industry, and contains a bookstock of approximately 273 900 books, periodicals, pamphlets, maps, etc. Special sections of this department house unique collections of books, documents, etc. relating to Tasmania. Collections include: (i) the Tasmanian Collection—a definitive collection of books, published in Tasmania; (ii) the W.E. Crowther Library—a large research collection of books, pamphlets and other items relating to Tasmania and Australia; and (iii) the Allport Library and Museum of Fine Arts—comprising a collection of antique furniture, china, glass, silver, pictures, prints and rare books in fine editions.

Archives Office: Under the *Archives Act* 1965, the State Library is the official repository for all official State Government records. A considerable quantity of private records of individuals, companies, associations, societies and institutions is held in addition to official records.

Hobart Lending Library: Provides a book lending service for adults and children. Approximately 110 000 volumes are held in this collection.

Performing Arts Collection: The collection contains over 5 500 films, almost 50 000 gramophone records and approximately 8 000 cassette tapes. Films and records are available for borrowing by individuals and organisations.

Resources Division: Controls the selection and disposition of all materials throughout the State Library system.

Technical Services: Responsible for the acquisition, cataloguing and classification of all materials added to the State Library.

Regional Libraries

Service to the remainder of the State is provided through six regional library systems forming an integral part of the State Library Department.

The Channel Regional Library System serves 23 000 people centred on Kingston from a temporary central library.

The Derwent Regional Library System serves 66 000 people centred on Glenorchy. A new central building for the region will open in September 1978.

The Hellyer Regional Library System serves 61 000 people in the north-west and west coast from Burnie.

The Mersey Regional Library System serves 44 000 people in the central north coast from temporary premises in Devonport. A site for a new central library has been selected.

The Northern Regional Library System serves 110 000 people from Launceston.

The Tasman Regional Library System serves 52 000 people in eastern Tasmania from temporary premises at Bellerive. A site for a regional headquarters building is under investigation.

The following table shows the distribution of branch libraries, depots, book-mobiles and materials held throughout these regions and in the State Headquarters:

Public Libraries: Tasmania, 30 June 1977

Regional system	Buildings			Book-mobiles	Materials held ('000)	
	Central library	Branch library	Depots (a)		Books	Other items
State Library Headquarters	1	..	..	3	414.1	40.0
Channel Region .. ..	..	6	..	..	37.1	1.1
Derwent Region .. ..	..	15	1	..	87.1	2.1
Hellyer Region	1	13	..	1	140.2	5.8
Mersey Region	1	4	1	..	56.3	4.0
Northern Region	1	22	8	3	222.5	6.4
Tasman Region .. ..	..	7	1	..	70.4	3.7
Total	4	67	11	7	1 027.8	63.1

(a) Comprises a small collection of materials not housed in a separate library building or room.

Expenditure

The following table shows the main expenditure items for the State Library Department for recent years:

Expenditure (\$'000)

Particulars	1972-73	1973-74	1974-75	1975-76	1976-77
Salaries and pay-roll tax	727	957	1 703	2 105	2 599
Purchase of books, etc.	364	390	588	665	790
Other	207	273	471	1 067	725
Total expenditure	1 298	1 620	2 762	3 837	4 114

The Education Division

The Education Division is a newly-created division, established in February 1978 following Ministerial acceptance of the *Sale Report* by the Tasmanian Advisory Committee on Libraries (1977). It has been formed around the nucleus of the former Library Services Branch of the Education Department of Tasmania and is headed by the former Supervisor of Libraries, now Assistant State Librarian (Education Services).

The Division is responsible for: (i) developing effective library support services to schools and colleges and to adult education; (ii) consultancy and advisory services on library matters in all educational areas; and (iii) maintaining liaison with all appropriate branches of the Education Department.

School and College Library Services

Libraries under the control of professional teacher-librarians have been established in 118 schools and colleges of the Education Department and in several non-government schools. Advisory services are available to all of the approximately 300 schools and colleges in the State. The resource-buying budget in this area is well in excess of \$0.5m per annum.

The Division is engaged in the planning of new libraries, conduct of in-service education programs, professional advice to teachers and teacher-librarians, preparation of library funding programs, operation of central cataloguing services and provision of resource evaluation information.

Chapter 15

SOCIAL WELFARE AND HEALTH SERVICES

WELFARE

Introduction

In Australia, the principal social welfare benefits are provided by the Federal Government under the *Social Services Act* 1947, as amended, which is administered by the Federal Department of Social Security. Finance for the benefits is provided from the National Welfare Fund which is augmented each year from the Consolidated Revenue Fund by an amount equal to the payments made.

State social welfare, which covers child welfare and relief, is administered by the State Department of Social Welfare.

Federal Department of Social Security

The following table shows expenditure in Tasmania from the National Welfare Fund on benefits under the federal *Social Services Act*.

**Social Security Payments Under the Social Services Act
(\$'000)**

Benefit or service	1971-72	1972-73	1973-74	1974-75	1975-76	1976-77
Age and invalid pensions ..	25 543	33 656	35 804	60 118	77 976	91 788
Widows' pensions	3 842	5 136	6 582	8 521	11 221	12 445
Supporting mothers' benefits ..	..	..	..	..	4 742	5 578
Maternity allowances ..	260	241	230	229	215	215
Family allowances	7 196	(a) 8 185	7 212	6 610	7 766	(b) 31 197
Unemployment benefits ..	966	2 095	3 125	7 746	15 256	17 963
Sickness benefits	497	792	1 247	1 692	2 409	2 380
Special benefits	79	128	224	421	811	979
Rehabilitation services ..	130	152	176	369	440	525
Funeral benefits	42	44	44	44	41	43
Double orphans' pension ..	..	..	17	43	43	(c) 66
Handicapped child's allowance ..	..	..	..	45	197	(c) 345
Total	38 556	50 428	54 661	85 838	121 117	163 524

(a) In 1972-73 five 12-weekly payments, instead of the usual four, were paid.

(b) Family allowances replaced child endowment from July 1976. Alterations to income tax rebates for dependent children accompanied this change.

(c) Estimated.

Federal activity in social services began with the passage of the federal *Invalid and Old Age Pensions Act* 1909. This and the *Maternity Allowances Act* were administered by the Department of the Treasury until 1941 when the Department of Social Services commenced to function as a separate organisation. Later, the

functions of the Department were widened with the passing of the *Child Endowment Act*, the *Widows' Pensions Act* and the *Unemployment and Sickness Benefits Act*. A referendum held in 1946 empowered the Federal Government to legislate for the provision of certain social services formerly provided by the states. In 1947, a consolidated *Social Services Act* was passed. Other major Acts administered by the Department include the *Aged and Disabled Persons' Homes Act*, the *Handicapped Persons Assistance Act* and the *Homeless Persons Assistance Act*.

Pensions and Benefits

Social Security benefit rates announced at recent budgets are set out in the next table:

Social Security Benefits, 1975-76 and 1976-77
(**\$ Per Week Unless Noted as Lump Sum Payment**)

Benefit	Maximum rate			
	1975-76		1976-77	
	August budget	Amending legislation (April)	August budget	Amending legislation (April)
Age and invalid pensions and sheltered employment allowances—				
Single person (a)	38.75	41.25	43.50	47.10
Married couple (both eligible and living together), each	32.25	34.25	36.25	39.25
Married couple (both eligible but living apart through ill health or one eligible), each (a)	38.75	41.25	43.50	47.10
Wife (if not a pensioner)	32.25	34.25	36.25	39.25
First and each subsequent child under 16 years (b) ..	7.50	7.50	7.50	7.50
Guardians' allowances—				
Where there is a child under 6 years or an invalid child requiring full-time care	6.00	6.00	6.00	6.00
Other cases	4.00	4.00	4.00	4.00
Maternity allowances (c)—				
No other children	30.00	30.00	30.00	30.00
One or two other children	32.00	32.00	32.00	32.00
Three or more other children	35.00	35.00	35.00	35.00
Multiple births, additional payment for each additional child	10.00	10.00	10.00	10.00
Family allowances (child endowment to June 1976)—				
One child	(d) 0.50	(d) 0.50	(e) 3.50	(e) 3.50
Two children	(d) 1.50	(d) 1.50	(e) 8.50	(e) 8.50
Three children	(d) 3.50	(d) 3.50	(e) 14.50	(e) 14.50
Four children	(d) (f)	(d) (f)	(e) 20.50	(e) 20.50
More than four children	(d) (f)	(d) (f)	(e) (g)	(e) (g)
Student child over 16 years and under 21 years ..	1.50	1.50	..	..
Orphan's pension	11.00	11.00	11.00	11.00
Handicapped child's allowance	10.00	10.00	15.00	15.00
Supporting mother's benefit	38.75	41.25	43.50	47.10
Widows' pensions (a)—				
Class A, widows with dependent children—				
Where there is a child under 6 years or an invalid child requiring full-time care	6.00	6.00	6.00	6.00
Other cases	4.00	4.00	4.00	4.00
First and each subsequent child under 16 years (b)	7.50	7.50	7.50	7.50
Class B, widows aged 50 years or more (b)	38.75	41.25	43.50	47.10
Class C, widows under 50 years of age in necessitous circumstances	38.75	41.25	43.50	47.10
Funeral benefit (c)	40.00	40.00	40.00	40.00

Social Security Benefits, 1975-76 and 1976-77
 (\$ Per Week Unless Noted as Lump Sum Payment)—*continued*

Benefit	Maximum rate			
	1975-76		1976-77	
	August budget	Amending legislation (April)	August budget	Amending legislation (April)
Unemployment and sickness benefits (i)—				
Single person	38.75	41.25	43.50	47.10
Married couple	65.50	68.50	72.50	78.50
First and each subsequent child under 16 years ..	7.50	7.50	7.50	7.50
Rehabilitation service	(j)	(j)	(j)	(j)
Personal care subsidy (k)	15.00	15.00	15.00	15.00

- (a) Supplementary assistance at a maximum rate of \$5.00 a week is payable in certain circumstances.
- (b) Or a person who is a full-time student and dependent on the pensioner.
- (c) Single lump sum payment.
- (d) Under 16 years.
- (e) Child under 16 years or student under 25 years. Applied from July 1976.
- (f) Increased by 25 cents per week for each child after the third so that the rate payable was \$2.25 per week (\$2.00 for the third child plus 25 cents) for the fourth child, \$2.50 for the fifth child and so on.
- (g) \$20.50 plus \$7.00 per week for each other child or student.
- (h) Class B Widows' pensions may also be payable to certain widows between 45 and 50 years of age.
- (i) A supplementary allowance at a maximum rate of \$5 a week is payable subject to the payment of rent and to an income test.
- (j) During periods of rehabilitation treatment, disabled patients receive the appropriate pension or benefit and while receiving vocational training they are paid a rehabilitation allowance. In addition a training allowance and, where appropriate, a living away from home allowance are also payable free of income test. Free vocational training, with associated allowances, may also be available to Class A and Class B widow pensioners.
- (k) Payable in respect of persons who receive approved personal care in an aged persons' home conducted by an eligible organisation under the *Aged and Disabled Persons' Homes Act*.

In the previous table a description was given of the various Social Security pensions, benefits, etc. The rates and conditions are varied from time to time by amending legislation; the 1976-77 rates were announced in the Federal Budget of August 1976 and were further increased by legislation in April 1977. (The Federal Treasurer outlines social security proposals in his budget and these are implemented in later Acts.)

Income Test

In November 1976, the income and property means test was abolished and replaced by an income test only. The capital value of assets is no longer taken into account when assessing entitlement to pensions. The same income test applies with respect to all pensions and the supporting mother's benefit. Blind persons, however, may receive the maximum rate of pension free of the income test.

Age and Invalid Pensions

Generally pensions are payable to persons who have been resident in Australia, New Zealand or the United Kingdom for 10 years in the case of age pensioners and five years in the case of invalid pensioners. (Reciprocal agreements exist with New Zealand and the United Kingdom.)

The qualifying ages for aged pensions are 65 years for men and 60 years for women; invalid pensions are payable to persons over 16 years of age who are permanently incapacitated for work. Additional allowances are payable for dependants under certain conditions.

Amending legislation in April 1977 varied the sliding scale income test so that a single pensioner can draw the full pension (\$2 450 per annum) and also have other income not exceeding \$1 040. When the single pensioner's other income reaches \$5 938, all pension ceases.

Married pensioners can draw full pension (\$4 082 per annum) and also have other income of \$1 794. When their other income reaches \$9 958, all pension ceases.

The 1973 Budget abolished the means test for all people aged 75 years or more and an amending Act passed in April 1975 abolished the means test for all persons aged 70 years or more.

Free medical service and medicine are provided for pensioners and their dependants under Medibank and a concessional telephone rental equal to one-third of the amount otherwise payable is available to blind people, pensioners who live alone, and to certain others. On the death of one of a married pensioner couple, the survivor receives six fortnightly instalments at the married couple rate before reduction to the single rate.

Widows' Pensions

These were first introduced in 1942. They are payable to widows who have been resident in this country, New Zealand or the United Kingdom, for five years before claiming a pension. There is no residential qualification where the woman and her husband were living permanently in Australia before he died. A woman also qualifies if her husband died overseas and she has lived in Australia for 10 years at any time.

The following table shows, for Tasmania, the number of persons receiving age, invalid and widows' pensions, and supporting mothers' benefits; and the amounts paid out in pensions and allowances:

Age, Invalid and Widow Pensioners and Supporting Mothers' Benefits, Tasmania

Particulars	1971-72	1972-73	1973-74	1974-75	1975-76	1976-77
Age and invalid pensions—						
Number of age pensioners (a)—						
Males	8 057	9 270	10 304	11 225	11 700	12 114
Females	17 611	19 837	21 600	23 044	23 894	24 840
Persons	25 668	29 107	31 904	34 269	35 594	36 954
Number of invalid pensioners (a)—						
Males	2 592	2 836	3 028	3 341	3 918	4 401
Females	1 906	2 019	2 059	2 119	2 173	2 211
Persons	4 498	4 855	5 087	5 460	6 091	6 612
Amount of pensions paid .. \$'000	25 543	33 656	35 804	60 118	77 976	91 788
Widows' pensions—						
Number (a)	3 205	3 600	3 932	4 103	4 209	4 337
Amount paid \$'000	3 842	5 136	6 582	8 521	11 221	12 455
Supporting mothers' benefits—						
Number (a) .. .. .	..	..	936	1 289	1 699	1 778
Amount paid \$'000	..	..	..	2 819	4 742	5 578

(a) At 30 June.

The classes of widows are as follows: (i) a class A widow has one or more dependent or student children in her care; (ii) a class B widow is at least 50 years of age, or 45 years when her class A pension ceases (because she no longer has a child in her care); and (iii) a class C widow is under 50, without children, and in necessitous circumstances in the 26 weeks following her husband's death. The term 'widow' includes a deserted wife, a divorcee and a woman whose husband has been imprisoned for at least six months or is a patient in a mental hospital. Certain 'dependent females' may also qualify for pension.

Unemployment, Sickness and Special Benefits

To receive unemployment benefit, a person must be out of work (but not through being a direct participant in a strike), must be capable of undertaking and willing to undertake suitable work and have taken reasonable steps to obtain employment. Registration with the Commonwealth Employment Service is necessary; payment is at the discretion of the Department of Social Security.

Sickness benefit may be paid to a person temporarily unable to work because of sickness or accident and who has suffered a loss of income because of this. A married woman is not eligible to receive a sickness benefit if it is reasonably possible for her husband to maintain her. Where the husband is able to maintain her partially, a benefit may be paid at a rate considered reasonable in the circumstances.

Benefits are not payable to people qualified to receive invalid, age, widows' or service pensions, supporting mothers' benefits, or tuberculosis allowances. The minimum age is 16 years, the maximum 65 (male) and 60 (female). There are no nationality restrictions, but if a claimant has not been resident in Australia for one year before making the claim, the Department must be satisfied that he intends to live here permanently.

The next table gives Tasmanian details for unemployment, sickness and special benefits:

**Unemployment, Sickness and Special Benefits
Beneficiaries and Payments**

Particulars	1971-72	1972-73	1973-74	1974-75	1975-76	1976-77
Unemployment benefits—						
Claims granted no.	8 974	12 536	11 562	22 088	30 930	23 860
Persons on benefit—						
At 30 June no.	1 697	2 330	1 769	3 555	7 228	7 078
Weekly average no.	1 187	2 073	2 089	4 439	6 302	7 161
Benefits paid \$'000	966	2 095	3 125	7 746	15 256	17 963
Sickness benefits—						
Claims granted no.	2 964	3 295	3 739	4 144	5 018	4 635
Persons on benefit—						
At 30 June no.	428	583	604	682	1 064	959
Weekly average no.	382	499	642	632	772	933
Benefits paid \$'000	497	792	1 247	1 692	2 409	2 380
Special benefits—						
Claims granted no.	418	459	574	800	1 760	1 822
Persons on benefit—						
At 30 June no.	138	148	172	297	471	469
Weekly average no.	139	136	148	215	359	461
Benefits paid \$'000	79	128	224	421	811	979
Total benefits—						
Claims granted no.	12 356	16 290	15 875	27 032	37 708	30 317
Persons on benefit—						
At 30 June no.	2 263	3 061	2 545	4 534	8 763	8 506
Weekly average no.	1 708	2 708	2 879	5 286	7 433	8 555
Benefits paid \$'000	1 542	3 015	4 596	9 859	18 476	21 322

A special benefit may be granted to a person not qualified for a pension or an unemployment, sickness or special benefits is not normally taxable since the amount domestic circumstances, or for other valid reasons, he is unable to earn a sufficient livelihood for himself and his dependants. Recipients of special benefits include, among others, persons caring for invalid parents, deserted fathers and persons ineligible for either age or invalid or widower's pensions because of lack of residence qualifications.

Income Taxation Applicable to Pensions and Benefits

Income from age, wives' or widows' pensions and supporting mothers', unemployment, sickness or special benefits is not normally taxable since the amount received in a full year is less than the level at which income tax becomes payable. If other income is earned and this raises total income above the minimum level, normal income tax provisions apply. Invalid and blind pensions are exempt from taxation.

Maternity Allowances

Maternity allowances were introduced in 1912. There is no income test and any mother is entitled to a maternity allowance if she gives birth to a child in Australia and if she resides or intends to remain in Australia.

The following table shows payments made in Tasmania during recent years:

Maternity Allowances

Particulars	1971-72	1972-73	1973-74	1974-75	1975-76	1976-77
Claims no.	8 211	7 615	7 296	7 225	7 210	6 729
Amount \$'000	260	241	230	229	227	215

Orphans' Pension

The 1973 Budget introduced the double orphans' pension which is payable to institutions or persons caring for a child whose parents are both dead or one parent is dead and the other parent cannot be located. At 30 June 1977 there were 133 orphans for whom pensions were being paid. Total payments in 1976-77 were \$66 000.

Handicapped Child's Allowance

The handicapped child's allowance is payable to the parents or guardians of a severely physically or mentally handicapped child who is living in the family home and needs constant care and attention. At 30 June 1977, allowances were being paid with respect to 467 children (139 new allowances were granted during 1976-77) and payments during 1976-77 totalled \$345 000.

Family Allowances

With the introduction of personal income tax indexation for the 1976-77 income year, tax rebates in respect of dependent children were abolished but this was offset by significant increases in family allowances (previously called 'child endowment') payments payable to persons (usually the mother) with dependent children. From 1 July 1976, the family allowances payable in respect of dependent children under 16 years of age, or over 16 but under 25 years of age and receiving full-time education, were as follows: first such child, \$3.50 per week; second child, \$5; third child, \$6; fourth child, \$6; fifth and later children, \$7. One year's

residence in Australia is required if the mother and child were not born here, but this requirement is waived if the Department is satisfied they intend to remain here permanently.

The following table shows family allowance (child endowment) statistics for Tasmania for the years 1971-72 to 1976-77:

**Family Allowances
Child and Student Dependants and Payments**

Particulars	1971-72	1972-73	1973-74	1974-75	1975-76	1976-77
Dependent children and students (a)—						
Children in endowed families (b) .. no.	128 946	128 297	126 595	126 461	125 391	(e)129 054
Children in approved institutions (b) no.	447	440	388	399	309	(e) 340
Students (d) .. no.	6 213	5 834	5 911	5 894	5 911	..
Total .. no.	135 606	134 571	132 894	132 754	131 611	129 394
Amount paid during year \$'000	7196	(e) 8 195	7 212	7 099	(f)7 766	31 197

(a) Number at 30 June.

(b) Children under 16 years.

(c) Includes dependent students under 25 years.

(d) Students 16 but under 21 years; includes students in approved institutions to 1975-76.

(e) Five 12-weekly payments.

(f) Includes some payments of the increased family allowances.

Rehabilitation Service

This service aims to fit handicapped people for employment by supplying medical and hospital treatment, surgical aids and appliances and, where necessary, arranging special education and training courses in industry, trade, commerce, public service, etc. Although employment is specifically the responsibility of the Federal Department of Employment and Industrial Relations, vocational counsellors arrange employment with suitable employers and follow up progress.

Rehabilitation training is given if the disability is a substantial handicap to engaging in full employment. Disabled people who do not qualify for free service may pay for rehabilitation themselves or may be sponsored by private or government organisations. In Tasmania the Department's rehabilitation centre is located in Hobart.

The following table shows the numbers accepted for rehabilitation and placed in employment in Tasmania:

Operation of the Rehabilitation Service

Particulars	1971-72	1972-73	1973-74	1974-75	1975-76	1976-77
Persons—						
Accepted for rehabilitation .. no.	77	82	109	131	134	159
Placed in employment no.	71	45	47	82	74	101
Expenditure (a) \$'000	112	133	176	321	440	525

(a) Excludes capital expenditure on sites and buildings and administrative costs of the Rehabilitation Service.

Homes for the Aged or Disabled

The *Aged or Disabled Persons' Homes Act 1974* provides for building subsidies and separate land subsidies on a \$2 for \$1 basis (up to a maximum amount, which is determined from time to time). The current maximum subsidies are for a single unit, \$11 130; double unit, \$12 910; and for land for a unit, \$1 920. These subsidies are payable to approved organisations intending to build or acquire homes for aged or disabled persons. The aim is to provide homes in which the conditions approach normal domestic life. ('Homes' in this context does not refer to houses built under Federal-State Housing Agreements.)

During 1976-77 nine grants were approved under the *Aged or Disabled Persons' Homes Act 1974*; the amount granted was \$470 737.

Personal Care Subsidy: A subsidy of \$15 per week is payable to eligible organisations in respect of all persons who receive approved personal care in hostel-type accommodation in an aged persons' home eligible under the *Aged or Disabled Persons' Homes Act 1974* and for whom National Health Benefit is not received. During 1976-77, 19 organisations cared for 466 qualified residents and received subsidies totalling \$358 100.

Delivered Meals Subsidy: A subsidy at the rate of 25 cents (plus five cents if vitamin C supplement provided) for each delivered meal is payable to approved organisations providing a 'meals-on-wheels' service. In 1976-77, 24 organisations in Tasmania provided approved meal services, and subsidy payments totalled \$73 383.

Handicapped Persons Welfare

The *Handicapped Persons Assistance Act 1974* provides assistance for the following prescribed services relating to handicapped or disabled persons: (i) training; (ii) activity therapy; (iii) sheltered employment; (iv) residential accommodation; (v) holiday accommodation; (vi) recreational facilities; and (vii) rehabilitation facilities.

Assistance toward approved expenditure is given to organisations under the Act by a \$4 for \$1 subsidy towards: (i) the capital cost of projects; (ii) the cost of building maintenance; (iii) the rental of premises; and (iv) the cost of equipment. In addition salary subsidies of up to 100 per cent are payable for the first two years after an organisation has commenced to provide a prescribed service and a 50 per cent subsidy is payable in all other cases. A training fee of \$500 is payable to a sheltered workshop for each disabled person placed in open employment for a period of not less than 12 months. Federal Government expenditure in Tasmania on assistance to handicapped persons under the *Handicapped Persons Assistance Act* in 1976-77 was \$337 287.

Child Care

Organisations may receive financial assistance for a range of child care projects including full day care, occasional and emergency care. Both capital and recurrent grants are available.

Migrant Welfare

Social workers are available to assist people with personal problems. There are also migrant welfare officers and a community interpreter service available to assist migrants.

State Department of Social Welfare

Expenditure

Activities of this State Government Department are grouped under Child Welfare and Relief Divisions. The following table shows expenditure over a five-year period:

Department of Social Welfare: Expenditure
(\$'000)

Particulars	1971-72	1972-73	1973-74	1974-75	1975-76
Administration and general ..	653	762	941	1 525	1 770
Relief Division	653	1 043	826	1 008	1 304
Child Welfare Division ..	368	408	477	632	774
Grants to organisations ..	127	149	157	174	160
Total	1 802	2 363	2 401	3 339	4 008

In 1975-76 the major expenses were: under Relief Division, fuel allowances for eligible pensioners, \$186 000 and relief and maintenance, \$1 051 000; under Child Welfare Division, maintenance of boarded-out children, \$387 000 and contributions towards maintenance of children in approved institutions, \$213 000; and under grants to organisations, Tasmanian Institute for Blind and Deaf, \$135 000.

Relief Division

The functions of this Division are to investigate applications for assistance from needy mothers with dependent children and to give cash relief where necessary; to issue fuel allowances (subject to an income test) to age and invalid pensioners; and to help pay for funerals, transport, furniture removals, artificial limbs, spectacles, etc., for persons in needy circumstances. Special grants are made to deserted wives (and sometimes deserted husbands) left with children, wives with husbands in gaol, to certain persons awaiting receipt of federal benefits or pensions, and to relatives supporting deserted children.

Child Welfare Division

The work of this Division includes the investigation of complaints that children are neglected or inadequately controlled; the supervision of neglected children in their own homes to avert the need for more drastic action; the investigation of cases to appear in Children's Courts; the supervision of children under court order; the placement and supervision of children made wards of the State; the control of the Department's receiving and other homes; the recovering of maintenance costs, where possible, from parents of children who are a charge on the Department; the licensing and supervision of children's boarding homes and day nurseries; the supervision of child migrants; and welfare of children referred by courts in divorce actions.

Where, because of illness, a mother is unable to undertake her normal duties, accommodation may be provided for her children at Rochebank Hostel in Hobart, or at other suitable residences throughout the State.

Adoption of Children: Women child welfare officers investigate applications by prospective adoptive parents and interview mothers wishing to place their children for adoption. Applications for adoption of children are heard by a magistrate. There were 211 orders for adoption made in 1975-76.

Children's Courts Statistics

Children's Courts are established to hear cases involving persons under the age of 17 years. If proceedings are instituted, a child's parent has the right to be heard and to examine and cross examine witnesses or to be represented by counsel; also a parent can be compelled to attend the hearing if this imposes no unreasonable inconvenience. For the powers of Children's Courts see the section under 'The Present Law Court System' in Chapter 16.

Children Appearing Before Children's Courts (a), 1975-76
Classified by Age and Sex

Sex	Age (in years)										Total (b)
	Under 8	8	9	10	11	12	13	14	15	16	
Boys ..	39	11	22	50	58	96	185	331	540	1 189	2 651
Girls ..	26	3	2	1	8	20	42	87	131	193	526
Total	65	14	24	51	66	116	227	418	671	1 382	3 177

(a) A child appearing twice or more before the Courts will appear twice or more in the table.

(b) Includes 143 children (130 boys and 13 girls) who were 17 years old when appearing before the Courts but 16 at the time the alleged offences were committed.

Children Appearing Before Children's Courts (a)
Classified by Offence

Offence alleged	1971-72	1972-73	1973-74	1974-75	1975-76
Damage to property	92	114	117	153	153
Breaking, entering and stealing	327	379	355	385	354
Stealing	322	431	433	578	586
Receiving	22	27	16	35	21
Illegal use of vehicles	176	235	209	285	224
Offences involving fraud	17	17	12	8	10
Sex offences	19	24	27	18	30
Other offences against the person	53	43	93	129	60
Offences against decency	34	51	49	6	15
Relatively serious offences	1 062	1 321	1 311	1 597	1 453
Disorderly conduct	40	89	65	126	77
Traffic offences	218	339	481	661	710
Breaches of—Licensing laws	400	440	689	591	509
By-laws	50	12	4	12	11
Firearms offences	42	18	36	19	28
Gaming (b)	n.a.	45	80	49	31
Trespass (b)	n.a.	26	18	57	49
Other (b)	n.a.	10	93	170	157
Other offences	750	979	1 466	1 685	1 572
Appearing as—Uncontrolled	41	33	122	48	53
Neglected	53	80	196	332	90
Breaches of supervision	19	11	12	28	9
Complaints under Child Welfare Act	113	124	330	408	152
Total	1 925	2 424	3 107	3 690	3 177

(a) A child reported twice or more will appear twice or more in the table.

(b) For 1971-72, these offences are included in other categories.

In the preceding table, the figures relate to actual prosecutions. Where a report concerned multiple offences, the apparently more serious one has been listed. However, a child may be included more than once if more than one report has been made.

The following table shows the number of children found guilty of an offence or against whom a complaint has been proven. The basis for inclusion is different from that in the two earlier tables:

- (i) a child found guilty at two or more appearances is only counted once; and
- (ii) a child found guilty of more than one offence is classified under the more serious.

Individual (a) Children: Findings of Guilty, or Complaint Proven, 1975-76

Sex	Relatively serious offences (b)	Other offences (b)	Complaints under Child Welfare Act (b)	Total
Boys	631	850	23	1 504
Girls	124	166	56	346
Total	755	1 016	79	1 850

(a) See paragraph before table for definition of 'individual'.

(b) See previous table for classification of offences and complaints.

Wards of the State and Supervised Children

Children are made wards of the State either on application of a parent or relative (e.g. in the case of both parents' death or desertion) or by a court order. Children may remain wards until they reach the age of 18. Wards, while under the supervision of a welfare officer, are often returned to their home and in such cases wardship is frequently terminated, as it is with those who successfully take up employment.

At 30 June 1976, there were 1 367 children under State control or supervision. Of these children 501 were under legal supervision of child welfare officers as a result of court-imposed supervision orders and 866 were wards of the State.

Wards are placed in: (i) foster homes (mostly ordinary family homes); and (ii) children's homes (private and departmental). The Department makes payments, based on the child's age, for wards in foster homes and contributes to non-departmental institutions for the maintenance of State wards.

Approved children's homes and foster homes are assisted with major items of clothing. The Department accepts responsibility for hospital expenses and cost of dentistry for wards of the State where this treatment is not available from school dental or hospital services. Optical expenses are also met where necessary. Pocket money, varying from 30 cents to \$1.50 per week is provided for children in foster homes. Assistance at the rate of \$11.00 per week also is available in respect of certain non-wards, who are orphans or abandoned, in the care of the managers of approved children's homes.

The following table gives details relating to the location of wards of the State and the numbers of children made wards and ceasing to be wards, for the last five years:

**Wards of the State: Location, Admissions and Discharges
(Number)**

Particulars	1971-72	1972-73	1973-74	1974-75	1975-76
Location at 30 June—					
In homes—					
Departmental	98	106	105	94	78
Other children's homes	199	202	163	179	159
Foster	374	378	390	390	329
With parents or relatives	177	155	201	201	232
In private lodgings	50	61	39	35	27
Other (a)	39	25	41	37	41
Total	937	927	939	936	866
Children made wards during the year—					
By courts—					
Delinquent	79	66	42	50	40
Neglected	36	50	76	90	33
On parents' or guardians' request—					
Neglected (uncontrolled) (b)	1	5	7	1	..
Deserted, or parents unable to provide (c)	53	45	59	40	31
Total	169	166	184	181	104
Children ceasing to be wards during the year—					
Adopted	33	21	28	27	37
Supervision not needed, age, etc.	119	155	144	157	137
Total	152	176	172	184	174

(a) Children in hospitals, other government institutions, missing, etc.

(b) Neglected—unfit for guardianship.

(c) Destitute and/or homeless.

The next table shows Government expenditure on wards of the State:

**Wards of the State: Government Expenditure
(\$'000)**

Particulars	1970-71	1971-72	1972-73	1973-74	1974-75	1975-76
Expenditure on departmental homes	271	341	384	412	703	760
Maintenance of children—						
In foster homes	149	178	179	244	325	387
In non-departmental homes	94	103	120	113	162	213
Total expenditure	515	622	683	769	1 190	1 360

Departmental Homes: The State's 12 receiving homes, which provide temporary accommodation for children, are maintained at Hobart, Launceston, Wynyard and Devonport. Also, in Hobart, a hostel provides accommodation for older boys who have left school and need to be established in employment.

Ashley Home for Boys, Deloraine, provides care and training for older wards who, because of maladjustment or delinquency, require special institutional control.

Wybra Hall, Mangalore, provides care and training for younger wards and boys on remand. Ages range from eight to 15 years and those admitted have problems of maladjustment or delinquency.

Westwinds, Woodbridge, is a home for intellectually and educationally retarded boys who range in age between five and 15. Boys of school age attend various schools in the area where there are special facilities recommended by the Educational Guidance Authorities as suitable for meeting their individual needs.

Weeroona Girls' Training Centre, Latrobe, provides for those adolescent girls in the care of the Department who require special institutional supervision and training. Girls of school age receive correspondence school education and older girls are trained in various aspects of domestic work.

Non-departmental Homes: Other children's homes in which wards are placed are: Kennerley Children's Homes at Claremont and Chigwell; Salvation Army Boys' Home, Salvation Army Girls' Home, St Joseph's Child Centre, Bethany Boys' Hostel, Mt St Canice Convent and Hillcrest, all in Hobart; Yalabee Hostel, Glenorchy; Clarendon Home, Kingston; Girls' Home and Glenara Home for Boys, Launceston; and Roland Boys' Home, Sheffield.

REPATRIATION SERVICES AND PENSIONS

General

The Department of Veterans Affairs was originally established as the Repatriation Commission under federal legislation in 1920. The Department is responsible for: (i) the payment of disability and service pensions to eligible veterans and their dependants; (ii) the provision of medical treatment to veterans for injuries and illnesses caused or aggravated by their war service; (iii) the provision of medical treatment to widows and dependants of deceased veterans whose deaths were due to war service; (iv) the provision of medical treatment in certain circumstances to veterans who are suffering from injuries and illnesses not caused or aggravated by war service; and (v) medical treatment for veterans of the 1914-18 War and the Boer War. The Department is also responsible for functions administered by the Defence Service Homes Corporation and the Office of Australian War Graves.

Benefits are provided in respect of service in the 1914-18 and 1939-45 Wars, in the Korea and Malaya operations, with the British Commonwealth Far East Strategic Reserve, and the Special Overseas Forces including veterans from the Vietnam operations. Certain members of the defence forces serving on or after 7 December 1972 are also eligible for benefits.

Repatriation Pensions

Disability pensions are payable, without general application of an income test, for war-caused or war-aggravated disabilities. Service pensions are payable in the main, to male veterans 60 years and over (and female veterans 55 years and over) subject to an income test; no disability need be claimed.

Disability and dependant's pensions may be granted to persons, or to dependants of persons, who come within the following categories and who suffered death or disability: (i) arising from any occurrence before discharge, or on overseas war service or on service in Australia within certain areas; (ii) attributable directly to service where the member served only in Australia; (iii) from pulmonary tuberculosis where the member served in any theatre of war; and (iv) from aggravation of a condition existing at enlistment where camp service exceeded six months.

Those who receive disability pensions are also eligible for free medical and hospital treatment for their pensionable disabilities. With certain categories of pensioners, the eligibility for free treatment is widened to cover all disabilities.

It is also possible for a veteran to qualify for free treatment for a disability without necessarily being granted a pension.

Service and dependant's pensions may be granted to persons (or to dependants of persons) who come within the following categories and satisfy an income test: (i) men aged 60 or over who served in a theatre of war or women 55 years and over who served abroad; (ii) men and women with similar service particulars who are permanently unemployable; (iii) sufferers from pulmonary tuberculosis. The conditions governing the income test are the same as for old age pensions described earlier in this chapter.

Details of selected repatriation benefit rates are shown in the following table:

Repatriation Benefits (a)			
(\$ Per Week)			
Benefit	Rate		
	At 6 May 1976	At 4 Nov. 1976	At 5 Mar. 1977
PAYABLE WITHOUT INCOME TEST			
Disability pensions—			
Special rate (T.P.I.) pensions—			
Veteran	78.85	83.25	90.15
Wife	4.05	4.05	4.05
Each child	1.38	1.38	1.38
Intermediate rate pensions—			
Veteran	54.30	57.35	62.10
Wife	4.05	4.05	4.05
Each child	1.38	1.38	1.38
General rate pension (maximum rates)—			
Veteran	29.80	31.45	34.05
Wife	4.05	4.05	4.05
Each child	1.38	1.38	1.38
War widows—			
Pension	41.25	43.50	47.10
Domestic allowance	12.00	12.00	12.00
Orphans' pensions—			
One parent dead—			
Each child	10.45	10.45	10.45
Both parents dead—			
Each child	20.90	20.90	20.90
PAYABLE SUBJECT TO INCOME TEST (MAXIMUM RATES)			
Service pensions—			
Veteran—Standard (single person) ..	41.25	43.50	47.10
Married	34.25	36.25	39.25
Addition for each child ..	7.50	7.50	7.50
Wife's pension (if she is not a pensioner)	34.25	36.25	39.25
Guardians' allowances—			
Where there is a child under six years or an invalid child requiring full-time care ..	6.00	6.00	6.00
Other cases	4.00	4.00	4.00

(a) Details relating to conditions of eligibility for the various pensions are available from the Department of Veterans Affairs.

Disability Pension Payments

The following table shows, for Tasmania, the number of pensions in respect of veterans and their dependants, together with expenditure on disability pensions:

Disability Pensions: Pensioners and Payments

Year	Number of pensions current at 30 June				Expenditure during year (a) (\$'000)
	Incapacitated veterans	Dependants of—		Total (b)	
		Incapacitated veterans	Deceased veterans (c)		
1972-73	8 503	11 360	2 042	21 905	9 857
1973-74	8 358	11 602	2 027	21 987	11 176
1974-75	8 219	11 231	2 015	21 474	13 697
1975-76	8 120	10 670	1 978	20 778	14 827
1976-77	7 950	10 182	1 916	20 062	16 637

(a) Includes widows' allowances.

(b) Includes miscellaneous pensions not specified under the 'veteran' details, e.g. seamen's war pensions and allowances.

(c) Includes war widows' pensions.

At 30 June 1977 the proportion of veterans in Tasmania receiving disability pensions in respect of service in the 1914-18 War was 6.3 per cent; the 1939-45 War, 87.4 per cent; the Korea and Malaya operations, 1.8 per cent, and other operations 4.5 per cent.

Service Pension Payments

The following table shows, for Tasmania, the number of service pensions in respect of veterans and their dependants, and expenditure on pension payments:

Service Pensions: Pensioners and Payments

Year	Number of pensions current at 30 June				Expenditure during year (\$'000)
	Veterans	Dependants of—		Total	
		Living pensioners	Deceased pensioners		
1972-73	2 638	1 402	122	4 162	2 827
1973-74	3 093	1 541	129	4 763	4 362
1974-75	3 433	1 822	120	5 375	6 668
1975-76	3 843	2 150	112	(a) 6 163	9 313
1976-77	4 386	2 564	119	(a) 7 162	12 327

(a) From 1975-76, includes British Commonwealth pensions.

Medical Services

To discharge these functions in Tasmania, the Department of Veterans Affairs maintains a branch office, a general hospital and an artificial limb and appliance centre in Hobart. Facilities exist at the Repatriation General Hospital for medical treatment of hospitalised patients and specialist services for out-patients. Generally treatment for out-patients throughout the State is provided by doctors appointed

by the Department as Local Medical Officers. People entitled to treatment can select a doctor from the panel of L.M.O.s. and receive treatment at departmental expense. Payment for treatment in hospitals other than the Repatriation General Hospital is met by the Department only in certain circumstances.

Extensions of benefits announced in the 1973 and 1974 Federal Budgets included: (i) free treatment for all veterans of the Boer War and the 1914-18 War (this includes medical, hospital, dental, ophthalmological and para-medical treatment and, subject to a contribution of \$43.40 per week, treatment in nursing homes); (ii) veterans, who are suffering from malignant cancer, are for that condition eligible for free medical and hospital treatment and, subject to a contribution of \$43.40 per week, to nursing home treatment; and (iii) allowing the facilities of the Repatriation Artificial Limb and Appliances Centres to be used to provide free artificial limbs to the general public. A further recent extension is the provision of free treatment, etc., for all ex-prisoners of war.

Soldiers' Children Education Scheme

Eligible Children

Educational assistance is granted to veterans' children in particular circumstances: (i) if the parent has died from causes attributed to war service or was receiving disability pension for specific serious disabilities at the time of death; (ii) if the parent, as a result of war service, is blinded, totally and permanently incapacitated or receiving the special rate pension for pulmonary tuberculosis.

Benefits

For children under 12 years, the scheme pays the cost of school requisites and fares. At secondary level, fortnightly maximum payments are: under 14 years, \$7.40; 14 and under 16, \$11.10; 16 years and over, \$24.30 if both parents are living and \$32.00 if only one parent is living. At tertiary level, those living at home may receive \$46.00 per fortnight and those living away from home, \$76.00.

HEALTH SERVICES

Department of Health Services

Headquarters

Responsibilities of the headquarters of the Department of Health Services include:

- (i) public hospital management advisory services and the licensing of private hospitals and other medical establishments under the *Hospitals Act 1918*;
- (ii) District Medical Service;
- (iii) School Dental Service;
- (iv) Nurses' Registration Board and Dental Mechanics' Registration Board;
- (v) Tourist Nursing Service;
- (vi) legislation concerned with health and allied matters;
- (vii) certain specialist medical services;
- (viii) State Drug Advisory Committee;
- (ix) liaison with the health departments of other states and the Federal Government (the Director-General of the State Department is a member of the National Health and Medical Research Council and the (National) Hospital and Allied Services Advisory Council); and
- (x) liaison with professional, medical, dental and nursing associations.

The Director-General is the controlling authority under the Hospital Employees' Award, the Medical Officers' Award and the Nurses' (Public Hospitals) Award. Headquarters also controls and maintains Crown property occupied by the various sections of the Department and deals with the appointment and salaries of staff who are not officers of the Public Service.

General

The State Department of Health Services is responsible for the maintenance of the health of the community, the prevention of disease and the provision of government hospital and medical services. The Department is under the jurisdiction of the Minister for Health, with the Director-General of Health Services as its permanent head. The headquarters of the Department controls two divisions, each under a director, namely Public Health and Tuberculosis. Three specialised services are also part of the Department: the State Health Laboratory under the direction of the Government Pathologist; the Government Analyst and Chemist Laboratory under the control of the Government Analyst; and Cardio-Vascular Services under the control of a Director.

Department of Health Services: Expenditure from Consolidated Revenue
(\$'000)

Particulars	1971-72	1972-73	1973-74	1974-75	1975-76
Administration, head office	348	398	476	665	705
Hospital and medical services—					
Administration <i>r</i>	299	365	393	518	520
Grants to hospitals <i>r</i>	12 212	14 536	19 193	33 030	40 057
Medical services, country districts ..	198	210	248	342	416
Dental Health Service	698	754	669	1 164	1 421
National fitness section (a)	87	100	126	..	..
Nurses' Registration Board	7	7	8	12	8
Ambulance Commission	158	256	265	594	713
Government Analyst and Chemist ..	139	164	188	265	287
St John's Park Hospital	1 763	1 925	2 326	3 920	4 696
Public Health—					
Administration and inspectors ..	369	403	425	<i>r</i> 475	586
School Medical Service	197	224	268	365	422
Child Health Service	242	281	311	424	505
Road safety (b)	94	111	158	201	..
Community Health Services .. ..	..	..	..	62	543
Tuberculosis Division—					
Administration	209	227	343	517	558
Chest hospitals	246	(c) 116	..	..	..
Miscellaneous grants and expenses <i>r</i> ..	493	592	597	1 038	1 142
Total	17 758	20 670	25 993	43 591	52 579

(a) National fitness section transferred to Education Department from 1 July 1974.

(b) Road safety transferred to Police Department from 1 July 1975.

(c) Chest hospitals were closed in 1972-73.

School Dental Health Service

This service, available free to children up to school leaving age, aims to examine and treat every child each six months, but continued staff shortages have prevented this from happening. At the end of June 1977, 43 static clinics were established at urban centres throughout the State while 26 mobile units provided services in most country districts. An orthodontic service is based in Hobart and there are permanent clinics in Launceston and Devonport.

Dental Therapy: Adopting the New Zealand system, Tasmania became the first Australian State to develop a School of Dental Therapy. Twenty three first-year and 27 second-year students, including several students trained on behalf

of the Federal Government (these are employed in the Australian Capital Territory after graduation) underwent training in 1977. Ten classes have graduated since January 1968 (after two year courses) and the graduates have been appointed to clinics. The school is located in Hobart and has a residential hostel attached providing accommodation for 30 students. It is hoped that a total of 100-140 dental therapists will work in rural and metropolitan areas by 1980; a recognised dental nursing certificate is required for a nurse to be appointed to such a field position.

Fluoridation

In 1953 Beaconsfield became the first local government authority to add flouride to its water supply and Launceston followed in 1961. In 1964 Hobart became the first Australian capital city to add fluoride to its water supply.

A Royal Commission inquired into fluoridation of water supplies in 1968. It reported favourably and recommended its extension throughout the State. The State Government passed the *Fluoridation Act* 1968, setting up a Fluoridation Committee with power to recommend to the Minister for Health the fluoridation of any public water supply and to oversee fluoridation operations. It is required to report annually to the Minister who must lay the report before Parliament.

By July 1976, fluoridation had been extended to include: the whole of the greater Hobart area served by the Derwent and Southern Regional Water Supply Schemes, extending as far afield as Sorell, Campania, Kempton, New Norfolk and Snug; the City of Launceston and surrounding areas supplied by the West Tamar and North Esk Regional Water Supplies; and numerous towns supplied by individual schemes including Burnie, Devonport, Smithton, Waratah, Queenstown, Deloraine, Scottsdale, St Helens, Campbell Town, Oatlands, Strathgordon, Huonville, Ranelagh, Cygnet, Geeveston, Dover and Alonnah.

District Medical Service

In 1937 the Government undertook to help the more remote municipalities obtain medical services. Up until June 1975, participating municipalities levied a rate under the *Local Government Act* 1962, as amended, and met between one half and one third of the cost of the scheme. From July 1975, the Federal Government contributed 50 per cent of the operating costs of the scheme by means of a Health Program Grant under the *Health Insurance Act*, the remaining 50 per cent being financed from State funds. Participating municipalities currently contribute only a nominal amount.

The scheme provides a general practioner service free to all residents of the municipality for consultations and home visits. A surgery is usually attached to the district medical officer's house and branch surgeries are sometimes located elsewhere within the district. Attention out-of-hours is charged for in accordance with Medi-bank rates, as are insurance medical examinations and compensation treatment.

As well as general practice, activities include the dispensing of drugs if no chemist is available; duties as Medical Officer of Health (under the *Public Health Act*) if a municipal council requests it; in some cases duty as superintendent if there is a district hospital within the municipality; attention to district nursing hospitals; and post mortem examinations.

Pharmaceutical Services Section

The Pharmaceutical Services Section has numerous advisory, supervisory and regulatory functions under regulations and legislation relating to narcotics, poisons, and dangerous and therapeutic drugs.

Alcohol and Drug Dependency Board

This Board was established under the *Alcohol and Drug Dependency Act 1969*; its members are appointed by the Minister for Health from the medical, pharmaceutical, social service, police and legal professions. Its functions are: (i) to keep under review all matters relating to the prevention and treatment of alcohol and drug dependency; (ii) to advise on the declaration and control of substances as drugs under the Act; and (iii) to act as a board of appeal for applications by patients for discharge from treatment centres.

The treatment and rehabilitation of sufferers of alcohol and drug dependency is handled by the Mental Health Services Commission; the Commission's acute psychiatric units (at Wynyard, Devonport and Launceston), the Royal Derwent Hospital at New Norfolk, the Royal Hobart Hospital and the John Edis Hospital at New Town have been declared treatment centres.

State Drug Advisory Committee

This advises on the nature, strength and variety of drugs to be supplied to public hospitals and institutions by the medical store of the Supply and Tender Department. It is not concerned with administration but helps the store to avoid stocking drugs with different names but similar properties, and stocking drugs not likely to be required.

Nursing

Nursing training is under the control of the Nurses' Registration Board. Of the State's nursing training schools, six are general, five midwifery, one child health, one psychiatric and one geriatric. There are nine general and one psychiatric training schools for auxiliary nurses (nursing aides).

Tourist Nursing Service

This service is based on the fact that trained nursing sisters from outside Tasmania like to visit the State and have a working holiday. These 'tourist nurses' are employed for short periods in hospitals or district nursing centres. Not more than two months service at any one time is required of a sister in any one place but she may stay longer.

Division of Public Health

General

The Division of Public Health has responsibility for the preventive medical services of the State. The Director is responsible for the operation of the *Public Health Act 1962* (as amended) and the control of medical officers of health and other health officers employed by the Department of Health Services and municipalities throughout the State. A major responsibility is public immunisation programs, conducted through the municipalities; preparations distributed include the Sabin anti-poliomyelitis vaccine and the triple antigen vaccine (against whooping cough, tetanus and diphtheria). The Division is responsible for the Nutrition Advisory Service; industrial hygiene; environmental sanitation; pure food and pure drug quality control; and the public health aspects of the building regulations. Other major functions are discussed separately in the following sections.

Notifiable Diseases

Certain diseases are notifiable under the *Public Health Act 1962*, the aim being to prevent or check their spread. The following table shows the incidence of notifiable diseases in Tasmania for a five-year period:

Notifiable Diseases Reported to Department of Health Services
Number of Cases

Particulars	1971-72	1972-73	1973-74	1974-75	1975-76
Amoebiasis .. .. .	..	..	..	..	..
Cholera .. .. .	..	1	..	..	..
Diphtheria .. .. .	..	..	..	..	..
Food poisoning in two or more associated cases	5	..	..	..	..
Gonorrhoea	112	162	230	222	140
Hydatids	9	7	9	5	4
Infectious hepatitis	186	55	36	59	284
Leptospirosis	12	..	1	..	4
Malaria	1	1	1	2	1
Salmonella infections	12	33	27	53	21
Serum hepatitis .. .. .	..	..	1	..	1
Shigella infections	1	21	14	2	1
Syphilis	9	2	4	4	1
Tetanus	1	1	..	..	..
Tuberculosis	43	54	48	41	44
Typhoid fever (incl. paratyphoid)	2	1	..	1	..
Urethritis	2	..	..	..	..
Total	395	338	371	389	501

Special conditions apply to venereal diseases. Persons suffering from them must not marry until cured, or engage in the manufacture or distribution of food-stuffs, and are liable to arrest and detention if they fail to continue treatment until cured.

Quarantine provisions and tuberculosis are dealt with in later sections.

Child Health Service

In 1976, there were 101 Child Health Centres and 15 travelling units. Triple Certified Child Health Sisters attached to these centres advise mothers on all aspects of caring for babies and young children. They advise mothers on infant feeding, child development and other health and social problems that occur in the family. The sisters visit new born babies at home and continue the supervision either at home or more commonly in the Child Health Centre where individual records are maintained. Sisters also arrange for examinations to be carried out by family doctors under the Pre-School Medical Scheme and departmental Medical Officers carry out the examinations in Child Health Centres. Voluntary Child Health Committees working for the centres raise money for furnishing and equipping new centres which are usually built by the Department. They also meet running costs such as heating, lighting, cleaning and telephones.

The Mothercraft Home: This home, located in Hobart, provides training for qualified nursing sisters who want to gain child health nursing certificates and for women who want to become mothercraft nurses. It accommodates children under two years old who need care or who cannot be looked after at home, and mothers learning to look after children or having feeding problems. When space is available, children under two years old can be boarded in the Home for short periods.

School Health Service

This is available free to children attending government and independent schools from kindergarten to matriculation level. Each school is visited annually by school medical officers who fully examine children at entry and in their eleventh and fifteenth years. In addition, children known to have defects are reviewed and special examinations are arranged for children whose physical health, behaviour or educational progress may be causing concern. Every year about 30 000 children

are examined by school doctors. About 20 per cent are found to have some defect, and these are referred to family doctors, specialists and hospital clinics and other appropriate agencies for investigation.

School nursing sisters visit schools regularly to supervise the health and hygiene of pupils. They maintain medical records, perform cleanliness inspections, test sight and hearing, assist at medical examinations and follow-up when defects are diagnosed. They contribute to health education, research projects and may organise immunisation sessions at their schools.

Health Education

The Health Education Council is composed of representatives of the Division of Public Health, the Education Department, the Mental Health Services Commission, the Adult Education Board and other interested persons. The Council's aim is public education by distribution of information on health matters.

Handicap Assessment Centres

Early in 1976, staff comprising Medical Officers, Nursing Sisters, Psychologists, Occupational Therapists and Welfare Officers were appointed to set up Assessment Centres in Hobart and Launceston. Children referred to these Centres because of a known handicap or only suspected of having a handicap are assessed using a team approach. Specialists in other areas, e.g. education, mental health and specialist clinics in hospitals are consulted and asked to contribute to case conferences.

Mental Health Services Commission

Introduction

Significant advances have been made in the field of clinical psychiatry and in the treatment of mental illness during the past three decades. The development of psychotropic drugs, new therapeutic techniques and improved methods of clinical practice have revolutionised the mental hospital from an institution for the incarceration of lunatics to a modern hospital geared to the care and rehabilitation of the sufferers of psychiatric disorders.

Administration

The Mental Health Services Commission was established under the *Mental Health Services Act 1967*, following an interdepartmental investigation into psychiatric services in Tasmania. The Commission comprises three members: a Medical Commissioner, a Clinical Commissioner (being Professor of Psychiatry at the University of Tasmania) and an Administrative Commissioner. Since 1 July 1968, the Commission has operated as a statutory authority, completely separate from the Department of Health Services.

Ultimately, the Mental Health Services Commission aims to provide integrated community services and to this end has established acute psychiatric units at Launceston, Wynyard and Latrobe. These regional units are closely linked to the public hospital complexes.

In September 1972, the Commission formally took over the Tasmanian Chest Hospital at Creek Road, Hobart and re-named the institution the John Edis Hospital. The facilities at this hospital have enabled the services for alcoholism and psychiatric disorders, formerly carried out at Clare House, New Town, to be expanded.

The principal institution under the control of the Commission is the Royal Derwent Hospital.

Royal Derwent Hospital

The following table shows the diagnosis of mental illness of patients in the Royal Derwent Hospital (incorporating Millbrook Rise):

Royal Derwent Hospital (a)
Diagnosis of Mental Disorder of Patients, 1975-76

Mental Disorder	Patients admitted (b) 1975-76			Patients at 30 June 1976		
	Males	Females	Total	Males	Females	Total
Senile and pre-senile dementia	19	19	38	20	49	69
Alcoholic psychosis	13	6	19	17	10	27
Psychosis with intracranial infection .. .. .	..	..	..	1	..	1
Psychosis with other cerebral condition	5	5	10	6	18	24
Psychosis with other physical condition	1	2	3	..	3	3
Schizophrenia	48	48	96	115	85	200
Affective psychoses	9	41	50	7	26	33
Paranoid states	2	5	7	8	9	17
Other psychoses	2	2	4	2	3	5
Neuroses	10	17	27	6	10	16
Personality disorders	57	35	92	16	14	30
Alcoholism	235	26	261	41	12	53
Drug dependency	2	2	4	..	1	1
Transient situational disturbances	10	6	16	..	..	..
Behaviour disorders of childhood	1	..	1	..	..	..
Mental disorders not specified as psychotic associated with physical conditions ..	8	7	15	7	5	12
Mental retardation—						
Borderline	3	7	10	4	4	8
Mild	18	4	22	23	15	38
Moderate	23	12	35	58	48	106
Severe	16	7	23	59	64	123
Profound	4	..	4	24	27	51
Unspecified	11	6	17	13	2	15
Other	14	2	16	..	..	..
Total	511	259	770	427	405	832

(a) Includes Millbrook Rise Hospital.

(b) Excludes those returned from leave.

Royal Derwent Hospital (a), Patients at 30 June 1976 by Mental Disorder: Summary

Mental disorder	Number	Per cent	Mental disorder	Number	Per cent
Senile and pre-senile dementia	69	8.3	Alcoholism	53	6.4
Alcoholic psychosis	27	3.2	Mental retardation	341	41.0
Schizophrenia	200	24.0	Other	109	13.1
Affective psychoses	33	4.0	Total	832	100.0

(a) Includes Millbrook Rise Hospital.

The Royal Derwent Hospital (at New Norfolk) is the State's principal centre for the treatment of psychiatric disorders and for caring for the mentally retarded. The hospital is divided into six sections and patients are allocated to the sections

on the basis of their medical diagnosis. The basic division of patients is into those who are psychiatric patients and those who are suffering from mental sub-normality.

The following table shows the numbers of patients admitted and discharged and deaths in the Royal Derwent Hospital (including Millbrook Rise):

Royal Derwent Hospital (a)
Number of Patients Admitted and Discharged, and Deaths, 1975-76

Particulars	Males	Females	Total
Patients at 30 June 1975	465	427	892
Patients admitted—			
First time	203	71	274
Re-admitted (including statistical re-admissions)	313	189	502
Total	516	260	776
Patients discharged, etc.—			
Discharged from hospital	256	173	429
Statistical discharges	268	67	335
Died	30	42	72
Total	554	282	836
Patients at 30 June 1976	427	405	832

(a) Includes Millbrook Rise Hospital.

NOTE: Statistical discharges are those patients who have not been officially discharged, but have been absent on leave from the hospital for more than 10 days. Should such persons require further hospitalisation, they are classified as 'Statistical re-admissions'.

Other Institutions

Hobart: (i) The Combined Children's Centre was opened in February 1968 for the treatment of psychiatrically disturbed children referred to the Centre by private medical practitioners, the Royal Hobart Hospital, Social Welfare Department, School Medical Service and the Guidance Branch of the Education Department. At 30 June 1976, there were 814 children under treatment.

(ii) The Day Minding Centre was opened in September 1968 to care for severely mentally retarded children, many of whom are also physically retarded. At 30 June 1976, 35 children were enrolled at the Centre.

Launceston: (i) The Lindsay Miller Clinic at the Launceston General Hospital reported the following attendance figures during 1975-76: out-patient visits, 3 685; day patient visits, 3 981; in-patients, 537. Psychological consultations totalled 129 and social work consultations 2 450.

(ii) The Children's Centre at Launceston was opened in October 1972 and attendance figures for 1975-76 were: new cases, 165; old cases, 767.

North-West: In-patient facilities are provided at the Mersey General Hospital and the Spencer Division of the North-Western General Hospital.

Various centres provide facilities for out-patient treatment on the north-west coast. During 1975-76, the North Western General Hospital, Spencer Division, treated 1 246 out-patients; Burnie Division, 1 572; Smithton District Hospital, 226; Devonport and Ulverstone Clinics, 2 115.

However, in the tables in this section, the term 'public' is applied only to the general and district hospitals, the other types of institutions being specified separately.

General Hospitals (Public)

Hospitals providing all facilities and specialised treatment are the Royal Hobart, Launceston General, Mersey General (at Latrobe) and North-Western General (with divisions at Burnie and Wynyard). The Queen Alexandra (Hobart) and the Queen Victoria (Launceston) are maternity hospitals.

Specialist treatment is available at general hospitals in obstetrics, gynaecology, orthopaedics, urogenital surgery, plastic and reconstructural surgery, neuro-surgery and neurology, radiology, pathology, radiotherapy, psychiatry and ophthalmology; skin diseases and venereal diseases are also treated and clinics operate in thoracic medicine and surgery. An emergency obstetric service, with specialists based in Hobart and Launceston, provides a free service to the smaller public hospitals, district nursing hospitals and district medical officers outside the two cities.

The Lady Clark Hospital, an annexe of the Royal Hobart Hospital, is a rehabilitation and physiotherapy centre with both in-patient and out-patient facilities.

The Peacock Convalescent Hospital in Hobart is run by a committee of management, most of its patients being referred from the Royal Hobart Hospital.

All district nursing centres, formerly administered by the Department of Health Services, have been administered as annexes by various general or district hospitals since 1 July 1968, the parent hospital in each case being selected on a geographical basis.

Fees

As from 1 October 1976, the Tasmanian Government entered into an agreement with the Federal Government for the equal sharing of costs, on an approved budget basis, of net operating costs for all recognised hospitals under the *Commonwealth and State Hospital Services Agreement Act 1976*. This agreement replaced previous arrangements entered into from 1 July 1975 but which were later found to be invalid.

A public hospital patient is entitled to receive free of charge comprehensive care and treatment as a hospital patient except in the following cases:

- (i) Hospitals may recover from the insurer, at specified rates, costs in respect of patients who may claim compensation or damages under workers compensation insurance or under the *Motor Accidents (Compensation and Liabilities) Act 1973* or seamen covered by the *Navigation Act 1912*.
- (ii) An intermediate patient and a personal obstetric patient are permitted to have a choice of medical practitioner at the Royal Hobart Hospital; the patient pays the medical practitioner on a fee-for-service basis and an accommodation charge is payable to the hospital by the privately insured patient. A hospital service fee is levied by the hospital on the medical practitioner for the use of hospital resources in providing the fee-for-service.
- (iii) A patient of the Queen Alexandra Hospital (obstetrics) and Queen Victoria Hospital (obstetrics and gynaecology) may elect to be treated as a private patient and be treated by a medical practitioner of her choice on a fee-for-service basis and be charged by the hospital for accommodation in either a single room or other than a single room.

- (iv) As from 1 October 1976, privately insured patients treated by hospital staff have been charged an all-inclusive fee by the hospital.

State Controlled Hospitals: Finances, Staff and Patients

The following tables give summaries of the financial operations and staff and patient numbers of State controlled hospitals and hospitals for the aged:

**State Controlled Hospitals and Hospitals for the Aged
Receipts and Payments (a), 1975-76
(\$'000)**

Particulars	Hospitals (excluding mental)			Mental hospitals	Hospitals for the aged
	Public (b)	Maternity (c)	Total		
Receipts—					
Government aid—					
State	36 592	2 176	38 768	6 598	3 720
Federal	7 029	640	7 669	51	2 297
In-patient fees	3 404	810	4 214	765	795
Out-patient fees	194	..	194	..	..
Other	1 049	107	1 156	58	94
Total	48 268	3 733	52 001	7 472	6 906
Payments—					
Salaries and wages	37 802	3 073	40 875	6 224	5 424
Provisions	1 514	146	1 660	(d)	438
Domestic supplies	878	79	957	(d)	68
Dispensary, etc.	3 164	118	3 282	(d)	107
Other	4 056	323	4 379	(d)	562
Total	47 414	3 739	51 153	7 472	6 599

(a) Excludes expenditure from State Loan Fund.

(b) Includes general and district hospitals; includes maternity wards in public hospitals.

(c) Excludes maternity wards in public hospitals.

(d) Not available on a comparable basis; included in 'Total'.

**State Controlled Hospitals and Hospitals for the Aged
Staff, Accommodation and In-Patients**

Particulars	Hospitals (excluding mental)		Mental hospitals		Hospitals for the aged	
	1974-75	1975-76	1974-75	1975-76	1974-75	1975-76
Hospitals and homes .. no.	22	22	1	1	3	3
Nursing staff .. no.	(a) 2 006	2 354	403	419	(a) 265	323
Beds available .. no.	2 277	2 299	1 030	1 030	836	843
In-patients—						
Total number treated ..	55 005	59 363	1 742	1 668	1 083	1 165
Daily average number of patients during year ..	1 510	1 538	901	846	715	679
In-patient costs—						
Total \$'000	n.a.	44 913	6 645	7 472	n.a.	6 624
Daily average per patient \$	n.a.	80	20	24	n.a.	27

(a) Excludes hospital aides and orderlies.

Hospitals for the Aged and Invalid

The State Government administers three hospitals caring for the aged and for invalids. In the table that follows, the distinction is made between 'general' and 'hospital' beds; 'general' refers to beds available for inmates not receiving treatment in the hospital sections of the institutions.

Government Hospitals for the Aged, 1975-76

Hospital	Average daily number of inmates			Beds available			Total persons accommodated during year	Total bed-days
	General	Hospital	Total	General	Hospital	Total		
Cosgrove Park (a)	107	124	231	141	134	275	394	84 654
St John's Park	11	406	417	216	321	537	726	152 693
Spencer Home for the Aged (b)	6	25	31	6	25	31	45	11 301
Total ..	124	555	679	363	480	843	1 165	248 648

(a) Cosgrove Park is administered as part of the Launceston General Hospital.

(b) This is a geriatric wing of the Wynyard Division of the North-Western General Hospital (previously the Spencer Hospital).

A new rehabilitation centre is presently under construction at New Town. This centre will cater for a wide range of services, including in-patient services for children and adults requiring hospitalisation because of all forms of disablement e.g. spastic diseases, mental retardation, crippled children and other handicapped persons and disabled persons generally. Domiciliary and day hospital therapeutic and home help facilities will still be based at St John's Park.

District Hospitals (Public)

These do not provide the diverse range of services available in the general hospitals, and do not have resident medical officers. They are located at Beaconsfield, Campbell Town, Currie, Franklin, Longford, New Norfolk, Ouse, Queenstown, Rosebery, St Helens, St Marys, Scottsdale, Smithton, Ulverstone and Whitemark.

Private Medical Establishments

There are 75 private medical establishments in Tasmania operated by charitable and church organisations and by private individuals or organisations. Most are concerned with care of the aged but five are hospitals with a more general purpose. All 75 are registered under Part III of the *State Hospitals Act* but five are also registered under the federal *National Health Act* and *Health Insurance Act* as hospitals. These are Calvary, St John's and St Helen's in Hobart, and St Luke's and St Vincent's in Launceston; all provide medical and surgical services. Of the remaining 70 establishments, 50 are licensed to provide nursing home care; and 20 to provide accommodation for ambulant patients only.

The largest units in the non-hospital group are: Hobart area, A.A. Lord Homes (111 beds), St Ann's Rest Home (110), Freemasons Homes (93), Lillian Martin Home (92), Mary's Grange (91), Strathaven Lodge (89), Queen Victoria Home for the Aged (80); Launceston area, Nazareth House (98 beds), Ainslie House (95); north-western area, Meercroft Home for the Aged (96), Eliza Purton Home for the Aged (80).

State Health Laboratory

The State Health Laboratory is under the control of the Government Pathologist. Apart from providing certain pathological services to the Royal Hobart Hospital, other hospitals and to doctors, the laboratory provides special bacteriological and cytological services.

The Laboratory is located at the Royal Hobart Hospital; prior to 1965 special tests had to be done in Melbourne, but equipment installed in that year now enables all work to be done in Tasmania. Specimens from suspected T.B. sufferers, discovered in the compulsory chest X-ray program (which ended on 31 December 1976) used to be examined at the Laboratory; uterine and other cancers can be discovered by the Papanicolaou smear test. Tasmania was the first Australian State to introduce this test on a large scale; early diagnosis by this simple and effective method, particularly in women who show no symptoms, usually makes possible the cure of this type of cancer.

Mass screening of new-born babies is done to correct errors of inborn metabolism, especially phenylketonuria, at the laboratory. Other work includes analysis of food, water and milk samples.

Government Analyst and Chemist Laboratory

This laboratory analyses a wide variety of foods, drugs and other substances and undertakes work for Government departments and the public. Its work includes food and agricultural chemistry, forensic chemistry and toxicology, analysis for industrial hygiene purposes, water and corrosion problems, and other matters such as blood alcohol examinations for *Road Safety (Alcohol and Drugs) Act* purposes.

Other Health Matters

Child Health Institutions

These are medical institutions run by the State or subsidised by public funds. They provide treatment and supervision along with general education. The Sight Saving School, School for the Blind and Deaf, Talire (for retarded children) and Wingfield (for orthopaedic patients) are government institutions for children with particular defects.

Ambulance Services

The Ambulance Commission of Tasmania co-ordinates services throughout the State and is responsible to the Minister for their effective operation. Ambulance Boards, centred on Hobart, Launceston, Devonport and Burnie, control services in the adjacent local government areas. A few municipalities, however, operate services outside the *Ambulance Act*. The total Government grant to ambulance services, both under Board and independent control, was \$1 136 092 in 1976-77.

Ambulance services under control of the four Boards provide free transport for ratepayers, occupiers and pensioners. In addition to receiving Government subsidies, their income is derived from fees (payable by visitors) and municipal grants.

The Ambulance Commission has adopted the training standards of the Victorian Ambulance Officer's Training School.

Royal Flying Doctor Service

This was established in Tasmania in 1960 and has as its purpose the provision of medical and dental services to persons in isolated areas. If the illness or injury is serious, a doctor flies to the patient and if necessary brings him back to hospital.

The ambulance services receive the calls, make arrangements to charter aircraft and supply medical equipment. The Federal and State Governments make an annual grant towards operational expenses.

Blood Transfusion Service

Prior to 1954, the Australian Red Cross Society, which operates the service, was assisted only by the State Government; now a grant equal to 35 per cent of operating expenses is made by the Federal Government and a grant equal to 60 per cent of operating expenses by the State. The combined grant in 1976-77 was \$260 445.

Municipal Health Functions

Municipal councils and city corporations possess wide powers and responsibilities in public health. They organise triple antigen immunisation campaigns against diphtheria, whooping cough and tetanus, and vaccinations against poliomyelitis and smallpox. (These are available without charge to children under 17 years.) They control the condemnation of sub-standard dwellings, the disposal of sewage, the provision of garbage and night soil services and the reticulation of water. A medical officer of health, often appointed by two councils, is responsible, among other things, for: inquiring into the causes, origins and distribution of diseases; investigating influences affecting the public health of the district; directing and supervising the municipal health inspectors in the execution of the *Public Health Act*; inspection of local certificates of notification of infectious disease and direction of control of such disease; reporting the existence of any nuisance; inspection of any animal carcass for sale for human consumption; and inspecting any premises where milk or milk products are produced or stored and for reporting on health of inmates or animals on the premises.

Federal Department of Health

General

The Department is concerned in Tasmania with the administration of the *Quarantine Act*, the *National Health Act*, the *Health Insurance Act* and the *Nursing Homes Assistance Act*; the control and maintenance of Pathology and National Acoustic Laboratories at Hobart and Launceston; and co-operating with the State Department of Health Services in the Community Health Program and related activities.

Quarantine

Quarantine guards against the importation *from overseas* of human, animal and plant infection. By arrangement, plant and animal quarantine is operated by the State Department of Agriculture. In general, *interstate movements* of animals and plants is left to the states, unless Federal action is necessary for the protection of a state.

Under arrangements with the states, the Federal Government reimburses state marine boards for costs associated with incinerators at first ports of entry for overseas ships. The incinerators are used to dispose of overseas ships' garbage, reducing the possibility of introduction of diseases. Incinerators are installed at all Tasmanian first ports of call.

Health Program Grants

These grants, under the *Health Insurance Act*, are generally paid to organisations providing services through medical and para-medical personnel remunerated on a salaried or sessional basis. An approved organisation is entitled to be paid

an amount equal to the cost incurred by the organisation in providing the approved health service, including such part of the management expenses of the organisation as the Minister considers attributable to the provision of the health service.

Domiciliary Nursing Care Benefit

This benefit of \$2 per day (\$14 per week) is designed to help meet the cost of home nursing and other professional care for aged people who are chronically ill but being cared for in their own homes. It is payable to any person who provides continuous care for a patient in a private home provided the home is the usual residence of both the person and the patient and provided the patient meets certain medical criteria. The main eligibility rules are: (i) patients must be 65 years of age or more; (ii) patients must have an official certificate from their doctor stating that because of infirmity or illness, disease, incapacity or disability they have a continuing need for nursing care by a registered nurse; and (iii) patients must be receiving care by a registered nurse on a regular basis involving multiple visits each week.

Nursing Home Benefits

The *Nursing Homes Assistance Act* 1974 came into effect from 1 January 1975. Under this Act, religious and charitable nursing homes can elect to come under the provisions of that legislation which relates to 'deficit financing' of such nursing homes. These nursing homes submit a budget showing estimated operating receipts and payments and the estimated end of year deficit. The Federal Government provides monthly advances against the anticipated deficit and a final settlement based on the actual deficit revealed in the audited end of year accounts. The Act prescribes a fee to be charged to patients (\$47.10 per week as at 7 July 1977) and this may be varied by legislation. Arrangements exist for waiver or part-waiver of the prescribed fee in certain circumstances.

Those religious and charitable nursing homes which have not elected to come under the provisions of the *Nursing Homes Assistance Act*, private gain nursing homes and government nursing homes continue under the provisions of the *National Health Act*.

The benefits and patient contribution to fees in these nursing homes are given in the following table:

Nursing Home Benefit Rates (National Health Act)
(\$ Per Week)

Particulars	Ordinary care patients	Intensive care patients
Benefit prior to 1 January 1973	24.50	45.50
Additional benefit from 1 February 1976 (a)	68.25	68.25
Patients share of fees from 7 July 1977	46.90	46.90
Total fee (b)	139.65	160.65

(a) Payable by the Federal Government for persons who *have not* taken out *both* medical and hospital private insurance, and by approved hospital benefits organisations for persons who *have* taken out appropriate private insurance.

(b) 'Total fees' are the standard fees as determined by the Government at 4 June 1976. If fees actually charged are: (i) less than the standard fee, the additional benefit, shown above, is reduced by the difference; or (ii) greater than the standard fee, the patient's share, shown above, is increased by the difference.

Private gain nursing homes and those religious and charitable nursing homes, which have not elected to come under the provisions of the *Nursing Homes Assistance Act*, accept a fee control system and require departmental approval to vary

their prescribed fees. The prescribed fees may differ between nursing homes because of the 'base' figure accepted for each nursing home when fees control was introduced on 1 January 1973 and because of continuing different costs as between such homes. An independent fees review committee exists in each state to determine any appeals made by nursing homes against departmental decisions on fees.

Pharmaceutical Benefits

The Pharmaceutical Benefits Scheme, under the provisions of the *National Health Act*, provides a comprehensive range of drugs and medicinal preparations which may be prescribed by medical practitioners for persons receiving medical treatment in Australia. Under this scheme, basic rate pensioners receive their pharmaceutical requirements free of charge; non-pensioner patients are required to pay a patient contribution fee of \$2 (reviewable) for each benefit item received. National Health prescriptions are valid for six months from the date they are written.

Pathology Laboratories

These laboratories, situated in Hobart and Launceston, provide diagnostic services for medical practitioners and hospitals. A general clinical pathology service is offered, and the laboratories also perform serological services for the Red Cross Blood Transfusion Centre.

National Acoustic Laboratory

The main function of the laboratory is the provision and maintenance of hearing aids, without charge, to deaf school and pre-school children, and to those whose hearing loss was discovered after leaving school, but who are still under 21 years of age. It also provides and maintains hearing aids on behalf of other Federal Government departments and assists the Education Department in measuring deafness by providing and maintaining portable audio-meters. In addition, the laboratory supplies eligible pensioners with hearing aids and provides the necessary maintenance.

HEALTH INSURANCE

Up until 30 June 1975, health insurance in Australia was available only through registered private health insurance funds which provided various medical and hospital benefits schemes. Benefits paid to insured members of funds comprised a fund benefit, together with a Federal Government benefit paid by the private funds on behalf of the Federal Government. A reduced hospital benefit was paid towards uninsured hospital patients' costs (80 cents per bed-day in 1974-75) and the Federal Government also provided benefits to pensioners and certain persons in needy circumstances (e.g. unemployed persons).

Introduction of Medibank

On 1 July 1975, 'Medibank', a new medical health insurance program for all Australians, came into operation. On the same date, the Medibank Hospitals Agreement between the Federal and Tasmanian Governments came into effect (similar agreements had been made between the Federal Government and each state government by the end of 1975).

The original Medibank scheme operated for 15 months. It provided automatic cover for everybody in Australia without the necessity to continue paying contributions to private medical and hospital insurance funds in order to qualify for the Medibank benefits. It provided benefits equal to at least 85 per cent of

'scheduled' medical fees, free accommodation and treatment in standard wards of public hospitals, and a subsidy of \$16 per day to approved private hospitals in respect of each occupied bed. With the introductions of Medibank, private health insurance funds were permitted to continue to operate subject to approval under provisions of the *National Health Act*. Benefits offered were 'gap' insurance (the difference between the 85 per cent of scheduled fees paid by Medibank and 100 per cent of the scheduled fees) for medical, optometrical and hospital fees; a varied range of ancillary benefits not provided by Medibank; and supplementary hospital benefits to provide additional cover in respect of intermediate and private ward patients in public hospitals, and patients in private hospitals.

Changes to the Medibank Scheme

On 1 October 1976, new health insurance arrangements came into operation when the previous Medibank scheme was revised as a result of the recommendations of the Medibank Review Committee. Under the new arrangements all persons are required to make direct contributions for their health insurance cover, with special arrangements to exempt most pensioners and low income earners from payment.

Method of Payment

Every person has the choice of paying: (i) a levy of 2.5 per cent on taxable income, known as the health insurance levy (imposed from 1 October 1976), up to a ceiling amount set as \$300 per annum for families or \$150 per annum for single people, which provides 'basic' Medibank cover; or (ii) contributions to 'Medibank Private' or to a registered private health insurance organisation which provides benefits that are at least equivalent to those of 'basic' Medibank (see sections '*Medical Benefits*' and '*Hospital Benefits*' below). Thus, the principle of universal health insurance coverage has been retained.

Certain Defence Force personnel and Repatriation beneficiaries and persons with a limited income are covered by 'basic' Medibank but are exempt from paying the levy.

Health Insurance Commission

Medibank is operated by the Health Insurance Commission which was established by the Federal Government to pay medical benefits, hospital subsidies, optometrical benefits and health program grants available under the *Health Insurance Act 1973*. The Commission also operates the Medibank Private medical and hospital insurance funds.

Medical Benefits

Medibank (basic) covers at least 85 per cent of the approved Schedule fee for each service listed in the Medical Benefits Schedule with a proviso that the maximum payment by the patient (where the schedule fee is charged) is limited to \$5. The Schedule fee is the fee agreed on in negotiations between the Federal Government and the Australian Medical Association, or determined by an independent inquiry, as being the fair and reasonable fee for any particular service for medical benefits purposes, or determined by the Medical Benefits Advisory Committee which the Minister for Health may appoint under provisions relating to health insurance.

Optometrical Benefits

Medibank 'basic' covers at least 85 per cent of the Schedule fee. The Schedule consists of four items all of which are related to consultations given by optometrists. All participating optometrists have given an undertaking that the fee charged for the specified consultations will not exceed the Schedule fee for that specified service.

Hospital Benefits

By arrangement between the Federal and Tasmanian Governments, all persons paying the health insurance levy (and their dependants) are entitled to accommodation and treatment in public hospitals free of charge. Persons entering public hospitals as intermediate or private patients are charged, and the charges are recoverable from private health insurance organisations to the extent that adequate hospital insurance cover has been taken out.

Those persons who remain with basic Medibank and pay the levy (or, who by virtue of their income are deemed to be levy payers without need to make actual contributions) may take out additional hospital insurance if they wish.

All persons entering private hospitals receive a subsidy from Medibank of \$16 per day (payable direct to the hospital only) and may insure themselves for additional costs.

Benefits Additional to Basic Medibank

Additional health insurance is optional and may be obtained from any registered private health insurance organisation ('Medibank Private' is a registered 'private' health fund).

It is a condition of registration for private health funds that they offer basic private health insurance, providing the same medical benefits as 'basic' Medibank, and hospital benefits to cover the cost of shared room accommodation in a public hospital (i.e. intermediate ward). These must be offered as a separate identifiable package. The optional additional health insurance available may vary as between different organisations but generally consists of 'Gap' Medical and 'Gap' Hospital. The former meets the difference between the 85 per cent of the Schedule fee payable under 'Medibank basic' and the full Schedule fee i.e. the 'gap' of 15 per cent. 'Gap' Hospital provides additional benefit to cover the cost difference between shared room accommodation in a public hospital (i.e. 'Intermediate Ward') and private ward accommodation in public hospitals or accommodation in private hospitals. The Medibank deduction of \$16 per day from private hospital accounts has continued under the new arrangements. Private health funds also offer a varying range of ancillary benefits—e.g. dental benefits, physiotherapy, spectacles and home nursing.

HOSPITAL MORBIDITY

In the following tables particulars are given of all in-patients treated in Tasmanian public hospitals who left hospital during 1976. Patients still in hospital at the end of 1976 will be included in figures for the year in which they leave hospital. Normal maternity patients are included, but babies born in hospital are included only if they receive treatment in excess of that routinely provided for the new-born.

Treatment Statistics

Comparable treatment statistics (in total only) for 1975 were: (i) number of in-patients treated in public hospitals—males 21 912 and females, 28 683; and (ii) average stay in hospital—males 11 days and females, 10 days.

In 1976 children aged up to nine years comprised 18.3 per cent of males and 10.4 per cent of females discharged. The high numbers in this age group were due principally to children receiving treatment for diseases of the respiratory system; this disease group accounted for 1 899 cases, or about one-quarter, of discharges of children under 10 years.

The following table analyses patients by age group and length of stay in hospital:

Patients Treated in Public Hospitals: By Age Group and Average Length of Stay, 1976

Age group	Males			Females		
	Number	Per cent of total	Average length of stay (days)	Number	Per cent of total	Average length of stay (days)
Days—						
Under 28	319	1.37	8	225	0.76	10
28-365	860	3.68	7	600	2.01	7
Years—						
1- 4	1 756	7.52	5	1 318	4.42	4
5- 9	1 349	5.78	5	964	3.24	5
10-14	1 127	4.83	6	826	2.77	6
15-19	1 612	6.91	8	2 800	9.40	6
20-24	1 383	5.92	7	4 627	15.53	7
25-29	1 152	4.93	8	4 073	13.67	7
30-34	970	4.16	9	2 204	7.40	7
35-39	951	4.07	9	1 414	4.75	8
40-44	867	3.71	9	1 147	3.85	8
45-49	1 180	5.05	10	1 223	4.11	10
50-54	1 478	6.33	11	1 242	4.17	11
55-59	1 569	6.72	12	1 204	4.04	14
60-64	1 703	7.29	13	1 179	3.96	14
65-69	1 729	7.41	14	1 283	4.31	19
70-74	1 344	5.76	18	1 130	3.79	23
75 and over	1 999	8.56	24	2 328	7.82	34
Total	23 348	100.00	11	29 787	100.00	11

Accidents were the main cause of hospitalisation of males in the 15-34 years age group. Injuries caused by accidents, poisoning and violence accounted for 2 112 cases or 41 per cent of male patients in the age group 15-34 years but accounted for only 724 cases or five per cent of female patients in this age group.

The next table analyses the patients shown in the previous table by condition treated and by length of stay:

Patients Treated in Public Hospitals: By Condition Treated and Average Length of Stay, 1976

Principal condition treated	Males			Females		
	Number of patients	Total days in hospital	Average stay (days)	Number of patients	Total days in hospital	Average stay (days)
Infective and parasitic diseases	723	5 729	8	726	4 891	7
Neoplasms	1 335	16 613	12	1 558	22 534	14
Endocrine, nutritional and metabolic diseases	321	4 410	14	411	9 241	22
Mental disorders	1 090	14 725	14	1 251	21 425	17
Diseases of the—						
Blood and blood forming organs	165	1 482	9	225	2 038	9
Nervous system and sense organs	956	11 961	13	855	13 855	16
Circulatory system	2 668	44 379	17	2 112	45 452	22
Respiratory system	2 818	25 118	9	1 986	17 958	9
Digestive system	2 240	19 954	9	1 900	17 167	9
Genito-urinary system	967	8 633	9	2 665	17 629	7
Skin and subcutaneous tissue	517	6 249	12	454	5 362	12
Musculoskeletal system and connective tissue	1 275	17 105	13	986	16 036	16

Patients Treated in Public Hospitals: By Condition Treated and Average Length of Stay, 1976
—continued

Principal condition treated	Males			Females		
	Number of patients	Total days in hospital	Average stay (days)	Number of patients	Total days in hospital	Average stay (days)
Congenital anomalies ..	290	2 519	9	223	2 007	9
Childbirth, complications of pregnancy and the puerperium .. ..	..	..	..	8 140	60 973	7
Certain causes (a) of perinatal morbidity and mortality ..	224	3 125	14	186	2 540	14
Symptoms and ill-defined conditions	2 476	23 252	9	2 435	20 457	8
Accidents, poisoning and violence	4 605	39 705	9	2 398	32 767	14
Other special admissions or consultations	678	5 854	9	1 276	9 830	8
Total	23 348	250 813	11	29 787	322 162	11

(a) Includes toxæmia of pregnancy, conditions of placenta, birth injury, etc.

Total days in hospital for 1975 were: males, 240 324 and females, 299 662.

Examination of the above table reveals that the seeming imbalance between total male and total female patients is largely accounted for by one classification: 'childbirth, complications of pregnancy and the puerperium'. If data under this classification were eliminated, then male patients would be nearly equal to female patients; the most significant classification affecting males is 'accidents, poisoning and violence' where males outnumbered females nearly two to one. One underlying cause is the greater exposure of males to industrial and road traffic accidents.

Chapter 16

LAW, ORDER AND PUBLIC SAFETY

LAW IN TASMANIA

Following British colonisation of Van Diemen's Land from 1803, a system of law and courts based on the Imperial system was established in the Colony. A description of the origin and evolution of Tasmanian law is included in the 1976 and earlier editions of the *Year Book*. This section describes the present system of law operating in the State.

The Criminal Law of Tasmania

In 1924 the *Criminal Code Act*, which codified and brought together the criminal law of Tasmania, was passed. This Act embodied the State's criminal law in the form of a code which was made a schedule to the 1924 legislation.

As a result of a review of the State's criminal law the *Criminal Code Act* 1973 was passed by Parliament. This statute embodied many important amendments to the Criminal Code; most of the changes stemmed from recommendations made by the Law Reform Committee of Tasmania. Among the more important changes were:

- (i) Repeal of the distinction between burglary and housebreaking. Prior to the 1973 Act the Criminal Code had perpetuated an archaic distinction between burglary which was committed at night and housebreaking which was committed by day.
- (ii) The more serious offence of aggravated burglary (i.e. where a person uses or carries a firearm or offensive weapon or uses force in the commission of a burglary) was incorporated in the code.
- (iii) A new offence of kidnapping was included.
- (iv) A section covering bomb threats was written into the legislation.
- (v) The infanticide provisions were extended to cover mothers of children up to 12 months of age.

Since passage of the *Criminal Code Act* 1973 further amendments have been made. The more important are as follows:

- (i) The provisions of the code relating to nuisance were revised and expanded to complement the *Environment Protection Act* 1973.
- (ii) The power of a judge to order whipping as a punishment for violent crimes was abolished.
- (iii) Section 124 was amended to make it a crime to have unlawful carnal knowledge of a girl under 17 years of age, i.e. the 'age of consent' was lowered from 18 years to 17 years. Consequently, amendments were also made to a number of other sections of the Code.

Juries

Tasmanian legislation regulating juries seems to have been first passed in 1830 although, for many years before that date, the introduction of the British system of trial by jury in civil and criminal cases had been persistently urged in the Colony. The *Hobart Town Gazette* shows that juries had been employed in the Colony for the trial of criminal cases from the establishment of the Supreme Court in 1824. Juries remain as the tribunal for trying indictable criminal cases and there is limited right to a jury in civil actions, although in 1935 they were abolished for the purpose of trying motor accident cases.

Although the Tasmanian jury system was based on the English system it has, since 1934, embodied the principle of allowing *majority* decisions in certain circumstances instead of requiring the *unanimous* decisions once characteristic of jury usage in England and most other countries.

Civil cases have a seven-member jury and, if after three hours deliberation a seven-nil decision cannot be reached, a five-two decision is accepted. If the minimum five-two decision cannot be reached after four hours, the jury may be discharged.

In criminal cases, similar principles apply except that a 10-2 decision is accepted in lieu of 12-nil after stipulated periods of deliberation. In the case of murder, 12-nil is necessary to convict, but 10-2 can bring in a verdict of not guilty, or not guilty of murder but guilty of a lesser crime.

The Present Law Court System

Courts of Petty Sessions

For particular municipalities in the State, there is a Court of Petty Sessions. The Court is constituted by a magistrate (who must have been a legal practitioner or barrister for not less than five years) or by two or more lay justices. In major centres of population, a Court sits regularly and, in smaller centres, a Court sits less frequently or is convened as occasion requires.

A Court of Petty Sessions has jurisdiction over all summary offences and also over certain indictable offences at the option of the defendant. Under the *Justices Act 1959*, a defendant may choose summary trial in the Court of Petty Sessions when charged with the following crimes: (i) Escape or rescue; facilitating escape of a prisoner or harbouring an offender; assisting escape of a criminal lunatic; rescuing goods legally seized; making a false declaration (or statement). (ii) Stealing; killing an animal with intent to steal; unlawfully branding an animal; obtaining goods by false pretence; cheating; fraud in respect of payment for work; receiving stolen property. (In all these cases the value of the property concerned must exceed \$100 but not \$1 000. If the value does not exceed \$100 the defendant will be tried summarily. If it exceeds \$1 000 he will be committed for trial in the Supreme Court.) (iii) Breaking a building other than a dwelling-house. (It is necessary for the defendant to be committed to the Supreme Court for trial where it is alleged that in the commission of the offence: property to the value of more than \$1 000 has been stolen; violence has been used or offered to any person in or about the building; the person had in his possession a gun, pistol, dagger, cosh, or other offensive weapon; explosives were used; or the defendant intended to commit a crime other than stealing.) (iv) Forgery; uttering. (The complaint must be for an offence in respect of a cheque for not more than \$1 000.)

The following tables show the number of cases tried in the lower courts. (Minor traffic offences settled without court appearance are excluded.)

Courts of Request

These are constituted as courts with civil jurisdiction for particular municipalities in accordance with the authority given by the *Local Courts Act 1896*. Courts are held before a commissioner who is usually a magistrate. The Attorney-General fixes the dates on which these courts sit. Every Court has jurisdiction throughout the State but a plaintiff may lose costs if he brings his action in a Court other than the Court nearest to which the cause of action arose.

The jurisdiction of a Court of Requests, which is a court of record, covers all personal actions where the debt or damage claimed does not exceed the maximum amount fixed under the Act. Since 1 November 1966, the sum of \$1 500 has been fixed as the maximum jurisdiction for a Court of Requests in respect of a debt or liquidated sum, and \$1 000 in any other case.

The Commissioner alone determines all questions of fact as well as of law and his decision is the judgement of the Court, unless a jury is required. In any action either party may require a jury as of right and there is power for the Commissioner to order that an action be tried by a jury, even though neither party has required it. Law and equity are administered concurrently in the Court and the general principles of practice in the Supreme Court are adopted and applied in cases not expressly provided for in the Act or Rules.

Courts of General Sessions

Courts of General Sessions with civil jurisdiction are constituted under the *Local Courts Act 1896* for particular municipalities of the State. In Hobart and Launceston, civil actions are dealt with by Courts of Requests. A Court of General Sessions is constituted by a chairman (elected by the justices for the municipality) and at least one other justice. All questions are decided by a majority of the justices present and, if they are equally divided in opinion, the chairman has both a deliberative and a casting vote. If there is business requiring its attention, the Court sits at times fixed by the Attorney-General.

A Court of General Sessions has jurisdiction to deal with civil proceedings of a minor nature and the limit of the Court's jurisdiction has been fixed at the sum of \$100.

The Supreme Court of Tasmania

The Supreme Court of Tasmania is constituted by the Chief Justice, four Puisne Judges and one acting Puisne Judge. Regular sittings of the Court are held at Hobart, Launceston and Burnie, although the Court is empowered to sit and act at any time and at any place for the exercise of any part of the jurisdiction and business of the Court.

The Court has jurisdiction over all causes, both civil and criminal, except those reserved for the High Court of Australia under the Australian Constitution. It also exercises federal jurisdiction in matters such as bankruptcy, etc. Its civil jurisdiction extends to all causes of action, whatever the amount involved may be, and its criminal jurisdiction includes the trial of all indictable offences. In civil cases, the Court has power to call in the aid of one or more assessors specially qualified to assist in the trial of the actions, but it is not bound by the opinion or advice of any such assessor.

The following table shows the number of convictions, by offence, in the Supreme Court in Tasmania during 1975 and 1976. The 286 convictions during 1976 were the lowest number since 1968 when 243 convictions were recorded in the Supreme Court:

Supreme Court Convictions

Offences	1975		1976	
	Males	Females	Males	Females
Offences against the person—				
Murder	1	..	3	..
Attempted murder	2	..	..	..
Manslaughter—Other than while driving	1	..	1	..
While driving	r ..	..	1	..
Dangerous or negligent driving	r 25	1	24	2
Rape	13	..	3	..
Other unlawful carnal knowledge	13	1	13	..
Incest	1	..	2	..
Other offences against females	11	..	6	..
Indecent practices between males	6	..	4	..
Unnatural carnal knowledge	5	..	1	..
Robbery	14	1	15	..
Malicious wounding	5	..	4	..
Aggravated assault	1	..	1	..
Common assault	8	..	11	1
Other offences against the person	3	..	4	..
Offences against property—				
Burglary; break and enter; break, enter and steal ..	119	2	92	2
Receiving, including possession of stolen goods ..	15	1	10	1
Fraud and false pretences	15	1	10	1
Arson, n.e.i. .. .. .	..	..	3	1
Stealing	46	4	28	..
Other offences against property	8	..	11	..
Forgery and offences against the currency	12	2	10	1
All other offences	9	1	16	4
Total (a)	333	14	273	13

(a) There are fewer Supreme Court Cases tried than the number committed from the lower courts would lead one to expect. This is because: (i) *complaints* often embrace several *offences* in the lower courts; (ii) some cases are not proceeded with. Higher Court cases often proceed under different offence titles from those under which the lower court committals were made.

The following table shows the number of convictions in the higher courts over a five-year period:

Supreme Court Cases: Convictions

Offences	1972	1973	r 1974	1975	1976
Offences against—The person	105	134	140	112	96
Property	210	188	178	211	159
Forgery and offences against the currency	5	3	9	14	11
All other offences	4	15	27	10	20
Total	324	340	354	347	286

There is an appeal to the Supreme Court of Tasmania from all inferior courts and from many statutory tribunals.

Law and equity are administered concurrently in the Court which is enjoined to grant, either absolutely or on such terms and conditions as seem just, all such remedies to which any of the parties may be entitled so that, as far as possible, all

matters in controversy between the parties may be completely and finally determined, and a multiplicity of legal proceedings avoided. The judges, on the recommendation of the Rules Committee, are empowered to make rules regulating the practice and procedure of all proceedings in the Court.

The jurisdiction of the Court is usually exercised by a judge of the Court and from his decision there is an appeal to the Full Court of the Supreme Court of Tasmania. A Full Court consists of three or more Judges of the Court. The Full Court is also a Court of Criminal Appeal under the Criminal Code. The latter is a Court to which appeals may be brought by the Crown or by an accused person where an indictable offence is involved. In some cases, there is an appeal as of right but, in other cases, special leave is required.

The High Court of Australia

This Court was created by the Constitution of the Commonwealth of Australia and it has both original and appellate jurisdiction. It is constituted by the Chief Justice of Australia and eight other Justices.

There is an appeal as of right to the High Court from the Supreme Court of the State in any civil matter where the sum involved amounts to at least \$3 000 or where the decision under appeal affects the status of any person under the laws relating to aliens, marriage, divorce, bankruptcy or insolvency. In other cases (including criminal cases) there is an appeal to the High Court if leave or special leave is granted.

Sittings of the High Court of Australia may be held in each capital city. Provision is made, when there is insufficient business to warrant convening a sitting of the Court in Hobart, for Tasmanian cases to be heard either in Melbourne or Sydney.

The Federal Court of Australia

The Court, created by the *Federal Court of Australia Act 1976*, is constituted by the Chief Judge and 20 other judges. It exercises original, and in some cases appellate jurisdiction under the *Conciliation and Arbitration Act 1904*, the *Bankruptcy Act 1966* and the *Trade Practices Act 1974*. Sittings of the Federal Court of Australia are held in each capital city and its District Registrars are in most cases the Registrar in Bankruptcy for each State.

Tribunals

There are many tribunals which are not true courts and the powers and functions of these depend upon the detailed provisions of the particular statute under which they operate. Certain specialised courts have been created by statute. For example there is the Wardens' Court constituted under the *Mining Act 1929* and the Licensing Court under the *Licensing Act 1932*.

Coroners' Courts

Coroners are appointed by the Governor and have jurisdiction throughout the State. Under the *Coroners Act 1957*, a coroner may hold an inquest: (i) Concerning the manner of death of any person who has died a violent or unnatural death, who died suddenly without the cause being known, or who died in a prison, or mental institution; at the direction of the Attorney-General, he may also be required to hold an inquest concerning any death. (ii) Concerning the cause of any fire if the Attorney-General has directed, or has approved a request by the owner or insurer of the property; or at the request of the Fire Brigades Commission or the Rural Fires Board.

The coroner usually acts alone in holding an inquest, but either the Attorney-General or the relatives of the deceased may request that a four or six-man jury be empanelled. After considering a post-mortem report the coroner may dispense with an inquest, unless the circumstances of death make an inquest mandatory under the Act.

The duty of the Court is to determine who the deceased was, and the circumstances by which he came to his death. Medical practitioners and other persons may be summoned to give evidence. In the case of the death of an infant in a nursing home, the coroner may also inquire generally into the conditions and running of the institution. On the evidence submitted at the inquest, the coroner can order a person to be committed to the Supreme Court and can grant bail. In the case of murder, a coroner can issue a warrant for apprehension.

Children's Courts

A 'child' in this jurisdiction is one under the age of 17 years. The Court, before finally disposing of the case, must receive a report from a child welfare officer (the representative of the Director of Social Welfare), unless the Court considers the offence trivial or the Director decides not to provide one. A child's parent has the right to be heard and to examine and cross-examine witnesses, or to be represented by counsel; also a parent can be compelled to attend the hearing if this imposes no unreasonable inconvenience.

In summary proceedings, the Court is compelled not to enter a conviction against a child unless it imposes a sentence of imprisonment or there are special circumstances which indicate that a conviction should be recorded.

Children under 16 years cannot be sentenced to imprisonment and children of 16 years cannot be sentenced for more than two years, in aggregate. Minimum penalties imposed by statute do not apply to children; for those under 14 years the maximum fine is \$20, and for those over 14 years, \$50. The Court may impose a supervision order to bring the child under the guidance of a child welfare officer or, if over 15 years, of a probation officer. Alternatively, the Court may declare the child a ward of the State, placing him under the control of the Director of Social Welfare until his eighteenth birthday, unless released sooner; it may also direct that a ward be committed to an institution. In cases where further investigation appears necessary the Court may issue a remand for an observation order before it makes a final decision. Remands for observation orders are for short periods and usually provide for intensive supervision. (In the case of delinquency the maximum period for such an order is three months.)

Neglected or uncontrolled children are in the Court's jurisdiction; it may make a supervision order; an interim order (similar to a remand for observation order, the effect being to defer the transfer of guardianship until it is apparent that there is no suitable alternative); or impose wardship or bind the parents over to provide proper care and control, and comply with other directions. If parents have contributed to a child's offence, by failing to control the child, they may also be charged, convicted, fined, ordered to pay for damage and obliged to enter into a recognizance for the good behaviour of the child for up to 12 months.

Unlike a Children's Court the Supreme Court is in no way inhibited in imposing a penalty on a child. In addition to its ordinary sentencing powers, it may make supervision or wardship orders, and commit a child to an institution. If a child is sentenced to imprisonment, the responsible Minister may direct that the sentence be served in a place other than a gaol.

Statistics of offences for which children were reported appear in Chapter 15 under 'Department of Social Welfare'.

Bankruptcy

The *Bankruptcy Amendment Act 1976* abolished the former Federal Court of Bankruptcy and vested its jurisdiction in the Federal Court of Australia which was established under the provisions of the *Federal Court of Australia Act 1976*. The Federal Court of Australia generally exercises bankruptcy jurisdiction in N.S.W., the A.C.T. and Victoria while the Supreme Court of Tasmania exercises the jurisdiction in Tasmania.

Under the *Federal Bankruptcy Act 1966*, a person unable to meet his debts may voluntarily present to the Registrar in Bankruptcy a petition against himself and become a bankrupt under section 55; if the Registrar does not accept the petition and refers it to the Court, he may be directed to accept it. A creditor may apply to the Court for compulsory sequestration of a debtor's estate where the debt is not less than \$500. Where a debtor becomes bankrupt:

- (i) his property, not being after-acquired property, vests immediately in The Official Receiver in Bankruptcy; and
- (ii) his after-acquired property vests in The Official Receiver in Bankruptcy, or if a private trustee has subsequently been appointed, then in that trustee.

A debtor may avoid sequestration in some circumstances, by authorising a registered trustee to call a meeting of his creditors and take control of his property; or by authorising a solicitor to call a meeting of his creditors (Part X). The debtor's property is controlled by the trustee until the creditors resolve otherwise, or the Court orders otherwise, or a deed of assignment or arrangement is executed, or a composition is accepted, or the debtor dies or becomes bankrupt.

A person becoming bankrupt under the Act may be automatically discharged from bankruptcy after the expiration of five years (section 149) unless discharged earlier by the Court. The Registrar, trustee or a creditor may lodge an objection to this type of discharge, and if it is not withdrawn the debtor must apply to the Court under section 150 if he desires to be discharged.

The following table shows the number of bankruptcies and private arrangements together with the assets and liabilities of debtors:

Tasmania: Bankruptcy Proceedings

Particulars	1972-73	1973-74	1974-75	1975-76	1976-77
Bankruptcies and orders for administration of deceased debtors' estates—					
Number	151	69	75	94	97
Liabilities \$'000	470	660	636	1 158	931
Assets \$'000	189	154	280	451	361
Deeds of assignment, arrangement, compositions and schemes—					
Number	12	12	6	4	5
Liabilities \$'000	416	311	129	171	586
Assets \$'000	574	315	176	132	336
Total—					
Number	163	81	81	98	102
Liabilities \$'000	886	971	765	1 329	1 517
Assets \$'000	763	469	456	583	697

The Licensing Board

The State Licensing Board was set up under the *Licensing Act 1976* and consists of a Barrister (who is the Chairman) and two other members. The Board is empowered to hear and determine applications for 'general', 'on', 'off', 'club' and 'limited' licences. The Board may prescribe standard conditions as the basis on which licences are granted, with respect to different types of establishment.

The following table shows the total hotel bedroom accommodation available to the public during recent years:

Standard of Accommodation: Hotels

At 30 June	Total number of bedrooms	Number of bedrooms furnished with—	
		Private bath, shower, toilet and hand-basin	Handbasin with hot and cold running water
1971	3 566	1 228	1 950
1972	3 640	1 333	1 924
1973	3 928	1 751	1 797
1974	4 089	1 899	1 812
1975	3 836	1 899	1 450
1976	3 962	2 082	1 606

The Board's inspectors and public health inspectors make a thorough examination of each hotel prior to the annual sittings at which renewals of licences are considered. Reports are furnished for the information of the Board and the Tourist Department. An officer of the Fire Brigades Commission also carries out an annual inspection to ensure that each hotel complies with the requirements of the Commission.

The following table shows the number of operative licences and club registrations:

Licensed Hotels, Restaurants, Clubs and Wholesalers

At 30 June	Hotels (a)	Restaurants (b)	Registered clubs	Wholesale licences	Total
1971	269	23	153	29	474
1972	269	22	156	29	476
1973	269	27	162	31	489
1974	274	42	164	45	525
1975	273	52	167	45	537
1976	271	60	169	48	548

(a) Includes a small number of premises not providing accommodation and known as 'taverns'.

(b) Includes motels which have a licence for dining rooms only.

The Ogilvie ministry introduced 10 a.m. to 10 p.m. bar trading hours before World War II and, in the post-war period, Tasmania's 10 p.m. closing contrasted with 6 p.m. closing in S.A., Victoria and N.S.W. However, these States progressively liberalised their drinking laws, and by 1967 all had adopted late closing.

In 1967 the Tasmanian *Licensing Act* 1932 was amended to allow 11.30 p.m. closing on Friday and Saturday nights for those hotels which desired to observe these hours and which obtained the necessary permits; 10 p.m. closing was made the rule for other nights (excluding Sunday) with provision nevertheless to obtain extension permits for special functions. The permitted age for drinking on licenced premises was lowered from 21 to 20 years and lowered further to 18 years in 1973. Restaurants complying with defined conditions can obtain licences to sell liquor and licensed restaurants can open until 11.30 p.m. six nights a week. Dining accommodation, kitchen specifications, etc., for licensed restaurants are strictly supervised.

The Wrest Point Casino Licence (granted by the Treasurer) permits certain categories of gaming until 3 a.m. seven days per week. As long as entertainment and dining facilities are provided the sale of liquor is allowed on the same basis under an *entertainment permit*. The entertainment permits are, in fact, available

to any hotel or licensed restaurant which is able to provide the required entertainment. Other permits are: (i) *occasional permits*—for clubs or societies which are not registered; and (ii) *motel permits* which allow the extension of liquor services to lodgers' rooms if the motel has a restaurant licence.

The *Licensing (Trading Hours) Act 1975* amended the *Licensing Act 1932* and allowed all hotels and licensed clubs to set their own trading hours provided they traded for at least eight hours a day on five days of the week with Sunday trade limited to between noon and 8 p.m. The legislation, which adopted most of the Savas Committee of Inquiry recommendations on liquor licensing, came into operation at the same time as revised drink-driving laws. Sunday trading under the new law commenced on 21 December 1975

PRISONS

General

The establishment, regulation and conduct of prisons and the custody of prisoners in Tasmania are provided for under the *Prison Act 1868* and 1908. Provision is made for the appointment, by the Governor, of a Controller of Prisons who is responsible for the supervision of gaols, including the initiation and implementation of correctional programs for prisoners and staff training schemes.

Two Justices of the Peace are appointed for each institution each year to act as Visiting Justices. They visit the prison at least once per month to examine the treatment, behaviour and condition of prisoners, and the condition of the prison. They hear complaints with regard to offences committed in the gaol, and have power to punish offenders by extending the term of imprisonment.

The main prison in Tasmania is at Risdon near Hobart, which has, as an outstation, the Farm Gaol at Hayes in the Derwent Valley. The Launceston Prison functions as a holding centre for prisoners from the northern districts of the State prior to their transfer to Risdon.

The following table shows Prisons Department expenditure from Consolidated Revenue:

Prisons Department: Expenditure From Consolidated Revenue
(\$'000)

Particulars	1972-73	1973-74	1974-75	1975-76	1976-77
Total expenditure	1 216	1 481	2 089	2 326	2 753
Net receipts (a)	75	84	70	85	73
Net expenditure	1 141	1 397	2 019	2 240	2 680

(a) From prison industry and gaol farm activities described later in the text.

Capital Punishment

The death sentence has not been carried out in Tasmania since 1946, but judges pronounced the sentence from time to time until 1968; in October 1968, the Attorney-General introduced a bill to abolish capital punishment and this was passed by the Parliament in December of that year.

Prisoners Received and Discharged

In the following table giving details of prisoners received into and discharged from Tasmanian prisons, no distinction is made between those on remand and those convicted and sentenced to imprisonment. (Figures for H.M. Prison, Risdon, include those held in custody at the Hayes Farm Gaol.)

Prisoners Received and Discharged (a), 1975-76

Particulars	Risdon Gaol		Launceston Gaol		Total	
	Males	Females	Males	Females	Males	Females
In custody at 30/6/1975 ..	354	2	5	..	359	2
1975-76—						
Received	697	28	369	11	1 066	39
Transferred (b)	+255	+8	-255	-8	..	..
Discharged	1 016	34	116	3	1 132	37
In custody at 30/6/1976 ..	290	4	3	..	293	4

(a) Includes persons on remand.

(b) Transfers from Launceston to Risdon.

Prisoners' Offences

The following table shows the offences for which convicted prisoners were received:

Offences for Which Convicted Prisoners Were Received in the State During 1975-76

Offence for which convicted	Males	Females	Persons	
			Number	Proportion of total
Offences against the person—				per cent
Common assault	47	..	47	2.01
Assault police	37	..	37	1.58
Indecent assault	16	..	16	0.68
Other	52	..	52	2.22
Total	152	..	152	6.49
Offences against property—				
Stealing	554	7	561	23.96
Burglary and breaking offences	326	2	328	14.01
Steal a motor vehicle	124	1	125	5.34
Damage to property	79	1	80	3.42
Obtain goods by false pretences	178	30	208	8.89
Forgery, uttering and currency offences	157	12	169	7.22
Other	23	..	23	0.98
Total	1 441	53	1 494	63.82
Offences against good order—				
Drunkenness	76	5	81	3.46
Escape from lawful custody	25	..	25	1.07
Resist arrest	26	..	26	1.11
Indecent or threatening language	21	..	21	0.90
Fail to pay fines and costs or default	101	..	101	4.31
Other	58	2	60	2.56
Total	307	7	314	13.41
Traffic offences—				
Drive whilst licence suspended	186	..	186	7.95
Dangerous driving	25	..	25	1.07
Exceed .08 per cent	64	..	64	2.73
Drunken driving	29	..	29	1.24
Other	36	..	36	1.54
Total	340	..	340	14.52
Offences against the Dangerous Drugs Act	35	6	41	1.75
Grand Total (a)	2 275	66	2 341	100.00

(a) The number of offences exceeds the number of prisoners received since some prisoners were convicted of multiple offences.

The next table classifies convicted prisoners according to the number of their previous convictions:

Convicted Prisoners Received in the State During 1975-76, According to Number of Previous Convictions (a)

Prisoners	Number of previous convictions				Total
	Nil	One	Two	Three or more	
Number received	44	28	14	532	618
Percentage of total	7.1	4.5	2.3	86.1	100.0

(a) Previous convictions may not necessarily have involved imprisonment.

Age of Prisoners

Young offenders account for a high proportion of receptions. The proportion of convicted male prisoners under 25 years was: 60 per cent in 1971-72; 62 per cent in 1972-73; 62 per cent in 1973-74; 61 per cent in 1974-75; and 58 per cent in 1975-76. The following table shows the age of convicted prisoners admitted to gaol.

Ages of Convicted Prisoners Received in the State, 1975-76

Sex	Age group (in years)								Total
	16-17	18-19	20-24	25-29	30-39	40-49	50-59	60 and over	
Males ..	53	115	182	73	81	51	39	8	602
Females ..	1	2	6	..	1	1	4	1	16
Total ..	54	117	188	73	82	52	43	9	618

Parole and Remission Sentences

Good conduct remissions of up to one third of sentence for prisoners sentenced to over three months may be granted by the Governor of the State on the Controller's recommendation. Prisoners may also be paroled on licence for the balance of their sentences.

On 31 March 1976, the *Parole Act 1975* was brought into effect by proclamation. This Act repealed the *Indeterminate Sentences Act* and provided machinery for the appointment of a three-member board to deal with the granting of parole. This function was previously carried out by the State Governor on recommendations made by the Controller of Prisons.

Risdon Gaol

The Risdon Gaol, with provision for 333 prisoners, was opened in November 1960. Male prisoners were then transferred from the old Hobart Gaol and in June 1963, the Female Prison, the first entirely separate gaol for women to be built in the State, was opened on the Risdon site. The following table shows the daily average and highest number of prisoners at Risdon Gaol over a five-year period:

Number of Prisoners, Risdon Gaol (a)

Prisoners	1971-72	1972-73	1973-74	1974-75	1975-76
Maximum number	406	398	388	366	365
Daily average	373	371	344	342	309

(a) Includes Hayes Farm Gaol.

The Risdon Gaol incorporates workshops which serve as a basis for vocational and trade training in such subjects as woodworking, tailoring, sheet metal working, laundry and breadmaking. Educational services include instruction during working hours for illiterate and semi-literate prisoners; private study during evenings in general academic subjects to Secondary Schools Certificate standard; correspondence courses in University, School Certificate, Higher School Certificate and various technical and commercial subjects; tuition in English for migrants; and training in art and allied subjects. A classification committee interviews all prisoners on admission and decides on each individual's training program.

Groups meet regularly for wood carving, art, pottery, toy making, chess and dramatics. Feature and documentary films are screened fortnightly. The Prison Debating Society debates regularly against outside teams. The Education Section publishes the prison magazine *In Side Out* each month. A comprehensive sports program is conducted, including athletics, gymnastics and competitions in cricket, volley ball, basketball and football.

The State Library of Tasmania helps with the prison library, providing a generous supply of books on a rotational basis, to supplement the stock of books owned by the Department. Over 5 000 volumes are immediately available for selection and prisoners may order books of special interest from the State Library System. The prison library has recently been re-located to develop the library atmosphere. Some 1 100 books are borrowed weekly from the library, all records being kept by prisoner librarians who receive advice from State Library officers.

Prison industries produce articles for government departments and institutions. The following table shows the receipts for prison industries over a five-year period. A laundry installed in 1963 contributes to receipts from sales and services but the amounts are not a true indication of value to the Government, as laundry and other services are provided at a nominal figure for hospitals and other government institutions.

Gaol Suspense Account (Prison Industries)

(\$)

Particulars	1971-72	1972-73	1973-74	1974-75	1975-76	1976-77
Receipts (a)	134 000	143 783	145 045	184 672	192 132	216 978
Paid to Consolidated Revenue	28 415	50 209	40 850	35 329	27 834	23 076

(a) Maintenance and material charges are met from receipts, the balance being paid to Consolidated Revenue in the following year.

Hayes Farm Gaol

The Farm Gaol at Hayes ('Kilderry') is an outstation of the Risdon Prison. It is used to prepare men for a normal way of life through operation of the honour system. Up to 90 prisoners who are regarded as being worthy of trust, regardless of their age, length of sentence or type of offence, are held there.

The following table shows the receipts from sale of farm produce and the amounts paid to Consolidated Revenue over a five-year period:

Gaol Farm Suspense Account
(**\$**)

Particulars	1971-72	1972-73	1973-74	1974-75	1975-76	1976-77
Receipts (a)	109 398	131 440	170 302	174 506	197 173	212 508
Paid to Consolidated Revenue	4 734	24 612	42 671	34 504	57 623	50 027

(a) Maintenance and material charges are met from receipts, the balance being paid to Consolidated Revenue in the following year.

The 567-hectare property has been developed into a model farm with a great diversity of farming activities. These include approximately 26 hectares for vegetables; a registered stud of friesian cattle and herefords; about 2 000 sheep for wool and fat lambs; a registered herd of berkshire pigs; poultry; cropping of wheat, oats, lucerne and hay; breeding of children's ponies; hot house cultivation; and an experimental shrub and tree nursery, etc. In May 1969, 125 hectares of land was purchased near New Norfolk. This property, about two kilometres north of the Hayes prison farm functions as an annexe to the Hayes property. During 1970-71 a sawmill was established on the property. A further 100 hectares adjacent to this property was purchased during 1974-75. The Royal Derwent Hospital farm of 297 hectares, including the dairy herd and poultry section, was transferred to the Prisons Department during 1971. Whole milk is produced and sold in bulk for general use. Building construction activities and machinery maintenance workshops also provide employment, but this range of prison industries is more limited than at Risdon. Similar educational and recreational facilities to those at Risdon are provided.

The Probation and Parole Service

The service is a division of the Attorney-General's Department and comprises a total of 41 Probation and Parole Officers, including the Principle Probation and Parole Officer. The Service's head office is located in Hobart and there are district offices at Launceston and Burnie with branch offices at New Norfolk, Bellerive, Launceston, Devonport and Queenstown.

The main function of the Service is to provide supervision of persons released from the courts on probation and those released from prison on probation or parole. Counselling in respect of personal and family matters is offered, as is practical assistance aimed at providing suitable employment and accommodation. Social re-orientation discussion groups for those under supervision are held regularly, and remedial teaching classes are also a feature of the Service. The Service also administers the community Work Order Scheme which is designed to provide a method of treatment of offenders as an alternative to imprisonment.

THE TASMANIA POLICE

The Present Force

Organisation

The Commissioner of Police is responsible directly to the Minister for Police. Next in rank is the Deputy Commissioner, followed by two Assistant Commissioners. The Assistant Commissioner positions were created during 1977, one designated Assistant Commissioner Logistics and the other, Assistant Commissioner Operations.

The highest uniform rank is Chief Superintendent, exercising an ombudsman-type mandate in areas of discipline and welfare. Superintendents control each of the State's four police districts from headquarters at Hobart, Glenorchy, Launceston and Burnie. Similarly, the four branches, Uniform, Criminal Investigation, Training and Traffic, have Superintendents in charge.

Recruitment and Training

Two schemes operate, one for adults, and another for Police Cadets: (i) Adult intakes comprise males and females from 19 years. Each course runs approximately 20 weeks. (ii) Cadet courses are drawn from youths aged 16 to 18 years with appropriate qualifications. Cadets are resident at the Police Academy at Rokeby for a (minimum) two years course. Up to 120 cadets can be accommodated and trained at one time and there are full training and in-service course facilities for adults. The Academy has residential blocks, a shooting range, parade ground, armoury, library and lecture hall-theatre. Classrooms are equipped with audio-visual educational devices, including closed-circuit television. A driving training complex has recently been added.

Criminal Investigation Branch

The Criminal Investigation Branch has the following sub-sections: (i) *Communications* which operates interstate and intrastate radio and telex systems. Radio is installed in all police vehicles, boats and most motor cycles. (ii) *Fingerprinting* has on file nearly 100 000 fingerprint sets. These include sets of prints from all fingers and thumbs of each hand, and 'Singles Crime Scene' files of individual prints. Interstate and overseas sources supply many thousands of sets yearly. All prints are checked with the Central Fingerprint Bureau in Sydney and classified. (iii) *Information Bureau* maintains modern equipment for ballistic examination, detection of forged documents and a complete photographic section. It also compiles and provides data on criminals and missing persons.

Traffic Branch

This branch is responsible for enforcing all traffic regulations and deploys some 400 vehicles, including motorcycles. It makes use of sophisticated mechanical, and electronic devices, including the 'Breathalyser'.

Uniform Branch

This branch maintains beat patrols on foot in conjunction with vehicle patrols. Since 1971, beat patrol officers have been equipped with personal 'walky-talky' radios.

Other Sections

Task Force: This was created in 1974 and operates only at night. It is highly mobile and a very effective deterrent.

Search and Rescue: A well equipped volunteer search and rescue squad is based at Hobart. Training for squad members includes techniques of resuscitation, rescue in bush, mountains, cliffs, and at sea, or underwater. The squad receives active support from walking, climbing and sailing clubs. A powerful 15.8 metre motor launch *Vigilant*, suitable for shallow or deep water work and with a sea range of 1 300 kilometres is kept on standby. Smaller police craft are stationed at points around the State coastline.

Licensing, Gaming: These sections are responsible for inspection of licensed premises, supervision of gaming and enforcement of regulations.

Prosecution Section: Is responsible for preparation of briefs and promotes prosecutions on behalf of all police branches.

Division of Road Safety

The Division was transferred from the Department of Health Services to the Police Department in 1975. It is headed by the Director of Road Safety. The Division is principally concerned with the development and implementation of Government road safety policy and legislation. It complements facilities available through other departments, authorities, private enterprise and voluntary organisations to ensure that available resources are fully used and co-ordinated.

A school road safety education program is operated throughout the State. Nine mobile Road Safety Officers are employed and supervise 51 part-time Adult Crossing Guards. In addition to school education, the Division is responsible for the preparation and dissemination of general road safety publicity material. Statistics concerning road crashes are used in assessing the value of instituted policies and in the development and initiation of new schemes to promote Road Safety throughout Tasmania.

Strength of Force

The following table shows the number of police and expenditure:

Tasmania Police: Number and Cost

Particulars	1972-73	1973-74	1974-75	1975-76	1976-77
Police officers (a) no.	892	r 939	976	1 004	1 026
Persons per police officer (a) .. no.	r 445	426	r 415	406	397
Cost (total expenditure of Police Department) \$'000	7 954	9 118	13 738	16 053	19 025
Cost per head of mean population \$	r 20.13	r 22.90	r 34.12	39.51	46.70

(a) At 30 June.

EMERGENCY SERVICES**State Emergency Service**

Following a series of discussions at federal and state level the Tasmanian Government, in 1962, decided, in common with other states, to establish a Civil Defence and Emergency Services Organisation for Tasmania. The Government considered that in addition to its intended role in time of war the organisation should be organised and trained to assist in combating natural emergency situations. A Director of Civil Defence and Emergency Services was appointed to plan the new organisation and exercise overall control of volunteer units. In April 1975 the title was changed to State Emergency Service in common with other states.

State Organisation

Ministerial responsibility for civil defence and emergency services in Tasmania is vested in the Minister for Police and Emergency Services. Local government authorities have the responsibility of sponsoring a volunteer unit for their municipality and appointing a local controller to raise, train and control it.

Legislation

On 1 July 1976, the *Emergency Services Act* came into force. This legislation formally established the State Emergency Service, and set up a counter-disaster control structure for dealing with any major emergency or disaster that might affect the State. Under this legislation the State Emergency Service was given wider functions and responsibilities, and the responsibilities of municipalities and

other bodies were also spelled out. Under the Act, when a state of disaster is declared, command is vested in a State Disaster Executive, consisting of the Commissioner of Police, the Director of Emergency Services, and the Ministerial Liaison Officer (Emergency Services).

Functions

The State Emergency Service has the responsibility for ensuring that the community is adequately prepared to meet any disaster situation that may arise. To this end the Service has the roles of co-ordinating emergency planning, provision of and co-ordination of emergency training, and co-ordinating all supporting and ancillary emergency organisations in support of police and other authorities in time of emergency or disaster.

Administrative Structure

State Emergency Service administration in Tasmania is organised on a three-level basis; municipal, regional, and State. The State is divided into three regions, centred on Hobart, Launceston and Burnie. Each region is administered by a full-time regional officer assisted by a staff officer, and operations within regions are co-ordinated from regional headquarters within the relevant town. State headquarters (Hobart) is also responsible for maintaining and operating the State Disaster Headquarters. The centre is put into action in event of any major emergency.

Recruitment and Training

By July 1976, some 2 300 persons had volunteered for service at the municipal and regional level. Training is undertaken at State and Regional Headquarters and at the municipal level, while advanced training is provided at the National Emergency Services College at Mount Macedon, Victoria.

Equipment and Finance

Protective clothing and operational equipment for the units of the various services are provided annually by the Federal Government through the Natural Disaster Organisation. All other funding is by the State Government—expenditure for 1976-77 was \$399 484.

Fire Prevention and Fire Fighting

Fire Brigades Commission of Tasmania

The *Fire Brigades Act* 1945 provided for the creation of the Fire Brigades Commission of Tasmania to co-ordinate the activities of existing fire brigade boards, while leaving the responsibility for individual control and management with the boards. The Commission comprises the following: two persons nominated by the Minister; one person representing the City and Municipal Councils; one person nominated by the Chairman of the Rural Fires Board; three persons representing the insurance companies and one employees' representative.

There were, at 30 June 1977, 23 boards controlling 40 stations, and their aggregate staffs numbered 713 (officers and firemen), comprising 277 permanent personnel and 435 part-time firemen.

Contributions towards the cost of operations of fire brigades are on the basis of 22.5 per cent each from the Treasury and the municipalities and 55 per cent from the insurance companies concerned. Details of finances for 1975-76 are shown below:

Fire Brigades: Principal Sources of Revenue, 1976-77
(\\$'000)

Contributions received by Fire Brigades Commission	Receipts	Distribution made by Fire Brigades Commission	Payments
From—		To—	
State Government	1 067	Fire brigade boards	4 742
City and municipal councils	1 067		
Insurance companies	2 608		
Total	4 742	Total	4 742

In September 1977 the Government announced that the Fire Brigades Commission would be abolished as recommended in a report on Tasmanian fire services by Mr R. G. Cox. Legislation was also to be introduced to establish a new State Fire Authority.

Rural Fires Board

Following the fire disaster of February 1967, the Rural Fires Board was reorganised under the *Rural Fires Act 1967* and became fully operative in July 1968.

The Rural Fires Board operates under a chairman appointed by the Governor and consists of 17 members representing: Forestry Commission (two members); Police; Fire Brigades Commission; pulp and paper making industry; sawmilling industry; Hydro-Electric Commission; The Insurance Council of Australia; Tasmanian Farmers' Federation; Tasmanian Farmers', Stockowners' and Orchardists' Association; Australian Workers' Union; Timber Workers' Union; Rural Fire Brigades; and State Emergency Service.

Under the Act, the municipal councils, through fire permit officers approved by the Board, are made responsible for the control and issue of permits for fire used for clearing vegetation during restricted periods. Fire use is controlled during and on days of total fire ban when no fires are permitted. These periods are introduced and removed as the seasonal conditions dictate, in various parts of the State. The Act requires each municipal council to form a municipal fire committee for the purpose of promoting the formation of rural fire brigades and advising the Board on matters of fire restriction, hazard reduction, the provision of funds for purchase of equipment to be used by rural fire brigades and any other fire control matters. Areas with particular fire problems and sparse population may be declared as special fire areas and be the subject of separate schemes sponsored entirely from Government finance.

The Board now has a total paid staff of 51 spread throughout the State at seven different locations. There were 366 rural fire brigades at 30 June 1977. These brigades are composed entirely of registered volunteers involving approximately 7 750 persons. The Board's Budget in 1976-77 was \$1 447 700 comprising: \$730 000 for Board administrative expenditure, \$431 300 for the development of Special Fire Areas (including capital items), \$182 400 for the development of Hobart Special Fire Area (including capital items), \$100 000 for subsidy grants to municipal councils and \$4 000 for workers compensation cover for brigade members. Half the administrative expenditure of the Board is met by insurance companies insuring rural properties, and half by the Government. Special Fire Area grants to councils and workers' compensation expenditure is borne by the Government. Hobart Special Fire Area expenditure is borne by the Government and the Hobart, Glenorchy and Kingborough Councils.

Forestry Commission

The Commission is responsible for the protection of the State forests (1.4m hectares) and of other forested Crown land. Close liaison is maintained with the Rural Fires Board as two members of the 17-man Board are representatives from the Forestry Commission. The following table gives details relating to fire damage for the last 10 years:

Comparisons of Seasonal Fire Damage

Year	Area burnt (a)	Fires	Suppression cost	Year	Area burnt (a)	Fires	Suppression cost
	hectares	no.	\$		hectares	no.	\$
1967-68 ..	38 730	230	61 032	1972-73 ..	r 140 960	305	262 531
1968-69 ..	r 4 536	87	18 722	1973-74 ..	r 6 055	62	23 688
1969-70 ..	r 6 223	118	21 963	1974-75 ..	2 300	48	18 205
1970-71 ..	r 8 667	114	22 493	1975-76 ..	19 949	88	69 512
1971-72 ..	r 1 827	95	r 13 840	1976-77 ..	3 511	59	44 453

(a) Includes private property inside the perimeter of fires on which suppressive action was taken.

During 1976-77, 2 842 hectares of State forest and Crown land were burnt including 1 922 hectares of scrub wasteland and 921 hectares of forested land.

Chapter 17

LABOUR, PRICES AND WAGES

EMPLOYMENT

Labour Force and Employment

It is essential to distinguish between 'labour force' and 'employees' since *employment* statistics in this chapter relate mainly to wage and salary earners. These are, however, *only one component of the labour force* which also comprises employers, self-employed persons, unpaid helpers and unemployed persons.

Labour Force

Since the 1966 Census, a set of questions, based on activity in the week before the Census, has been asked to establish who should be included in the labour force. The composition of the labour force as determined by the 1966 and 1971 Censuses was as follows:

Elements of Labour Force: Censuses, 1966 and 1971 (a)

Year and sex	Employer	Self-employed	Employee	Unpaid helper	Un-employed	Total in labour force	Total population
1966—Males	8 245	9 162	87 572	432	1 146	106 557	187 390
Females	1 759	1 644	35 451	940	971	40 765	184 045
Persons	10 004	10 806	123 023	1 372	2 117	147 322	371 435
1971 (a)—Males	6 841	8 442	90 627	277	1 786	107 973	196 442
Females	1 727	1 892	39 649	760	1 261	45 289	193 971
Persons	8 568	10 334	130 276	1 037	3 047	153 262	390 413

(a) See page 188 of the 1976 *Year Book* for a dissection of the employed population by industry group.

The new approach to labour force classification was as follows: in pre-1966 censuses people had been invited to classify themselves (e.g. as unemployed, employee, etc.) but in 1966 and 1971, people were invited to describe their *activity* in a specific week and the Statistician, using pre-determined definitions, classified them on the basis of their answers.

Briefly, the new questions asked whether the person: (i) had a job or business of any kind last week (even if temporarily absent from it); (ii) did any work at all last week for payment or profit (unpaid helpers who worked were to answer *yes*); (iii) was temporarily laid off by his employer without pay for the whole of last week; and (iv) looked for work last week (ways of 'looking for work' were specified on the Census form).

The 1966 and 1971 labour force included all persons answering *yes* to any one of these four questions. The effect of the new definition was to include additional persons in the labour force. This applied particularly to those working part-time (sometimes for only a few hours a week), some of whom in earlier censuses may not have considered themselves as '... engaged in an industry, business, profession, trade or service'.

The total of persons recorded as unemployed in 1966 and 1971 was compiled from persons answering *no* to questions (i), (ii) and (iii) and *yes* to question (iv).

Intercensal Labour Force Estimates

Labour Force Survey

Population censuses tend to be expensive undertakings and are therefore held only at five-yearly intervals. However the demand for regular *census-type* information exists right through the intercensal periods; the most sought data are those describing the labour force. To meet this demand, the Bureau designed in 1960 a special sample of private households and non-private dwellings under the title 'population survey', and it trained teams of interviewers to contact the selected sample units by personal visit with the aim of filling in questionnaires on the spot.

The population survey can be used to collect an extremely wide range of data but the main routine application has been the quarterly labour force enquiry, conducted in February, May, August and November of each year. The questionnaire is filled in for persons 15 years and over within each sampled unit and the definitions of employment, unemployment, etc. are basically the same in concept as those used in population censuses. Naturally the estimates are subject to sampling error. The specialist reader is referred to the Bureau's federal publication *The Labour Force* (Ref. No. 6203.0) where tables appear stating the standard error associated with the estimates in specific size ranges. The following table gives details of elements of the civilian labour force based on estimates derived from recent quarterly population surveys.

Civilian Population 15 Years of Age and Over, by Employment Status (a)

Month	Employed (b)			Unemployed (c)		Total labour force (d)		Not in labour force ('000)	Civilian population aged 15 and over ('000)
	Agri-culture ('000)	Other industries ('000)	Total ('000)	Number ('000)	Per cent of labour force	Number ('000)	Per cent of population		
MALES									
1975—									
February	11.4	99.6	110.9	3.1	2.7	114.1	80.8	27.2	141.2
May ..	10.4	99.6	110.0	3.3	2.9	113.3	79.9	28.5	141.8
August ..	10.3	100.6	111.0	3.8	3.3	114.8	80.4	27.9	142.7
November	10.3	99.2	109.5	3.9	3.5	113.4	79.1	29.9	143.3
1976—									
February	9.7	100.3	110.1	4.8	4.2	114.9	79.7	29.2	144.1
May ..	9.3	102.2	111.5	3.7	3.2	115.1	79.6	29.5	144.6
August ..	8.8	100.9	109.6	4.7	4.1	114.3	79.0	30.5	144.8
November	9.1	102.5	111.6	4.7	4.1	116.4	79.5	29.9	146.3
1977—									
February	8.8	103.1	112.0	5.3	4.5	117.3	79.9	29.5	146.8
May ..	8.7	104.5	113.2	4.5	3.8	117.6	79.8	29.8	147.5

Civilian Population 15 Years of Age and Over, By Employment Status (a)—continued

Month	Employed (b)			Unemployed (c)		Total labour force (d)		Not in labour force ('000)	Civilian population aged 15 and over ('000)
	Agriculture ('000)	Other industries ('000)	Total ('000)	Number ('000)	Per cent of labour force	Number ('000)	Per cent of population		
FEMALES									
1975—									
February	2.4	50.1	52.5	4.2	7.4	56.7	39.3	87.5	144.2
May ..	2.8	49.7	52.4	3.4	6.1	55.8	38.4	89.5	145.3
August ..	3.1	49.8	52.9	3.0	5.4	56.0	38.4	89.8	145.8
November	2.9	52.4	55.2	4.1	6.9	59.3	40.5	87.2	146.6
1976—									
February	2.4	52.5	55.0	5.1	8.6	60.1	40.8	87.2	147.3
May ..	3.1	51.7	54.8	4.7	7.9	59.5	40.4	87.7	147.2
August ..	2.7	50.1	52.8	3.5	6.2	56.3	38.1	91.6	147.9
November	2.3	52.1	54.4	3.7	6.4	58.1	39.1	90.4	148.5
1977—									
February	2.1	50.2	52.3	5.2	9.1	57.5	38.6	91.6	149.1
May ..	2.3	52.3	54.6	5.6	9.3	60.2	40.2	89.3	149.5

PERSONS

1975—									
February	13.8	149.7	163.4	7.3	4.3	170.7	59.8	114.7	285.4
May ..	13.1	149.3	162.5	6.6	3.9	169.1	58.9	118.0	287.1
August ..	13.4	150.5	163.9	6.8	4.0	170.7	59.2	117.7	288.5
November	13.2	151.5	164.7	8.1	4.7	172.8	59.6	117.2	289.9
1976—									
February	12.2	152.9	165.0	9.9	5.7	175.0	60.0	116.4	291.4
May ..	12.3	153.9	166.3	8.3	4.8	174.6	59.8	117.2	291.8
August ..	11.4	151.0	162.4	8.2	4.8	170.6	58.3	122.1	292.7
November	11.4	154.6	166.0	8.4	4.8	174.5	59.2	120.3	294.8
1977—									
February	10.9	153.3	164.3	10.6	6.0	174.8	59.1	121.1	295.9
May ..	11.0	156.8	167.8	10.0	5.6	177.8	59.9	119.2	297.0

(a) This series is based on a quarterly survey of a sample of the population. The estimates relate to all persons aged 15 years and over with the exception of members of the permanent armed forces and certain diplomatic staff.

(b) Includes all those who, during the survey week: (i) did any work for pay or profit, or (ii) worked 15 hours or more without pay in a family business (or farm), or (iii) had a job, business or farm but were not at work because of illness, holidays, etc. Included in this category are *employers, self-employed persons and employees in agriculture and private domestic service.*

(c) Includes all those who, during the survey week, did not work at all and who: (i) did not have a job and were actively seeking work, or (ii) who were laid off without pay for the whole week.

(d) Includes all those classified as employed or unemployed during the survey week.

Definitional Differences

Later in this chapter is an unemployment series based on persons registered with the Commonwealth Employment Service. Since registration is a voluntary act, the unemployment figures appearing in the labour force series will differ from the registration series (in the former series 'actively looking for work' is the basis of the unemployment classification).

The next section of this chapter gives details of the monthly employment series which excludes: (i) employers; (ii) the self-employed; (iii) unpaid helpers; and

(iv) employees in agriculture, private domestic service and defence forces. However the labour force series (above) covers all these classes of persons with one exception, the defence forces.

Monthly Series of Employment Statistics

The employment series in this section and the later section 'Industrial Classification of Employees' are based on data (referred to as *bench-marks*) derived from the Population Census of 1971.

Estimates for the period subsequent to the 1971 census have been derived from three main sources: (i) current pay-roll tax returns; (ii) current returns from government bodies; and (iii) some other direct records of current employment. The figures are supplemented by estimates of the change in employment in areas not covered by these direct collections.

The Australian Standard Industrial Classification is the industry classification now used throughout the series. The industry dissection of the bench-mark has been adjusted, as far as possible, to an enterprise or establishment basis which is the basis for classification of subsequent estimates.

Prior to January 1976, all employers (other than certain exempt organisations) paying more than \$400 a week in wages were required to lodge pay-roll tax returns. The exemption level was raised to \$800 in January 1976 and to \$923 in January 1977, but the changes have had little effect on employment estimates.

It should be noted that employees in rural industry and in private domestic service are not included in the estimates because of the inadequacy of current data. The terms *employment*, *number employed*, *employees* and *wage earners* used throughout are synonymous with, and relate to *wage and salary earners* on pay-rolls or in employment in the latter part of each month, as distinct from numbers of employees actually working on a specific date. The estimates include some persons working part-time.

Figures for recent periods are subject to revision. As they become available, particulars of employment obtained from other Bureau collections are used to check and, where necessary, to revise estimates in relevant sections.

The table below gives estimated totals for employees in Tasmania at June and December of each year:

Wage and Salary Earners in Civilian Employment, June and December (Excluding Employees in Agriculture and Private Domestic Service, and Defence Forces)
(*000)

Year	June			December		
	Males	Females	Persons	Males	Females	Persons
1971	86.7	38.9	125.5	86.6	39.8	126.4
1972	87.2	39.6	126.8	88.2	41.0	129.2
1973	87.9	41.3	129.2	89.8	43.3	133.1
1974	89.6	44.1	133.7	90.5	44.7	135.2
1975	90.7	46.6	137.3	89.3	46.4	135.7
1976	88.2	46.8	135.0	89.2	48.3	137.5
1977	88.7	48.4	137.1			

The detailed study of employment trends requires examination of monthly figures; the next table has been compiled to show totals of employees for each month:

Wages and Salary Earners in Civilian Employment, Monthly Estimates (Excluding Employees in Agriculture and Private Domestic Service, and Defence Forces)
(*000)

Month	1975			1976			1977		
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons
January ..	90.1	44.1	134.2	88.9	45.2	134.1	88.8	48.0	136.8
February ..	90.6	44.4	135.0	88.9	46.2	135.1	89.1	48.2	137.3
March ..	90.4	44.8	135.3	89.1	47.1	136.2	89.5	48.6	138.1
April ..	91.1	45.8	136.9	89.0	46.9	135.9	89.4	48.7	138.1
May ..	91.0	46.4	137.4	88.5	47.0	135.5	89.2	48.6	137.8
June ..	90.7	46.6	137.3	88.2	46.8	135.0	88.7	48.4	137.1
July ..	90.4	46.8	137.3	88.5	47.1	135.6	88.1	48.5	136.6
August ..	89.9	46.6	136.6	88.3	47.2	135.5	88.1	48.6	136.7
September ..	89.7	46.5	136.3	88.1	47.3	135.4	87.8	48.8	136.7
October ..	89.6	46.3	135.9	88.2	47.7	135.9	87.4	48.8	136.2
November ..	89.1	46.1	135.3	88.6	47.9	136.5	87.9	49.3	137.2
December ..	89.3	46.4	135.7	89.2	48.3	137.5			

Civilian Employees of Government Bodies

In Tasmania, as in other Australian states, a relatively high proportion of wage and salary earners is employed by government bodies operating at four levels: Federal, State, local and semi-government (with the complication that semi-government authorities may have been created by either Federal or State legislation). For the purpose of these statistics, government employees include persons working on government services such as railways, bus services, banks, post offices, power and light, air transport, education (including universities), radio, television, police, public works, government factories, departmental hospitals and institutions, etc., as well as those engaged in administrative services.

Estimates of private and government employment from January 1976 are on a revised basis which has been designed to achieve uniformity of classification with other statistical collections. The principal changes affecting the private/government dissection of employment estimates are as follows:

- (a) *Hospitals*: Non-departmental 'public' hospitals (other than those run by religious or charitable organisations) are now classified to State Government.
- (b) *Marketing Authorities*: All marketing authorities or boards (other than those which are purely growers' or producers' co-operatives) are now included in the government sector as they exercise functions which are fundamentally those of government.

The next table shows employees according to private and government sectors:

Total Civilian Employees of Private Employers and Government Authorities at 30 June—Revised Series
(*000)

Year	Private employers			Government authorities		
	Males	Females	Persons	Males	Females	Persons
1975	60.7	30.4	91.1	30.1	16.2	46.2
1976	59.1	30.0	89.1	29.1	16.8	46.0
1977	59.0	31.0	90.1	29.7	17.4	47.1

The following table shows the number of government employees in Tasmania according to the level of government:

Civilian Employees of Government Bodies at 30 June—Revised Series
(*000)

Year and sex	Level of government			Total
	Federal (a)	State (a)	Local	
1975—Males	6.0	r 20.7	3.4	r 30.1
Females	2.1	r 13.6	0.5	r 16.2
Persons	8.1	r 34.3	r 3.8	r 46.2
1976 (b)—Males	5.9	r 20.7	2.5	r 29.1
Females	2.1	r 14.3	0.4	r 16.8
Persons	8.0	r 35.1	2.9	r 46.0
1977—Males	5.9	21.1	2.7	29.7
Females	2.1	14.9	0.4	17.4
Persons	8.0	36.0	3.1	47.1

(a) Includes semi-government authorities.

(b) Change in basis of distinction between government and private; see text preceding table.

Industrial Classification of Employees

The next table specifies the main industrial groups and shows the industrial classification of *civilian employees only*, for recent years. At 30 June 1977 the percentage contributions made by the main industry groups to the total number of wage and salary earners in civilian employment (excluding employees in agriculture and private domestic service, and the defence forces) were as follows: manufacturing, 20.6; wholesale and retail trade, 19.3; community services, 18.5; construction, 8.6; entertainment, recreation, etc., 6.9; finance, insurance, real estate, etc., 6.6; public administration and defence, 6.1; other (ASIC divisions A, B, D, G and H), 13.4.

Wage and Salary Earners in Civilian Employment at 30 June: Main Industry Groups
(Excluding Employees in Agriculture and Private Domestic Service, and Defence Forces)
(*000)

A.S.I.C. Division and title	Year				
	1973	1974	1975	1976	1977
MALES					
A. (Part) Forestry, fishing and hunting ..	1.1	1.1	1.3	1.2	1.4
B. Mining	4.3	4.1	4.3	3.9	3.7
C. Manufacturing	25.1	25.4	24.1	23.8	23.7
D. Electricity, gas and water	3.3	3.3	3.3	3.3	3.3
E. Construction	12.0	11.8	12.6	11.7	11.5
F. Wholesale and retail trade	14.4	14.6	14.5	14.8	15.3
G. Transport and storage	6.6	7.0	7.0	6.1	6.0
H. Communication	2.0	2.1	2.1	2.1	2.0
I. Finance, insurance, real estate, etc. ..	4.4	4.6	4.5	4.6	4.7
J. Public administration and defence ..	4.5	4.7	5.0	5.1	5.2
K. Community services	7.2	7.5	8.1	8.2	8.5
L. Entertainment, recreation, etc. ..	3.1	3.3	4.0	3.3	3.4
Total	87.9	89.6	90.7	88.2	88.7

Wage and Salary Earners in Civilian Employment at 30 June: Main Industry Groups
(Excluding Employees in Agriculture and Private Domestic Service, and Defence Forces)—*cont.*

('000)

A.S.I.C. Division and title	Year				
	1973	1974	1975	1976	1977

FEMALES

A. (Part) Forestry, fishing and hunting..	..	..	..	0.1	0.1
B. Mining	0.2	0.2	0.2	0.2	0.2
C. Manufacturing	6.2	6.1	5.1	4.7	4.5
D. Electricity, gas and water	0.3	0.3	0.3	0.3	0.3
E. Construction	0.3	0.3	0.3	0.3	0.3
F. Wholesale and retail trade	9.9	10.6	10.4	10.4	11.1
G. Transport and storage.. .. .	0.6	0.6	0.7	0.7	0.7
H. Communication	0.8	0.8	0.8	0.8	0.8
I. Finance, insurance, real estate, etc. ..	3.5	3.7	3.9	3.9	(a) 4.4
J. Public administration and defence ..	2.3	2.5	2.9	3.0	3.1
K. Community services	12.6	13.3	15.1	16.2	16.9
L. Entertainment, recreation, etc. ..	4.6	5.6	6.7	6.3	6.1
Total	41.3	44.1	46.6	46.8	48.4

PERSONS

A. (Part) Forestry, fishing and hunting..	1.1	1.1	1.3	1.3	1.5
B. Mining	4.5	4.3	4.5	4.1	3.9
C. Manufacturing	31.3	31.5	29.2	28.5	28.2
D. Electricity, gas and water	3.6	3.6	3.6	3.6	3.6
E. Construction	12.3	12.1	12.9	12.0	11.8
F. Wholesale and retail trade	24.3	25.2	24.9	25.2	26.4
G. Transport and storage.. .. .	7.2	7.6	7.7	6.8	6.7
H. Communication	2.8	2.9	2.9	2.9	2.8
I. Finance, insurance, real estate, etc. ..	7.9	8.3	8.4	8.5	9.1
J. Public administration and defence ..	6.8	7.2	7.9	8.1	8.3
K. Community services	19.8	20.8	23.2	24.4	25.4
L. Entertainment, recreation, etc. ..	7.7	8.9	10.7	9.6	9.5
Total	129.2	133.7	137.3	135.0	137.1

(a) Increase over 1976 due principally to changes in Health Insurance activities.

UNEMPLOYMENT

Census Data

In the 1966 population census, the following question was asked: 'Did the person look for work last week? Answer *yes* or *no*. (Note: 'Looking for work' means: (i) being registered with the Commonwealth Employment Service; or (ii) approaching prospective employers; or (iii) placing or answering advertisements; or (iv) writing letters of application; or (v) awaiting the results of recent applications.) In the 1971 Census this question was asked again with one refinement: was the person seeking a job for the first time or had the person had other jobs before?

After the exclusion of persons who were already employed, but who were seeking alternative employment, the following data were obtained:

Labour Force and Unemployed Persons, 1966 and 1971 Censuses

Year and sex	Labour force	Unemployed	
		Number	Proportion of labour force (per cent)
1966—Males	106 557	1 146	1.1
Females	40 765	971	2.4
Persons	147 322	2 117	1.4
1971—Males	107 973	1 786	1.7
Females	45 289	1 261	2.8
Persons	153 262	(a) 3 047	2.0

(a) Includes 226 males and 277 females 'looking for first job'.

Registrations With Commonwealth Employment Service

The Commonwealth Employment Service (C.E.S.) was established by federal legislation under Section 47 of the *Re-establishment and Employment Act 1945*, and under the *Social Services Legislation Declaratory Act 1947*. The principal function of this service is to provide facilities in relation to employment for the benefit of persons seeking to change or obtain employment, or seeking to engage labour, and to provide facilities to assist in bringing about a high and stable level of employment throughout Australia.

The C.E.S. functions within the Employment Division of the Department of Employment and Industrial Relations on a decentralised basis. The central office is in Melbourne; there is a regional office in Hobart with district employment offices in central Hobart, Glenorchy, Bellerive, Burnie, Devonport and Launceston, and a branch office in Mowbray. There are also agencies at Smithton, George Town and Huonville.

All applicants for unemployment benefits provided under the federal *Social Services Act 1947*, must register at a district employment office or agency of the C.E.S. which is responsible for certifying whether or not suitable employment is available. Claims for unemployment benefits are paid by the Department of Social Security; country residents remote from a Social Security employment office or agency may claim by mail.

The establishment of the C.E.S. created two new methods of measuring fluctuations in unemployment: (i) the number of persons registered for employment with the C.E.S.; and (ii) the number of persons receiving unemployment benefit from the Department of Social Security.

'Registered for Employment'

In the following table the persons shown are those who claimed, when registering with the C.E.S., that they were not employed and who were recorded on the Friday nearest the last day of the month as unplaced. The count includes those referred to employers and those who may have obtained employment without notifying the C.E.S.; persons receiving unemployment benefit are included.

**Persons Registered for Employment with Commonwealth Employment Service
At June and December of Each Year (a)**

Year	June			December		
	Males	Females	Persons	Males	Females	Persons
1967	1 157	959	2 116	1 716	1 348	3 064
1968	1 145	943	2 088	1 786	1 314	3 100
1969	1 305	815	2 120	1 863	1 612	3 475
1970	1 160	728	1 888	1 791	1 376	3 167
1971	1 726	956	2 682	2 786	1 746	4 532
1972	2 113	1 385	3 498	3 349	2 304	5 653
1973	2 201	1 517	3 718	2 560	1 911	4 471
1974	1 968	1 342	3 310	4 089	3 251	7 340
1975	3 648	2 542	6 190	6 950	3 791	10 741
1976	5 840	3 146	8 986	6 464	3 734	10 198
1977	5 142	3 644	8 786	8 266	4 355	12 621

(a) Recorded as unplaced on the Friday nearest the last day of the month.

The above table indicates that unemployment remained at a relatively low level until after mid-1974. However, the number of persons registered for employment with the Commonwealth Employment Service showed an increase of 182 per cent from December 1973 to December 1977.

In interpreting the level of registration, account should be taken of the fact that registration is a *voluntary* act. Thus, while an increase in registrations may normally be taken to indicate an increase in unemployment, theoretically at least, it could merely indicate wider use of the facilities offered by the Commonwealth Employment Service. (There is an alternative source of data on unemployment which does not suffer from this disability; the section 'Intercensal Labour Force Estimates' earlier in this chapter includes a series showing the number of persons unemployed as one element of the labour force. 'Actively looking for work' is the basis of classification in the labour force series.)

The table that follows has been compiled to show the number registered for employment at the end of each month. The monthly figures are subject to pronounced seasonal influences, the most obvious being the effect of school-leavers on registrations in December and January.

**Persons Registered for Employment With Commonwealth Employment Service
At End of Each Month (a)**

Month	1975			1976			1977		
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons
January ..	4 781	3 495	8 276	7 775	4 071	11 846	6 845	3 850	10 695
February ..	4 667	3 335	8 002	6 426	3 857	10 283	6 174	3 870	10 044
March ..	3 815	2 869	6 684	5 448	3 399	8 847	5 092	3 593	8 685
April ..	3 460	2 674	6 134	5 063	3 376	8 439	4 555	3 420	7 975
May ..	3 295	2 631	5 926	5 484	3 167	8 651	4 665	3 451	8 116
June ..	3 648	2 542	6 190	5 840	3 146	8 986	5 142	3 644	8 786
July ..	3 825	2 379	6 204	6 098	3 145	9 243	6 043	3 462	9 505
August ..	4 196	2 305	6 501	6 182	3 025	9 207	6 217	3 523	9 740
September ..	4 631	2 504	7 135	6 217	2 910	9 127	6 162	3 254	9 416
October ..	4 678	2 593	7 271	5 994	2 907	8 901	6 283	3 051	9 334
November ..	4 747	2 749	7 496	5 739	2 803	8 542	6 572	3 285	9 857
December ..	6 450	3 791	10 241	6 464	3 734	10 198	8 266	4 355	12 621

(a) At Friday nearest last day of month.

Differences between Population Surveys Estimates of Unemployment and Commonwealth Employment Service Figures

The population surveys sample estimates of unemployment will differ from the number of persons registered with the Commonwealth Employment Service as *not employed, awaiting placement in full-time employment* for a number of reasons, including the following:

- (i) the survey estimates include persons looking for part-time as well as full-time work;
- (ii) they include some unemployed persons (particularly females) who do not register with the Commonwealth Employment Service;
- (iii) they exclude persons who did any work at all during the survey week, even though they may subsequently have become unemployed and registered with the Commonwealth Employment Service, or have done so little work as not to lose eligibility for unemployment benefit;
- (iv) they exclude any persons registered as unemployed who find jobs but do not notify the Commonwealth Employment Service at once that they have done so;
- (v) they represent averages over a period whereas the numbers registered refer to a particular day near the end of the month; and
- (vi) they are subject to sampling variability.

Survey of Persons Registered with the Commonwealth Employment Service as Unemployed, March 1977, Australia

This survey was based on a sample, selected by the Bureau, of the addresses of persons registered as unemployed in the records of Commonwealth Employment Service (C.E.S.) offices within metropolitan statistical divisions of the six state capital cities as at 18 March 1977. About two per cent of addresses were included in the sample.

During the period 21 to 25 March, interviews were conducted by Bureau officers at the selected addresses, using a questionnaire similar to that used in the normal quarterly labour force survey. Information was sought with respect to all usual residents at the selected addresses. It should be noted that the person interviewed was not necessarily the person registered with the C.E.S., whose name was not known to the interviewer.

Survey questionnaires were matched with the selected C.E.S. records by Bureau officers. Information was not obtained in respect of some registrants. Such persons are shown as 'non-respondents'.

The survey results showed that of 135 000 respondents, 22.0 per cent were *employed*, 70.2 per cent were *unemployed* and 7.8 per cent were *not in the labour force*. Of the 55 400 non-respondents, 2 400 had given non-existent addresses and 4 100 had given insufficient address; 3 700 dwellings were apparently not inhabited and at 29 600 dwellings the registrant apparently did not reside at that address.

Persons Receiving Unemployment Benefit

It is possible for a person to register as unemployed but make no claim for unemployment benefit. On the other hand, a person claiming unemployment benefit *is required* to register for employment. The next table gives details of persons receiving unemployment benefit each month.

Number of Persons Receiving Unemployment Benefit (a)

Month	1971	1972	1973	1974	1975	1976	1977
January ..	518	1 125	2 572	2 706	4 687	8 516	7 397
February ..	502	1 144	2 439	2 538	5 413	7 169	7 501
March ..	347	1 113	1 881	1 630	4 938	6 438	6 926
April ..	405	1 191	1 862	1 748	3 664	6 425	6 575
May ..	574	1 278	2 242	1 655	3 835	6 611	6 554
June ..	782	1 697	2 330	1 769	4 439	7 228	7 078
July ..	957	1 922	2 279	2 325	4 787	7 603	7 978
August ..	1 062	1 854	2 200	2 615	5 223	7 609	7 917
September ..	1 165	1 813	2 067	3 139	5 378	7 511	8 083
October ..	1 215	1 698	1 692	3 166	5 369	7 210	8 037
November ..	1 148	1 879	1 782	2 650	5 634	7 053	7 179
December ..	1 399	2 214	2 029	4 210	8 096	7 009	7 610

(a) Compiled from information furnished by the Department of Social Security. From March 1976 monthly figures are not directly comparable because of differences in accounting periods. Some monthly figures cover a four week period whilst others cover a six week period. Prior to March 1976 the figures relate to the Saturday nearest the end of the month.

The number of males and females in receipt of unemployment benefit is shown for June of each year in the following table:

Persons Receiving Unemployment Benefit at June (a)

Particulars	1971	1972	1973	1974	1975	1976	1977
Males ..	531	1 087	1 306	1 034	2 717	4 927	4 381
Females ..	251	610	1 024	735	1 722	2 301	2 697
Persons ..	782	1 697	2 330	1 769	4 439	7 228	7 078

(a) See footnote to previous table.

DEPARTMENT OF EMPLOYMENT AND INDUSTRIAL RELATIONS

In addition to its function of operating the Commonwealth Employment Service, the Employment Division of the Department of Employment and Industrial Relations has controlled schemes aimed at reducing the recent high level of unemployment. A brief description of these schemes follows.

National Employment and Training System

In October 1974 the employment training schemes administered by the then Department of Labour and Immigration, together with the Training Scheme for Widow Pensioners, were superseded by the National Employment and Training System.

The National Employment and Training (N.E.A.T.) System provides a comprehensive system of labour market training designed to remedy labour imbalances by:

- (i) Alleviating unemployment where it occurs and overcoming skills in short supply.
- (ii) Assisting in the long-term restructuring of the work force by promoting regional development and bringing about overall increases in the general level of skills. Training arrangements cover the full range of occupational skills and, as necessary, provide pre-

liminary and preparatory instruction needed to assist entry into normal training programs and to meet the needs of particular individuals such as the handicapped.

Facilities approved for training include those provided by public and private education institutions but of growing importance is the training provided by industry and commerce by arrangement with employers and with employer industry and trade associations. Trainees are approved primarily on the basis of labour market demand for their existing and proposed skills. Subject to a means test, trainees attending educational institutions receive training allowances. Employers who provide approved programs of in-industry training and meet the wage costs of trainees are paid a subsidy for the duration of approved training periods.

All applications for employment training through N.E.A.T. are made with the Commonwealth Employment Service which, in its capacity as an employment referral centre, is able to test the labour market and determine an individual's need for training as a means of obtaining satisfactory employment.

Community Youth Support Scheme

The Community Youth Support Scheme (C.Y.S.S.) is a Federal Government Scheme which was introduced in November 1976 to assist young people experiencing difficulty in finding employment.

The Scheme aims to encourage community action through the provision of supportive programs and services for the young unemployed. Financial assistance is made available to community groups and youth organisations to conduct a wide range of activities designed to:

- (i) Improve the ability of unemployed youth to apply for jobs and find employment.
- (ii) Maintain youth with a sense of direction and purpose, including an orientation to work.
- (iii) Help overcome the feelings of boredom, frustration and disillusionment associated with long periods of unemployment.

Any young person registered with the Commonwealth Employment Service is eligible to participate in C.Y.S.S. projects. Bus fares and other necessary expenses incurred in attending a C.Y.S.S. project are reimbursed up to \$6.00 per week.

INDUSTRIAL LEGISLATION AND CONDITIONS

Apprenticeship

Apprenticeship Commission

The Apprenticeship Commission was set up under the *Apprentices Act 1942* to: (i) encourage, regulate and control training in proclaimed trades; (ii) assist youths towards successful trade courses; and (iii) provide properly trained craftsmen for industry. The Commission, which meets each month, consists of three representatives of trade unions, three of employers' organisations, a nominee of the Minister for Education and the President, all members being appointed for a three-year term. To keep the Commission up-to-date with the latest developments, Trade Committees have been formed for particular industries, with both employers and employees represented.

Apprentices are trained at work and at technical classes, and supervisors report on the effectiveness of the training; supervisors also give on-the-spot advice to employers and apprentices where their mutual obligations are concerned and refer matters that cannot be settled in this way to the Commission for decision.

Apprenticeships

An apprenticeship may not be commenced without the consent of the Commission which determines the suitability of employers for training apprentices and the educational qualifications required for entry to a particular trade.

The apprentice serves a probationary period before a contract (indentures) is made with the employer and registered with the Commission. The Commission determines disputes about the contracting parties' rights, duties and liabilities and no apprenticeship may be terminated, suspended or assigned other than by its authority; when an apprenticeship has been completed, the employer and the Commission certify to this effect. Where apprentices are required to undertake technical training, either at technical classes or by correspondence, instruction is mandatory. Apprentices attend technical classes for eight hours per week during working hours without loss of pay. (Country apprentices in remote areas attend three fortnightly training periods each year.) The progress apprentices make is reported to the Commission and unsatisfactory reports are investigated.

Apprentices are encouraged in the following ways: (i) by payment of *proficiency allowances* for annual examinations passed successfully in the allotted time; (ii) by *certificates of proficiency* for apprentices successfully completing the mandatory trade course of technical instruction; (iii) by reducing the apprenticeship term by one year in some cases, where the qualifying trade course is completed in the allotted time; and (iv) by the award of bursaries.

The Commission offers an award to the outstanding apprentice in each of the building, automotive, electrical, metal and other trades, and from these five apprentices, the 'Apprentice of the Year' is selected and qualifies for an award of \$600. Other awards are to the value of \$450. Should there not be any outstanding apprentice in any particular trade group, the prize allotted for that group may be awarded to other trade groups.

Number of Apprentices

The following table shows the number of apprentices in Tasmania and also details of apprenticeships registered and completed:

Number of Apprentices, Apprenticeships Registered and Completed

Particulars	1971-72	1972-73	1973-74	1974-75	1975-76
Number at 30 June (a)—					
Indentured apprentices	3 583	3 281	4 035	4 265	4 285
Apprentices on probation	235	322	180	218	183
Total	3 818	3 603	4 215	4 483	4 468
During year—					
New apprenticeships registered ..	998	1 117	1 404	1 312	1 413
Apprenticeships completed	778	882	750	771	1 052

(a) Distributed in proclaimed trades.

Industrial Safety and Accident Prevention

Responsibility: The Department of Labour and Industry is concerned with industrial safety and accident prevention and discharges this function with the knowledge that there are approximately 10 000 accidents each year involving lost time (of more than one day), among the population covered by the *Workers' Compensation Act*.

Prevention: Prevention obviously has a two-fold aspect: (i) inspection programs aimed at pin-pointing unsafe working conditions; and (ii) education and training designed to eliminate unsafe actions.

Training: The problem of training is basically one of educating supervisors and foremen, since an attitude of 'safety consciousness' has to start with management. Formal training in industrial safety and accident prevention is available at Hobart and Launceston Technical Colleges in two-year courses. Informal training is arranged by the Department of Labour and Industry, the two-day courses being based on the concept of 'training within industry'. Single lectures on industrial and farm safety are also available and the Department makes arrangements to provide lecturers on request.

Safety Officers: It is expected that large undertakings will have their own specialists concerned with safety matters. However, government safety officers are available to industries which may use their services for short periods. Their function is purely advisory and they assist organisations which wish to stress safety or to reduce their accident rates.

Research Facilities: The Department carries out a safety research program. A comprehensive classification of safety data and information is maintained from local, interstate and overseas sources.

Factory Legislation

Working conditions in factories in Tasmania are covered under the *Factories, Shops and Offices Act 1965*, as amended, which makes provisions with respect to the health, welfare, safety and working conditions of persons employed in factories, shops and offices, and the sanitation of factories, shops and offices. All factories are required to register with the Department of Labour and Industry; fees date from 1 January each year. Fees for registration range from \$3 for small factories (where less than four persons are employed), up to \$345 for factories employing more than 800 persons. See the 1977 and earlier *Year Books* for greater detail relating to factory legislation and factory inspection.

Industrial Accidents

Industrial accident statistics in Tasmania are compiled from returns of workers' compensation claims submitted by insurance companies, self-insurers and State Government departments. The returns are submitted for cases finalised; the statistics do not represent the number of accidents occurring in a particular year. The statistics first published by the Bureau for 1969-70 replaced those formerly published by the Department of Labour and Industry. Because of the number of minor definitional, conceptual and classification changes adopted for the new series, the statistics shown in the following tables are not strictly comparable with those published for 1968-69 and earlier years.

The collection is limited to those employees covered by the *Tasmanian Workers' Compensation Act* and therefore excludes self-employed persons, Federal Government employees and the police. Exclusion of self-employed persons is likely to reduce coverage in industries where self-employment is prevalent (e.g. retail trade, rural industries, etc.). Because of the exclusion of Federal Government employees, some industries are not covered at all, while coverage is considerably reduced in other industries (e.g. communications).

In compiling the statistics the following definitions have been adopted:

Industrial Accident: A compensated work injury causing death or absence of the injured person from work for one day or more. Disease cases and accidents occurring during journeys or recess periods are included. The number of accidents is based on claims finalised during each year ended 30 June. The accidents to which the claims refer may have occurred in the year the claim was finalised or during any earlier year.

Time Lost: The actual time lost from work of persons reported to be temporarily incapacitated or permanently partially-incapacitated as a result of a compensated work injury.

Cost of Claims: Includes compensation for wages lost, hospital and medical expenses and lump sum settlements of cases finalised during the year ended 30 June.

Industry Groups: Classified in accordance with the Australian Standard Industrial Classification.

The table that follows shows the number of industrial accidents reported during 1975-76 and the time lost through those accidents which caused temporary and permanent partial-disability.

Fatal and Non-fatal Industrial Accidents: Industry Group and Time Lost, 1975-76

Industry group	Accidents		Time lost	
	Fatal	Non-fatal	Total	Average per accident
	no.	no.	weeks	weeks
Primary, mining, etc.—				
Primary production	3	637	1 699	2.7
Mining .. .. .	..	774	2 216	2.9
Total	3	1 411	3 915	2.8
Manufacturing—				
Food, drink, etc. .. .. .	..	1 089	2 194	2.0
Wood and wood products, etc.	1	824	2 297	2.8
Glass and clay products, etc. .. .. .	..	123	328	2.7
Metal and metal products, etc. .. .. .	..	1 070	2 334	2.2
Transport equipment .. .. .	..	92	165	1.8
Other manufacturing	1	592	1 373	2.3
Total	2	3 790	8 690	2.3
Other industries—				
Electricity, gas, etc. .. .. .	..	272	495	1.8
Construction	2	1 911	3 752	2.0
Wholesale and retail trade	2	883	2 417	2.7
Transport, storage, etc. .. .. .	..	545	1 556	2.9
Finance and property .. .. .	..	50	69	1.4
Public administration .. .. .	..	195	442	2.3
Community services .. .. .	..	342	1 256	3.7
Amusements, hotels, etc.	4	250	863	3.5
Total	8	4 448	10 850	2.4
Grand total	13	9 649	23 455	2.4

The cost of claims arising out of industrial accidents, as applicable to each industry group, is shown in the next table:

Industrial Accidents: Industry Group and Cost of Claims, 1975-76
(**\$**)

Industry group	Cost of Claims			
	Fatal accidents	Non-fatal accidents	Total accidents	Average per non-fatal accident
Primary, mining, etc.—				
Primary production	59 138	296 801	355 939	466
Mining .. .. .	..	416 523	416 523	538
Total	59 138	713 324	772 462	506
Manufacturing—				
Food, drink, etc. .. .. .	..	329 003	329 003	302
Wood and wood products, etc. ..	933	406 077	407 010	493
Glass and clay products, etc. ..	..	57 862	57 862	470
Metal and metal products, etc. ..	..	361 646	361 646	338
Transport equipment .. .. .	..	25 771	25 771	280
Other manufacturing	2 726	240 716	243 442	407
Total	3 659	1 421 075	1 424 734	375
Other industries—				
Electricity, gas, etc. .. .. .	..	83 996	83 996	309
Construction	19 675	754 385	774 060	395
Wholesale and retail trade	17 753	320 838	338 591	363
Transport, storage, etc. .. .. .	..	245 393	245 393	450
Finance and property .. .. .	..	10 643	10 643	213
Public administration .. .. .	..	52 097	52 097	267
Community service .. .. .	..	173 130	173 130	506
Amusements, hotels, etc.	21 747	119 107	140 854	476
Total	59 175	1 759 589	1 818 764	396
Grand total	121 972	3 893 988	4 015 960	404

Workers' Compensation

Legislation: Workers' compensation legislation in Tasmania was first introduced in 1910 but it was not until 1927 that the principle of compulsory insurance was embodied in the *Workers' Compensation Act 1927*.

Purpose and Limitations: The principle of the Act is provision for compensation on the death or disablement of a worker, if occasioned by personal injury arising out of and during the course of employment. In 1970 the Act was amended to extend compensation cover for injuries sustained by a worker travelling in either direction between his residence and place of employment. The Act provides that this cover to and from work applies only for reasonably direct journeys, except for breaks or deviations connected with the worker's employment. Amendments in 1970 extended coverage to workers who are temporarily absent from work during meal breaks. Self-inflicted injuries are excluded and certain limitations are applied where serious or wilful misconduct is involved. Monetary benefits have fixed limits. All reasonable costs of medical, hospital, nursing and ambulance services, and in the event of death, the reasonable costs of burial or cremation are paid. In addition weekly payments are made during incapacity and there is a lump sum entitlement for scheduled injuries.

Non-contributory Basis: The Act is non-contributory, i.e. the worker does not pay into any fund for the provision of benefits. The employer is obliged to insure with an approved insurance company against the liability to compensation, except in certain cases where he is allowed to carry his own risk. In any case where an employer has no paid-up insurance policy, where the employer cannot be found or where the employer or his insurance company has become insolvent, the worker may claim against a 'nominal insurer', as if he were the employer. Amounts paid by the 'nominal insurer' are provided by all insurance companies carrying on workers' compensation business. Each company is required to contribute to these types of claims in proportion to the premium income derived from policies issued during the preceding year.

Compensation on Death: Where death results from an injury, the compensation payable to dependants wholly dependent on the worker's earnings is 284 times the current Hobart base rate, plus seven times the current Hobart base rate for each worker's child under sixteen years at the date of injury. Partial dependants are entitled to proportionate amounts.

Base Rate means the minimum weekly wage payable to the lowest paid adult male employed at Hobart under the federal Metal Trades Award (in December 1976 the minimum was \$103.80 per week).

Weekly Payments During Incapacity: When the worker is *totally incapacitated* he is entitled to receive weekly compensation payments at whichever of the following alternatives is greater: (i) the rate of his average weekly earnings over the period of twelve months immediately preceding the period of incapacity; or (ii) the ordinary time rate of pay for the work on which he was engaged immediately prior to the period of incapacity. When the worker is *partially incapacitated* the weekly payments are reduced by any amount that he is able to earn in some other suitable employment.

Maximum Limit of Weekly Payments: In cases of partial or total incapacity of any worker, the total liability of an employer in making weekly compensation payments is limited to 284 times the current Hobart base rate.

Lump Sum Payments: In addition to weekly incapacity payments, lump sum payments are made in respect of the loss of members of the body or of bodily powers of function. In the Act, specific injuries are listed and the single amount payable is related to the current Hobart base rate (specified as B in the following examples): (i) loss of both feet, $B \times 284$; (ii) loss of leg, $B \times 138$; (iii) loss of thumb, $B \times 51$; and (iv) loss of great toe, $B \times 35$, etc. Where more than one of these injuries are suffered in the same accident, a maximum payment equal to $B \times 532$ may be paid.

The Inspection of Machinery

Legislation: Generally, the *Inspection of Machinery Act 1960*, as amended, applies to all machinery of one or more horsepower used in manufacturing or industrial processes and specifically includes boilers, pressure vessels, lifts and cranes. By proclamation, machines not ordinarily covered by the Act may be made subject to its provisions. The Department of Labour and Industry is responsible for application of the Act which is administered by a chief inspector and district inspectors at Hobart, Launceston, Burnie and Devonport.

Long Service Leave for Casual Employees

The *Long Service Leave (Casual Employment) Act 1971* extended long service leave entitlements to casual workers in the building and construction industry.

Contributions to a Long Service Leave (Casual Employment) Fund are made by employers with respect to all casual employees covered by the Act. For further details, reference should be made to the 1977 or earlier editions of the *Year Book*.

TRADE UNIONS

The following table shows details of the number of unions and the number of union members in Tasmania:

Trade Unions: Numbers and Membership

Year ended 31 December	Number of separate unions	Number of members ('000)	Annual increase in membership (a) (per cent)
1939	79	22.1	..
1972	112	80.5	7.1
1973	118	84.1	4.5
1974	121	89.1	5.9
1975	117	87.4	-1.9
1976	119	86.9	-0.6

(a) On preceding year.

PRICES

Retail Prices and Price Indexes

Retail Price Index Numbers from 1901

Retail prices of food and groceries and average rentals of houses for periods extending back to the year 1901 were collected by the Australian Statistician. A continuous price series from 1901 to the present day (shown in part below) has been constructed from the various indexes in use during this period to provide a broad indication of long-term trends in retail price levels. The index numbers are derived by linking a number of indexes that differ greatly in scope. The successive indexes used are: 1901-1914, the 'A' Series; from 1914 to 1946-47, the 'C' Series; from 1946-47 to 1948-49, a composite of Consumer Price Index Housing Group (partly estimated) and 'C' Series excluding rent; and from 1948-49, the Consumer Price Index. It should be noted that this long-term series is for the six capital cities combined, *not for Hobart alone*.

Retail Price Index Numbers from 1901: Six State Capital Cities Combined
(Base: Year 1911 = 100)

Year	Index number	Percent- age change (a)	Year	Index number	Percent- age change (a)	Year	Index number	Percent- age change (a)
1901	88	..	1946	190	1.6	1971	621	6.0
1911	100	3.1	1951	313	19.5	1972	658	6.0
1921 (b) ..	168	-13.0	1956	419	6.3	1973	720	9.4
1926	168	1.8	1961	471	2.6	1974	829	15.1
1931	145	-10.5	1966	517	3.0	1975 (c) ..	954	15.1
1936	141	2.2	1969	564	2.9	1976 (d) ..	1 082	13.5
1941	167	5.0	1970	586	3.9	1977	1 215	12.3

(a) Over previous year (previous year's figures not necessarily shown in table).

(b) November; remaining figures are averages for the respective years.

(c) Affected by the introduction of Medibank and the consequent reduction in cost of hospital and medical services.

(d) Includes the effects of price increases in hospital and medical services associated with changes to Medibank.

Consumer Price Index

The index currently in use is the Consumer Price Index. A comprehensive view of the present composition and weighting of the Consumer Price Index is given in the following table:

**Consumer Price Index
Composition and Weighting Pattern at September Quarter 1976 (a):
Six State Capital Cities Combined**

Group, section, etc.	Percentage weight	
	Section, etc.	Group
Food—		
Dairy produce	2.138	} 21.026
Cereal products	2.384	
Meat and seafoods—Meat	4.537	
Fish	0.420	
Fruit and vegetables—Fresh fruit and vegetables	2.017	
Processed fruit and vegetables	0.889	
Soft drinks, icecream and confectionery	2.080	
Meals out, take away food—Meals out	2.072	
Snacks, take away food	2.331	
Other food	2.158	
Clothing—		
Men's and boys' clothing—Men's clothing	2.339	} 10.141
Boys' clothing	0.589	
Women's and girls' clothing—Women's clothing	3.911	
Girls' clothing	0.578	
Piecegoods and other clothing	0.538	
Footwear—Men's footwear	0.549	
Women's footwear	0.774	
Children's footwear	0.328	
Clothing and footwear services	0.535	
Housing—		
Rent—Privately owned dwellings	4.779	} 13.544
Government owned dwellings	0.468	
Home ownership—Local government rates and charges	1.759	
House price	4.708	
Repairs and maintenance	1.830	
Household equipment and operation—		
Fuel and light—Electricity	1.437	} 14.761
Gas	0.520	
Other fuel	0.278	
Furniture and floor coverings	3.222	
Appliances	1.909	
Drapery	1.077	
Household utensils and tools—Household utensils	1.017	
Tools	0.490	
Household supplies and services	3.319	
Postal and telephone services—Postal charges	0.341	
Telephone charges	1.151	
Transportation—		
Private transport—Motor vehicle purchase	5.523	} 18.453
Motor vehicle operation	10.788	
Public transport fares	2.142	
Tobacco and alcohol—		
Alcoholic beverages—Beer	4.769	} 10.247
Wine	1.180	
Spirits	1.052	
Cigarettes and tobacco	3.246	

Consumer Price Index
Composition and Weighting Pattern at September Quarter 1976 (a):
Six State Capital Cities Combined—continued

Group, section, etc.	Percentage weight	
	Section, etc.	Group
Health and personal care—		
Health services—Hospital and medical	0.889	} 3.950
Dental	0.595	
Personal care products	1.799	
Personal care services	0.667	
Recreation—		
Books, newspapers, magazines	1.428	} 7.878
Other recreation goods	3.215	
Holiday accommodation	0.921	
Other recreation services	2.314	
Total	100.000	100.000

(a) This weighting pattern is based on estimates of household expenditure for the year 1974-75, valued at September quarter 1976 prices; see Chapter 18 for details relating to the 1974-75 Household Expenditure Survey.

The weighting indicates the relative influence given to the various components in measuring the degree of price change in the index from the September quarter 1976 (i.e. from the beginning of the ninth linked series).

Comparison of the Linked Series: The Consumer Price Index is a chain of 'fixed weight aggregative' indexes, with significant changes in composition and weighting made at the linking dates.

The 1977 *Year Book* includes details relating to changes made at the following linking dates: June quarter 1952; June quarter 1956; March quarter 1960; December quarter 1963; December quarter 1968; and December quarter 1973. Subsequent changes were as follows:

The Eighth Linked Series was introduced from the September quarter 1974 when the item 'Radio and television licenses' was deleted. This series comprised the following groups and weighting pattern (percentage contributions to the total index): 'Food group', 26.0; 'Clothing and drapery group', 13.2; 'Housing group', 15.6; 'Household supplies and equipment group', 11.2; and 'Miscellaneous group', 34.0 per cent (all groups, 100.0 per cent).

The Ninth Linked Series was introduced from the September quarter 1976 and changed weights for all items. It is based on the results of the 1974-75 Household Expenditure Survey (see Chapter 18). The following items were added to the directly represented areas of expenditure: in the 'Food group'—meals out, fresh and frozen fish, oils and fats, cakes, fresh fruit and vegetables; in the 'Household equipment and operation group'—fertiliser, seeds, etc., insurance of dwellings and contents, travel goods, repairs to household goods; in the 'Transportation group'—motor vehicle comprehensive and third party property insurance, taxi and airfares, motor cycles; and in the 'Recreation group'—books, sound equipment, sports equipment, caravans, bicycles, toys, games, holiday accommodation, television hire, spectator admission, charges for sports services. A new group and sub-group structure, more consistent with international convention, has been adopted. The main changes were:

- (i) sub-division of the former 'Miscellaneous group' into four groups: 'Transportation', 'Health and personal care', 'Recreation' and 'Tobacco and alcohol';
- (ii) transfer of dry cleaning and shoe repairs to the 'Clothing group';
- (iii) transfer of postal and telephone services to the 'Household equipment and operation group'; and
- (iv) transfer of 'Drapery sub-group' from former 'Clothing and drapery group' to the 'Household equipment and operation group'.

As with previous series, the cost of land and interest charges on house purchases are not included in the new series.

The percentage contributions of the various groups to the total index are included in the last table.

Local weights for the individual cities are used for some items.

Consumer Price Index, Hobart

The Consumer Price Index for Hobart is compiled to the base 1966-67=100.0, the number 100.0 being the base value for each of the major groups and also for the 'All groups' index (except for 'Health and personal care', base: December quarter 1968 = 100.0; and 'Recreation', base: September quarter 1976 = 100.0).

The following table shows group index numbers for Hobart on a financial year and quarterly basis (an annual index number is the average of the four respective quarterly index numbers):

Consumer Price Index: Hobart (a)
(Base of Each Index: Year 1966-67 = 100.0) (b)

Year or quarter	Food	Clothing	Housing	Household equipment and operation	Transportation	Tobacco and alcohol	Health and personal care	Recreation	All groups
1966-67 ..	100.0	100.0	100.0	100.0	100.0	100.0	n.a.	} n.a. {	100.0
1967-68 ..	106.8	102.4	103.6	103.7	104.2	102.1	n.a.		104.6
1968-69 ..	105.3	104.5	108.4	105.8	108.1	105.0	n.a.		106.1
1969-70 ..	106.4	107.9	112.6	107.4	111.2	107.3	102.5		108.5
1970-71 ..	109.6	111.9	117.4	110.9	116.2	115.6	103.2		112.6
1971-72 ..	112.9	118.5	124.2	119.3	126.6	124.7	119.8		119.9
1972-73 ..	120.0	125.6	131.8	123.8	132.1	134.7	125.8		126.7
1973-74 ..	141.4	142.4	146.9	132.8	139.6	152.7	141.0		142.6
1974-75 ..	158.6	171.8	180.9	156.4	165.3	169.4	174.1		166.7
1975-76 (c) ..	177.5	200.9	216.4	183.9	196.7	206.3	138.5		190.0
1976-77 (d) ..	201.5	232.5	244.9	201.8	220.7	222.0	250.3	103.6	217.7
Quarter—									
1973-74—									
September	131.9	134.2	137.1	129.2	134.1	144.7	137.5	} n.a. {	135.2
December	139.7	139.8	146.8	130.9	138.8	153.0	136.6		141.1
March ..	144.2	142.7	149.8	133.1	141.6	153.2	138.5		144.0
June ..	149.7	152.9	153.9	138.0	143.7	159.9	151.3		149.9
1974-75—									
September	155.1	160.3	163.6	144.2	155.4	164.2	161.7	} n.a. {	157.4
December	158.0	171.6	179.8	157.0	162.2	167.2	170.6		165.5
March ..	158.1	174.0	186.0	161.0	168.1	172.1	180.8		169.3
June ..	163.1	181.3	194.2	163.4	175.6	173.9	183.1		174.6

Consumer Price Index: Hobart (a)
(Base of Each Index: Year 1966-67 = 100.0) (b)—continued

Year or quarter	Food	Clothing	Housing	Household equipment and operation	Transportation	Tobacco and alcohol	Health and personal care	Recreation	All groups
1975-76—									
Sept. (c) ..	168.8	186.1	199.7	167.1	181.2	182.8	125.5	} n.a. {	175.9
December	174.8	199.7	214.5	186.8	193.6	212.0	136.9		189.1
March ..	181.6	202.4	221.4	188.7	202.8	212.2	141.0		194.2
June ..	184.7	215.2	230.1	192.8	209.1	218.2	150.4		200.6
1976-77—									
September	192.0	218.5	235.5	196.2	215.2	218.9	153.4	100.0	205.5
Dec. (d) ..	200.4	231.8	244.0	198.5	217.7	220.9	277.0	102.1	217.2
March ..	204.0	235.4	247.7	203.3	223.3	220.5	283.4	105.4	221.4
June ..	209.7	244.1	252.5	209.3	226.6	227.6	287.3	106.9	226.7
PERCENTAGE CHANGE BETWEEN JUNE QUARTER 1976 AND JUNE QUARTER 1977 (d)									
	+13.5	+13.4	+9.7	+8.6	+8.4	+4.3	+91.0	n.a.	+13.0

(a) Figures after the decimal point have limited significance; they are inserted to avoid the distortions that would occur in rounding.

(b) Except 'Health and personal care' (December quarter 1968 = 100.0) and 'Recreation' (September quarter 1976 = 100.0).

(c) The 'Health and personal care' and 'All groups' indexes affected by the introduction of Medibank and consequent reduction in net cost of medical services.

(d) The 'Health and personal care' and 'All groups' indexes include the effects of increases in prices for hospital and medical services associated with the changes to Medibank.

The following table shows the 'All groups' index numbers for Hobart, quarter by quarter, and also as averages for financial years:

Consumer Price Index: All Groups Index Numbers, Hobart (a)
(Base of Index: Year 1966-67 = 100.0)

Year	Quarter ending—				Average for year	
	September	December	March	June	Index	Percentage change (b)
1966-67 ..	98.6	99.2	100.6	101.5	100.0	2.0
1967-68 ..	104.3	105.0	104.6	104.6	104.6	4.6
1968-69 ..	105.0	105.8	106.5	107.0	106.1	1.4
1969-70 ..	107.4	108.1	108.9	109.6	108.5	2.3
1970-71 ..	110.2	112.4	113.2	114.6	112.6	3.8
1971-72 ..	116.5	120.3	120.9	122.0	119.9	6.5
1972-73 ..	123.4	125.1	127.5	130.8	126.7	5.7
1973-74 ..	135.2	141.1	144.0	149.9	142.6	12.5
1974-75 ..	157.4	165.5	169.3	174.6	166.7	16.9
1975-76 ..	(c) 175.9	189.1	194.2	200.6	(c) 190.0	(c) 14.0
1976-77 ..	205.5	(c) 217.2	221.4	226.7	(c) 217.7	(c) 14.6
PERCENTAGE CHANGE: 1976-77 QUARTER OVER CORRESPONDING 1975-76 QUARTER						
	+16.8	(c) +14.9	(c) +14.0	(c) +13.0	..	..

(a) Figures after decimal point have limited significance. They are inserted to avoid the distortions that would occur in rounding.

(b) Over preceding year.

(c) See foot notes (c) and (d) to the previous table.

Consumer Price Indexes: Capital Cities

Six Capital Cities: A consumer price index series is constructed for each state capital city. These indexes measure price movements in each city individually (but do not provide a basis for the comparison of the retail price level in one city with that in any other city). The six capital cities Consumer Price Index is derived as the weighted average of the indexes for the individual cities, the basis of weighting being their populations as recorded at successive censuses.

The next table summarises index numbers and percentage changes for the 'All groups' consumer price index for the six state capital cities combined:

Consumer Price Index: All Groups
Australia—Six State Capital Cities (a): Summary
(Base of Index: Year 1966-67 = 100.0)

Quarter	Quarter		Percentage change from same quarter of preceding year	Calendar year (b)		Fiscal year (b)	
	Index number	Percentage change (c)		Index number	Percentage change (c)	Index number	Percentage change (c)
1972—							
September ..	126.2	+1.4	+ 5.7	125.5	+ 5.9	129.8 (1972-73)	+ 6.0
December ..	127.7	+1.2	+ 4.5	(1972)			
1973—							
March	130.4	+2.1	+ 5.7	137.3 (1973)	+ 9.4	146.6 (1973-74)	+12.9
June	134.7	+3.3	+ 8.2				
September ..	139.6	+3.6	+10.6	158.1 (1974)	+15.1	171.1 (1974-75)	+16.7
December ..	144.6	+3.6	+13.2				
1974—							
March	148.1	+2.4	+13.6	181.9 (1975)	(d)+15.1	193.3 (1975-76)	(d)+13.0
June	154.1	+4.1	+14.4				
September ..	162.0	+5.1	+16.0	206.5 (1976)	(e)+13.5	220.0 (1976-77)	(e)+13.8
December ..	168.1	+3.8	+16.3				
1975—							
March	174.1	+3.6	+17.6	206.5 (1976)	(e)+13.5	220.0 (1976-77)	(e)+13.8
June	180.2	+3.5	+16.9				
September (d)	181.6	+0.8	+12.1	206.5 (1976)	(e)+13.5	220.0 (1976-77)	(e)+13.8
December (d)	191.7	+5.6	+14.0				
1976—							
March	197.4	+3.0	+13.4	206.5 (1976)	(e)+13.5	220.0 (1976-77)	(e)+13.8
June	202.4	+2.5	+12.3				
September ..	206.9	+2.2	+13.9	206.5 (1976)	(e)+13.5	220.0 (1976-77)	(e)+13.8
December (e)	219.3	+6.0	+14.4				
1977—							
March	224.3	+2.3	+13.6	206.5 (1976)	(e)+13.5	220.0 (1976-77)	(e)+13.8
June	229.6	+2.4	+13.4				

(a) Weighted average of six state capital cities combined.

(b) Calendar year and fiscal year index numbers are averages of the four respective quarterly index numbers.

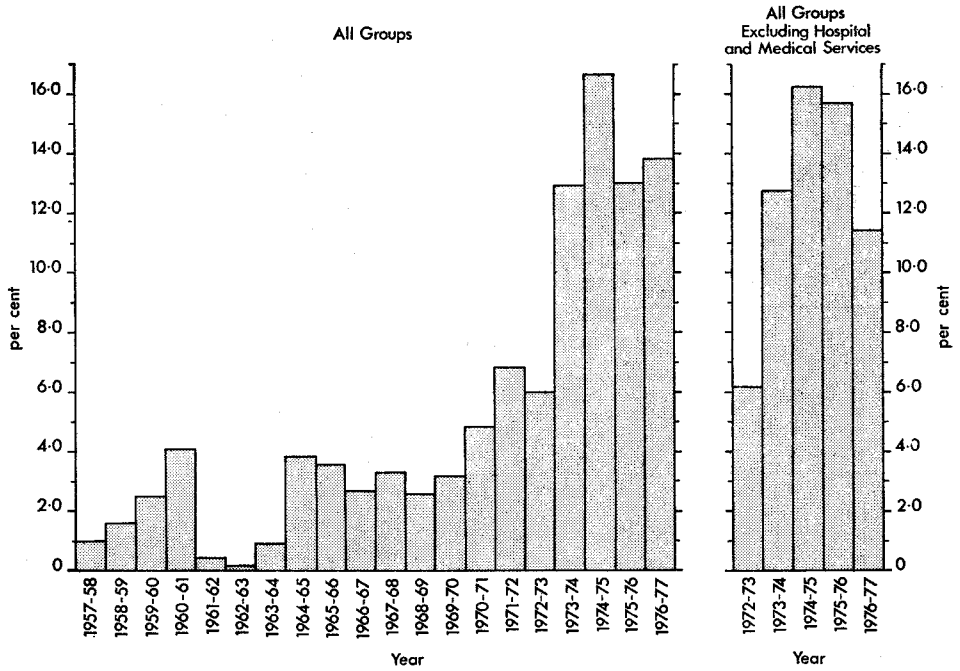
(c) Over preceding period (year or quarter).

(d) Affected by the introduction of Medibank and the consequent reduction in the cost of hospital and medical services.

(e) Includes the effects of price increases in hospital and medical services associated with changes to Medibank.

The following graph shows the 'All groups' consumer price index for the six state capitals for the last twenty years and, for the last five years, the 'All groups excluding hospital and medical services' index.

**Consumer Price Index: Weighted Average of the Six State Capital Cities,
Percentage Change Over Preceding Year**



The next table includes details for the 'All groups excluding hospital and medical services' index. This facilitates the analysis of trends in retail prices by excluding the effects of the unusual changes in hospital and medical services for the September and December quarters of 1975 (following the introduction of Medi-bank) and for the December quarter 1976 (following changes to Medibank).

**Consumer Price Index, Six State Capital Cities, Australia (a)
All Groups and All Groups Excluding Hospital and Medical Services**

Quarter	All groups				All groups excluding hospital and medical services			
	Index number	Per-centage increase over preceding quarter	Equiv-alent annual rate (b) (per cent)	Per-centage increase over same quarter of previous year	Index number	Per-centage increase over preceding quarter	Equiv-alent annual rate (b) (per cent)	Per-centage increase over same quarter of previous year
1972—Sept. ..	126.2	1.4	5.7	5.7	126.0	1.4	5.7	5.8
Dec. ..	127.7	1.2	4.9	4.5	127.6	1.3	5.3	4.7
1973—Mar. ..	130.4	2.1	8.7	5.7	130.3	2.1	8.7	5.9
June ..	134.7	3.3	13.9	8.2	134.7	3.4	14.3	8.4
Sept. ..	139.6	3.6	15.2	10.6	139.3	3.4	14.3	10.6
Dec. ..	144.6	3.6	15.2	13.2	144.2	3.5	14.8	13.0
1974—Mar. ..	148.1	2.4	10.0	13.6	147.7	2.4	10.0	13.4
June ..	154.1	4.1	17.4	14.4	153.9	4.2	17.9	14.3
Sept. ..	162.0	5.1	22.0	16.0	161.7	5.1	22.0	16.1
Dec. ..	168.1	3.8	16.1	16.3	167.6	3.6	15.2	16.2

Consumer Price Index, Six States Capital Cities, Australia (a)
All Groups and All Groups Excluding Hospital and Medical Services—continued

Quarter	All groups				All groups excluding hospital and medical services			
	Index number	Per-centage increase over preceding quarter	Equiv-alent annual rate (b) (per cent)	Per-centage increase over same quarter of previous year	Index number	Per-centage increase over preceding quarter	Equiv-alent annual rate (b) (per cent)	Per-centage increase over same quarter of previous year
1975—Mar. ..	174.1	3.6	15.2	17.6	172.4	2.9	12.1	16.7
June ..	180.2	3.5	14.8	16.9	178.8	3.7	15.6	16.2
Sept. ..	(c) 181.6	(c) 0.8	(c) 3.2	(c) 12.1	184.0	2.9	12.1	13.8
Dec. ..	(c) 191.7	(c) 5.6	(c) 24.4	(c) 14.0	195.6	6.3	27.7	16.7
1976—Mar. ..	197.4	3.0	12.6	(c) 13.4	201.3	2.9	12.1	16.8
June ..	202.4	2.5	10.4	(c) 12.3	206.3	2.5	10.4	15.4
Sept. ..	206.9	2.2	9.1	(c) 13.9	210.8	2.2	9.1	14.6
Dec. ..	(d) 219.3	(d) 6.0	(d) 26.2	(d) 14.4	216.8	2.8	11.7	10.8
1977—Mar. ..	224.3	2.3	9.5	(d) 13.6	221.9	2.4	10.0	10.2
June ..	229.6	2.4	10.0	(d) 13.4	227.3	2.4	10.0	10.2

(a) Weighted average of the six state capitals combined. Base year: 1966-67 = 100.0.

(b) Quarterly rate compounded over four quarters, e.g. 4.0% per quarter is equivalent to 17.0% p.a. ($1.04 \times 1.04 \times 1.04 \times 1.04 = 1.17$).

(c) Affected by the introduction of Medibank and the consequent reduction in the cost of hospital and medical services.

(d) Includes the effects of price increases in hospital and medical services associated with changes to Medibank.

Consumer (Retail) Price Indexes, Various Countries

The following table shows consumer (retail) price indexes for selected countries. It should be noted that the items priced and the weighting patterns used in constructing the indexes vary widely from country to country.

Consumer (Retail) Price Indexes: Various Countries (a)
(Source: Monthly Bulletin of Statistics of the Statistical Office of the United Nations)

Year	Australia (b)	France	Federal Repub. of Germany	Italy	Japan	New Zealand	Switzerland	United Kingdom	U.S.A.
INDEX NUMBERS (Base of each index: Year 1970 = 100.0)									
1972	112.3	112.0	111.1	110.8	110.9	118.0	113.7	117.2	107.7
1973	122.9	120.2	118.8	122.8	123.9	127.7	123.6	128.0	114.4
1974	141.5	136.3	127.1	146.3	154.2	141.9	135.7	148.4	127.0
1975	162.8	152.2	134.7	171.1	172.4	162.7	144.8	184.4	138.6
1976	184.8	166.9	140.8	199.8	188.4	190.2	147.3	214.9	146.6
PERCENTAGE INCREASE OVER PREVIOUS YEAR									
1972	5.9	6.2	5.5	5.7	4.5	6.9	6.7	7.1	3.3
1973	9.4	7.3	6.9	10.8	11.7	8.2	8.7	9.2	6.2
1974	15.1	13.4	7.0	19.1	24.5	11.1	9.8	15.9	11.0
1975	15.1	11.7	6.0	17.0	11.8	14.7	6.7	24.3	9.1
1976	13.5	9.7	4.5	16.8	9.3	16.9	1.7	16.5	5.8

(a) The items priced and the levels at which they are priced in these indexes vary widely from country to country.

(b) Consumer Price Index converted to base: Year 1970=100.0.

Average Prices of Foodstuffs, Hobart

The average retail prices of selected foodstuffs in Hobart since 1955 are shown in the next table. The list, while representative of foodstuffs commonly consumed, is not exhaustive; for a description of foodstuffs in the Consumer Price Index regimen, see the earlier table 'Consumer Price Index, Composition and Weighting Pattern'.

Average Retail Prices (a): Hobart
Selected Items of Foodstuffs
(Cents)

Item	Unit (a)	1972	1973	1974	1975	1976	
						Average price	Percentage increase (b)
Groceries, etc.—							
Bread, ordinary white, delivered	900 g	24.9	27.0	31.2	39.2	45.1	15.1
Flour, self-raising	1 kg	27.1	28.0	31.1	38.3	47.0	22.7
Tea	250 g	36.7	35.6	37.2	49.7	53.0	6.6
Coffee, instant	150 g	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	159.2	..
Sugar	2 kg	48.4	47.9	48.0	52.4	56.7	7.1
Peaches, canned	822 g	34.0	35.2	42.9	51.5	64.3	24.9
Potatoes	1 lb	7.4	9.3	13.8	8.9	15.3	10.4
Onions, brown	1 lb	11.4	17.9	17.1	15.8	19.7	24.7
Dairy Produce, etc.—							
Butter	500 g	63.9	63.9	67.5	77.0	85.2	21.9
Cheese, processed	250 g	30.5	32.8	37.0	45.5	48.5	6.6
Margarine, table, poly-unsaturated	500 g	<i>n.a.</i>	<i>n.a.</i>	(d) 70.5	78.7	78.1	-0.8
Eggs	1 doz (55 g)	67.4	75.2	88.8	93.7	109.2	16.5
Bacon, rashers, pre-packed ..	250 g	56.9	57.6	75.6	91.9	111.6	21.4
Milk, fresh bottled, delivered	2x600ml	23.2	25.1	28.3	33.6	36.0	7.1
Meat—							
Beef—Rump steak	1 lb	104.6	123.1	145.0	130.2	146.7	12.7
Silverside, corned	1 lb	68.0	79.4	91.3	82.0	91.2	11.2
Lamb—Leg	1 lb	51.4	67.5	77.5	77.8	89.4	14.9
Loin chops	1 lb	51.7	67.7	79.3	78.5	89.9	14.5
Pork, leg	1 lb	68.9	77.7	99.8	116.4	137.3	18.0

(a) The table units are not necessarily those for which the original price data were obtained; in such cases, prices have been calculated for the table unit.

(b) Over the corresponding average 1975 price.

(c) Average price for nine months only.

(d) Average price for six months only.

Wholesale Price Indexes**General**

The Bureau compiles several wholesale price indexes of basic materials. These include the 'Wholesale Price Index of Materials used in House Building' and the 'Wholesale Price Index of Materials used in Building other than House Building'. Two other indexes, the 'Melbourne Wholesale Price Index' and the 'Wholesale Prices (Basic Materials and Foodstuffs) Index', were compiled for a number of years but have been discontinued. The *Price Index of Materials used in the Manufacturing Industry* was first published by the Bureau in July 1975 and the *Price Index of Articles produced by Manufacturing Industry* in October 1976.

Wholesale Price Index of Materials Used in House Building

General: This index is complementary to the 'Other than House Building' index and measures the change in prices of selected materials used in house construction.

Scope and Composition: The materials selected and weights given to the items were in accordance with the usage of materials in a sample of representative house types constructed in or about 1968-69. The house types included in the sample were those using brick, brick veneer, timber or asbestos-cement sheeting for the outer-walls. Within the four major construction types account was taken of a range of characteristics, e.g. material used for internal partitions, window frames, roofs, etc. The number of items included in the index range from 49 (Brisbane) to 51 (Perth). The items are combined into 11 groups; an 'All groups' index is also published. Standards are fixed and price movements are for items of a constant quality.

Derivation of Items and Weights: The index is a fixed weight index and is calculated by the method known as the 'weighted arithmetic mean of price relatives'. The items and weights used are based on the reported values of materials used in the selected houses in each state capital city urban area. Information about materials used and their value was obtained for a total of 114 houses. The material values derived for each state capital city were then used to develop weighting patterns for the individual cities and aggregated to give a weighting pattern for the six state capital cities combined. The next table gives the weighting pattern for the Hobart index.

Wholesale Price Index of Materials Used in House Building
Composition and Weighting Pattern: Hobart

Group	Percentage weight of group
Concrete mix, cement and sand	7.25
Cement products	7.01
Clay bricks, tiles, etc.	10.14
Timber, board and joinery	38.15
Steel products	7.49
Other metal products	7.93
Plumbing fixtures, etc.	2.74
Electrical installation materials	1.61
Installed appliances	6.98
Plaster and plaster products	4.99
Miscellaneous materials	5.71
Total	100.00

Base Period: The index has a base year 1966-67=100.0 but the weighting pattern is more appropriate to material usage during 1968-69.

Prices: Prices relate to specified standards for each commodity and are obtained in all state capital city urban areas from representative suppliers of materials used in house building. The prices are collected as at the mid-point of the month to which the index refers.

Index Numbers: The index has been compiled for each month from July 1966 and for financial years from 1966-67. Index numbers are published for each group and combined into an all groups number for each state capital city and the six state capital cities combined.

The following table compares movements in the index numbers for each of the six capital cities and six capitals combined for recent years. (The separate city indexes allow comparisons to be drawn between capital city areas as to differences in the degree of price movement from period to period, but not as to differences in price levels.)

Wholesale Price Index of Materials Used in House Building
All Groups Index Numbers: Six State Capital Cities
(Base of Each Index: Year 1966-67 = 100.0)

Year or month	State capital cities						Six capitals (a)	
	Sydney	Mel-bourne	Brisbane	Adelaide	Perth	Hobart	Index number	Percentage change (b)
1972-73	135.6	126.5	133.8	134.8	126.9	130.8	131.1	6.8
1973-74	158.0	147.8	152.2	157.2	141.8	145.5	151.3	15.4
1974-75	189.4	178.4	187.0	195.4	172.4	179.1	183.4	21.2
1975-76	211.1	200.1	218.5	222.5	201.9	209.2	208.1	13.5
1976-77	234.5	223.6	243.5	250.7	229.8	235.1	232.9	11.9
1976-77—								
September	226.6	218.3	237.0	243.9	223.3	230.2	226.3	2.0
December	231.9	221.7	241.0	247.7	227.4	234.0	230.5	1.9
March	242.0	228.4	249.7	256.2	237.3	239.8	239.2	3.8
June	244.3	231.9	253.3	260.4	241.9	244.1	242.6	1.4
PERCENTAGE CHANGE: JUNE 1977 OVER JUNE 1976								
	9.0	9.1	8.4	9.3	11.5	9.3	9.3	..

(a) Weighted average of six state capital cities.

(b) Over preceding year or preceding month shown.

Index numbers for the Hobart capital city urban area for each group of items are given in the next table:

Wholesale Price Index of Materials Used in House Building
Group Index Numbers: Hobart
(Base of Each Index: Year 1966-67 = 100.0)

Year or month	Concrete mix, cement and sand	Cement products	Clay bricks, tiles, etc.	Timber, board and joinery	Steel products	Other metal products
1972-73	130.7	137.2	140.2	134.6	135.9	118.1
1973-74	139.8	147.3	159.2	154.2	150.8	130.9
1974-75	157.6	178.6	201.0	192.5	188.7	160.2
1975-76	184.9	205.9	244.0	226.6	224.2	181.8
1976-77	205.0	231.6	272.1	257.4	254.7	201.4
1975-76—						
September	181.2	202.2	234.7	215.9	215.5	174.9
December	181.4	203.4	241.9	225.2	221.5	180.2
March	192.2	208.4	254.7	235.7	231.4	187.0
June	194.8	225.8	258.7	241.9	242.5	195.3
1976-77—						
September	202.8	228.6	271.5	250.7	247.9	198.2
December	204.9	232.5	272.5	256.0	253.4	199.8
March	208.1	233.1	272.5	265.0	260.2	201.1
June	209.2	235.8	283.9	269.0	263.8	211.9
PERCENTAGE CHANGE: JUNE 1977 OVER JUNE 1976						
	7.4	4.4	9.7	11.2	8.8	8.5

Wholesale Price Index of Materials Used in House Building
Group Index Numbers: Hobart—continued
(Base of Each Index: Year 1966-67 = 100.0)

Year or month	Plumbing fixtures, etc.	Electrical installation materials	Installed appliances	Plaster and plaster products	Miscellaneous materials	All groups	
						Index number	Percentage change (a)
1972-73	136.8	126.0	107.6	114.2	132.5	130.8	8.4
1973-74	145.5	146.8	115.3	119.2	141.9	145.5	11.2
1974-75	173.2	162.4	130.3	157.0	178.6	179.1	23.1
1975-76	202.2	174.6	136.9	188.3	204.8	209.2	16.8
1976-77	228.2	191.8	148.0	202.2	234.0	235.1	12.4
1975-76—							
September ..	195.9	170.6	131.9	177.2	200.0	201.1	4.1
December ..	201.4	171.2	139.3	191.7	202.1	207.8	3.3
March	205.4	173.7	138.7	195.1	206.2	216.1	4.0
June	215.7	191.6	141.6	197.1	221.1	223.4	3.4
1976-77—							
September ..	221.0	187.3	144.1	194.8	229.9	230.2	3.0
December ..	230.0	185.7	149.2	196.1	232.5	234.0	1.7
March	234.1	195.5	150.5	211.0	238.6	239.8	2.5
June	233.5	200.2	150.9	211.1	241.0	244.1	1.8
PERCENTAGE CHANGE: JUNE 1977 OVER JUNE 1976							
	8.3	4.5	6.6	7.1	9.0	9.3	..

(a) Over preceding year or preceding month shown.

Wholesale Price Index of Materials Used in Building Other than House Building

General: This was the first of a series of indexes designed to replace the obsolete Wholesale Price (Basic Materials and Foodstuffs) Index. The index measures changes in the prices of selected materials used in the construction of buildings other than houses and 'low-rise' flats (in general, those up to three storeys).

Prices: Price series used relate to specified standards of each commodity and are obtained in all state capital city urban areas from representative suppliers of materials used in building. In the main they are collected as at the mid-point of the month to which the index refers, or as near thereto as practicable. There are some exceptions to the use of local prices in the indexes for each capital city area. In a few cases where suitable price series are not currently available for an item in a given city, imputation is necessary. For each capital city area, the whole of the group 'electrical installation materials' and the majority of the items in the group 'mechanical services components' are based on Sydney and Melbourne price series.

Base Period: The reference base of the index is the year 1966-67=100.0. The index is a fixed-weights index and is calculated by the method known as the 'weighted arithmetic mean of price relatives'.

Scope and Composition: Composition of the index is in accordance with actual material usage in building projects which were selected as being representative for purposes of determining weighting patterns. Completed values of the types of buildings selected constituted 86 per cent of all completed new buildings other than houses and low-rise flats in the period 1964-65 to 1966-67. Buildings for entertainment, recreation and religious purposes together with buildings in the building statistics category 'miscellaneous buildings' are not directly represented.

The index comprises 72 items combined into 11 groups. Items are described in terms of fixed specifications with the aim of recording price changes for representative materials of constant quality. The group weighting pattern is given in the next table:

**Wholesale Price Index of Materials Used in Building Other Than House Building
Composition and Weighting Pattern**

Group	Percentage weight of group
Concrete mix, cement, sand, etc.	10.41
Cement products	3.64
Bricks, stone, etc.	5.28
Timber, board and joinery	11.90
Steel and iron products	30.58
Aluminium products	6.01
Other metal products	2.59
Plumbing fixtures	1.19
Miscellaneous materials	7.09
Electrical installation materials	8.61
Mechanical services components	12.70
Total	100.00

Index Numbers: The index has been compiled for each month from July 1966, and for financial years from 1966-67.

The following table compares movements in the index numbers for each of the six capital cities and the six capitals combined:

**Wholesale Price Index of Materials Used in Building Other Than House Building
All Groups Index Numbers: Six State Capital Cities
(Base of Each Index: Year 1966-67 = 100.0)**

Year or month	State capital cities						Six capitals (a)	
	Sydney	Mel- bourne	Brisbane	Adelaide	Perth	Hobart	Index number	Percent- age change (b)
1972-73	127.2	131.2	130.4	129.8	126.3	129.7	128.9	4.8
1973-74	144.1	148.0	149.0	145.8	142.9	143.8	145.8	13.1
1974-75	176.0	180.6	186.6	181.0	176.7	179.3	179.2	22.9
1975-76	199.0	209.4	216.3	210.4	208.3	210.4	206.2	15.1
1976-77	221.5	234.8	241.2	234.3	235.4	234.8	230.3	11.7
1975-76—								
September	190.3	201.0	205.9	201.1	198.6	202.7	197.2	3.6
December	197.1	207.2	214.5	208.9	206.8	208.8	204.3	3.6
March	204.4	215.8	223.4	217.3	214.5	217.8	212.3	3.9
June	212.2	224.3	231.0	225.3	223.9	223.9	220.4	3.8
1976-77—								
September	214.8	228.5	235.0	228.7	227.9	229.2	223.9	1.6
December	220.0	234.1	240.7	233.3	234.3	234.6	229.3	2.4
March	227.1	239.5	246.0	238.5	242.2	239.1	235.5	2.7
June	230.0	243.8	249.3	242.2	245.0	234.4	238.9	1.4
PERCENTAGE CHANGE: JUNE 1977 OVER JUNE 1976								
	8.4	8.7	7.9	7.5	9.4	8.7	8.4	..

(a) Weighted average of six state capital cities.

(b) Over preceding year or preceding month shown.

The separate city indexes measure price movements within each metropolitan area individually. They enable comparisons to be drawn between metropolitan areas as to differences in degree of price movement from period to period, but not as to differences in price level. The six state capitals combined index is a weighted average of the individual indexes for each city, weighted on the basis of estimated value on completion of building other than house building in the separate states over a fixed period.

Index numbers for the Hobart urban area for each group of items are given in the following table:

**Wholesale Price Index of Materials Used in Building Other Than House Building
Group Index Numbers: Hobart**
(Base of Each Index: Year 1966-67 = 100.0)

Year or month	Concrete mix, cement, sand, etc.	Cement products	Bricks, stone, etc.	Timber, board and joinery	Steel and iron products	Aluminium products
1972-73	130.3	138.4	130.1	134.3	133.6	111.8
1973-74	139.3	149.3	150.0	154.6	148.7	117.3
1974-75	157.5	179.5	197.6	191.2	195.0	149.1
1975-76	185.3	207.8	238.1	222.4	236.9	176.2
1976-77	206.2	236.5	262.6	249.5	262.9	199.0
1975-76—						
September	181.1	202.3	227.7	213.1	227.5	168.2
December	181.6	205.4	238.2	221.1	235.7	172.7
March	192.9	215.0	245.5	231.6	247.7	183.6
June	195.9	226.6	252.0	234.5	252.9	189.6
1976-77—						
September	203.7	231.9	260.3	242.9	256.9	196.2
December	205.8	237.2	262.4	249.2	263.9	197.0
March	209.6	238.8	264.5	256.5	266.7	200.6
June	211.0	244.3	273.9	259.9	271.1	209.8
PERCENTAGE CHANGE: JUNE 1977 OVER JUNE 1976						
	7.7	7.8	8.7	10.8	7.2	10.7

**Wholesale Price Index of Materials Used in Building Other Than House Building
Group Index Numbers: Hobart—continued**
(Base of Each Index: Year 1966-67 = 100.0)

Year or month	Other metal products	Plumbing fixtures	Miscellaneous materials	Electrical installation materials (a)	Mechanical services components (a)	All groups	
						Index number	Percentage change (b)
1972-73	126.7	142.9	120.2	120.5	132.1	129.7	5.8
1973-74	150.1	154.0	129.1	138.3	143.5	143.8	10.9
1974-75	168.8	189.4	161.1	157.4	181.3	179.3	24.8
1975-76	176.5	221.6	188.1	177.4	201.7	210.4	17.3
1976-77	193.4	246.5	209.9	199.6	226.3	234.8	11.6
1975-76—							
September	173.7	217.7	183.6	169.1	194.9	202.7	5.2
December	174.7	222.4	187.2	176.2	200.6	208.8	3.0
March	177.1	226.0	190.8	181.5	205.7	217.8	4.3
June	188.7	232.0	199.3	192.4	212.6	223.9	2.8

Wholesale Price Index of Materials Used in Building Other Than House Building
Group Index Numbers: Hobart—continued
(Base of Each Index: Year 1966-67 = 100.0)

Year or month	Other metal products	Plumbing fixtures	Miscellaneous materials	Electrical installation materials (a)	Mechanical services components (a)	All groups	
						Index number	Percentage change (b)
1976-77—							
September ..	190.4	240.3	204.5	193.1	217.4	229.2	2.4
December ..	192.2	248.1	209.2	195.7	227.4	234.6	2.4
March ..	193.8	251.2	214.3	206.6	232.1	239.1	1.9
June ..	199.7	253.4	217.0	207.9	237.6	243.4	1.8
PERCENTAGE CHANGE: JUNE 1977 OVER JUNE 1976							
	5.8	9.2	8.9	8.1	11.8	8.7	..

(a) The whole of the group 'Electrical installation materials' and the majority of items in the group 'Mechanical services components' are based on Melbourne and Sydney price series.

(b) Over preceding year or preceding month shown.

Australian Export Price Index

This index has fixed weights, its purpose being to provide monthly comparisons over a limited number of years of the level of export prices of the selected items, making no allowance for variations in quantities exported. The index numbers are thus measures of price change only. The price series used in the index relate to specific standards for each commodity and in most cases are combinations of prices for a number of representative grades, types, etc. For some commodities, price movements in the predominant market, or markets, are used, while for other commodities average realisations in all export markets are used. As nearly as possible, prices used are on the basis of f.o.b. at the main Australian ports of export.

Export Price Index Numbers: Australia
(Base of Each Index: Year 1959-60 = 100)

Year or month	Wool	Meats	Dairy produce	Cereals	Dried and canned fruits
1972-73	179	178	119	102	106
1973-74	172	201	109	184	152
1974-75	121	132	127	256	176
1975-76	127	150	122	240	162
1976-77	164	169	128	219	184
1975-76—					
September	117	134	126	235	166
December	126	150	122	252	169
March	134	162	123	250	157
June	140	169	116	243	151
1976-77—					
September	147	147	119	224	154
December	180	167	130	219	171
March	174	183	135	209	188
June	167	191	141	206	241

Export Price Index Numbers: Australia—*continued*
(Base of Each Index: Year 1959-60 = 100)

Year or month	Sugar	Hides and tallow	Metals and coal (a)	Gold	All groups (b)	
					Index	Percentage change (c)
1972-73 ..	136	139	142	180	134	28.8
1973-74 ..	176	161	196	289	160	19.4
1974-75 ..	378	141	263	391	181	13.1
1975-76 ..	335	151	286	359	187	3.3
1976-77 ..	314	203	330	370	206	10.2
1975-76—						
September ..	347	135	274	378	180	1.1
December ..	324	152	283	358	187	3.9
March ..	337	160	286	341	192	2.7
June ..	333	177	307	331	197	2.6
1976-77—						
September ..	316	185	307	289	192	-2.5
December ..	310	194	345	414	213	10.9
March ..	317	214	346	434	213	0.0
June ..	313	245	341	415	214	0.5

(a) Does not include iron ore, bauxite, alumina and mineral sands.

(b) In addition to the specified groups, 'All groups index' includes iron ore, bauxite, alumina and mineral sands.

(c) Over preceding year or preceding month shown.

The index numbers shown in the preceding table are based on the value of exports in 1969-70 and form part of an interim series which has been published since June 1969. The interim series will be published until a comprehensive review and rebasing of the index is completed. The 'All groups' index in the interim series includes the items iron ore, bauxite, alumina and mineral sands (these items were excluded from the index prior to June 1969) which are not included in the relevant sub-group, 'Metals and coal'.

Price Indexes and Inflation

There is no practical means available for *directly and precisely* measuring the rate of inflation, as this would entail regular measurement of both the price and volume of *all* goods and services sold and an ability to take into account constantly changing standards, qualities and types of these goods and services. However, price indexes, although not a true measure of inflation, are often used as giving the best available rough indication of the rate of inflation.

When a rate of inflation is stated for a particular country, the rate of increase in the official retail price index has usually been quoted. However, any such measure actually relates only to purchasing power with respect to the 'Basket' of items in the particular index used, combined in their specified proportions. Retail price indexes *do not* measure changes in raw material prices, wholesale prices, industrial plant and equipment costs, etc., and, therefore, cannot be regarded as measuring the trend in the overall internal price structure of an economy (i.e. the rate of inflation).

For a more detailed coverage of this topic, see the article under the above heading in the 1976 *Year Book* (a table showing the effect of various constant rates of price increase if compounded over a number of years is included). The table below shows, for recent years, the varying results obtained when different price index series are used as a measure of the change in prices and of purchasing power:

Selected Price Indexes: Comparison

Year	Consumer price index (a)			Price index of materials used in—			G.D.P. implicit price deflator (c)
	Hobart, all groups	Six state capitals combined		House building, Hobart (a)	Manufacturing industry, Australia (b)		
		All groups	Excluding hospital and medical services		Imported materials	All groups	
1972-73	126.7	129.8	129.7	130.8	105.2	113.9	136.0
1973-74	142.6	146.6	146.3	145.5	127.1	134.7	155.8
1974-75	166.7	171.1	170.1	179.1	181.5	145.1	183.4
1975-76	190.0	193.3	196.8	209.2	202.9	158.6	210.8
1976-77	217.7	220.0	219.2	235.1	233.2	p 182.1	234.6

INDEX NUMBERS

PERCENTAGE INCREASE OVER PRECEDING YEAR							
1972-73	5.7	6.0	6.2	8.4	1.1	11.0	9.0
1973-74	12.5	12.9	12.8	11.2	20.8	18.3	14.6
1974-75	16.9	16.7	16.3	23.1	42.8	7.7	17.7
1975-76	14.0	13.0	15.7	16.8	11.8	9.3	15.0
1976-77	14.6	13.8	11.4	12.4	p 14.9	p 14.8	11.3

PRICE (d) OF AN ARTICLE WORTH \$100 IN 1971-72 IF ITS PRICE INCREASED AT THE SAME RATE AS THE RESPECTIVE PRICE INDEX
(\$)

1972-73	105.67	106.05	106.22	108.37	101.06	111.01	108.89
1973-74	118.93	119.77	119.82	120.55	122.09	131.29	124.74
1974-75	139.03	139.79	139.31	148.38	174.35	141.42	146.84
1975-76	158.47	157.92	161.18	173.32	194.91	154.58	168.78
1976-77	181.57	179.74	179.52	194.78	224.02	177.49	187.83

VALUE OF A \$1 NOTE EXPRESSED IN TERMS OF 1971-72 VALUES IF THE RESPECTIVE PRICE INDEX IS TAKEN AS A MEASURE OF INFLATION
(\$)

1972-73	0.95	0.94	0.94	0.92	0.99	0.90	0.92
1973-74	0.84	0.83	0.83	0.83	0.82	0.76	0.80
1974-75	0.72	0.72	0.72	0.67	0.57	0.71	0.68
1975-76	0.63	0.63	0.62	0.58	0.51	0.65	0.59
1976-77	0.55	0.56	0.56	0.51	0.45	0.56	0.53

(a) Base of each index: year 1966-67 = 100.0.

(b) Base of each index: year 1968-69 = 100.0.

(c) Index based on estimates of Australian Gross Domestic Product at current prices and at average 1966-67 prices available in September 1977; not a fixed weights index (see 'Implicit Price Deflators' in the section on Australian National Accounts in Chapter 18).

(d) Average price of the article during a particular year; these figures (rounded) can also be used as the respective indexes to the new base: year 1971-72 = 100.0.

Calculation of Price Index Series for Particular Purposes

Special purpose index series are often useful. For example, an index of average weekly earnings for Tasmania, base year 1971-72 = 100.0, may be useful

in relation to the costs of a large construction program commenced in that year; an office rental rate may be adjusted regularly according to movements in the consumer price index from the date of commencement of the leasing agreement.

Calculation of a special purpose price index series based on values (or index numbers) available for a series of years is easily carried out as follows: Choose the base year and let the index number for that year equal 100.0; then the index number for any other year equals—

$$\frac{\text{value for that year}}{\text{value for the base year}} \times \frac{100.0}{1}$$

As examples, price index series with base year 1971-72 = 100.0 have been calculated from the following series: (i) average weekly earnings per employed male unit, Tasmania; and (ii) the consumer price index, all groups, for Hobart. The results are set out below:

Average Weekly Earnings Index and Consumer Price Index

Particulars	1971-72	1972-73	1973-74	1974-75	1975-76	1976-77
Average weekly earnings, Tasmania (a)—						
Amount \$	87.50	95.20	110.50	140.20	157.80	181.30
Index of, base year 1971-72=100.0	100.0	108.8	126.3	160.2	180.3	207.2
Percentage increase (b) ..	..	8.8	16.1	26.8	12.5	14.9
Consumer price index (c)—						
Base year 1966-67=100.0..	119.9	126.7	142.6	166.7	190.0	217.7
Base year 1971-72=100.0..	100.0	105.7	118.9	139.0	158.5	181.6
Percentage increase (b) ..	6.5	5.7	12.5	16.9	14.0	14.6

- (a) Average weekly earnings estimates have been revised from 1971-72 as a result of the incorporation of a revised series of employment estimates.
- (b) Over preceding year.
- (c) All groups, Hobart.

Using a Price Index Series

If a relevant price index is available, a current value series may be readily adjusted to values at constant prices relative to any base year desired, in order to allow a more realistic assessment of trends over time.

For example, the year *n* value, at year *m* constant prices

$$= \frac{\text{current value for year } n}{1} \times \frac{\text{price index for year } m}{\text{price index for year } n}$$

If it was desired to convert a current value of \$100m in 1974-75 to constant 1971-72 values based on the Hobart all groups consumer price index (see the last table for index numbers), the calculations would be as follows:

$$\begin{aligned} \text{Value at 1971-72 prices} &= \$100\text{m} \times \frac{119.9}{166.7} \\ &= \$71.9\text{m} \end{aligned}$$

$$\text{(Or, alternatively, } \$100\text{m} \times \frac{100.0}{139.0} = \$71.9\text{m)}$$

WAGES

Basic Wage in Tasmania

General

The present position is as follows: wages fixed by Tasmanian State Industrial Boards still consist of two parts, namely a *basic wage* and a *margin*; wages fixed by the Federal Conciliation and Arbitration Commission are expressed as a *total wage*, the basic wage concept having been abolished in federal awards in 1967. All state industrial authorities with the exception of Victoria's have also retained the basic wage concept. A more detailed history of the basic wage can be found in the 1970 *Year Book*.

State Basic Wage Rates

The following table shows the awards and determinations made by Tasmanian industrial authorities after the basic wage was abolished in federal awards in June 1967:

Tasmanian Basic Wage Rates Prior To and After Abolition of Federal Basic Wage (\$)

Date of operation (a)	Adult males	Adult females	Date of operation (a)	Adult males	Adult females
1966 11 July ..	33.40	25.05	1975 18 September	50.00	50.00
1967 1 July ..	34.40	26.05	1976 15 February ..	54.40	54.40
1968 25 October ..	35.70	27.40	1976 15 May ..	58.20	58.20
1969 19 December ..	36.80	28.20	1976 15 August ..	60.70	60.70
1971 1 January ..	39.00	29.90	1976 22 November	62.90	62.90
1972 19 May ..	41.00	31.90	1977 31 March ..	68.60	68.60
1973 29 May ..	43.50	34.40	1977 24 May ..	69.90	69.90
1974 23 May ..	46.00	36.90	1977 22 August ..	71.30	71.30
1975 15 May ..	47.70	38.20			

Minimum Wages

Tasmanian Industrial Boards introduced the concept of the minimum wage into their determinations in June 1967. Weekly minimum wage rates prescribed in federal and State awards for recent years are shown in the following table:

Minimum Wages, Adult Males: Federal and State Awards (\$)

Date operative (a)	Federal awards	Tasmanian State Industrial Boards determinations
19 May 1972	51.70	51.70
29 May 1973	60.70	60.70
23 May 1974	68.70	68.70
1 January 1975	76.70	76.70
15 May 1975	80.70	80.70
18 September 1975	83.50	83.50
15 February 1976	88.80	88.80
1 April 1976	93.80	93.80
15 May 1976	96.60	97.60
15 August 1976	99.10	100.10
22 November 1976	101.30	102.30
31 March 1977	107.00	108.00
24 May 1977	109.00	110.10
22 August 1977	111.20	112.30

(a) Rates operative from the first pay-period commencing on or after the date shown.

The Federal Conciliation and Arbitration Commission announced in its decision of 8 July 1966 that it intended to grant relief to low wage earners by inserting a provision prescribing a minimum wage. It ordered that the minimum male wage paid under the Metal Trades Award should be the appropriate basic wage plus \$3.75 a week (e.g. in Tasmania a basic wage of \$33.40 plus \$3.75 giving a minimum wage of \$37.15).

Total Wage Concept

For a full account of events leading to the adoption of a 'total wage' concept see the 1970 *Year Book*. The decision, abolishing the basic wage in awards of the Federal Conciliation and Arbitration Commission, was handed down in June 1967 when a \$1.00 increase was awarded, to be added to the *total wage*. Results of recent national wage cases follow:

- 1973 The total wage was increased by a combination of a two per cent increase plus a flat increase of \$2.50. The minimum wage was increased by \$9.00 per week.
- 1974 The Arbitration Commission again increased total award rates by a combination of a two per cent increase plus a flat rate increase of \$2.50. The minimum wage was increased by \$8.00 per week.
- 1975 Total wages were increased by 3.6 per cent in line with the movement of the Consumer Price Index during the March quarter 1975. The minimum wage was increased by \$8.00 per week, effective from 1 January 1975, and by a further \$4.00 when trial indexation was introduced.
- 1976 The 1976 national wage case is outlined in a later section.

Total Wage Concept in Tasmania

The federal award of June 1967 was followed by a test case argued before the Chairman of the State Industrial Boards. The employers asked for adoption of the total wage concept. The unions opposed this and argued for a \$7.30 increase in the basic wage; if a lesser amount was determined, then a *minimum total wage* of \$40.70 should nevertheless be fixed.

The following table shows recent determinations made by the State Industrial Boards:

Tasmania: State Industrial Boards Determinations

Date (a)	Basic wage		Minimum wage	
	Increase	Total	Increase	Total
September 1975	\$..	\$ 50.00	\$ 2.80	\$ 83.50
February 1976	4.40	54.40	5.30	88.80
April 1976	(b)	54.40	5.00	93.80
May 1976	3.80	58.20	3.80	97.60
August 1976	2.50	60.70	2.50	99.80
November 1976	2.20	62.90	2.20	102.30
March 1977	5.70	68.60	5.70	108.00
May 1977	1.91	69.90	1.91	110.10
August 1977	2.01	71.30	2.01	112.30

(a) Determination effective during this month.

(b) No adjustment made.

The decision in the test case (Electrical Trades) was that both male and female rates should be increased by \$1; the increase, however, should be regarded as *raising the basic wage* which would be retained for the present in State deter-

minations. The State Industrial Boards have retained the basic wage and margins concepts in awards handed down following subsequent national wage case determinations of the Federal Conciliation and Arbitration Commission.

State Industrial Boards Decisions, 1976: Meetings of all industrial boards were convened to determine variations to the State basic wage and minimum wage following National Wage Case hearings during 1975 and 1976. Representatives from the Tasmanian Employers' Federation and the Tasmanian Trades and Labour Council appeared at the hearings which were held under the 'common rule' provisions of the *Industrial Boards Act*.

National Wage Case 1975-76

The Conciliation and Arbitration Commission began hearing submissions regarding wage indexation subsequent to the publication of the June Quarter 1975 Consumer Price Index. Submissions were made by the Federal Government, state governments, tribunals, private employers and trade unions. The Commission also sat to consider whether subsequent increases should be awarded, in line with the principles of wage indexation, following publication of the Consumer Price Index for each quarter.

The following table shows the increases made by the Conciliation and Arbitration Commission in National Wage Case decisions from May 1975.

General Increases in Award Total Wages: National Wage Cases Decisions

Date operative (a)	Increase
1975—15 May	3.6 per cent
18 September	3.5 per cent
1976—15 February	6.4 per cent
15 May	3.0 per cent (b)
15 August	1.5 per cent (c)
22 November	2.2 per cent
1977—31 March	\$5.70 a week
24 May	1.9 per cent (d)
22 August	2.0 per cent

(a) Operative from the beginning of the first pay-period commencing on or after the date shown.

(b) Increase three per cent up to a maximum of \$3.80 a week.

(c) \$2.50 for wage rates up to \$166 per week. 1.5 per cent for wage rates over \$166 per week.

(d) Increase 1.9 per cent up to a maximum of \$3.80 a week.

Weekly Wage Rates in Tasmania

Definitions

In this section, 'weekly wage rates' is used as a short title for 'weighted average minimum weekly wage rates'. The rates are those applicable to adult males and adult females, and are those fixed in awards.

The minimum wage is the lowest rate payable for a particular occupation. This minimum rate may be expressed as: (i) a total wage (e.g. in awards of the Federal Conciliation and Arbitration Commission); (ii) a basic wage plus secondary wage payments, i.e. additional amounts for skills, loadings, etc. (e.g. in awards of state wage-fixing authorities except Victoria); or (iii) in agreements registered with federal or state wage-fixing authorities. The introduction of varying federal and state practices relating to 'total' and 'basic' wages from time to time has not affected the continuity of the statistical series.

Weighting: To arrive at a weighted average rate for a particular field (e.g. a rate for occupations in Tasmania covered by federal awards) certain data are required. The basic initial information is the award rate applying to each occupation and its relative significance (broadly, the numbers in each occupation). The calculation of average minimum rates is based on the occupational structure existing in 1954.

The individual minimum wage rates, combined to give the averages shown in the tables, are those for representative occupations within each industry. Since the aim is to measure movements in prescribed minimum rates of 'wages' as distinct from 'salaries', those awards, etc., which relate solely or mainly to salary-earners are excluded. Weighted averages of the components of the total minimum weekly wage rate (i.e. basic wage, margin and loading) are calculated separately for adult male employees covered by federal awards, etc., and for those covered by state awards etc.

'Federal Awards, etc.': These include awards of, or agreements registered with, the Federal Conciliation and Arbitration Commission, and determinations of the Federal Government Public Service Arbitrator.

'State Awards, etc.': These include awards or determinations of, or agreements registered with state industrial tribunals, together with certain unregistered agreements, where these are dominant in the particular industries to which they refer. (In Tasmania the principal tribunals are the State Industrial Boards.)

'Basic Wage Rates': These are weighted averages of the weekly rates prescribed in awards, etc., for the occupations included in the calculation. For industries other than mining, metropolitan basic wage rates have generally been used. However, there are a number of occupations for which basic wage rates other than the metropolitan rate are prescribed. In all such cases, the basic wage rate actually paid is used in the tables. As a result, the weighted average basic wage shown in this section differs from the Hobart basic wage appearing elsewhere.

'Margins': These are minimum amounts, in addition to the basic wage, awarded to particular classifications of employees for special features such as skill, experience, arduousness or other like factors.

'Loadings': These include industry loadings and other general loadings prescribed in awards, etc., for the occupations included in the calculation. Loadings that are not applicable to all workers in a specified award occupation (for example, those payable because of length of service; working in wet, dirty or confined spaces, etc.) are not included in the calculation.

Male and Female Rates

Limitation: The wage rates shown in the tables in this section should not be regarded as actual current averages, but rather as indexes expressed in money terms, indicative of trends. The wage rates do not measure the relative level of minimum wages as between states.

Minimum weekly wage rates for adult males are not comparable with 'average weekly earnings per employed male unit' appearing in a later section of this chapter; the latter includes not only the earnings of adult wage-earners but also those of salaried employees, junior wage-earners and part-time and casual employees; included also are over-award payments and overtime earnings.

The following table summarises weekly wage rates for adult males and adult females in Tasmania from 1961 onwards. The averages include federal and State awards, etc., and are for all industry groups combined.

Weighted Average Minimum Weekly Wage Rates (a)
Adult Males and Adult Females: All Groups
 (\$)

End of December—	Adult rate		End of December—	Adult rate	
	Male	Female		Male	Female
1961	36.27	24.82	1969	52.00	36.94
1962	36.48	24.83	1970	54.49	38.17
1963	37.29	25.21	1971	60.86	44.35
1964	39.69	27.04	1972	67.18	49.07
1965	40.73	27.94	1973	76.80	61.16
1966	43.27	29.80	1974	106.02	92.47
1967	45.31	31.62	1975	r 117.27	105.56
1968	48.98	33.46	1976	134.14	122.15

(a) Weighted average minimum weekly rates payable for a full week's work (excluding overtime) as prescribed in awards, determinations, etc.

Rates in Industry Groups

Tasmanian details by industry group are given in the next table:

Weighted Average Minimum Weekly Wage Rates and Index Numbers
Adult Males and Adult Females: Industry Groups, 31 December 1976

Industry group	Adult males		Adult females	
	Rates of wage (\$)	Index numbers (a)	Rates of wage (\$)	Index numbers (a)
Mining and quarrying	146.07	517.2	..	..
Manufacturing—				
Engineering, metals, vehicles, etc.	127.77	452.4	122.56	615.7
Textiles, clothing and footwear	120.12	420.3	115.50	580.2
Food, drink and tobacco	129.60	458.9	120.49	605.2
Sawmilling, furniture, etc.	122.41	433.4	107.19	538.4
Paper, printing, etc.	131.99	467.4	121.65	611.0
Other manufacturing	124.11	439.5	..	..
All manufacturing groups	126.94	449.5	118.21	593.8
Building and construction	135.62	480.2	..	..
Railway services	123.12	436.0	133.07	668.4
Road and air transport	132.61	469.6	..	..
Shipping and stevedoring	163.68	579.6	..	..
Communication	156.83	555.3	134.98	678.0
Wholesale and retail trade	136.44	483.1	125.98	632.8
Public authority (n.e.i.) and community and business services	148.82	527.0	130.50	655.5
Amusement, hotels, personal service, etc.	119.41	422.8	115.28	579.0
All industry groups	134.14	475.0	122.15	613.6

(a) Base of index numbers: weighted average minimum weekly wage rate, Australia, 1954 = 100.0.

Index Numbers

The following table shows, in summary form, the index numbers for adult male and adult female weighted average minimum weekly wage rates in Tasmania for recent years:

**Weighted Average Minimum Weekly Wage Rates: Index Numbers, All Groups
Adult Males and Adult Females**

End of December—	Index numbers (a)		End of—	Index numbers (a)	
	Male	Female		Male	Female
1970	192.9	191.7	March 1975 ..	380.7	482.2
1971	215.5	222.8	June 1975 ..	398.7	507.5
1972	237.9	246.5	September 1975 ..	413.5	528.8
1973	271.9	307.2	December 1975 ..	414.5	530.2
1974	375.4	464.5	December 1976 ..	475.0	613.6

(a) Base of index numbers: weighted average minimum weekly wage rate, Australia, 1954 = 100.0.

Australian Rates

In the next table, rates and index numbers are shown for each Australian state:

Australia: Weighted Average Minimum Weekly Wage Rates (a): All Groups, Adult Males

End of December—	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Australia
RATES OF WAGES (\$)							
1970	54.40	53.68	55.07	52.12	55.99	54.20	54.20
1971	61.70	61.40	62.90	59.38	61.98	60.86	61.56
1972	68.11	67.86	68.42	65.82	66.15	67.18	67.71
1973	78.13	77.42	79.82	75.20	75.66	76.80	77.69
1974	r 105.97	105.15	108.95	103.32	101.02	106.02	r 105.57
1975 r	118.70	117.32	121.48	115.13	113.32	117.27	117.95
1976	136.04	134.10	139.14	132.20	132.29	134.14	135.25
INDEX NUMBERS (b)							
1970	192.6	190.1	195.0	184.6	198.2	192.9	191.9
1971	218.5	217.4	222.8	210.3	219.5	215.5	218.0
1972	241.2	240.3	242.3	233.1	234.2	237.9	239.8
1973	276.7	274.1	282.6	266.3	267.9	271.9	275.1
1974	r 375.2	372.3	385.8	365.8	357.7	375.4	r 373.8
1975	r 420.3	r 415.4	430.1	407.6	401.2	r 415.2	r 417.6
1976	481.7	474.8	492.7	468.1	468.4	475.0	478.9

(a) For a full week's work (excluding overtime), as prescribed in awards, determinations, etc.

(b) Base of index numbers: weighted average minimum weekly wage rate, Australia, 1954 = 100.0.

Hourly Wage Rates in Tasmania

General

Hourly wage rates is the short title for 'Weighted average minimum hourly rates payable'. The concept is completely analogous to that embodied in weighted average minimum weekly wage rates and the calculation is similarly based on rates prescribed in awards or determinations of federal and state industrial authorities or in agreements registered with them.

Definitions

Hours of Work: In the fixation of weekly wage rates, most industrial tribunals prescribe the number of hours constituting a full week's work for the wage rates specified. The hours of work so prescribed form the basis of the compilation of the weighted averages of hourly rates.

Rural industry is excluded from the calculation of weighted average minimum weekly wage rates and also from the calculation of weighted average minimum hourly wage rates. In addition, the shipping and stevedoring group is also excluded from the latter calculation since definite particulars for the computation of hourly wage rates are not available.

The 40-hour week has operated in Australia generally from 1 January 1948 (N.S.W., from 1 July 1947). Nevertheless the number of hours constituting a full week's work (excluding overtime) differs between occupations and/or states. The weighted average standard hours of work (excluding overtime) prescribed in awards, determinations and agreements for a full working week, in respect of adult male workers in all industry groups except rural, and shipping and stevedoring, at 30 June 1976, were: N.S.W., 39.74; Victoria, 39.92; Queensland, 39.84; S.A., 39.80; Tasmania, 39.89; Australia, 39.83. Corresponding figures for adult female workers at 30 June 1976 were: N.S.W., 39.53; Victoria, 39.81; Queensland, 39.70; S.A., 39.77; W.A., 39.78; Tasmania, 39.63; Australia, 39.67.

Weekly Wage Rate Definitions: Apart from exclusion of the shipping and stevedoring industry, the definitions in the section headed 'weekly wage rates' apply with equal force to the calculation of hourly wage rates.

Summary of Details

The following table shows, for Tasmania, weighted average minimum hourly wage rates for adult male and adult female workers in all industries (except rural, and shipping and stevedoring) since 1939:

Weighted Average Minimum Hourly Wage Rates, All Groups
Adult Males and Adult Females

End of—	Rates of wage		Index numbers (a)	
	Males (b)	Females (c)	Males (b)	Females (c)
	\$	\$		
December—1939	0.2095	n.a.	29.6	n.a.
1945	0.2642	n.a.	37.3	n.a.
1950	0.4952	n.a.	70.0	n.a.
1955	0.7371	0.5056	104.2	100.8
1960	0.8808	0.6037	124.5	120.3
1965	1.0211	0.7052	144.3	140.6
1969	1.2955	0.9323	183.1	185.8
1970	1.3550	0.9632	191.5	192.0
1971	1.5192	1.1191	214.7	223.1
1972	1.6591	1.2385	234.5	246.9
1973	1.9010	1.5435	268.7	307.6
1974	2.6396	2.3336	373.1	465.1
September—1975	r 2.8912	2.6567	r 408.7	529.5
December—1975	r 2.8989	2.6639	r 409.7	531.0
March—1976	3.0916	2.8347	437.0	565.0
June—1976	3.1839	2.9511	450.0	588.2
September—1976	3.2483	3.0162	459.1	601.2
December—1976	3.3176	3.0827	468.9	614.4

(a) Base of index numbers: weighted average hourly wage rate, Australia, 1954 = 100.0.

(b) All industry groups except rural, and shipping and stevedoring.

(c) All industry groups except rural, mining and quarrying, and building and construction.

Average Weekly Earnings in Tasmania

Source of Data

The figures in the following section are derived from particulars of employment and of wages and salaries recorded on pay-roll tax returns, from other direct collections and from estimates of the unrecorded balance. (In general, businesses

with pay-rolls of less than \$5 000 per month are exempt from pay-roll tax and do not need to supply monthly details of employment and of wages and salaries.) Pay of members of the defence forces is not included.

Definitions

'Employed Male Unit': This is a special unit devised to overcome the difficulty that particulars of wages and salaries are not available separately for males and females. (The basic data available are the number of males, the number of females and the total pay-roll only.) The number of females is converted to a *lesser equivalent number* of males by taking into account the approximate ratio of female to male earnings; a divisor for deriving average 'male' earnings is then obtained by adding the actual number of males to the calculated number of 'male equivalents'. The divisor so obtained is called 'employed male units'.

Separate ratios of male to female average earnings are used for individual states based on information from regular surveys of weekly earnings and hours and other sources. The Australian ratio is the weighted average of the State and Territory ratios. (The ratio for Tasmania for the March quarter 1977 was 64 per cent and for Australia 66 per cent).

Components of Pay-roll: Pay-roll includes, in addition to wages at award rates, the earnings of salaried employees, overtime earnings, over-award and bonus payments, allowances, commissions, directors' fees, and payments made in advance or retrospectively (e.g. advances of annual leave pay). Included also are the wages and salaries, not only of adults, but also of juniors; the earnings may relate to full-time, part-time or casual workers.

Invalid Comparison: Average earnings per employed male unit cannot be compared with male weighted average minimum weekly wage rates shown in the previous section. Weighted average minimum weekly wage rates relate to award rates for adult male wage earners in non-rural industry for a full week's work, at the end of each month or year; the average weekly earnings per employed male unit are derived from the pay-roll concept outlined in the previous paragraph, and obviously cover a wider field of earnings and of wage and salary earners.

Seasonal Influence: Quarterly figures are affected by seasonal influences. For example, special payments, including prepayment for holiday periods, tend to raise the December quarter and to depress the March quarter averages. Comparisons as to trends are generally best made by relating complete years or corresponding periods of incomplete years. Alternatively, a 'seasonally adjusted' series may be used. Seasonally adjusted estimates (i.e. original data subjected to seasonal adjustment factors to remove the sudden influence of major changes in awards and determinations and of the effects of pay-day variations) are shown in the graph which follows the next table.

Revision of Series

In June 1977, revised estimates from September quarter 1971 to December quarter 1976 were released. These revisions were due to the incorporation of a revised series of employment estimates, changes to the ratio of female to male average earnings and some amendments to the allowance made for earnings from second jobs.

Annual and Quarterly Details

The following tables show, for Tasmania and Australia, average weekly earnings per employed male unit; the figures are arranged both as quarterly and annual averages:

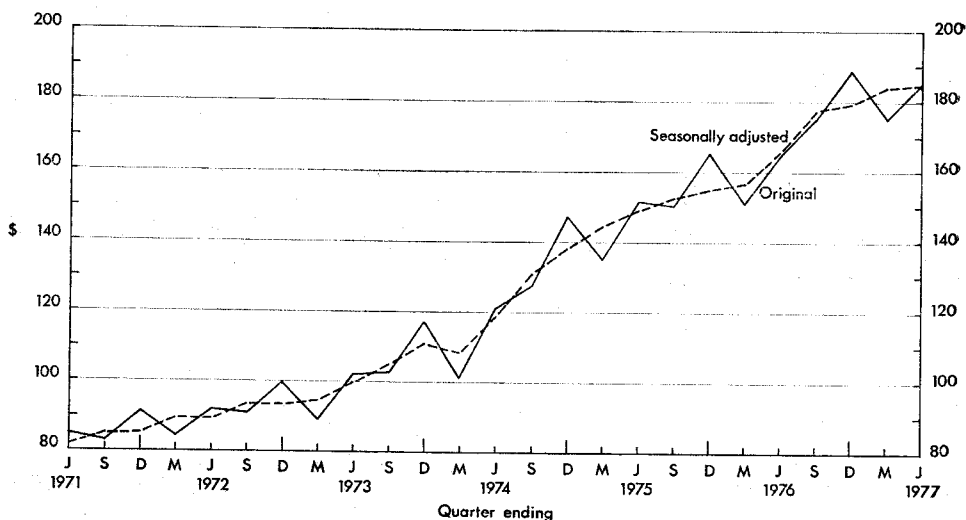
Average Weekly Earnings Per Employed Male Unit (a) (b)

Year	Average for quarter ending— (\$)				Average for year	
	September	December	March	June	Amount (\$)	Percentage change (c)
1971-72 r ..	82.70	91.10	84.20	92.00	87.50	10.6
1972-73 r ..	90.80	99.30	88.70	102.00	95.20	8.8
1973-74 r ..	102.40	117.20	101.60	120.60	110.50	16.1
1974-75 r ..	127.30	146.70	135.30	151.40	140.20	26.9
1975-76 r ..	150.30	164.70	151.20	165.10	157.80	12.6
1976-77 ..	175.60	188.70	175.20	185.50	181.30	14.9

(a) For definitions, see earlier section headed 'Definitions'.

(b) All estimates from September quarter 1971 have been revised as a result of the incorporation of a revised series of employment estimates, changes to the ratio of female to male average earnings and some amendments to the allowance made for earnings from second jobs.

(c) Over preceding year.

Average Weekly Earnings Per Employed Male Unit
Quarterly Averages, TasmaniaAustralia: Average Weekly Earnings Per Employed Male Unit (a) (b)
(\$)

Period	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T. (c)	A.C.T. (c)	Australia
1971-72 r ..	96.30	93.90	87.40	86.00	93.60	87.50	..	..	93.40
1972-73 r ..	104.60	102.80	97.10	93.40	98.80	95.20	..	..	101.80
1973-74 r ..	121.20	118.80	113.50	110.40	115.00	110.50	..	..	118.30
1974-75 r ..	152.10	147.80	142.50	138.60	145.60	140.20	168.50	184.30	148.30
1975-76 r ..	172.70	170.50	163.50	158.50	169.10	157.80	190.00	209.00	169.60
1976-77 ..	193.60	191.10	184.50	179.50	190.80	181.30	216.80	237.70	190.70

PERCENTAGE CHANGE: 1976-77 OVER 1975-76

	12.1	12.1	12.8	13.2	12.8	14.9	14.1	13.7	12.4
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Australia: Average Weekly Earnings Per Employed Male Unit (a) (b)—continued
(\$)

Quarter	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Australia
1974—June <i>r</i>	132.10	128.30	124.00	120.80	125.30	120.60	137.50	156.90	128.70
Dec. <i>r</i>	158.70	155.20	150.00	141.80	147.40	146.70	160.80	182.70	154.40
1975—June <i>r</i>	160.70	154.20	150.40	145.30	156.00	151.40	181.60	191.10	156.40
Dec. <i>r</i>	178.20	178.00	169.90	163.70	173.70	164.70	188.70	205.20	175.70
1976—June <i>r</i>	183.60	180.70	175.00	167.60	178.80	165.10	199.60	221.90	179.80
Dec. . .	197.90	197.40	189.80	182.80	194.50	188.70	220.00	243.90	195.50
1977—June . .	201.80	200.80	192.30	187.40	198.20	185.50	225.60	245.80	199.00
PERCENTAGE CHANGE: JUNE QUARTER 1977 OVER JUNE QUARTER 1976									
	9.9	11.1	9.9	11.8	10.9	12.4	13.0	10.8	10.7

(a) For definitions, see section headed 'Definitions'.

(b) All estimates from September quarter 1971 have been revised, as a result of the incorporation of a revised series of employment estimates, changes to the ratio of female to male average earnings and some amendments to the allowance made for earnings from second jobs.

(c) Estimates for periods prior to 1974-75 are not available.

Surveys of Weekly Earnings and Hours

General

Sample surveys in respect of most employers in the private sector subject to pay-roll tax have been conducted annually during recent years by the Bureau as at the last pay-period in October. In 1972, for the first time, government employees were included in the survey. The results of the surveys are based on returns from stratified random samples of private employers subject to pay-roll tax; non-government hospitals not subject to pay-roll tax; local government authorities; and for all federal and state government departments, authorities and semi-government bodies.

For Australia as a whole the 1976 Survey covered approximately 2 687 000 male and 1 398 000 female wage and salary earners comprising 1 779 000 males and 1 000 000 females in private employment and 908 000 males and 398 000 females in government employment.

Definitions

Weekly Earnings: Gross earnings before taxation and other deductions have been made; includes overtime earnings, ordinary time earnings, shift allowances, penalty rates, commission and similar payments; and that part of paid annual leave, paid sick leave, long service leave and paid holidays taken during the specified pay-period. It includes one week's proportion of payments made other than on a weekly basis, e.g. salary paid fortnightly or monthly. Retrospective payments are excluded.

Juniors: Those under 21 years of age not paid adult rates (but 'adults' may include those under 21 years receiving adult rates).

Full-time Employees: Employees who ordinarily work 30 hours or more a week and who received pay for the last pay-period in October.

Results of Surveys

The next table shows for the private and government sectors in Tasmania: (i) average weekly earnings; (ii) average weekly hours paid for; and (iii) average hourly earnings.

Average Earnings and Hours: All Industries (a)

Particulars	October 1976 (b)	
	Private employment (c)	Government employment (c)
AVERAGE WEEKLY EARNINGS (\$)		
Adult males	175.60	194.10
Junior males	100.10	105.70
Adult females	136.20	174.50
Junior females	87.70	106.00
AVERAGE WEEKLY HOURS PAID FOR		
Adult males	41.1	39.4
Junior males	40.0	39.1
Adult females	39.2	37.6
Junior females	39.7	38.8
AVERAGE HOURLY EARNINGS (\$)		
Adult males	4.27	4.93
Junior males	2.50	2.70
Adult females	3.47	4.64
Junior females	2.21	2.73

(a) Excludes rural industry and private domestic services.

(b) Last pay-period in October.

(c) Excludes managerial, executive, professional and higher supervisory staff. Full-time employees included only.

The following table dissects average weekly earnings by ordinary time and overtime earnings for the private and government sectors:

Average Weekly Overtime and Ordinary Time Earnings, Private and Government Employment, (a) October 1976

Particulars	Average weekly overtime earnings		Average weekly ordinary-time earnings		Average weekly total earnings	
	Private	Government	Private	Government	Private	Government
Adult males—						
Manufacturing—						
Metal products, machinery and equipment ..	14.40	2.20	173.80	147.80	188.20	150.00
Other	13.40	3.70	156.10	168.50	169.60	172.30
Total manufacturing ..	13.70	2.80	161.30	156.40	175.00	159.30
Non-manufacturing ..	16.60	9.40	159.60	186.00	176.30	195.30
All industries ..	15.20	9.10	160.40	185.00	175.60	194.10
Junior males, all industries ..	3.90	1.70	96.20	104.00	100.10	105.70
Females, all industries—						
Adult	4.00	2.00	132.20	172.40	136.20	174.50
Junior	2.40	1.40	85.20	104.60	87.70	106.00

(a) Average for all employees represented in industries but excluding managerial, executive, professional and higher supervisory staff. Full-time employees included only.

Minimum Wage Rates, Selected Occupations, Hobart

The following table shows minimum wage rates for selected occupations as prescribed by Federal and State awards, agreements and various determinations (both registered and un-registered) operative at 31 December in recent years. Unless specified, rates shown in the following table are for a 40-hour week. Increases reflect various margin adjustments.

Selected Minimum Wage Rates, Adult Males and Females: Hobart
(\$)

Industry and occupation	31 December		
	1974	1975	1976
ADULT MALES			
Primary production—			
Farming (general), general hand (a)	80.70	98.30	113.30
Grazing, shearer (per 100 flock sheep) (b)	45.00	48.20	53.55
Mining and quarrying—			
Coal mining (c), miner (machine) (d)	113.55	132.30	150.30
Quarrying, labourer	93.00	106.10	121.80
Engineering, metals, vehicles, etc.—			
Engineering—Fitter or turner	106.80	114.50	130.80
Toolmaker	112.40	120.50	137.50
Textiles, clothing and footwear—			
Clothing trades (readymade), tailor	93.40	109.80	126.60
Footwear, maker	85.40	101.20	115.90
Textiles—Knitting, knitter	83.10	101.90	116.70
Woollen, weaver	79.70	98.30	112.60
Food, drink and tobacco—			
Aerated waters and cordials, general hand	86.30	97.90	112.20
Bacon curing, boner	120.60	137.30	155.80
Bread baking, doughmaker	123.50	140.80	159.50
Brewing, general hand	88.37	94.69	108.75
Butter, cheese and milk processing, butter maker	106.20	114.00	130.40
Confectionery, confectioner (group 1)	103.70	111.20	126.20
Jam, fruit and vegetable preserving, general hand	95.70	105.30	120.50
Meat industry—Labourer (beef, mutton)	99.30	106.50	122.20
Slaughterman (mutton)	127.90	137.10	165.00
Sawmilling, furniture, etc.—			
Sawmilling and timber yards—Machinist (A grade)	110.90	118.90	135.70
Sawyer (circular)	97.40	104.40	119.50
Paper, printing, etc.—			
Printing (general)—Bookbinder	106.70	119.70	136.60
Machine compositor	112.30	125.80	143.30
Printing (newspapers)—Machine compositor (day work)	145.80	156.30	180.70
Machine compositor (night work)			
(e)	154.80	165.30	211.30
Other manufacturing—			
Brickmaking, drawer	95.80	113.30	129.70
Electricity generation and supply, electrical fitter	111.70	118.40	135.70
Building and construction—			
Building (f)—Bricklayer	137.90	159.15	191.80
Builder's labourer, skilled	119.30	142.40	177.20
Builder's labourer, unskilled	110.10	132.08	165.60
Carpenter	139.05	159.88	191.80
Electrician (installation) (g)	119.30	129.20	155.50
Plasterer	137.90	159.46	191.80
Painter	137.75	158.17	191.80
Plumber (g)	127.80	136.60	161.80
Railway services—			
Traffic—Locomotive engine driver	123.65	132.25	149.85
Porter	91.85	98.25	112.05

Selected Minimum Wage Rates, Adult Males and Females: Hobart—*continued*

(\$)

Industry and occupation	31 December		
	1974	1975	1976
<i>ADULT MALES—continued</i>			
Road and air transport—			
Road transport, motor truck driver (over 1.2 tonnes to 3.0 tonnes)	107.90	115.70	132.10
Tramways and buses, bus driver (one-man operator)	111.00	118.00	134.80
Shipping and stevedoring—			
Shipping (cargo vessels), able seaman (b) (i)	163.52	175.30	197.00
Stevedoring, wharf labourer (per hour) (j)	3.40	4.54	5.11
Communication—			
Post Office, postman (k)	111.16	122.00	138.63
Wholesale and retail trade—			
Butchers, general butcher	105.30	130.50	148.40
Petrol service stations, attendant	80.00	97.60	112.50
Retail stores, shop assistant (grocery)	85.90	92.10	106.60
Wool stores, wool classer	91.40	98.00	112.30
Public authority (n.e.c.), community and business services—			
Hospitals, orderly	102.48	118.50	135.30
Other services—Graduate engineer	140.13	150.30	169.90
Graduate scientist	129.44	138.80	157.40
Amusement, hotels, personal services, etc.—			
Hairdressing, hairdresser (men's)	109.40	117.50	141.40
Hotels (l), barman	98.70	105.90	121.20
Restaurants (l), cook (one cook only employed)	93.00	106.20	121.90
Watchmen, cleaners, etc., office cleaner (day)	103.20	110.70	126.80
<i>ADULT FEMALES</i>			
Textiles, clothing and footwear—			
Dry cleaning, presser	90.10	106.30	122.70
Order dressmaking, machinist	82.40	102.40	118.40
Readymade dressmaking, table hand or coat machinist	81.30	102.40	118.50
Textiles—Knitting, machinist	77.60	101.90	116.70
Woollen, weaver	78.10	101.70	116.40
Food, drink and tobacco—			
Confectionery, general hand	82.40	88.40	113.20
Jam, fruit and vegetable preserving, general hand	95.70	105.30	120.50
Transport and communication—			
Post Office, telephonist (m)	104.88	112.50	128.56
Wholesale and retail trade—			
Retail stores—Shop assistant (confectionery)	82.70	92.10	106.60
Shop assistant (drapery)	85.90	91.10	106.60
Public administration and community and business services—			
Federal Public Service, typist (k)	105.99	113.60	129.82
Hospital nurses (qualified), first year	117.80	126.40	152.20
Amusement, hotels, personal service, etc.—			
Cleaners, office cleaner (day)	100.20	110.70	126.80
Hairdressing, hairdresser	102.05	117.25	141.40
Hotels (l), barmaid	97.60	104.60	119.70
Restaurants (l), waitress	79.40	100.60	116.20
Theatres, usherette, ticket-taker, etc. (m)	93.90	100.70	115.30

(a) 44-hour week. (b) Rates shown are 'not found rates'. Shearers' hours of work are 40 per week. (c) In addition to the rate shown, an attendance allowance is payable for each full fortnightly pay-period worked. (d) 35-hour week. (e) 38-hour week. (f) Rates shown are weekly equivalents of hourly rates. They include allowances for excess fares, travelling time, sick leave, statutory holidays, following the job, etc. (g) Weekly rates prescribed for a full week's work (excluding overtime). (h) Includes an allowance valued at \$7.24 per week for keep and accommodation. (i) Rates shown are for 40 hours of work; seamen are required to work eight hours per day. (j) Rates shown are for casual wharf labourers on other than special cargo work. (k) 36½-hour week. (l) Weekly cash payments where board and lodging are not provided. (m) 36-hour week.

WAGE-FIXING AUTHORITIES

Tasmanian Industrial Boards

History

The evolution of the Tasmanian Wages Boards system is described in the 1968 *Year Book*. On 22 December 1975, Royal Assent was given to the *Industrial Relations Act 1975*. The new Act superseded the *Wages Board Act 1920*, replacing Wages Boards with Industrial Boards; the more important changes embodied in it are outlined in the 1977 *Year Book*. The following sections summarise the current situation.

Office of the Chairman of Industrial Boards

The Office of the Chairman of Industrial Boards is the wage-fixing Authority for all employers whose employees are not covered by a Federal or Public Service Board award (approximately 70 000 employees in this State). The Authority comprises the Chairman and Deputy Chairman of Industrial Boards, who are Government-appointed and who act as Chairmen on approximately 70 Industrial Boards that are covered by the Authority. Supporting staff are officers of the Department of Labour and Industry.

Establishment and Constitution of Industrial Boards

Boards are established, by order of the Governor, for particular industries. The constitutional nexus of a Board is the industry of the employer, not the common occupation of the employees, as is the case under other authorities.

Each Board, of which there are about 70 in active existence, consists of an equal number of employer and employee representatives, and a Chairman. The Chairman is the Chairman of Industrial Boards, or at his direction, the Deputy Chairman of Industrial Boards. Board members are appointed by the responsible Minister; at least one-half (on either side) of the representatives must be employed in the industry within the Board's jurisdiction.

Board members are appointed to a three year term of office.

Function of Boards

The function of Industrial Boards is to make awards prescribing minimum wage rates and conditions of employment that must be observed by all employers in the industries within the particular Board's jurisdiction. (An 'Industry' being defined in the Act as any trade, business, undertaking, profession, calling, function, process or work performed, carried on, or engaged in by an employer.) Examples are the Mining (Lead-Zinc) Industrial Board, which is established in respect of the industry of mining and processing of silver-lead-zinc ore; the Dentists' Industrial Board, established in respect of dentists and dental mechanics, and hence covering persons employed in those industries, and the Shipbuilders' Industrial Board, established in respect of the industry of constructing, altering, or repairing ships or boats, and dunnaging of ships' holds.

An award cannot contain any matter relating to: (i) the opening or closing hours of an employer's business premises; (ii) the granting of long service leave; (iii) a bonus payment made at the discretion of an employer; or (iv) a superannuation scheme.

Awards may be made to have retrospective effect, and may be made to remain in force for a specified period. Awards may replace, rescind or amend an existing award, and are subject to the *Apprentices Act 1942*, the *Long Service Leave Act 1956*, the *Public Health Act 1962*, the *Factories, Shops and Offices Act 1965*, and the *Mines Inspection Act 1968*.

Meetings of Boards are normally convened by the Chairman of Industrial Boards but the responsible Minister (The Minister for Industrial Relations) may convene a Board meeting for the purpose of settling or preventing an industrial dispute.

Variations to Awards Without a Meeting of a Board

Under section 30 of the Act, the Chairman may make an award amending a previous award, without the convening of a meeting of the Board, upon written application from all representative members of the Board for the particular amendment.

Under section 31 the Chairman can make a Common Rule Award, where the provisions of at least five awards are affected.

On receipt of an application, a notice is published in the daily press. A hearing is then conducted, at which the submissions of employer and employee organisations are considered by the Chairman. Following the hearing, the Chairman may make a Common Rule Award.

This award may only relate to the following matters: (i) a basic wage; (ii) a minimum wage; (iii) standard hours of work; (iv) paid leave of absence; and (v) any matter that is determined in an award made under the *Commonwealth Conciliation and Arbitration Act* that affects or relates to industries in which at least five Boards have jurisdiction. However, this restriction is removed if the award is made on joint application from the Tasmanian Trades and Labour Council and an appropriate employer organisation (usually the Tasmanian Chamber of Industries).

One example of a Common Rule Award is an award made following a 'National Wage' decision of the Federal Conciliation and Arbitration Commission.

Industrial Agreements

Under section 32 of the Act, an industrial agreement may be made, for the purpose of resolving an industrial matter that does not extend to the whole of an industry within the jurisdiction of a Board. When the Chairman satisfies himself that the agreement has been executed by, or on behalf of, all parties involved in the matter, and that the provisions of the agreement are in line with appropriate award provisions, the Chairman 'shall certify that agreement as an award having like effect under this Act'.

Industrial Appeals Tribunal

This Tribunal was set up to provide for appeals against awards made by Industrial Boards. Appeals may be made to the Tribunal against an award other than on a matter of law. Such appeals must be made within 21 days of the making of an award. After hearing the Appeal, the Tribunal may confirm the award with or without amendment, quash the award and make another award in its place, or quash the award without making any further award.

A decision of the Tribunal can be challenged only on the grounds of illegality, by application to the Supreme Court.

Compulsory Conferences

Under section 50 of the Act, the Minister may call a compulsory conference for the purpose of settling or preventing an industrial dispute relating to:

- (i) the engagement, dismissal, or reinstatement of any particular employee or class of employees; or

- (ii) the entering into, execution, or termination of any contract for services in circumstances that affect, or may affect, an employee in, or in relation to, his work.

The Minister may summons any persons whose presence may help prevent or settle a dispute.

The compulsory conference is presided over by a person directed by the Minister to undertake such duty; in practice this person is usually the Chairman or Deputy Chairman of Industrial Boards.

If after considering the views expressed at the conference the President is of the opinion that certain action should be taken to effect the aim of the conference, viz. to settle or prevent an industrial dispute, then he may, by written order, direct such action to be taken.

Tasmanian Public Service Board

General

Legislation passed in 1973 established two new industrial authorities, the Public Service Board and Public Service Arbitrator (for details see the next section) to deal with awards, working conditions, etc., for employees of the State Government and certain State authorities. The Public Service Board comprises three Commissioners appointed by the Governor for terms not exceeding five years. One of the three Commissioners is appointed Chairman of the Board. In addition to members of the State Public Service the Board's jurisdiction includes persons employed in the teaching service, police force, parliamentary staff positions, public hospitals, non-academic staff of the College of Advanced Education and various State authorities.

Industrial Functions

The Public Service Board may make awards covering wages, salaries and conditions of work for employees falling within its jurisdiction. A main function of the Board is determining 'principal awards', i.e. an award which covers all employees within the scope of a particular group such as administrative and clerical officers. The determining of a principal award involves a complete review of the wages and salaries and other work conditions of all positions within the scope of the particular award.

Unless revoked, a principal award is effective for three years, however, during the currency of the principal award it may be amended by the Board to eliminate anomalies, errors or defects contained in the award, or to incorporate determinations of the Federal Conciliation and Arbitration Commission (e.g. national wage case decisions, etc.).

The Tasmanian Public Service Arbitrator

The *Public Service Act* 1973, in addition to creating the Public Service Board, also established the position of Public Service Arbitrator. The Public Service Arbitrator, appointed by the Governor for a term not exceeding five years, has the same area of jurisdiction as the Public Service Board. Applications to the Arbitrator for arbitration on awards may be made where the Public Service Board has: (i) refused an application for an award; (ii) made an award (including an award to supplement a consent award); or (iii) allowed three months or longer to elapse after an application has been made for an award without (a) refusing the application or (b) making an award (including a consent award). Such applications are lodged with the registrar and the Arbitrator, after he has been satisfied that the applicant is entitled to apply for arbitration, arranges to hear the applicant

and others affected by the award. After hearing and considering an application the Arbitrator may: (i) refuse the application; (ii) confirm the award or any of its provisions; (iii) direct the Board to vary the award by omitting, altering or adding to the award's provisions; or (iv) where it has refused or failed to make an award, to make an award in specified terms.

The Public Service Arbitrator has an additional function of reviewing individual salary classifications made by any controlling authority following the handing down of any new principal award. Applications for consideration of particular salary classifications may be made by any registered employee organisation in respect of any office or position held by any of its members. In addition, the *State Employees (Long-Service Leave) Act 1950* was amended on 19 September 1974, to provide a new section for the settlement of any dispute as to whether or when an employee is or has become entitled to leave of absence or an allowance in lieu, or whether a deceased employee's personal representative is or has become entitled to payment of an allowance. The section stipulates that the Public Service Arbitrator shall hear and determine all such disputes.

INDUSTRIAL DISPUTES

Statistics of industrial disputes refer only to those involving a stoppage of work of 10 man-days or more. The information is compiled from the following sources: (i) direct from employers and trade unions; (ii) reports from government departments and authorities; (iii) reports from state and federal industrial authorities; and (iv) information contained in trade journals, newspapers, etc. Particulars of some stoppages are estimated and the following statistics should be regarded as giving only a broad measure of industrial stoppages. The details relating to workers involved, working days lost and estimated loss in wages are in respect of those thrown out of work at the establishments where the stoppages actually occurred, only.

Industrial Disputes (a)

Year	Disputes	Workers involved	Working days lost	Estimated loss in wages
	no.	'000	'000	\$'000
1969	44	8.7	9.9	115.3
1970	66	14.8	32.2	451.1
1971	46	14.7	20.6	317.3
1972	48	15.2	19.2	305.1
1973	63	17.5	140.1	2 322.4
1974	79	33.6	88.5	1 800.9
1975	57	20.1	40.6	1 007.5
1976	43	30.9	62.2	(b) 1 792.7

(a) The statistics relate to stoppages involving 10 man-days or more in the establishments where the stoppages occurred only.

(b) The estimated Tasmanian loss was 1.6 per cent of the Australian total in 1976.

The record estimated loss in wages due to industrial disputes (involving stoppages of 10 days or more) in 1973 (\$2 322 400) represented an average loss of \$133 per worker for the 17 500 workers involved. The average loss per worker involved in 1976 was \$58. Details relating to the value of production lost as a direct result of industrial disputes are not available.

The next table summarises statistics relating to industrial disputes in Australia for the last five years:

Industrial Disputes (a): Australia

Year	Disputes	Workers involved	Working days lost	Estimated loss in wages
	no.	'000	'000	\$'000
1972	2 298	1 113.8	2 010.3	32 074.4
1973	2 538	803.0	2 634.7	45 206.5
1974	2 809	2 004.8	6 292.5	128 301.8
1975	2 432	1 398.0	3 509.9	95 760.7
1976	2 055	2 189.9	3 799.2	114 552.0

(a) The statistics relate to stoppages involving 10 man-days or more in the establishments where the stoppages occurred only.

The following table analyses industrial disputes according to the industry of the labour force involved:

Industrial Disputes by Industries

Period	Mining	Manufacturing					Total manufacturing	Construction
		Metal products, machinery and equipment	Textiles, clothing, footwear	Food, beverages, tobacco	Paper and paper products, printing and publishing	Other		
NUMBER OF DISPUTES								
1973	16	6	2	7	2	2	19	3
1974	10	6	5	7	7	5	30	8
1975	8	6	..	6	5	5	22	9
1976	12	1	..	7	2	5	15	4
1976—								
March qtr	3	..	..	..	2	..	2	..
June qtr ..	5	..	..	3	..	3	6	..
Sept. qtr ..	3	1	..	3	..	2	6	2
Dec. qtr ..	1	..	..	1	..	..	1	2
WORKERS INVOLVED (DIRECTLY AND INDIRECTLY) ('000)								
1973	2.8	1.8	1.4	4.2	2.7	..	10.1	0.2
1974	0.8	5.7	4.2	4.5	3.9	0.1	18.5	6.7
1975	2.4	3.4	0.7	1.2	3.2	0.3	8.6	6.9
1976	3.6	4.4	1.9	2.2	1.2	4.4	14.1	3.8
1976—								
March qtr	0.5	..	..	..	1.2	..	1.2	..
June qtr ..	1.3	..	..	0.2	..	0.3	0.5	..
Sept. qtr ..	1.4	4.4	1.9	1.9	..	4.1	12.3	3.8
Dec. qtr ..	0.5	..	..	..	..	..	..	..
WORKING DAYS LOST ('000)								
1973	35.4	20.1	16.4	5.5	39.7	0.3	81.9	0.7
1974	4.0	45.5	3.7	6.1	12.8	2.6	70.6	7.5
1975	8.9	14.4	1.6	3.5	2.7	1.1	23.3	5.9
1976	8.2	4.7	1.9	7.2	15.4	6.5	35.7	4.2
1976—								
March qtr	1.3	..	..	..	15.4	..	15.4	..
June qtr ..	4.0	..	..	0.3	..	0.4	0.6	..
Sept. qtr ..	2.6	4.7	1.9	6.9	..	6.1	19.6	4.1
Dec. qtr ..	0.4	..	..	0.1	..	..	0.1	0.1

Industrial Disputes by Industries—*continued*

Period	Railway transport, air transport	Road transport, other transport and storage, communication	Water transport		Entertainment, recreation, hotels, personal service, etc.	Other industries (a)	Total all industries
			Stevedoring services	Other water transport			
WORKING DAYS LOST ('000)							
1973	0.3	0.1	..	0.5	..	21.1	140.1
1974	0.4	0.7	3.4	0.1	0.2	1.6	88.5
1975	1.1	0.1	0.6	0.5	..	0.2	40.6
1976	1.7	1.8	0.2	3.2	0.4	6.9	62.2
1976—							
March qtr ..	0.2	0.1	..	0.1	..	0.1	17.1
June qtr ..	0.9	..	..	..	..	0.9	6.4
Sept. qtr ..	0.6	1.7	0.2	3.1	0.4	5.2	37.4
Dec. qtr ..	..	..	..	..	..	0.8	1.3
ESTIMATED LOSS IN WAGES (\$'000)							
1973	5.1	1.5	0.5	9.4	..	321.8	2 322.4
1974	1.6	14.0	54.1	2.3	2.6	30.3	1 800.9
1975	26.1	3.7	16.8	15.4	0.9	3.3	1 007.5
1976	47.7	73.0	5.3	120.3	9.6	181.7	1 792.7
1976—							
March qtr ..	5.5	2.1	..	0.7	..	1.6	431.0
June qtr ..	21.8	..	..	1.0	..	22.3	213.5
Sept. qtr ..	20.4	70.9	5.3	118.6	9.6	132.1	1 104.1
Dec. qtr ..	..	..	..	..	..	25.7	44.0

(a) Includes: agriculture, grazing, etc.; finance and insurance; wholesale and retail trade; real estate and business services; electricity, gas and water; public administration and defence; and community services.

Chapter 18

MISCELLANEOUS

ECONOMIC CENSUSES AND SURVEYS

Introduction

Commencing with the year 1968-69, integrated censuses were introduced for the following sectors of the economy: mining; manufacturing; electricity and gas; retail trade; and wholesale trade. Since then, some sectors have been covered by regular annual economic censuses (e.g. mining) while others have not yet been the subject of a subsequent census (e.g. wholesaling). Also data for the agricultural sector have recently been made available on a comparable basis. These have been based on a survey (the annual Agricultural Finance Survey) rather than a complete census. In the 1972 *Year Book*, Appendix A gave a detailed description of the first Australian Integrated Economic Censuses, conducted by the Australian Bureau of Statistics for the 1968-69 financial year. The various industry sectors covered by integrated economic censuses and the Agricultural Finance Survey are each featured in this book; references are: (i) *Agriculture*, Chapter 7; (ii) *Mining*, Chapter 8; (iii) *Manufacturing*, Chapter 9; (iv) *Electricity and Gas*, Chapter 9; (v) *Retail Trade*, Chapter 10; and (vi) *Wholesale Trade*, Chapter 10.

In this section are set out the definitions of terms and concepts which apply to the integrated economic censuses. Also, the results of those industry sectors covered by censuses in recent years, together with survey results for the agricultural sector, are brought together to allow inter-sector comparisons to be made. Comparison tables showing the results of the five 1968-69 censuses may be found in Chapter 18 of the 1977 *Year Book*.

Concepts and Definitions

For the 1968-69 and subsequent economic censuses uniform definitions and concepts have been used. This allows inter-sector comparisons (see later section) and increases the usefulness of the data derived from censuses for economic analysis and market research. Definitions and concepts used in these censuses are summarised below.

Establishment: Generally the establishment is the whole of each physical location operated by one enterprise, given that the main activity of the establishment is within scope of the census. Usually only one return is submitted for each establishment *classified to the industry of its main activity*. The principal exception to the 'one return one establishment' rule is where a secondary activity at a location creates gross receipts of \$1m or more. In such cases the secondary activity may have to be reported on a second return appropriate to its industry or its sector. Details for *administrative offices and ancillary units* (such as head offices, storage depots, garages, laboratories, etc.) which serve or administer establishments within the same enterprise but which are located away from them are treated as follows: (i) if only one establishment is served or administered

then details are included in the establishment return; or (ii) if more than one establishment is served or administered details are included on the enterprise return. *Manufacturers' sales branches* located away from the parent manufacturing establishment are treated as ancillary units provided they do not distribute goods to customers from their own holdings of stocks. If the unit does distribute from stocks in this manner then it is treated as an establishment and included in the wholesale sector.

Electricity and Gas Industries—the Exception: The single operating location is not suitable as a basis for enterprises engaged in producing or distributing electricity or gas. Therefore for electricity and gas industries, a special treatment was devised—the establishment unit for these industries consists of all locations operated by the enterprise in the one state.

Enterprise: This is broadly the operating legal entity and is the key unit for the collection of information. Where a number of legal entities operate as a group, owned or controlled by a single company, the enterprise is not the group as a whole, but each individual operating legal entity in the group.

Enterprise Group: Comprises a group of operating legal entities owned or controlled by a single company.

Value Added: Common to all sectors covered by integrated economic censuses is the following definition: value added *equals* turnover *plus* increase in stocks *minus* purchases, transfers in and selected expenses. The value added measure can then be aggregated for all establishments and sectors covered by the censuses *without duplication*. In broad terms value added is the surplus from which establishments pay wages and salaries, interest, depreciation, rents and overheads. The remainder is available for appropriation as profits (after provision for income tax).

Turnover: The definition of turnover is as follows: (a) In manufacturing and mining censuses: (i) sales of goods produced by the establishment; (ii) sales of goods not produced by the establishment; (iii) transfers out of goods to other establishments of the same enterprise; (iv) bounties and subsidies on production; (v) all other operating income but excluding revenue from rent and leasing, interest other than hire purchase interest, dividends and sales of fixed tangible assets; and (vi) capital work done for own use or for rental or lease. (b) In retail and wholesale trade censuses: (i) sales of goods (owned by the enterprise); (ii) transfers out of goods to other establishments of the same enterprise (applies only to wholesale); (iii) selling and purchasing commissions received (applies only to wholesale); (iv) all other operating income but excluding items specified in (a) (v) above; and (v) goods withdrawn from stock for own use (as fixed tangible assets, or for rental or lease).

Purchases and Selected Expenses: Are defined as follows: (a) In manufacturing and mining censuses: (i) the value of purchases of materials, fuels, electricity and gas, and wrapping and packaging materials is supplemented by the value of transfers in from other establishments of the enterprise; (ii) purchases of goods for resale are included as well as purchases for own use in production; and (iii) selected expenses comprise repair and maintenance expenses, charges for sub-contract and commission work, outward freight and cartage, motor vehicle running expenses and sales commission payments. (b) In retail and wholesale trade censuses: (i) the value of purchases of goods for resale is widened to include purchases for both wholesale and retail trade, no matter whether the establishment is primarily a retailer or a wholesaler; (ii) the value of purchases also includes purchases of materials for manufacturing to cover cases where the retail or wholesale establishment has this secondary activity; and (iii) selected expenses comprise

those specified in (a) (iii) above *plus* purchases of wrapping and packaging materials, and electricity and gas (see item (a) (i) in preceding manufacturing and mining group for the reason for this addition).

Stocks: Are the total held by the establishment and may therefore include some stocks held for secondary activities, e.g. a manufacturing establishment may have, in its stocks figure, merchanted goods held or a retail establishment may include in its return, stocks held for wholesaling and manufacturing.

Transfer Values: Transfers, both in and out are confined to transfers of goods; the term is further narrowed to mean transfers between establishments of the same enterprise. Provision exists for recording transfers in all census sectors except retail trade and here the instruction requires purchases to be reported inclusive of transfers in, but net of transfers out. Thus, transfers are taken into account in arriving at value added since transfers out, as just defined, are a part of turnover and transfers in are a part of purchases and selected expenses.

Employment, Salaries and Wages: In accordance with the new concept of treating the establishment as a whole, all employees are entered, including those working in administrative offices and ancillary units which serve only the one associated establishment.

Fixed Capital Expenditure: The general basis for collection is: purchases of new and second-hand assets *less* sales of second-hand assets. (For establishments of multi-establishment enterprises, transfers from other establishments of the enterprise are treated as purchases, and transfers to such establishments are treated as sales.) The dissection of fixed capital expenditure comprises expenditure on: (i) motor vehicles; (ii) land and buildings; and (iii) plant and machinery. A further distinction is made between new assets and second-hand assets.

Industrial Classification

The Australian Standard Industrial Classification (ASIC) was adopted for use in the 1968-69 and subsequent economic censuses. ASIC defines the industries for which statistics are collected in the censuses and allows the scope of the individual censuses to be marked out without gaps or duplications between them. It also identifies the statistical units (establishments, enterprises, etc.) and lays down standard rules for identifying and coding them to industries of the classification. A detailed description of ASIC may be found in the Bureau publication 'Australian Standard Industrial Classification (Preliminary Edition) 1969, Vol 1'.

Agricultural Sector Financial Statistics

As from 1968-69, the Bureau has progressively developed annual agricultural industry finance surveys to obtain: firstly, details of farm expenditure; and, more recently, a wide range of financial data on a compatible basis to that available for industry sectors covered by the integrated economic censuses. The coverage of the 1974-75 and subsequent Agricultural Finance Surveys has consisted of a randomly selected sample of agricultural enterprises (classified to ASIC Sub-division 01). Results of these surveys have been used to calculate estimates covering all agricultural enterprises. A complete agricultural sector economic census of all agricultural enterprises has not been conducted, nor is one proposed, because of the high cost involved.

The concepts and definitions used are basically the same as those outlined above for the integrated economic censuses. Additional notes are set out below:

Value Added: When determining the 'increase in stocks' only livestock is taken into account due to its relative significance and to the difficulties associated with including other farm stocks.

Turnover: Turnover of agricultural enterprises includes proceeds received during the year (which do not necessarily relate to the production of that year) from the sale of crops, livestock and livestock products, and other miscellaneous revenue. Miscellaneous revenue includes both sundry agricultural proceeds (such as proceeds from insurance recoveries, agistment, livestock service, artificial insemination, government relief payments, agricultural services such as contract shearing, harvesting, etc.) and also receipts from any non-agricultural activity of the enterprise.

Purchases and Selected Expenses: Include cash payments made during the year for goods and services including marketing expenses; purchases of livestock, feed, fodder, fertiliser, chemicals and veterinary supplies and services; payments for electricity, fuel, water and drainage; payments to contractors; repairs and maintenance to motor vehicles, machinery, equipment, buildings, structures and fences; motor vehicle registration and insurance; insurance of plant; payments for agistment; etc.

Adjusted Value Added: This is value added *plus* rent and leasing revenue (other than land) *less* rates and taxes, insurance payments, other expenses, and rent and leasing expenses (other than land).

Gross Operating Surplus: is adjusted value added *less* wages, salaries and supplements.

Cash Operating Surplus: is gross operating surplus *less* the increase in value of livestock, interest and land rent paid *plus* interest and land rent received. It is the surplus available for profit, income tax and depreciation provisions.

Net Capital Expenditure: is the expenditure on new and second-hand assets *less* sales of existing assets and trade-in allowances.

Gross Indebtedness: is the total amount owing at 30 June.

Comparisons Between Industry Sectors

Principal items from economic censuses conducted in recent years are shown below:

Mining, Manufacturing, Electricity and Gas Censuses, 1971-72 to 1975-76

ASIC classification of establishments and year		Number of establishments at 30 June	Persons employed at 30 June	Wages and salaries	Value added
			no.	\$'000	\$'000
Mining (a)—	1971-72 . . .	53	4 640	25 521	59 317
	1972-73	48	4 326	28 091	62 186
	1973-74	56	4 317	30 623	85 321
	1974-75	56	4 450	43 026	80 903
	1975-76	57	4 248	47 197	80 607
Manufacturing—	1971-72	933	33 144	119 411	245 068
	1972-73	912	31 504	130 703	283 420
	1973-74	935	32 359	161 386	340 250
	1974-75 (b)	628	28 708	194 883	402 255
	1975-76 p	669	28 378	211 582	456 382
Electricity and gas—	1971-72	5	2 971	14 658	45 749

(a) Census results exclude 'small' tin miners whose sales were less than \$20 000.

(b) From 1974-75 the Census results exclude single establishment enterprises employing less than four employees at 30 June.

As already noted, value added is a measure that can be aggregated and directly compared for all establishments and industry sectors for which it has been determined, *without duplication*. The following table compares the industry sectors agriculture, mining and manufacturing on the basis of value added for recent years.

Integrated Economic Censuses and Agricultural Finance Survey: Value Added

Industry sector	1973-74		1974-75		1975-76	
	Value added	Per head of mean population	Value added	Per head of mean population	Value added	Per head of mean population
	\$m	\$	\$m	\$	\$m	\$
Agriculture (a)	(b) 74.4	187	67.9	169	p 58.0	143
Mining	85.3	214	80.9	201	80.6	198
Manufacturing	(b) 340.3	855	402.3	999	p 456.4	1 123

(a) Estimates based on sample surveys and therefore subject to possible inaccuracies. 'Standard errors' indicating the reliability of the estimates are included in the Canberra Office publication *Agricultural Sector, Part IV, Financial Statistics* (Ref. No. 7507.0).

(b) Not strictly comparable with later years.

AUSTRALIAN NATIONAL ACCOUNTS

Introduction

National accounting aims at providing a systematic summary of the transactions taking place in the economy, especially of those that relate to the production and use of goods and services, and to transfers of income or capital between sectors of the economy. National accounts statistics therefore provide a medium for describing or analysing the forces that drive and shape the economy.

Estimates of national income and expenditure are compiled by the Bureau and presented in a regular sequence of national accounts publications, in which the first estimates for the year just completed are successively revised and additional detailed tables are issued as further information becomes available. The cycle begins in August with the Budget White Paper *National Income and Expenditure* which gives preliminary estimates for the year just completed and later estimates for the previous four years. The June quarter issue of *Quarterly Estimates of National Income and Expenditure* follows shortly after this with estimates for quarters for the year just completed and for the previous two years. Issues for subsequent quarters may revise the past quarterly estimates as they add additional quarters and may revise annual estimates for some items for the most recent years. The majority of revisions are the result of changes in principles and definitions rather than the correction of errors. *Australian National Accounts, National Income and Expenditure* is the most comprehensive national accounts publication; after estimates for this publication are finalised in about February and sent for printing, mimeographed *Preliminary Statements* are issued which make available selected tables in advance.

Description of National Income and Expenditure Accounts

A brief description of the conceptual basis of national accounts is given in the 1977 *Year Book*, but for a more detailed treatment of the concepts and structure of the Australian National Accounts reference should be made to *Australian National Accounts, National Income and Expenditure* (Ref. No. 5204.0).

Australian National Accounts Statistics

The next table gives details of the items on the receipts side of the domestic production account for recent years. Estimates of gross domestic product at average 1966-67 prices are also included. Such estimates are described as *estimates at constant prices* and are designed to remove the direct effect of price changes from the original (current prices) estimates. Estimates at constant prices are largely based on the application of specially constructed price indexes. All estimates shown below are expressed in current prices unless otherwise stated. They have been taken from the 1975-76 issue of *Australian National Accounts, National Income and Expenditure* (Ref. No. 5204.0) and are subject to revision.

Gross Domestic Product, Australia

Particulars	1970-71	1971-72	1972-73	1973-74	1974-75	1975-76 <i>p</i>
Wages, salaries and supplements .. \$m	17 939	20 056	22 409	27 573	35 449	40 672
Gross operating surplus—						
Trading enterprises—						
Companies \$m	4 715	5 074	6 023	6 689	6 702	7 813
Unincorporated enterprises .. \$m	4 196	4 729	5 787	7 559	7 295	8 139
Dwellings owned by persons .. \$m	1 828	2 097	2 410	2 842	3 472	4 240
Public enterprises \$m	1 076	1 216	1 267	1 232	1 120	1 607
Financial enterprises \$m	612	709	830	893	998	1 237
Less Imputed bank service charge .. \$m	748	855	1 083	1 399	1 650	1 931
Gross domestic product at factor cost \$m	29 618	33 026	37 643	45 389	53 386	61 777
Indirect taxes less subsidies \$m	3 305	3 697	4 238	5 314	6 601	8 466
Gross domestic product .. \$m	32 923	36 723	41 881	50 703	59 987	70 243
Percentage increase in G.D.P. (a) ..	9.9	11.5	14.0	21.1	18.3	17.1
G.D.P. at average 1966-67 prices—						
Value \$m	28 164	29 412	30 780	32 502	32 703	33 216
Percentage increase (a)	4.4	4.4	4.7	5.6	0.6	1.6
Implicit rate of price increase (per cent) (b)	5.3	6.8	9.0	14.6	17.6	15.3
Gross farm product \$m	2 004	2 239	3 062	4 479	3 622	3 727
Gross non-farm product \$m	30 919	34 484	38 819	46 224	56 365	66 516

(a) Over previous year (current prices).

(b) Percentage increase in weighted average of prices of all items contributing to the G.D.P., above the average for previous year, implied by the figures given for G.D.P. at current and constant prices.

Implicit Price Deflators: The item 'Implicit rate of price increase' in the above table is derived from an index referred to as the 'gross domestic product *implicit price deflator*'. Such indexes are obtained (to the same base year as the constant price series from which they are derived) by dividing aggregate flows of goods and services measured at current prices by the corresponding estimates at constant prices. Implicit price deflators have limitations as indicators of price change as they can be affected by the physical composition of the aggregates and components to which they refer (they are *not* 'fixed weight' indexes), and by seasonal factors, and the aggregates are subject to revision. These limitations render implicit price deflators of limited value in assessing quarterly price changes but are seldom of great significance with regard to annual national accounting aggregates.

General Government Income and Outlay Account: Receipts

Particulars	1970-71	1971-72	1972-73	1973-74	1974-75	1975-76 <i>p</i>
AMOUNT (\$ million)						
Income from public enterprises	683	788	771	672	542	850
Interest, etc., received	277	298	339	418	539	617
Indirect taxes	3 594	4 087	4 559	5 631	6 920	8 778
Direct taxes on income—						
Companies, etc.	1 427	1 519	1 618	2 013	2 432	2 600
Households	3 175	3 765	4 084	5 485	7 709	9 213
Other direct taxes, fees, fines, etc.	408	439	488	560	590	681
Total receipts	9 564	10 896	11 859	14 779	18 732	22 739
PERCENTAGE INCREASE OVER PREVIOUS YEAR						
Indirect taxes	9.1	13.7	11.5	23.5	22.9	26.9
Direct taxes on income—						
Companies, etc.	20.2	6.4	6.5	24.4	20.8	6.9
Households	11.2	18.6	8.5	34.3	40.5	19.5
Total receipts	10.8	13.9	8.8	24.6	26.7	21.4
Consumer price index (a)	4.8	6.8	6.0	12.9	16.7	13.0

(a) Weighted average for the six state capital cities (all groups).

The previous table shows details for items making up the receipts side of the general government income and outlay account. Percentage increases are also shown for major items and for the consumer price index (six state capitals combined). The latter give some perspective to the monetary values (current prices) which are subject to growth due to price increases as well as being subject to *real* growth (see also the item 'Implicit rate of price increase' in the preceding table). In 1975-76 total 'General government receipts' as a proportion of gross domestic product was 32.4 per cent compared with 29.0 per cent in 1970-71.

National Accounts Statistics Relating to Tasmania

The following tables are included to provide information relating to household income and private final consumption expenditure within Tasmania during the last six years, together with an analysis of Tasmanian farm income during the same period. Two tables which show Tasmanian figures relative to those of the other Australian states are also included.

Household Income is the total income, whether in cash or kind, received by persons normally resident in Australia. It includes both income received in return for productive activity (such as wages, salaries and supplements, incomes of unincorporated enterprises, etc.) and transfer incomes (such as cash social service benefits, interest, etc.). Household income also includes any property income received by non-profit organisations such as private schools, churches, charitable organisations, etc. That part of farm income accruing to unincorporated enterprises is included under household income.

Farm Income is the difference between the gross value of farm production (after stock valuation adjustment) and total costs (i.e. production costs plus net rent and interest paid and third party insurance transfers) incurred.

Private Final Consumption Expenditure covers the expenditure on goods and services by persons and expenditure of a current nature by non-profit organisations serving households. Goods and services purchased by businesses or general government are excluded. It excludes the purchase of dwellings and capital expenditure by non-profit organisations.

Household Income: Tasmania

Particulars	1970-71	1971-72	1972-73	1973-74	1974-75	1975-76 <i>p</i>
Wages, salaries and supplements .. \$m	484	534	595	729	958	1 088
Income of farm unincorporated enterprises \$m	27	32	49	64	24	21
Income of other unincorporated enterprises \$m	52	60	70	84	98	117
Income from dwellings \$m	16	19	21	28	32	38
Transfers from general government .. \$m	59	71	87	105	147	196
All other income \$m	55	63	73	89	111	130
Total household income .. \$m	693	779	895	1 099	1 370	1 590
Less Income tax payable .. \$m	79	94	101	150	197	
Other direct taxes, fees, fines, etc. .. \$m	10	10	10	12	12	
Consumer debt interest .. \$m	} 9	10	12	16	19	
Transfers overseas \$m						
Household disposable income—						
Amount \$m	595	665	772	921	1 142	
Percentage increase (a) ..	9.4	11.8	16.1	19.3	24.0	

(a) Over previous year.

Household Income by States, 1975-76 *p*

N.S.W. and A.C.T.	Vic.	Qld	S.A. and N.T.	W.A.	Tas.	Australia
TOTAL INCOME (\$ million)						
22 595	16 923	8 289	5 659	4 883	1 590	59 939
INCOME PER HEAD OF MEAN POPULATION (\$)						
4 434	4 532	3 954	4 177	4 215	3 913	4 329

Private Final Consumption Expenditure: Tasmania
(\$ million)

Particulars	1970-71	1971-72	1972-73	1973-74 <i>r</i>	1974-75 <i>r</i>	1975-76 <i>p</i>	
						Amount	Per cent
Food	109	116	126	149	171	190	17.3
Cigarettes and tobacco	17	18	<i>r</i> 19	22	26	34	3.1
Alcoholic drinks	<i>r</i> 39	<i>r</i> 42	<i>r</i> 44	49	62	70	6.4
Clothing, etc.	56	62	65	83	98	103	9.4
Health	32	37	41	47	60	67	6.1
Rent	61	68	75	90	110	131	11.9
Gas, electricity, fuel	18	20	21	22	27	33	3.0
Household durables	38	43	45	61	81	105	9.5
Newspapers, books, etc.	10	11	12	15	16	21	1.9
All other goods, n.e.i.	22	24	26	34	42	45	4.1
Travel and communication	86	95	103	120	150	178	16.2
All other services	56	65	75	87	106	124	11.3
Total	<i>r</i> 544	<i>r</i> 601	<i>r</i> 652	779	949	1 101	100.0

PERCENTAGE INCREASE (OF TOTAL) OVER PREVIOUS YEAR

	9.0	10.5	<i>r</i> 8.5	19.5	21.8	16.0	..
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Private Final Consumption Expenditure: States, 1975-76 p
(\$ million)

Particulars	N.S.W. and A.C.T.	Vic.	Qld	S.A. and N.T.	W.A.	Tas.	Australia	
							Amount	Per cent
Food	2 583	1 994	1 006	710	615	190	7 098	17.1
Cigarettes and tobacco	403	276	159	114	89	34	1 075	2.6
Alcoholic drinks ..	1 081	607	423	232	233	70	2 646	6.4
Clothing, etc.	1 355	950	453	350	275	103	3 486	8.4
Health	1 068	655	293	248	192	67	2 523	6.1
Rent	2 224	1 966	774	476	443	131	6 014	14.5
Gas, electricity, fuel ..	342	286	108	69	72	33	910	2.2
Household durables ..	1 391	1 018	527	407	340	105	3 788	9.1
Newspapers, books, etc.	265	182	98	60	44	21	670	1.6
All other goods, n.e.i.	690	528	258	178	152	45	1 851	4.5
Travel and commun- ication	2 449	1 707	915	594	529	178	6 372	15.3
All other services ..	2 117	1 397	674	413	385	124	5 110	12.3
Total	15 968	11 566	5 688	3 851	3 369	1 101	41 543	100.0

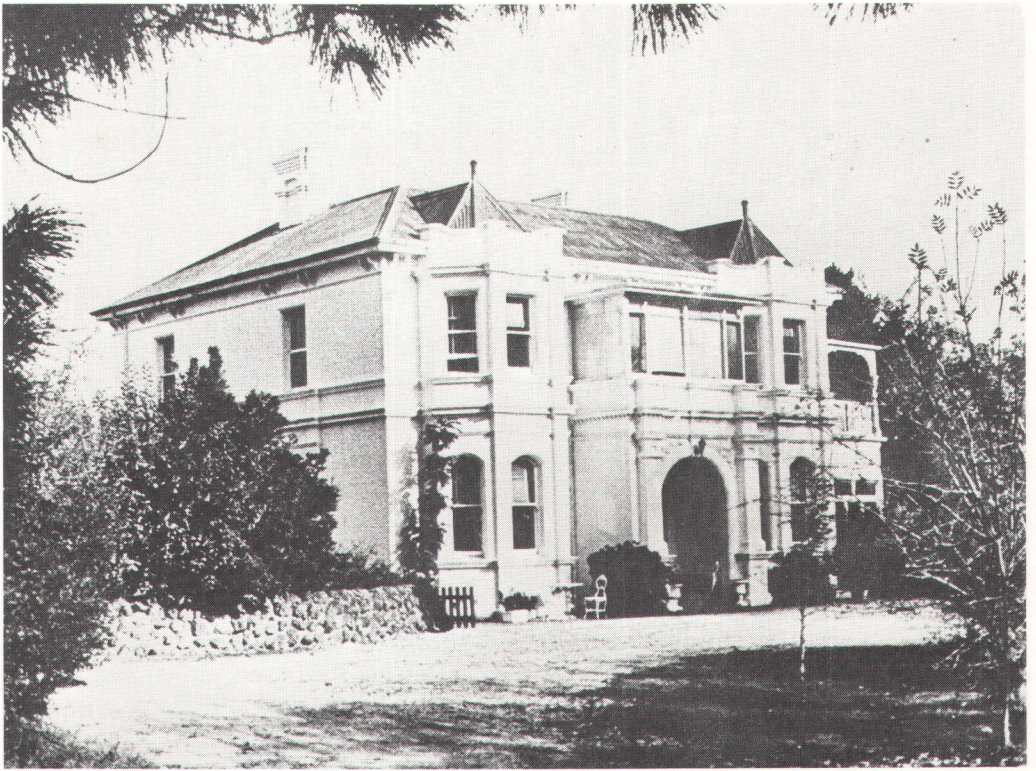
PERCENTAGE INCREASE (OF TOTAL) OVER 1974-75

	16.7	17.7	19.5	21.5	22.2	16.0	(a) 18.2	..
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(a) At average 1966-67 prices, the total for Australia for 1975-76 was \$21 408m, an increase of only 3.1 per cent over 1974-75.

Farm Income: Tasmania
(\$ million)

Particulars	1970-71	1971-72	1972-73	1973-74	1974-75 <i>r</i>	1975-76
Gross value of farm production—						
Wool (including skin wool)	15	18	37	32	24	28
Livestock slaughtering	28	31	44	58	32	34
Grain crops	2	2	2	3	3	2
Fruit	17	14	18	15	16	14
Other crops	18	18	20	29	31	28
Other livestock products	27	29	27	28	34	36
Total	107	112	148	165	140	142
Less Stock valuation adjustment .. ..	..	1	3	-2	..	..
Less Production costs other than wages and depreciation—						
Marketing costs	16	14	18	<i>r</i> 17	17	68
Seed and fodder	9	10	<i>r</i> 15	<i>r</i> 13	16	
Other costs	25	25	28	32	39	
Gross farm product at factor cost	57	62	<i>r</i> 84	<i>r</i> 105	68	74
Less Depreciation	10	10	10	10	10	52
Less Wages, net rent and interest paid and third party insurance transfers	20	20	23	<i>r</i> 29	33	
Farm income	27	32	<i>r</i> 51	66	25	22
Less Farm income of companies .. ..	..	..	2	<i>r</i> 2	1	1
Income of farm unincorporated enterprises	27	32	<i>r</i> 49	<i>r</i> 64	24	21



Andora, south of Evandale

[The Examiner, Launceston]



Brickendon, Longford

[The Examiner, Launceston]



Connorville, near Cressy

[*The Examiner, Launceston*]



Saundridge, near Cressy

[*The Examiner, Launceston*]



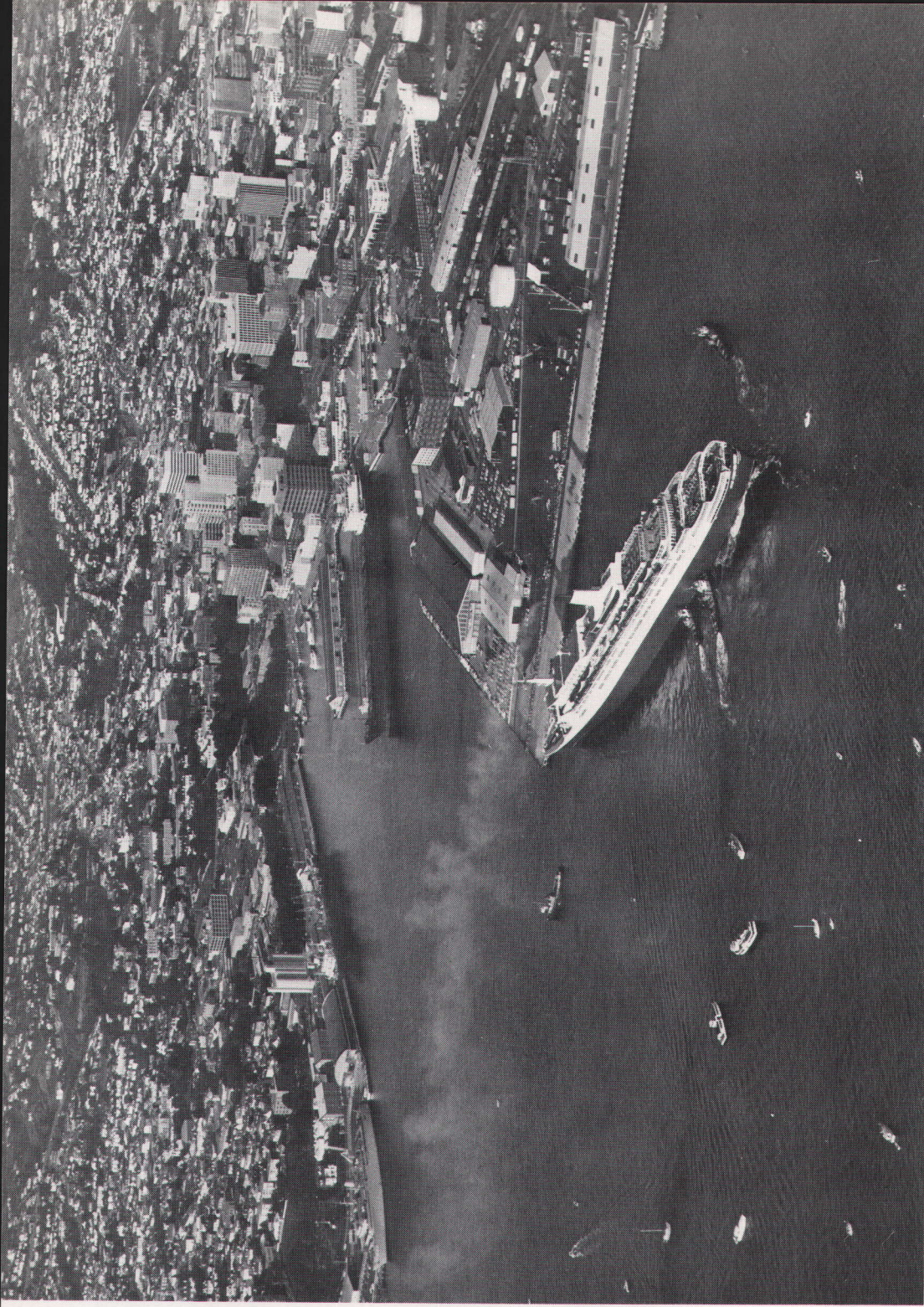
Lake House, south of Cressy

[The Examiner, Launceston]



Carriage at the John Batman celebrations, George Town 3 April 1977

[The Examiner, Launceston]



The 67 000-tonne passenger liner, *Queen Elizabeth 2*, berthing in Hobart on 20 February 1978

HOUSEHOLD EXPENDITURE SURVEY

The 1974-75 Collection

During 1974-75 the Bureau conducted a survey based on a sample of private dwellings in the six state capital cities and Canberra. Trained interviewers were used to collect details of expenditure on major items such as the purchase of vehicles and property and the payment of household accounts (electricity and gas, municipal rates, etc.), and to collect details of income. For other expenditure items, all household members over 15 years of age were asked to record all payments they made over a two-week period (the actual dates varied to give an even spread over the 12-month survey period) in a specially designed diary.

The selected private dwellings included houses, flats, home units, caravans and any other structures used as private residences. Hotels, boarding houses, institutions, etc. were specifically excluded, being outside the scope of the survey. Information was collected on a household basis because many items of expenditure are related to the household rather than to an individual. Such items include food, electricity, household equipment, etc.

Certain categories of households were excluded from the survey. These included foreign diplomats and their staff, overseas servicemen, overseas visitors, visitors staying in the household for less than four weeks after the initial interview and certain residents who were absent at the time of the initial interview or who were leaving within seven days of it. Children under 15 years of age who were away at boarding school or away for less than four weeks were included as members of a household. An estimation procedure was used for households which did not respond.

Definitions

The following definitions apply with respect to the survey:

Expenditure: was defined as all payments for goods and services for private use, made by all members of the selected household aged 15 years and over. In general, expenditure was collected on the basis of payments made during the reference period rather than on the basis of goods and services 'acquired' or 'consumed' during the period.

Other Payments: included payments such as income tax, land tax, life insurance premiums, superannuation contributions, purchases of and deposits on land and dwellings, and gambling payments. Receipts from sales of land and dwellings and gambling winnings are offset against payments. As a result 'Other payments' may appear as a negative value.

Household Income: was defined as gross income from all sources before taxation and other deductions were made, and was collected from all members of the selected household aged 15 years and over. The main components of household income are:

- (i) wages and salaries (including income-in-kind received from an employer);
- (ii) income derived from self-employment (including wages and income-in-kind taken from the business);
- (iii) government social service benefits;
- (iv) income from investments (including interest, dividends, royalties and rent); and

- (v) other regular income (including educational grants and scholarships received in cash, benefits received from an overseas government, income received for professional advice outside the normal job situation, superannuation, workers' compensation, alimony or maintenance, and any other allowances regularly received).

Although information about most types of income was obtained on a current basis, some data, principally incomes from investment and from self-employment, were obtained in respect of the previous 12 months or financial year.

A Household: was defined as a group of people who live together as a single unit in the sense that they have common housekeeping arrangements, that is they have some common provision for food and other essentials of living. A person, or persons, living in the same dwelling but having separate catering arrangements, constituted a separate household.

Adults/Children: Adults are persons aged 18 years and over. Children are persons under 18 years of age.

Persons Working: are those persons aged 15 years and over who reported any 'earned' income (i.e. income from self-employment or from part-time or full-time wage and salary employment). In general, persons who were asked to report 'earned' income were those who worked in a job or business, or received income from a job or business, at any time during the four weeks prior to the interview.

Retired Persons: are those persons who reported no 'earned' income and who described themselves as being retired (e.g. having retired from work for reasons of age or sickness).

Employment Status: All persons aged 15 years and over were classified either as workers or as non-employed persons (e.g. housewife, retired, unemployed, full-time student) on the basis of whether or not they reported 'earned' income.

Limitations

Since the estimates are based on a sample they are subject to sampling variability. In addition to sampling errors, the estimates are also subject to errors in reporting, estimating and processing. Considerable effort was made to minimise such errors and the reliability of the results can be gauged by comparing them with other statistics such as production and retail sales data. From this type of comparison it appears that expenditure was understated on some items, particularly alcohol and tobacco. This is in line with experience in other countries where similar surveys have been carried out.

Because of the extended collection period there may be some distortion as a result of changing money values and relative prices of goods and services.

Final 1974-75 Results

In the lower household income ranges *expenditure and other payments* exceeded *income* as defined. Some households will have financed purchases out of savings or other sources (such as loans and receipts from the sale of assets) which are not included in the definition of income. In the higher income ranges, income exceeded expenditure and other payments.

The following table shows average weekly household income and expenditure by income group for each of the capital cities:

Average Weekly Household Income and Expenditure, 1974-75 r

Capital city	Weekly household income group						
	Under \$80	\$80 and under \$140	\$140 and under \$200	\$200 and under \$260	\$260 and under \$340	\$340 and over	All households
AVERAGE WEEKLY HOUSEHOLD INCOME (\$)							
Sydney	46.13	114.21	168.10	228.81	293.52	466.75	208.12
Melbourne	46.74	113.98	169.66	228.61	293.94	459.30	212.22
Brisbane	49.03	114.06	168.76	228.55	293.05	473.67	197.91
Adelaide	48.60	116.08	168.03	225.45	293.27	433.96	189.24
Perth	48.74	113.83	167.92	227.67	296.59	454.31	192.76
Hobart	50.84	111.43	170.96	231.50	362.61		187.29
Canberra	97.35		170.11	229.81	293.49	451.79	277.37
All capitals	47.36	114.31	168.72	228.34	293.77	461.20	205.92
AVERAGE WEEKLY HOUSEHOLD EXPENDITURE (a) (\$)							
Sydney	59.41	136.73	178.57	218.08	273.40	385.68	200.88
Melbourne	63.34	139.31	165.79	214.59	260.89	407.02	205.30
Brisbane	54.58	123.66	167.15	211.71	246.22	368.42	179.85
Adelaide	68.41	142.60	178.32	207.48	244.77	361.16	183.79
Perth	69.46	120.31	167.76	215.51	255.43	403.05	185.00
Hobart	56.32	110.72	164.31	234.08	325.18		179.30
Canberra	127.37		194.57	220.11	283.62	398.64	266.47
All capitals	61.94	134.27	175.32	215.32	262.97	391.38	197.62
ESTIMATED TOTAL NUMBER OF HOUSEHOLDS ('000)							
Hobart	9.0	10.3	9.7	8.6	10.2		47.7

(a) Includes 'other payments'.

Average Number of Persons Per Household, Hobart, 1974-75 r

Occupants	Weekly household income group					
	Under \$80	\$80 and under \$140	\$140 and under \$200	\$200 and under \$260	\$260 and over	All households
All persons—	1.64	2.56	3.44	3.37	4.02	3.02
Males	0.59	1.21	1.64	1.81	2.05	1.47
Females	1.05	1.35	1.80	1.57	1.96	1.55
Children—						
Under 2 years	0.04	0.15	0.17	0.13	0.10	0.12
2 and under 5 years	0.02	0.22	0.28	0.23	0.16	0.18
5 and under 18 years	0.18	0.47	1.05	0.88	1.21	0.76
Adults—						
18 and under 65 years	0.60	1.51	1.83	2.03	2.47	1.70
65 years and over	0.79	0.21	0.11	0.10	0.07	0.25
Persons working	0.22	0.80	1.39	1.74	2.34	1.31
Retired persons	0.43	0.16	0.04	0.07	0.04	0.15

Average Weekly Household Income and Expenditure, Hobart, 1974-75 r
(**\$**)

Item	Weekly household income group						All Households	
	Under \$80	\$80 and under \$140	\$140 and under \$200	\$200 and under \$260	\$260 and over	All Households		
						Amount	Proportion (a)	
INCOME AND EXPENDITURE								
Average weekly household expenditure—								
Food—								
Bread, cakes and cereals ..	1.87	2.66	3.76	3.69	3.89	3.18	1.7	
Meat and fish ..	4.32	6.38	7.95	8.24	9.97	7.41	4.0	
Dairy products, oils and fats	2.60	3.36	4.34	5.66	5.60	4.30	2.3	
Fruit and vegetables ..	1.99	3.16	4.29	4.53	5.55	3.93	2.1	
Other food	3.73	7.36	9.74	13.46	19.56	10.86	5.8	
Total food	14.53	22.93	30.08	35.59	44.58	29.70	15.9	
Current housing costs (b) ..	9.26	16.82	20.19	27.88	23.84	19.57	10.4	
Fuel and power	2.73	3.26	3.37	5.38	5.10	3.96	2.1	
Alcohol and tobacco	3.25	6.26	6.95	10.94	14.70	8.48	4.5	
Clothing and footwear ..	4.67	9.25	10.75	14.93	26.47	13.39	7.1	
Household equipment and operation	7.53	12.11	10.86	17.89	31.47	16.17	8.6	
Medical care and health expenses	1.53	3.73	4.51	5.33	6.47	4.35	2.3	
Transport and communication	7.85	15.40	21.47	25.44	44.79	23.29	12.4	
Recreation and education ..	4.51	6.16	10.48	12.32	19.21	10.60	5.7	
Miscellaneous goods & services	4.51	8.32	9.14	21.30	35.24	15.85	8.5	
Total expenditure (c) ..	60.39	104.28	127.85	177.04	251.83	145.38	77.6	
Other payments	(c) - 4.07	6.44	36.46	57.04	73.35	33.92	18.1	
Total payments	56.32	110.72	164.31	234.08	325.18	179.30	95.7	
Average weekly household income	50.84	111.43	170.96	231.50	362.61	187.29	100.0	

(a) Per cent of average weekly household income.

(b) Includes principal and interest components of any housing loan repayments but *excludes* outright purchase or deposit on dwellings or land, or other capital payments, which are included in 'Other payments'.

(c) Excludes 'Other payments'.

(d) See earlier section, 'Definitions', for explanation of negative value.

Household Expenditure Survey 1975-76

A further household expenditure survey was conducted by the Bureau in respect of 1975-76. This was not limited to the six state capital cities but covered the whole of each state. The same definitions, concepts and limitations apply as for the 1974-75 survey. However, care should be taken in comparing results of the 1974-75 and 1975-76 surveys because of the difference in geographical coverage and because of the difference in sample sizes. The number of households in the 1974-75 sample for the capital cities was 9 095 (Hobart, 562), whereas in 1975-76 the number of households in the sample for Australia was much lower at 5 869, of which 2 813 were in the capital cities (145 in Hobart). Sample errors can be significant in making inter-survey comparisons.

The following table shows preliminary results from the 1975-76 survey together with 1974-75 survey results for Hobart:

Average Weekly Household Income and Expenditure, All Households

Item	1974-75	1975-76 p		
	Hobart	Hobart	Tasmania	Australia
Number of households in sample	562	145	422	5 869
Estimated total number of households ('000)	47.7	51.3	121.8	164.0
Average number of persons per household	3.02	3.12	3.24	3.09
	\$	\$	\$	\$
Average weekly household expenditure—				
Food—				
Bread, cakes and cereals	3.18	3.61	3.77	3.83
Meat and fish	7.41	8.29	7.88	8.07
Dairy products, oils and fats	4.30	4.83	5.02	5.12
Fruit and vegetables	3.93	4.15	4.18	4.82
Other food	10.86	10.73	10.49	11.81
Total food	29.70	31.63	31.35	33.66
Current housing costs (a)	19.57	21.43	18.33	23.60
Fuel and power	3.96	4.83	4.41	4.00
Alcohol and tobacco	8.48	10.16	9.03	10.28
Clothing and footwear	13.39	18.12	15.01	14.32
Household equipment and operation	16.17	20.81	18.88	17.26
Medical care and health expenses	4.35	4.84	4.45	5.30
Transport and communication	23.29	34.41	35.46	33.68
Recreation and education	10.60	18.05	13.99	15.93
Miscellaneous goods and services	15.85	16.53	13.53	14.47
Total expenditure (b)	145.38	180.84	164.47	172.55
Other payments	33.92	51.46	41.38	49.00
Total payments	179.30	232.30	205.85	221.55
Average weekly household income	187.29	239.47	210.11	225.69

(a) Includes principal and interest components of any housing loan repayments but *excludes* outright purchase or deposit on dwellings or land, or other capital payments, which are included in 'Other payments'.

(b) Excludes 'Other payments'.

INCOME TAX RATES

Introduction

As noted in Chapter 5, income tax was first introduced in Australia in the colony of South Australia in 1884 and by 1915 had been adopted by all state governments and the Federal Government. Uniform income taxation throughout Australia was first adopted in 1942 when the Federal Government became the sole authority levying this tax. This continued until 1977-78 when, under new federal-state income tax sharing arrangements, each state was given the right to impose a surcharge or grant a rebate on personal income tax levied in its state.

This section sets out income tax rates that apply to companies and details of the personal income tax system. (The 1977 *Year Book* included an outline of personal income tax in Australia for the period 1954-55 to 1976-77.)

Taxable Income: Expenses incurred in producing assessable income, certain specified deductions and losses incurred in previous years may be allowable deductions in calculating taxable income.

Company Income Tax

For the income year 1976-77, company tax rates were set at 41 per cent of taxable income for non-profit friendly society dispensaries and 46 per cent for all other companies; the respective tax rates for friendly society dispensaries and other companies were 37.5 and 42.5 per cent for both the income years 1974-75 and 1975-76.

It is noted that the tax payable by companies during the financial year 1977-78 is based on income derived during the year ended 30 June 1977 or substituted accounting period.

Introduction of Trading Stock Valuation Adjustment

The Income Tax Assessment Amendment Bill 1977 inserted a new subdivision—Subdivision BA of Division 3—in the *Income Tax Assessment Act* for the purpose of authorising deductions by way of trading stock valuation adjustments. The broad strategy of the adjustments scheme is to allow taxpayers who carry on a business a special deduction from their assessable income. This is related to the value of specified trading stock on hand at the commencement of the year of income. The deduction is ascertained by applying to the value of that trading stock, a percentage equal to one-half of the percentage increase in the index for the goods component of the Consumer Price Index between the June quarter of the year preceding the year of income and the June quarter of the year of income. The deduction is available in respect of the year of income that commenced on 1 July 1976 and subsequent years. This system was intended to reduce the artificial increase in taxable income due to inflation (and followed release of the Mathews Committee Report on taxation).

Introduction of Personal Tax Indexation

In a statement read to the House of Representatives on 20 May 1976, the Federal Treasurer announced the introduction of full personal income tax indexation from 1 July 1976. Tax indexation was to be applied for income years ending on 30 June on the basis of the percentage change in the consumer price index (for the six state capitals) for the latest year ended 31 March over the preceding year ended 31 March, adjusted to offset the effect of changes in indirect taxes on the index. (The consumer price index number for a year ending 31 March is the average of the four quarterly C.P.I. numbers for that year.) Indexation changes were to be applied in respect of the tax scale (taxable income brackets), the general (minimum) concessional tax rebate, dependant rebates and the maximum separate net income which does not affect dependant rebate levels.

The Rationale For Tax Indexation

The aim of tax indexation is to ensure that income tax, as a proportion of income, remains unchanged from one year to the next for a person whose income keeps pace exactly with price rises as measured by the consumer price index (adjusted to offset the effect of changes in indirect taxes). It therefore ensures that tax remains constant in *real* terms for a person whose income remains constant in *real* terms. (This has not in fact occurred fully under the system adopted in Australia as the indexation provisions have not applied to the maximum limits applying to items of concessional (rebatable) expenditure. Also, with the introduction of indexation for the 1976-77 income year, tax rebates, which had previously applied in respect of dependent children, were abolished. This was offset by significant increases in family allowance payments (see Chapter 15) payable in respect of dependent children but the amounts involved have not been subject to indexation adjustments to take account of inflation.)

Personal Income Tax 1977-78

The Pre-Budget Scheme

For 1977-78, the 1976-77 personal income tax scheme was subject to indexation and the resultant new scales affected P.A.Y.E. tax deductions until February 1978. Another new set of tax scales then came into effect following significant changes to the personal income tax scheme introduced in the 1977-78 Federal Budget.

The initial indexation of personal income tax for 1977-78 involved application of an indexation adjustment of 10.9 per cent to the previously existing tax scales and dependant rebates. This was the change in the consumer price index (six state capitals combined) for the year ended 31 March 1977 over that for the year ended 31 March 1976, adjusted to discount the effect of changes in indirect taxes. (The original price index numbers for the years ending 31 March 1976 and 1977 were 187.7 and 213.2, respectively, giving an increase of 13.6 per cent.)

Indexation raised the general (minimum) concessional tax rebate from \$610 to \$676 (equivalent to concessional expenditure of \$1 690). The maximum amounts of concessional (rebatable) expenditure allowed for residential rates, life assurance, etc. were not indexed.

The new tax scale derived by indexing the 1976-77 tax brackets is shown below:

Pre-Budget Rates of Tax: Individuals, 1977-78 Income Year

Taxable income (a) bracket	Marginal tax rate (b)	Gross tax		Net tax after deduction of \$676 minimum concessional rebate	
		On income in bracket specified in column (1)	Cumulative (i.e. on income shown in column (5))	On taxable income of—	Net tax payable (c) (d) ((4)—\$676)
(1)	(2)	(3)	(4) (c)	(5)	(6)
\$	cents per \$	\$	\$	\$	\$
1 — 2 506	20	501.20	501.20	2 506	..
2 507 — 6 266	27	1 015.20	1 516.40	6 266	840.40
6 267 — 12 532	35	2 193.10	3 709.50	12 532	3 033.50
12 533 — 18 798	45	2 819.70	6 529.20	18 798	5 853.20
18 799 — 25 063	55	3 445.75	9 974.95	25 063	9 298.95
25 064 — 31 329	60	3 759.60	13 734.55	31 329	13 058.55
Over 31 330	65				

(a) Gross income *less*: expenses incurred in earning that income; subscriptions to trade, business or professional association or union; gifts to approved funds or institutions; and deduction (if allowable) in respect of housing loan interest.

(b) Marginal rate payable in respect of each dollar in the range specified.

(c) Payable *if* this system were to apply for full year.

(d) Subject to reduction in tax (if applicable) equivalent to: (i) 40 per cent of total concessional expenditure in excess of \$1 690; and (ii) tax rebates in respect of dependants.

Concessional Expenditure: The previous table shows (column (6)) the tax that would have been payable under the scheme by residents whose circumstances were such that their only tax rebate was the general concessional rebate of \$676 (which applied even if they had *no* concessional expenditure). For taxpayers whose concessional expenditure exceeded \$1 690, the net tax payable would have

been obtained by deducting from the 'Gross tax payable' 40 per cent of the total concessional expenditure. The various items of concessional expenditure are subject to maximum amounts above which they are not rebatable. These limits are not subject to indexation and have remained unchanged since 1975-76. The next table shows the various items of concessional expenditure and the maximum amounts for which rebates apply:

Personal Income Tax: Concessional Expenditure 1975-76 to 1977-78

Particulars	Maximum rebatable expenditure
	\$
Rates and land taxes on principal residence	300
Medical, dental, optical, etc. expenses (a) (b)	no limit
Funeral expenses (a)	100
Life insurance premiums and superannuation contributions (c) ..	1 200
Education expenses (d)	250 (per student)
Self-education expenses	250
Adoption expenses	no limit
Calls paid on shares in afforestation companies	$\frac{1}{3}$ amount paid

(a) In respect of a resident taxpayer and/or his 'dependants' who are residents.

(b) Net of refunds; excluding health insurance costs.

(c) For benefit of the taxpayer, or the spouse or child of the taxpayer.

(d) In respect of taxpayer's child or other dependant under 25 for whom the taxpayer is entitled to a rebate or notional rebate.

Dependant and Sole Parent Rebates: These are 10.9 per cent above those applying for 1976-77 and they reduce the tax payable after the reduction made for the concessional rebate. They are set out in the table below:

Dependant and Sole Parent Rebates, 1977-78

Dependant	Maximum tax rebate (a)
	\$
Spouse or daughter-housekeeper	555
Housekeeper (b)	555
Parent or parent-in-law	501
Invalid relative	251
Sole parent (c)	388

(a) Reduced proportionately if dependant was only dependent upon the taxpayer for part of the year. Each dependant rebate except the sole parent rebate is reduced by one dollar for every four dollars the dependant's separate net income exceeds \$189.

(b) Allowable, subject to certain other conditions, only if no daughter-housekeeper rebate claimed.

(c) Allowable to a sole parent if neither a daughter-housekeeper nor housekeeper rebate is claimed.

Changes to the Scheme

The 1977-78 Federal Budget (introduced on 16 August 1977) included provisions for significant changes to the personal income tax system. A new rate scale was introduced which was used as the basis for calculating P.A.Y.E. deductions from 1 February 1978. The general concessional rebate of \$676 was abolished and the only concessional expenditure to attract a rebate was that in excess of \$1 590

at a reduced rate of 32 cents in the dollar. The maximum amounts that could be included as concessional expenditure for various allowable types of expenditure remained unchanged (see an earlier table for details). Rebates for dependants, and the sole parent rebate, remained unchanged (as shown in an earlier table).

The next table shows the new tax scales applying from 1 February 1977 together with details of tax payable *if these rates were to operate for a full year*:

New Rates of Tax Applying from 1 February 1978 (a)

Taxable income (a) bracket	Marginal tax rate (b)	Gross tax (c)	
		On income in bracket specified in first column	Cumulative (i.e. on higher figure in first column) (d)
\$	cents per \$	\$	\$
1 — 3 750 .. .. .	..	..	3 920
3 751 — 16 000	32	3 920	3 920
16 001 — 32 000	46	7 360	11 280
Over 32 000	60	..	..

(a) Gross income *less*: expenses incurred in earning that income; subscriptions to trade, business or professional association or union; gifts to approved funds or institutions; and deduction (if allowable) in respect of housing loan interest.

(b) Marginal rate payable in respect of each dollar in the range specified.

(c) Gross tax applicable *if* the rates specified were to apply for a full year.

(d) Subject to reduction (if applicable) by: (i) 32 per cent of total concessional (rebatable) expenditure in excess of \$1 590; and (ii) tax rebates in respect of dependants.

Effective Rates of Income Tax, 1977-78

Taxable income (a) bracket	Marginal tax rates (b)	Gross tax	
		On income in bracket specified in first column	Cumulative (i.e. on higher figures in first column) (c)
\$	cents per \$	\$	\$
1 — 3 402 .. .. .	..	..	..
3 403 — 3 750	27.000	93.96	93.96
3 751 — 6 266	29.085	731.78	825.74
6 267 — 12 532	33.749	2 114.71	2 940.45
12 533 — 16 000	39.579	1 372.60	4 313.05
16 001 — 18 798	45.417	1 270.77	5 583.82
18 799 — 25 063	51.247	3 210.62	8 794.44
25 064 — 31 329	54.162	3 393.79	12 188.23
31 330 — 32 000	57.077	382.99	12 571.22
Over 32 000	62.915	..	..

(a) Gross income *less*: expenses incurred in earning that income; subscriptions to trade, business or professional association or union; gifts to approved funds or institutions; and deduction (if allowable) in respect of housing loan interest.

(b) Marginal rate payable in respect of each dollar in the range specified.

(c) Subject to reduction (if applicable) by: (i) 32 per cent of total concessional (rebatable) expenditure in excess of \$1 590; and (ii) tax rebates in respect of dependants.

The August 1977 Budget provided for full automatic indexation of the tax rates to continue except for the year 1978-79 when transitional arrangements were to apply. On 1 July 1978, the tax rates shown in the first table on the previous page were to be indexed by half the factor provided from application of the annual indexation rules. However, dependant rebates were still to be indexed by the full factor.

Income Tax Assessment, 1977-78: The personal income tax system applying for 1977-78 is a composite of tax rates for the pre-Budget scheme (with a weight of seven twelfths) and the new system applying from February 1978 (with a weight of five twelfths). Dependant rebates are unchanged and the new provisions relating to concessional (rebatable) expenditure apply (a rebate of 32 per cent of total concessional expenditure in excess of \$1 590, subject to the previously existing limits on individual items). The last table sets out the composite tax rates that apply for the 1977-78 income year together with details of tax payable.

PLANNING IN TASMANIA

Introduction

This section contains summaries of the Draft Report on a State Strategy Plan for Tasmania completed in December 1976 and the Report of the Callaghan Inquiry into the Structure of Industry and the Employment Situation in Tasmania published in September 1977. An article on the new Department of Planning and Development, established on 1 July 1977, follows this section.

The two reports and establishment of the new Department show an increased importance being placed on planning in the State. The Treasury Department remains an important source of economic advice for the State Government with respect to forward planning but other sources of advice have gained increased significance. The importance of town planning was recognised in 1944 with the passage of the *Town and Country Planning Act*. (The section 'Planning Authorities' in Chapter 4 outlines the functions of the Town and Country Planning Commission (which was incorporated as a Division of the Department of Planning and Development from July 1977) and of the three regional Master Planning Authorities—Southern Metropolitan, Tamar and North-West.) A recent development was the appointment of the Director of the Cabinet Office in August 1977 (the appointment was taken up in November 1977). The Director's role is to co-ordinate the preparation of reports and submissions to Cabinet on matters referred to him by the Premier. The Cabinet Office was to operate using ad-hoc committees and task forces staffed by officers seconded from other departments and agencies and, where necessary, outside experts. The Cabinet Office was to monitor and review Government policies to ensure that they are properly co-ordinated and designed to achieve their overall objectives.

State Strategy Plan for Tasmania

Introduction

A State Strategic Development Study program was initiated in April 1974 by an exchange of letters between the Prime Minister and the Premier. Funded wholly under the *Growth Centres Act 1973*, the Study had four stated objectives:

- (i) To identify future growth areas in Tasmania, within the context of a State development program.
- (ii) To formulate policy guidelines for integrated development of the State on a regional basis.
- (iii) To resolve major conflicts between the competing requirements of development and conservation in the best interests of the community.
- (iv) To help the State improve its planning resources.

The work program and the disbursement of funds was supervised by a Federal/State intergovernment Steering Committee, comprising officers of the Federal Government, senior officers of the Tasmanian Government and representatives of the regional master planning authorities.

Early work on the program was undertaken by consultants and the regional master planning authorities who prepared information and undertook research studies needed before planning work could proceed. During 1975, a small task force of planners was assembled and work on the preparation of a Strategy Plan for the State commenced.

A draft report on the study was completed by the State Strategy Plan Task Force in December 1976 and was tabled in Parliament in March 1977. The following summary presents the major findings and recommendations of that draft Report. It is not possible in this summary to discuss all the recommendations presented in the draft Report and readers are referred to the Report itself for a fuller discussion of the issues raised.

Population

The starting point for the recommendations found in the Strategy Plan Report is an analysis of expected changes in the size and composition of the Tasmanian population. From an assumed population base of about 406 600, the estimated capacity for natural increase was 36 700 by 1986. This was only expected to occur if the persistent loss of population through outward migration could be overcome. A fundamental change in the age distribution of the population is predicted in the Report. The size of the 20-45 year old age group was predicted to grow by 35 000, while the number of persons under the age of 20 was predicted to decline by 7 600.

The Report reached the conclusion that the achievement of the potential population growth for Tasmania in the next 10 years will depend on the creation of sufficient employment to discourage net outward migration and the accompanying harmful economic effects which may result. This is particularly important for the 20-45 year old age group whose impact on the economy is significant, due to its greater demand for housing and other goods and services.

Labour Force and Education

The growth of the labour force is more difficult to predict and will be affected by the role of post-secondary education and the degree of participation by women in the labour force. The Report suggested that a population growth of 40 000, together with the reduction of unemployment to 2 per cent of the work force, would require the creation of 35 250 jobs.

Alternatively, the State could create an additional 5 000 to 10 000 places in post-secondary education and encourage the formation of an additional 30 250 or 25 250 places in the work force. On a per capita basis, there were fewer people engaged in post-secondary education in Tasmania in 1975 than the national average, so it is possible to argue that more aid should be provided for the education of Tasmanian residents. Although 2 500 additional educational places were created in the past five years, not all Tasmanian students can find suitable post-secondary education here and many are forced to move to other states to attain the qualifications they desire. The Report suggests that the Government should seek to expand the number of educational places in particular fields of study, for example forestry, tourism or mining technology, in which Tasmania could specialise.

Analysis of the composition of the work force revealed that the Federal Government was under-represented as an employer in Tasmania, while the State Government's role as an employer was greater than the national average. This suggested that the State Government should resist the temptation to expand its own work force but should actively seek the transfer to Tasmania of suitable Federal Government activities.

In the period from 1971 to 1975 nearly 12 000 jobs were created in Tasmania, 4 900 in community services and 4 200 in entertainment. During the same time 2 700 jobs were lost in manufacturing, and this trend has continued since 1975. Thus the emphasis for employment creation must be to halt or reverse the trend of job loss in manufacturing and to further encourage the service sector of the economy.

Housing

The second chapter of the Report deals with the housing needs of the Tasmanian population and the pattern of urban growth. In the last few years there have been significant changes in the processes of household formation. This is indicated by the overall reduction in average occupants per dwelling. More particularly, the average number of adults (persons over 20 years old) per occupied dwelling has dropped from 2.20 in 1966 to 2.05 in 1976. At the same time there has been a tendency for the proportion of unoccupied dwellings to increase, mainly due to the increasing ownership of holiday homes. If, in the next decade, the population increases by about 40 000 and the trends outlined above continue, the building industry will be hard-pressed to supply the 42 000 new dwellings which will be required. If, on the other hand, the average number of adults per dwelling stabilises at the present level, then 30 000 new dwellings would be required over the next 10 years. The Tasmanian building industry currently builds about 3 500 dwellings per year; a reduction in demand below this figure would be felt not only in the building industry but in many other sectors of the Tasmanian economy.

The Report considers not only the number but also the type of dwellings which might be built in the next 10 years. An increase in the number of single adult households would be likely to result in the construction of a greater proportion of flats and units. Since flats require less land than houses the number of serviced blocks required will differ only slightly whether 30 000 or 42 000 new dwellings are constructed. It was recommended that the Government encourage the efficient use of water and sewerage infrastructure by ensuring that the development of flats and units occurs at locations within urban areas which already possess excess capacity in water and sewerage systems. Regional authorities should identify such areas. Those areas suitable for urban expansion which can be serviced most cheaply (subject to social and environmental constraints) should also be identified and nominated as preferred development areas. Three categories of land should be established within preferred development areas: land for immediate use; land for later development; and land to be held in reserve in case local demand exceeds expectations. On a State-wide basis there should be about 13 000 residential blocks in each category, apportioned between the Hobart (6 000 blocks), Tamar (4 000) and North-West (3 000) urban areas.

The Report recommended that regional planning authorities should also examine the capacity for growth in holiday home areas which are already serviced. In addition it suggested that a survey of coastal features was urgently required. Such a survey should identify areas which are environmentally vulnerable and, conversely, those areas where residential development would have minimal environmental impact. It was recommended that a management plan for coastal holiday home development be prepared on the basis of such studies.

Transport

In the area of transport the Report recognised three particular areas of concern. These were related to tourism, urban development and transport research. The promotion of the Tasmanian tourist industry requires regular, reliable and cheap passenger services across Bass Strait. The Report recommended that the State Government press for a modification of the two-airline policy by all possible legal and political means. The aim would be to create conditions favourable to the operation of a shuttle service with substantial fare reductions during off-peak periods.

Recognising that urban development is shaped by the provision of services, including sewerage, water and roads, the Report suggested that road development plans should be co-ordinated with plans for preferred development areas. A transport planner should always be included on the staff of any strategic planning group to examine these and other issues. In addition, given the complexity of the transportation problems facing this State, the Report recommended that a transport research group should be established, either within a restructured Department of Transport or at the University of Tasmania.

Natural Resources

A major concern of strategic planning is the management and conservation of the State's resources. These resources include not only those of economic significance such as forests or minerals, but also the environmental and cultural resources which contribute to the quality of living in Tasmania.

The Report expressed concern at the depletion of forest resources on private land and the inadequate area of forests represented in State Reserves. It recommended the protection of the best agricultural land from urban expansion and the rehabilitation of land scarred by extractive industries. It also suggested that the fishing industry was fully exploiting two important species and that diversification of the industry was essential. In the light of extensive modification of many Tasmanian lakes and rivers the identification and preservation of examples of the natural aquatic ecosystem were required. Similarly, the State Reserve system should protect examples of the whole range of plant and animal habitats found in Tasmania. These activities would require funding for a thorough program of research, acquisition and management.

Welfare and Social Development

Another major concern of the Strategy Plan Draft Report was the welfare and social development of the Tasmanian population. The Report examined changes in the size of seven broad age groups and the implications of these changes on the provision of services and facilities.

The number of infants (under five years of age) was estimated to remain approximately the same but additional services, such as child health clinics, creches and kindergartens, would nevertheless be required to remedy deficiencies which already existed or which would emerge in developing areas. The number of school children, however, was expected to fall by nearly 6 000 during the next 10 years. Although new schools will still be required in developing areas, the Report suggested that opportunities will arise to service a greater range of community needs from educational facilities which become under-utilised. The Report noted that, although the number of 15-19 year olds will decrease in the coming decade, increased participation in secondary and post-secondary education will create a continued demand for these services.

As mentioned earlier, the largest change will occur in the size of the 20-34 year old age group. This group will be likely to require employment counselling and retraining due to anticipated difficulties in obtaining promotion. An increase in the demand for supporting services for single parents and working mothers can also be expected. Older adults aged 45-64 are likely to express the need for more recreational and educational opportunities than in the past. This would be associated with greater leisure time and disposable income than before, related to a reduction in family size and the departure of children from the home at an earlier age.

The number of aged persons was expected to increase considerably in the next 10 years. As a consequence, the need for suitable housing, and domiciliary and geriatric services would increase. The provision of recreational and transport facilities would also require greater involvement by government and voluntary organisations.

The Report recognised the importance of voluntary organisations but suggested that they could be strengthened by a co-ordinated program of financial assistance. It also suggested that regional planning authorities have an important part to play in assessing the need for social facilities and services at the local level. From this assessment, social facility plans should be prepared which relate the provision of community services to the proposed preferred development areas. In preparing such plans the regional planning authorities should be advised by Councils for Social Development which have already been established in the various regions.

Future Planning

The final recommendations of the Report were directed to the scope and direction of strategic planning in the future. Generally, it was considered that strategic planning should be wide in its scope but narrow in its involvement with detail. It should be more concerned with what must be done rather than how it is done. The Report suggested that the principles of corporate planning could be applied to the working of government. However, the overriding aim would not be one of profitability, as in private enterprise, but in achieving the best possible results from government expenditures and the best use of the public assets of the State—physical, environmental and social. Three functions are delineated within the ambit of strategic planning: the achievement of co-ordinated government action; the evaluation of information and consequent advice to government; and the involvement of city, municipal and other representative bodies in the planning process.

To achieve a greater degree of co-ordination the Report proposed the establishment of a State Planning Co-ordination Council to advise Cabinet on matters of economic, environmental and social importance to the Tasmanian population. The information and research needs of this Council were to be serviced by a Strategic Planning Group consisting of researchers skilled in appropriate fields. This group should contain staff who are regularly rotated by secondment to and from other State and Federal authorities and from tertiary educational institutions and enterprise in the private sector. Regional planning authorities were also considered to have a significant role to play in advising government on local needs and in involving local communities in the planning process. Because of this role the Report recommended the strengthening of regional planning authorities through financial and staff support from the State Government.

The final section of the Report presented a review of work carried out for the Strategy Plan. This work was documented in numerous working papers and consultant reports. Each report or paper is reviewed and its main findings are presented in the Report.

Some of the proposals made in the draft State Strategy Plan had already been acted upon by the Government by October 1977. Perhaps the most significant recommendation in terms of future strategic planning was the setting up of a State Planning Co-ordination Council which was subsequently implemented. Among the first tasks of this Council would be a review of the recommendations contained in the draft State Strategy Plan Report and suggestion of methods for their implementation.

The Callaghan Inquiry

Introduction

At about the time of presentation of the draft State Strategy Plan to State Cabinet late in 1976, the Prime Minister of Australia honoured a promise made when on a pre-election tour of Tasmania. He commissioned Sir Bede Callaghan C.B.E., to make a swift one-man 'Inquiry into the Structure of Industry and the Employment Situation in Tasmania'. The terms of reference were very wide-reaching.

Sir Bede presented his preliminary pre-Budget report in May 1977 to the Federal Minister for Industry and Commerce. By September the full report was available to the public (through Australian Government Publishing Service bookshops).

This timing coincided with an Industries Assistance Commission investigation of the Textile Industry which concerned the Launceston mills. The Joy Report on the future of the Government Railways became available before submissions were heard in Hobart. The Everett Inquiry into private forestry was in progress during most of the period (see summary in Chapter 8). Towards the time of final reporting decisions were announced denying air freight subsidies and specifying subsidy levels on south-bound sea freights for certain commodities. Arguments about the need for this assistance, which had been recommended by the Nimmo Commission of Inquiry into Transport to and from Tasmania (a summary of the Report is included in the 1977 *Year Book*), featured in many submissions to Sir Bede. The House of Representatives Select Committee on Tourism had scheduled its Hobart public hearings for May 1977.

Uncertainties resulting from this plethora of current investigations obliged Sir Bede Callaghan to tread carefully to avoid coming to inadequately researched contrary conclusions in specific areas. His own research was completed during a period of industrial recession, inflation and unemployment. Understandably, the Report took a less sanguine view of the State's future prospects than did the State Strategy Plan.

Ironically and typically, during the period of public submissions to Sir Bede, Tasmanian rates of unemployment, though high, were exceeded by official Commonwealth Employment Service (C.E.S.) figures for the states of Queensland and N.S.W.

Findings and Recommendations

The implied assumption underlying the State Strategy Plan was that it is possible and desirable to prevent out-migration of population from the island. However Sir Bede Callaghan stated: 'Any hope of stemming the new outflow . . . will have to come from attracting . . . immigrants' (he claimed that many Tasmanians leave for non-work reasons). 'This would be extremely difficult, unless there are major changes in Tasmania's natural advantages (e.g. significant mineral discoveries) given the momentum of the State's relative decline in population, the transport difficulties and the difficulty of even retaining present employment.'

Although State Strategy Plan working papers were available to Sir Bede's largely non-Tasmanian secretariat, his basic conviction expressed above, that long-term trends were unlikely to be reversed, was also seen in his use of one of the population estimates from the National Population Inquiry (Borrie Report) in which the prediction of Tasmania's population for the year 1996 is 455 700, or around 2.7 per cent of Australia's then population, compared with the 1976 proportion which was 2.93 per cent. This relative decline assumes a continuation of the long-term trend of net out-migration which he traces back as far as census figures for 1881.

Because this was a time of unprecedented report writing by others on specific aspects of the State, Sir Bede confined himself to a largely uncontroversial overall descriptive and statistical profile of Tasmania.

He took issue with the popular assumption about the rightness of that population decentralisation which he found and that present-day Tasmanians counted as virtue but which they inherit from the accidents of geography and colonisation. Concerned about this, he pointed out not only the greater vulnerability to overseas demand fluctuations inherent in Tasmania's concentration of manufacturing employment at a few large plants around the State; but he drew attention to the dependence of whole communities upon the fortunes of those few factories which had been attracted by the successful 'power strategy' of past decades.

From the point of view of plant operating costs he repeatedly underlined the expense to management and government that the provision or non-provision of specialist services all round the State entailed. The alternative was to make them collectively available in a single viable industrial community. Such a city would have economies of scale adequate enough to sustain growth but yet, being in Tasmania, would still be well below the size of the environmentally-problematic Mainland metropolises.

To correct the observed size imbalance in manufacturing units, he specifically urged the setting up of a serviced industrial estate for small and medium sized producers by the State Government. Tactfully avoiding taking sides on contentious issues involving provincial loyalties, Sir Bede generally left such matters as specific locations or municipal amalgamation to the State Government. On this particular issue he concurred with the State Government submission which suggested Launceston as the site for a pilot estate on account of the need for the structural adjustment made apparent there by unemployment within the textile industry and the threatened run-down of the railway workshops.

Referring to the role of government in preventing Tasmania from becoming as relatively depressed an appendage of the Mainland as Newfoundland or Ireland, respectively, the Report urged the Federal Government to locate a more equitable proportion of its own direct work force in Tasmania. He suggested it could at least be raised to the equivalent ratio of the total work force as in the other states. In view of the obvious absence of full-time defence forces from the island he suggested that the transfer of the Antarctic Division to Tasmania could be supplemented by the establishment of an army training battalion base.

The Report implied that the State Government administration would benefit from some sort of efficiency investigation.

Other suggestions, like the need for a tourism survey to augment the meagre data on visitors, had in fact been acted upon by the time of publication.

Perhaps one of the most useful aspects of the Report lies in the 49 tables which form a statistical annexure. They comprise a comparison between Tasmania and the rest of the Commonwealth over time, and contain hitherto unpublished economic accounting and interstate migration figures.

THE DEPARTMENT OF PLANNING AND DEVELOPMENT**Introduction**

On 12 May 1977 the Premier announced that a new Department of Planning and Development would be established. Its principal aim was to be the co-ordination of all aspects of Tasmania's economic and industrial development. The Premier made it clear that the Government would make the final decisions in relation to the long term planning of the State. Such decisions would be removed from the bureaucratic level with Cabinet filling the role of final decision maker.

The new Department came into being on 1 July 1977 under Mr P. M. Sinclair, appointed as Director-General. It incorporated the previously existing Directorate of Industrial Development and Trade, the Town and Country Planning Commission and the Immigration section of the Department of Tourism and Immigration (now the Department of Tourism). It consists of four major Divisions and several other responsibilities. A single administrative section caters for the requirements of all divisions. At the end of October 1977, the Department had a total staff of 51 (Town and Country Planning, 16; Industrial Development and Trade, 5; Economic Research, 4; Immigration, 3; Administration and other, 23).

The four main Divisions—Town and Country Planning, Industrial Development and Trade, Immigration and Economic Research—and their functions are outlined below.

Division of Town and Country Planning

This Division has the same functions and statutory responsibilities as existed when it was a section of the Premier's Department. The Commissioner of Town and Country Planning, Mr Lyneham, retains all the statutory responsibilities which he held previously, with the addition of the position of Executive Director of the State Planning Co-ordination Council. (The Town and Country Planning Division's functions are outlined in greater detail in Chapter 4.)

The effect of the inclusion of this Division in the new Department will be to enable a greater cross-fertilisation of ideas to occur between it and the Division of Industrial Development and Trade. This exchange of views was expected to lead to both divisions being more effective in the area of long term planning for the State as a whole.

It was planned that those officers of this Division involved in the State Strategy Plan would work in close consultation with the Division of Economic Research.

Division of Industrial Development and Trade

This Division retains the same functions as those previously held by the former Directorate of Industrial Development and Trade, with three changes: (i) the Research Section of the old Directorate became a separate division; (ii) a new Small Business Section was formed; and (iii) a State Division of the Industrial Design Council of Australia was to be formed.

Reliance on media advertising as a major part of Tasmania's marketing was drastically altered to a system of personal contact during 1976-77. This change led to a major increase in awareness that the Division existed and to a large increase in its work load.

Small Business Bureau

By setting up the Small Business Bureau, the Government believed that it would fulfil a need which was becoming more and more apparent. The Division works in close consultation with the Commonwealth and all other states in formulating policies and guidelines for the establishment of Small Business Bureaux all over Australia.

Consultations with associations and institutes involved in commercial enterprise were to be held so that a suitable program of regular consultation and co-operation could be evolved.

It was proposed to appoint two small business counsellors in the Department, both of whom should have training and experience in financial matters. Experience in other states has shown that the majority of queries coming to small business counsellors involve financial matters. It is also intended to compose a directory of contemporary and retired executives living in the State so that on-the-spot advice can be given when problems arise.

Industrial Design Council

A Steering Committee has been formed to establish the Tasmanian Division of the Industrial Design Council of Australia.

Promotion of Industrial Development

Within Tasmania, the Division is a focal point for liaison between private enterprise and Government. It co-ordinates the activities of Government to facilitate implementation of industrial proposals, bringing the two sectors together through its day-to-day activities. Local and overseas interests are also brought together through the activities of the Division and an officer is based in London to establish opportunities for the development of Tasmanian industry and trade in the United Kingdom and Europe.

Encouragement of the establishment and growth of manufacturing industries and promotion of the export of goods made in Tasmania involves: (i) research and investigations; (ii) liaison with other government instrumentalities; (iii) publicity and promotion; (iv) financial assistance; and (v) trade promotion.

Research into such matters as the availability of labour, provision of services, suitable water supplies, transport facilities, extent of the market and other matters of economic importance is carried out. This has enabled the Division to supply much information in response to specific inquiries. It can utilise research facilities of government instrumentalities in order to examine technical aspects of a project.

Publicity and Promotion: Modern promotional techniques are used to create interest in opportunities offered within Tasmania. Through the preparation of research reports and the collation of data, the Department is able to advise foreign industrialists on the advantages of investing in Tasmania. It assesses the needs of particular industries and the prospects which exist for further development within the local industrial environment.

Financial Assistance: In certain circumstances, the Government offers some direct forms of assistance such as the purchase of land and the building of factories for lease or sale, and the provision of loans. Also, guarantees may be given as collateral security under certain circumstances. (The Agricultural Bank of Tasmania, operating under the provisions of State Acts, also provides finance to prescribed industries manufacturing or processing rural or fishery products.)

Trade Promotion: Trade Promotion involves stimulating buyer interest in Tasmanian goods. Main activities include: analysis of the market; studying methods of distribution and presentation of goods made in Tasmania; improvement of quality standards; and liaison between Tasmanian producers, overseas importers and government instrumentalities.

The Government organises and financially supports some major promotional events, e.g. trade missions, exhibitions, special newspaper supplements, etc. Generally, through the Division, it avails itself of modern promotional techniques to create interest in the opportunities and products offered by Tasmania.

Division of Immigration

When the new Department was formed it was felt that immigration should be an integral part of Tasmania's future planning and development and it was, therefore, made part of the Department.

It was appreciated that the major responsibility for immigration rests with the Federal Government but the states still have a major role to play both from a direct point of view involving immigration from the United Kingdom and indirectly in advising the Federal Government on aspects which are peculiar to this State.

Division of Economic Research

This Division is primarily the research section of the old Directorate of Industrial Development and Trade. Its officers now work closely with their colleagues in the Town and Country Planning Division involved in the State Strategy Plan.

Another function of this Division is to advise other divisions of the Department and the Government on any specific economic investigations which may be required. Rather than conflict with the economic advice now presented to the Government from Treasury sources, it was intended that the Division add to this input the broader scope of economic advice drawn primarily from industry and commercial sources throughout the State.

State Planning Co-ordination Council

One of the major indirect responsibilities of the new Department is executive responsibility for the State Planning Co-ordination Council. The Council comprises the following members (the names of members as at 31 October 1977 are shown in brackets): The Premier (Hon. W. A. Neilson); The Deputy Premier (Hon. D. A. Lowe); The Minister for Education (Hon. N. L. C. Batt); The Commissioner of Town and Country Planning (Executive Director) (Mr N. L. Lyneham); The H.E.C. Commissioner (Mr R. Ashton); The Director of Environmental Control (Mr J. Pottinger); The Chief Commissioner of Forests (Mr P. Unwin); The Director of Main Roads (Mr G. E. C. McKercher); The Director of Lands (Mr D. T. Doyle); and The Director-General of Planning and Development (Mr P. M. Sinclair).

At the time of formation of the State Planning Co-ordination Council in mid-1977, the Premier announced that a committee of leading industrialists and other members of the community would be formed to act as a sounding board for Government policy. The members of this committee were to be drawn from all areas of the State and were expected to contribute wide and diverse knowledge and experience.

The Premier was to chair both committees and was the only individual common to both. It was his stated intention to use the State Planning Co-ordination Council as a review body for Government policy. The Council was to remain as an informal discussion group so that he could obtain the broadest advice possible.

Publications

A full-time Publications Officer is responsible to the Director-General for production of Department publications. A number of special publications and reports relating to Tasmanian industry are produced from time to time. Seven editions of *Tasmania, A Businessman's Handbook* were published during the period 1960 to 1975. The first edition of the *Tasmanian Manufacturers Directory* was published in August 1977.

TOURISM

This section, apart from the 'Tourist Industry' and 'Tourist Accommodation Statistics', has been contributed by the Department of Tourism.

Introduction

In that it is an island, with relatively short distances separating population centres, Tasmania is unique among the Australian States. The populated areas of the State are serviced by a main road network of a high standard and in addition, the scenery and topography (see also the section 'Physiography' in Chapter 2) is fascinatingly varied. Without travelling for any great distance one can encounter long white beaches, coastal heaths and sand dunes, dense rain forests, rugged mountains, alpine moors and snow country, undulating hill country, fertile river valleys, numerous lakes and rivers, lush green pastures, orchards, convict ruins, many fine examples of early colonial architecture and extensive hydro-electric developments. Angling, bushwalking and caverneering are strong attractions for enthusiasts. As a result, tourism is of great importance to Tasmania and is vigorously promoted.

Visitors to the State

During 1976-77, more than 500 000 paying passengers travelled to Tasmania, including about 150 000 returning Tasmanian residents. Over the past four years, monthly passenger arrivals have conformed to a marked seasonal pattern, distinguished by an accentuated trough in July, a major peak in January, and minor peaks in October and April.

Excluding returning Tasmanians, it is estimated that of the some 350 000 visitors travelling to Tasmania each year, around 200 000 come purely for holiday purposes. The remainder, who visit the State for other reasons, often extend their stay by several days to enjoy Tasmania's tourist attractions. The average length of visit is approximately ten days.

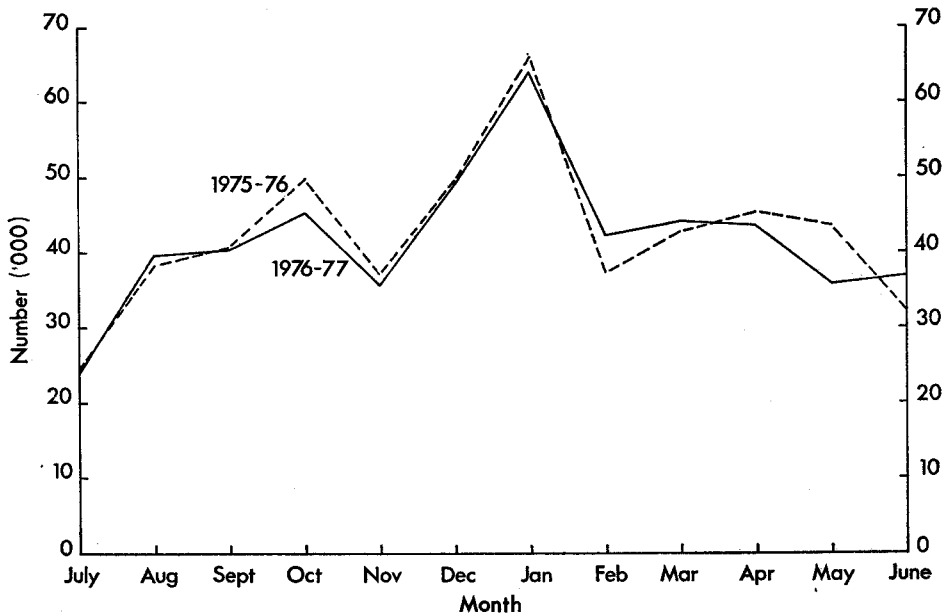
Approximately 60 per cent of visitors (around 210 000) enter Tasmania via the main northern points of entry—Wynyard, Devonport and Launceston. A popular form of holiday is to travel around the State via the north coast, east coast, Midlands, Derwent Valley and west coast highways. The next table shows passenger arrivals dissected by month and port of entry for 1976-77.

Passenger Arrivals, 1976-77
(Source: Department of Tourism)

Month	Port of entry								Total
	Hobart	Launceston	Wynyard	Devonport			King Is.	Flinders Is.	
				Air	Sea	Total			
July	(a) 10 483	6 473	2 557	2 068	1 967	4 035	292	..	(b) 24 096
August	16 125	11 884	3 222	3 316	4 429	7 745	647	51	39 674
September	17 061	11 845	3 714	3 588	3 743	7 331	502	38	40 491
October	19 886	12 507	3 942	2 951	5 464	8 415	561	45	45 356
November	13 704	10 723	3 050	2 602	5 053	7 655	418	30	35 580
December	17 802	14 946	4 322	4 912	6 395	11 307	672	156	49 205
January	23 747	22 081	5 303	6 577	5 276	11 853	861	165	64 010
February	16 227	13 079	3 378	3 718	5 250	8 968	532	74	42 258
March	18 282	13 892	3 069	3 255	5 267	8 522	510	73	44 348
April	16 665	13 238	3 682	3 800	5 678	9 478	561	77	43 701
May	14 244	11 148	2 682	2 237	5 102	7 339	391	73	35 877
June	16 296	10 410	3 440	2 888	3 397	6 285	597	56	37 084
Total	200 522	152 226	42 361	41 912	57 021	98 933	6 544	838	(b)501 680

(a) Includes 47 passengers via the *Australian Trader* from Sydney to Hobart.
(b) Includes 256 passengers from Sydney to Bell Bay and Burnie.

Passenger Arrivals, Tasmania, 1975-76 and 1976-77



During 1976-77, the Australian National Line carried 15 344 motor cars and campervans, 687 caravans and trailers and 57 324 passengers from the Mainland to Tasmania, almost all the traffic being between Melbourne and Devonport. These figures are lower than those for the previous year, as the *Australian Trader* was taken off the Sydney-Tasmania run in July 1976, leaving only the *Empress of Australia* in operation.

Bass Strait Vehicle and Passenger Sea Traffic: Melbourne to Devonport 1976-77

Month	Motor vehicles	Caravans and trailers	Passengers
July (a)	563	22	1 967
August	1 131	56	4 429
September	1 054	66	3 743
October	1 442	95	5 464
November	1 400	45	5 053
December	1 615	104	6 395
January	1 280	57	5 276
February	1 485	65	5 250
March	1 442	56	5 267
April	1 548	49	5 678
May	1 314	42	5 102
June	985	27	3 397
Total	15 259	684	57 021

(a) The *Australian Trader* carried eight motor vehicles and 47 passengers from Sydney to Hobart and 77 motor vehicles, three caravans and 256 passengers from Sydney to Bell Bay or Burnie during July 1976 before being taken off the Sydney-Tasmania run.

Campervans: The use of campervans, hired on arrival in Tasmania, is growing in popularity with holiday visitors. At 30 June 1977, 194 campervans were licensed by the Transport Commission as hire and drive vehicles; 45 factory-new campervans had been registered by the Commission during the preceding six months.

Department of Tourism

The Department of Tourism is responsible for the development of Tasmania as a tourist destination. It pursues this objective through the provision of travel information and services for tourists, direct promotional activities, the provision of financial assistance for approved tourism development projects, the registration of all categories of commercial accommodation, regulation of the erection of certain types of road-side signs in non-urban areas and through research into specific aspects of Tasmania's tourist industry.

Tourist Promotion

The Department is currently expanding its promotional and publicity activities. In 1976-77 direct expenditure on these activities amounted to \$580 000, an increase of 22 per cent over the expenditure of \$475 241 in the previous year. National campaigns conducted in spring and autumn incurred an expenditure of almost \$260 000.

The sales arm of the Department consists of the Tasmanian Government Tourist Bureaux which are located at Hobart, Launceston, Devonport, Burnie, Queenstown, Melbourne, Sydney, Brisbane and Adelaide. It is proposed to establish a Bureau in Canberra in the near future. These bureaux display promotional material relating to Tasmania, disseminate Tasmanian tourist information, answer specific inquiries, organise and sell package tours within the State, and assist and act as agents for other travel organisations which provide tourist services to and within Tasmania. In turn, the bureaux are represented throughout Australia, in New Zealand and in Papua New Guinea, by some 870 accredited travel offices.

During 1976-77, the sales receipts of all bureaux amounted to \$16 942 065, of which 65 per cent was generated outside Tasmania. This represents a decrease of almost 2 per cent (mainly due to industrial disputes) on receipts of \$17 285 328

for the previous year. Receipts of the Mainland bureaux declined by \$604 588 but this was partly off-set by an increase of \$261 325 in receipts of the Tasmanian bureaux.

The Department also promotes capital investment in tourist accommodation, transport and facilities by providing loans, guarantees and grants for approved projects. During 1976-77, the Minister for Tourism and the Environment approved seven loans totalling \$896 666 for tourist projects, the main areas of investment being Launceston and the east coast. In addition, 47 grants to the value of almost \$155 000 were made to municipal councils, sporting bodies and other organisations for tourism promotional activities and development projects throughout the State, including three grants totalling almost \$69 000 for the development of caravan parks at Wynyard, Strahan and Bruny Island.

Accommodation Standards

Under Section 16 of the *Tourism Act* 1977, the Department of Tourism is responsible for the registration of accommodation houses which can be classified as motels, guest houses, holiday flats, holiday cabins, caravan parks and tourist caravan parks. Such premises are required to conform to minimum standards of quality relating to health and hygiene, safety and facilities. (Registration is also extended to premises licensed under the *Licensing Act* 1976.) During 1976-77, 71 inquiries were received regarding proposals for the establishment of new premises. The Department received 34 complaints against registerable premises, and a total of 260 inspections were made.

At 30 June 1977, there were 225 registerable accommodation houses in Tasmania (excluding hotels), of which 177 had been granted full or provisional registration or exemption from registration by the Department of Tourism. Statistics relating to 'tourist accommodation establishments' are included in a later section.

Seventy-five caravan parks and camping grounds throughout the State are registered with the Department, providing more than 2 300 powered sites. Almost all provide communal washing and toilet facilities, and showers. Just over half are owned and operated by municipal councils.

Research

The research activities of the Department during 1976-77 focussed on bringing to completion the 'Tourism Study of Southern Tasmania'. This was a major consultancy study of tourism in Tasmania, jointly commissioned by the Tasmanian Department of Tourism and the Federal Department of Industry and Commerce in March 1975 at a cost of \$130 000. The Study, which highlighted the need for indicative planning, was released in September 1977. It contains a general appraisal of tourism in southern Tasmania and preliminary feasibility studies of tourism projects, but its most important aspect is the formulation of an action plan for the development of the tourist industry in southern Tasmania.

With the assistance of the Bureau of Statistics, the Department planned a survey of departing air and sea passengers to take place during the 1978 calendar year. Work centred on the design of the survey questionnaire and on refinement of the sampling procedures. It is intended that this survey will up-date the 'Survey of the Tourist Industry in Tasmania', conducted by the State Treasury in 1968-69.

Further research is expected to focus on the formulation of a State-wide tourism development plan, on the viability of tourism development projects, and on the economic value of tourism to Tasmania.

The Tasmanian Tourist Council

Regional tourism interests in the various parts of the State are managed by local tourism councils, committees and associations which are members of, or affiliated with, the Tasmanian Tourist Council. This is an independent organisation representing the tourist industry. Through its wide membership and its long association with tourism in Tasmania, it provides a valuable link between local government, private enterprise and the State Government in matters concerning the development of the tourist industry.

The 'Tourist Industry'

In terms of the industrial structure of the economy there is no identifiable sector which can be regarded as the 'tourist industry'. The difficulty is that the provision of goods and services for tourists cannot generally be distinguished from the provision of goods and services for residents. Receipts from tourists for goods and services purchased contribute in varying degrees to the total receipts of a wide range of businesses. Tourists might, for example, be expected to use the services of the insurance industry or to purchase furniture to only a very limited extent whereas, at the other end of the scale, they would be major users of the services provided by the accommodation industry.

Rather than attempt to delineate a separate 'tourist industry' it is therefore much more meaningful to examine the 'tourist impact' on industries within the accepted industrial structure.

Probably the most effective way of measuring tourist impact is to interview suitable samples of tourists and ascertain the pattern and scale of their expenditures while on tour. From these data estimates can be made of total tourist impact on the purchases of goods and services. As mentioned earlier, the Department of Tourism, with assistance from the Bureau, will conduct a survey of air and sea passengers departing from the State during 1978.

A major part of tourist expenditure is on accommodation. Hence information obtained from establishments which provide accommodation for tourists will reflect tourist impact. It will, of course, also include expenditure by residents (e.g. public bar trade of licensed hotels). The next section contains statistics relating to Tasmanian accommodation establishments. (See also the section 'The Licensing Board' in Chapter 16.)

Tourist Accommodation Statistics

Census, 1973-74

Covering operations in the year 1973-74, the Bureau conducted its first census of tourist accommodation establishments which were defined as those which catered predominantly for short-term guests. The aim was to obtain a broad picture of this accommodation sector in the census year and also to provide the framework for subsequent occupancy surveys. Details of the results of the 1973-74 Census are contained in Chapter 18 of the 1977 *Year Book*.

Definitions

The establishments included in the 1973-74 Census and in subsequent quarterly surveys of tourist accommodation establishments are classified in accordance with the following definitions:

Licensed Hotel: Any hotel or motel which has a public bar licence.

Licensed Motel: A motel with a licence to serve drinks but without a public bar licence.

Unlicensed Motel: A motel without any liquor licence. A licensed restaurant, leased to or operated by a separate enterprise, may be located at the establishment.

Private Hotel or Guest House: An establishment which does not provide facilities in most guest rooms and has no liquor licence.

'With Facilities': Establishments consisting predominantly of rooms which incorporate a bath or shower and a toilet.

'Without Facilities': Establishments consisting predominantly of rooms which require guests to use a common bathroom and/or toilet.

Survey of Tourist Accommodation

Since the census of 1973-74 a survey of tourist accommodation has been conducted by the Bureau each quarter. Statistics are obtained in respect of each month in a particular quarter. The scope of the survey is the same as that for the 1973-74 Census except for the omission of caravan parks and holiday flats; the same definitions apply. The following table shows details of the survey for the twelve months ended 30 June 1977:

Accommodation Establishments With Facilities (a): Details by Statistical Division, Twelve Months Ended June 1977

Period	Hobart	Southern	Northern			Mersey-Lyell			Total Tasmania
			Tamar	North Eastern	Total	North Western	Western	Total	
1977, June qr—	No.	No.	No.	No.	No.	No.	No.	No.	No.
Establishments	41	11	28	7	35	29	6	35	122
Guest rooms	1 464	266	682	196	878	725	205	930	3 538
Bed spaces ..	3 543	763	1 704	535	2 239	1 944	556	2 500	9 045

PROPORTION OF ROOMS OCCUPIED TO ROOMS AVAILABLE (per cent)

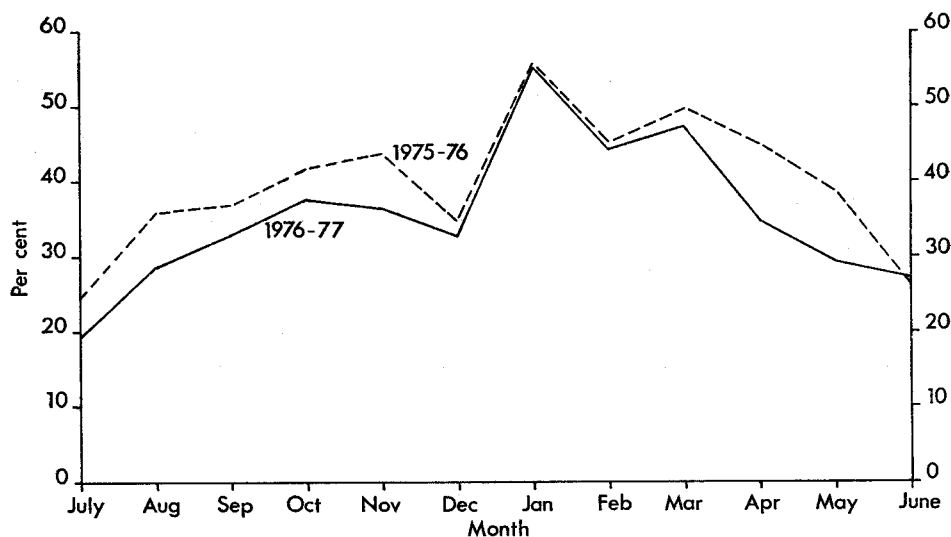
1976—July ..	34.5	22.0	35.6	23.4	33.2	32.6	30.9	32.2	32.6
Aug. ..	46.2	33.7	46.2	37.7	44.5	37.4	48.1	39.8	43.1
Sept. ..	50.6	33.9	54.5	36.1	50.8	43.4	47.5	44.3	47.7
Oct. ..	65.7	43.5	62.6	36.9	56.6	43.8	55.8	46.5	56.7
Nov. ..	58.4	47.9	63.2	39.6	57.7	48.6	68.1	52.9	56.0
Dec. ..	48.2	43.7	50.9	38.1	47.9	42.3	53.0	44.7	46.8
1977—Jan. ..	73.7	78.6	65.3	73.7	67.3	64.1	82.6	68.2	71.1
Feb. ..	68.0	61.9	65.7	49.6	61.9	57.8	74.5	61.5	64.3
March	76.8	60.7	68.6	58.3	66.1	55.8	84.2	62.1	69.1
April ..	54.7	48.2	50.5	41.3	48.5	43.1	65.5	48.1	50.9
May ..	49.3	31.2	46.7	29.8	43.0	40.5	52.2	43.1	44.7
June ..	46.8	33.2	41.9	29.9	39.2	37.5	36.8	37.3	41.4
1976-77 ..	56.0	44.8	54.1	41.6	51.3	45.6	58.3	48.4	52.0

**Accommodation Establishments with Facilities (a): Details by Statistical Division,
Twelve Months Ended June 1977—continued**

Period	Hobart	Southern	Northern			Mersey-Lyell			Total Tasmania
			Tamar	North Eastern	Total	North Western	Western	Total	
TAKINGS FROM ACCOMMODATION (\$'000)									
1976—July ..	319	30	130	17	147	114	33	147	643
Aug. ..	438	49	175	30	205	136	53	189	880
Sept. ..	481	54	209	28	237	157	52	209	982
Oct. ..	690	68	239	40	280	181	73	254	1 291
Nov. ..	579	70	235	41	275	199	85	284	1 208
Dec. ..	523	69	201	44	245	189	73	262	1 099
1977—Jan. ..	828	145	275	94	369	290	119	408	1 750
Feb. ..	661	101	249	57	306	232	94	326	1 395
March ..	835	108	294	72	365	251	120	371	1 679
April ..	591	81	221	48	268	182	89	271	1 211
May ..	504	55	210	32	242	176	69	245	1 045
June ..	470	54	177	32	210	159	46	205	939
1976-77 ..	6 919	884	2 615	535	3 149	2 266	906	3 171	14 122
EMPLOYMENT AT 30 JUNE 1977 (persons)									
Full time—									
Males ..	439	31	81	19	100	87	3	90	660
Females ..	287	25	75	18	93	69	11	80	485
Part time—									
Males ..	193	21	57	18	75	75	14	89	378
Females ..	514	49	285	52	337	320	78	398	1 298
Total ..	1 433	126	498	107	605	551	106	657	2 821

(a) Establishments consisting predominantly of rooms which incorporate a bath or a shower and a toilet.

Bed Occupancy Rates (a): Accommodation Establishments with Facilities



(a) Establishments consisting predominantly of rooms which incorporate a bath or a shower and a toilet.

Tasmania's Caves

(This section was contributed by the National Parks and Wildlife Service and the Tasmanian Caverneering Club)

Tasmania possesses some of the finest limestone caves in Australia. Four of these (Newdegate Cave near Hastings, Marakooa and King Solomons Caves near Mole Creek, and Gunns Plains Cave on the North-West Coast) have been developed for the benefit of visitors and are protected and displayed by the National Parks and Wildlife Service. The State is also fortunate in possessing some of the best caves in the world, and in having them all reasonably close to main centres of population. Caves such as Exit, near Hastings, Kubla Khan at Mole Creek, and Khazad Dum at Maydena are renowned for their features.

The Tasmanian Government Tourist Bureaux will advise as to the times of guided tours of caves and how to reach them.

The Caves

Newdegate Cave: Near Hastings, about 90 kilometres south of Hobart is the Hastings Caves State Reserve where Newdegate Cave is available for inspection and visitors may enjoy a swim in the recently refurbished thermal pool. Newdegate Cave has recently been connected to the State's power grid, replacing the old generator, and the lighting is in the process of being replaced. This Cave has been delighting visitors since 1939 with its displays of stalactites, stalagmites and flowstone; a highlight is Titania's Palace. A kiosk at the site serves light refreshments.

The Marakooa and King Solomons Caves: Just a few kilometres from Mole Creek, two caves are open for inspection—Marakooa and King Solomons. Marakooa has the attraction of a fine display of glow-worms and some large awe-inspiring galleries, while King Solomons boasts some exceptionally fine calcite formations. Both caves are set in reserves of natural bushland which further adds to the enjoyment of a visit. At King Solomons Cave a kiosk serves light refreshments during the summer.

Experienced guides at both Hastings and Mole Creek conduct cave tours on a regular timetable. The caves are lit with normal white lighting, enabling them to be seen in their natural colours.

Gunns Plains Cave: is located some 25 kilometres south of Ulverstone in the north of the State. Inspections are provided as required by a local concessionaire operating on a lease granted by the National Parks and Wildlife Service. The cave was formed by an underground river which can be viewed in part of the cave. There are also excellent displays of formations, including stalactites, shawls or curtains and massive flowstone.

Exit Cave: Sixteen kilometres in length, this is the longest cave in Australia and is noted for its immense chambers, spectacular glow-worm displays, delicate formations and sandy beaches. The D'Entrecasteaux River flows through part of this cave and has formed a relatively unusual feature—a river which divides on the surface and does not re-connect for some kilometres. One branch of the river disappears underground and emerges at the entrance to Exit Cave, near Ida Bay. It occasionally floods, stranding people in the cave. This cave is soon to become a State Reserve, protected by the National Parks and Wildlife Service of Tasmania. Although it is undeveloped, tours of part of the cave are conducted on Saturdays and Sundays from October to May, involving a walk of up to five kilometres, inside the cave.

Kubla Khan: at Mole Creek is also a long cave, but is famed for its incredibly rich formations. This cave also has a stream through it and, in fact, this slowed initial exploration. The effort involved in seeing this cave, which unfortunately is not open to the general public, is amply rewarded as one stands in Khan Hall looking at the 18 m high stalagmite known as the Khan, or as one walks over the flowstone floor which is some 40 metres long and terraced gently up to a height of 15 metres.

Khazad Dum: (the name was borrowed from *The Lord of the Rings* by J. R. R. Tolkien) at Maydena, is representative of the deep caves in this area. There are several other deep potholes within its vicinity, all of which offer a challenge to cavers. *Khazad Dum* is itself the deepest in Australia at over 320 metres. This cave offers an exciting but dangerous trip, with the distinct possibility of rain on the surface causing a flood.

Fauna

Tasmanian caves contain no known bat colonies but they have a rich and varied invertebrate fauna. There are cave crickets or wetas which emerge in the evenings to forage for food and various species of beetle, some of them lacking eyes and adapted to a continued existence in total darkness. Further up the food chain is the harvestman, a very frail looking relative of spiders but a capable hunter, able to subdue the much larger wetas. A number of spiders are also common, most notably the large, black Tasmanian Cave spider, *Hickmania troglodytes*, which lays its eggs in a characteristic white, drop-shaped egg sack (see also page 69). And, of course, there is the Tasmanian glow-worm, *Arachnocampa tasmaniensis*, the larva of a fungus gnat, which suspends itself from the cave roof and ensnares insects attracted by its luminescence in sticky threads which hang beneath it.

The visitor, if patient, may see some of these interesting animals on a visit to a cave. None of them pose any danger to humans and a number are wholly protected under the *National Parks and Wildlife Act*.

Caverneering

Tasmania has the oldest caving club in Australia—the Tasmanian Caverneering Club—established in 1947 by Professor S. Carey of the University of Tasmania. There are now also two other active caving clubs.

Apart from the caves described above, there are other areas of spelaeological interest in the State—Mt Anne in the South-West National Park has an extensive area of deep shafts, including one with a clear drop of over 250 metres from the original ground level. This area has only been visited by fully equipped parties on a very few occasions, the last time being in 1971. There is tremendous potential for new discoveries in this area.

The extensive limestone deposits of the lower Gordon and Franklin Rivers have been encouraging and the prospect for further cave discoveries is excellent. exploration—canoes or inflatable craft must be used. Nevertheless, initial results have been encouraging and the prospect for further cave discoveries is excellent.

Appendix

CHRONOLOGY AND LATER INFORMATION

CHRONOLOGY: THE YEAR 1977

Further 73 retrenchments at Mt Lyell brought total to nearly 300 since November 1976. Tasmania admitted to the Sheffield Shield on trial basis for next two seasons. Craft apprentice training assistance scheme announced by Federal Government. Business syndicate announced plans for a \$3m holiday resort complex to be built at Great Lake. Joy Report on Tasmanian Railways recommended cutbacks in services, freight rate rises and a complete review in 1981. Mr J. R. Ashton appointed Commissioner for H.E.C. replacing Sir Allan Knight who retired after 31 years as Commissioner. Tasmanian unemployed reached 10 695 in January, 6.8% of the work force. Two men killed in Fingal coal mine explosion. Argentine ants reported to be a growing problem in Tasmania. Allegations of recruitment of mercenaries in Tasmania for Rhodesia. Brallos won both the Hobart and Launceston Cups in 1977 establishing a record by winning both Cups in successive years. Campaign launched to save Ida Bay Railway. Air Tasmania applied to Federal Government for permission to buy an aircraft for a freight service between Hobart-Melbourne-Sydney. Thirteen-day dispute halted Tasman Bridge restoration work. \$1.3m expansion program announced for Stanley Works, Hobart. Two-day visit to Hobart and Launceston by Queen Elizabeth and Prince Philip. Federal Government confirmed Kingston as the site for Australia's new Antarctic Base. State Government announced plans to form a commercial film-making corporation. Ida Bay Railway re-opened by commercial interests. \$1.3m Eastern Shore Community Health Centre opened. Second Tasmanian Military Tattoo realised 33% increase in attendance. Federal Government was asked to purchase Kelsall and Kemp Woollen Mill which subsequently retrenched 234 workers. State Strategy Plan released. Boags Esk Brewery undertook \$2m expansion at Launceston plant. Flash floods hit north-west coast. State Government sold M.V. *Rab* for \$1.35m. Burnie expressway opened. Legislation introduced banning smoking on public transport. Mt Lyell Company and Getty Oil announced plans for \$5m five-year exploration program on west coast. No Tasmanian road deaths over four-day Easter break. The Prime Minister and all State Premiers called for a three-month voluntary wages and prices freeze; supported by T.T.L.C. Intermediate patient scheme introduced at the Royal Hobart Hospital. T.C.A.E. F.M. radio began regular transmission. Tanker drivers and aircraft refuellers strike suspended all regular Tasmanian air services, partial relief granted after 24 days, total duration of strike 29 days. \$25m expansion program announced by A.P.P.M. Burnie. Middle Road-Don expressway opened. Hobart March quarter C.P.I. rise 1.9% (second lowest of all capital cities). 140 km/h winds caused damage in Hobart. Gay Dor Plastics Ltd, Launceston, announced \$0.6m expansion plans for plastic pipe manufacturing factory. State Government allotted \$50 000 for restoration and development of Bowen Park, Risdon. Plans announced for 25-bed geriatric hospital to be built at Campbell Town. Joint Australian-Korean company planned new fishing and fish processing industry on the east coast. Federal referenda accepted three

proposals but rejected simultaneous elections, Tasmania, W.A. and Queensland combining to defeat that proposal. Promotion of tourist industry (\$340 000) planned to offset effects of air strike. Australian National Railways Commission leased part of Hobart Railway marshalling yards to State Government enabling construction of a slip road by-passing the Railway Roundabout. Arbitration Commission handed down the March quarter National Wage decision of 1.9% increase up to \$200 per week and a flat \$3.80 thereafter. 'Price freeze' officially ended. Second Ranger uranium inquiry (Fox) report released. Elections held in four electorates in the State Upper House, all sitting members returned. State Government purchased Jones and Co. warehouse for \$1.62m, to be used as a site for light industry. Secretary of T.T.L.C., Mr R. J. Watling and Minutes Secretary, Mr P. A. Imlach charged with being members of, or connected with, the National Civic Council. State Government announced creation of new Policy Review Unit. State Government purchased 133 ha of land at Barns Bay (St Helens)—road in and launching ramp to be built. One km long and 5 x 5 m Gordon Dam tailrace tunnel holed through. Farmers concerned about ragwort infestation in Deloraine area. G. J. Coles submitted plans for \$7m K-Mart at Devonport. Report on education in Tasmania recommended: greater emphasis on community involvement; reduction of educational inequalities resulting from social origins; abolition of corporal punishment; assistance in rural areas; and strengthening the district school system. Federal grant of \$36 000 announced for the State to purchase Three Hummock Island. *Joseph Banks* sold for \$300 000. Full Bench of the High Court dismissed the appeal against mining of limestone at Precipitous Bluff. Supreme Court ruled that laws proclaimed by regulation (published in State Gazette) are not valid. 74 Vietnamese refugees allowed to settle in Tasmania. 500 workers at Savage River Mines stood down as a result of a strike by 127 members of the F.E.D.F.A. State Department of Planning and Development established. Mr Batt, Minister for Education, demanded resignation of three members of the State Library Board. Full Bench of Supreme Court reversed earlier decision regarding invalidity of regulations published in the State Gazette; Lower Courts returned to normal. Retail Traders Association attempted to restrict Saturday afternoon and Sunday trading. Comalco Aluminium (Bell Bay) Ltd began an expansion program to lift output by 20%. State Government finished financial year with \$1.6m surplus in the Consolidated Revenue Fund. Launceston City Council proposed lawn cemetery establishment at Carr Villa. Salmonella poisoning cases reported. Plans approved for pedestrian mall in the centre of Hobart. H.E.C. announced 25% increase in retail power charges. South-bound freight subsidy to benefit the State by \$20m for the financial year 1976-77. Edgell Division of Petersville Australia Ltd to spend \$2.1m expanding their potato processing plant, increasing production capacity by 50%. Parliamentary Public Works Committee approved new high school at Rokeby to cost \$3.05m. Radar guns introduced for use by the Police. Coats Patons Ltd announced \$1.7m development program. Industries Assistance Commission recommended tariff cuts for clothing, textile and footwear industries. Federal grants to Tasmanian local government authorities totalled \$5.3m, an increase of \$1.3m over the previous year. State Government allocated \$120 000 for a trial to investigate establishment of a sugar beet industry. Fire caused \$100 000 damage to Kelp Industries Pty Ltd, King Island. Fire caused \$2m damage at Lactos Pty Ltd's Burnie cheese factory. Military Tattoo cancelled for 1978; State Government announced plans to take over 1979 Tattoo. State Budget increased motor taxes and increased exemptions from land tax and probate duty. Cox Inquiry into Fire Brigades Commission recommended establishment of a Fire Protection Authority headed by an administrator to replace the existing Board. T.A.A. and Ansett announced 25% reduction in fares on some off-peak flights. Messrs R. J. Watling and P. A. Imlach expelled from the A.L.P. A.P.P.M.

secured \$2.5m contract to supply paper for telephone directories. The Premier, Mr Neilson, announced his retirement from 1 December to become Tasmania's Agent-General in London. Report of Callaghan inquiry into Tasmania tabled. First year motor cycle riders to be limited to cycles of 250 c.c. or less. Federal Parliamentary Public Works Committee recommended relocation of Antarctic Division at Kingston at a cost of \$8m. Strike at E.Z. Co., Rosebery involved 500 men and lasted five days. Devonport ratepayers rejected site value rating. Japanese-Australian survey of squid resources in south-east Australian waters announced. A \$121m expansion, increasing plant capacity by 93 000 tonnes, opened at Comalco Aluminium (Bell Bay) Ltd. Legislative Council Select Committee report on the Ambulance Commission recommended its abolition and replacement by a Transport Division within the Department of Health. Legislation introduced to establish a State Fire Authority. Auditor-General critical of financial operations of 1977 Military Tattoo. Mr Baldock, Minister for Main Roads, announced that the Bailey Bridge would be retained for light vehicles and buses after the re-opening of the Tasman Bridge. Tasman Bridge re-opened 8 October (closed since 5 January 1975); Federal Government payments for restoration, widening and provision of new and up-graded roads, provision of services on the Eastern Shore and assistance to ferries totalled \$44m. The first 144 000 kW generator commissioned at Gordon River power station. Plans announced for Hobart's West End shopping mall and car park complex (three-level, covered shopping arcade and five-level car park (capacity 535)); the venture to be jointly financed by National Mutual Life Association (\$3.7m) and Hobart City Council (\$3.3m). Schools Report to the Education Department recommended phasing out of secondary classes at the following District Schools: Edith Creek, Forest, Sprent, Beaconsfield, Cygnet, Geeveston, Lilydale and Swansea. The Report also recommended extension of activities at 10 other District Schools. A.N.L. freight rates increased by up to 8%. *Empress of Australia* passenger rates increased by 15% and rates for accompanied vehicles increased by 8%; fare reduction proposed for 1978 winter sailings. Jetfoil feasibility study presented to members of State Cabinet. Gerwyn Kranenburg crowned Miss Tasmania. Apple and Pear Stabilisation Scheme extended to cover 1978 export crop plus proposed supplementary apple export assistance to a maximum of \$1m; to be jointly funded by Federal and State Governments. Federal-State tax sharing arrangements finalised; states to share 39.87% of personal income tax collections from the preceding year. Tasman Ltd derailed between Evandale and Clarendon. Australia's first housing advisory service opened in Hobart for a trial period of one year. Carbide Industries Pty Ltd announced \$5.5m re-development plan for its Electrona works. Electrical Trades Union decided not to train apprentices who are not union members; decision prompted by Launceston railway apprentice Chris Symons' failure to join the A.M.W.S.U. Total fire bans declared for Central Plateau, Midlands, East Coast and Southern Tasmania as a result of the driest air ever recorded for October. Arbitration Commission granted agricultural workers a 40-hour week plus four weeks annual leave. State Government announced a scheme to provide free conveyancing to first home buyers up to \$50 000 value; the scheme excluded purchases of land and legal costs in arranging mortgages. Plans announced for \$3m convention centre in Launceston to be connected to the Albert Hall. Board of Inquiry established to examine as one of its terms of reference, the effects on the Tasmanian economy of probate reforms in other states. Estates passing between husband and wife in Tasmania to be exempted from death tax. A.P.P.M. Burnie announced two-year expansion program creating 100 jobs and increasing capacity by 25 000 tonnes at a cost of \$30m. Australia's registered unemployed reached 6% of work force, 370 355 during October, a post-war record. Prince Charles visited Hobart. Frosts caused estimated \$5m loss to Tasmanian fruit industry. The Federal Government announced a ten-point

plan for the growth and development of Tasmania based on the Callaghan Report. Federal Government agreed to pay \$4.46m to aid Mt Lyell to the end of 1977-78 financial year as a result of I.A.C. report recommending special assistance to the Company; the cost to the State Government was \$337 000 in pay-roll tax concessions. Launceston Transport Revision Report recommended the spending of \$25m to upgrade Launceston's road system over the next 10 years. Bans imposed on importing cattle, sheep and goats and their semen to Tasmania to prevent the animal disease blue tongue from being introduced to the State. State Government requested \$250 000 Federal aid to assist Huon fruit growers hit by frosts. The State Government announced intended purchase of the Kelsall and Kemp site, Launceston for conversion to a precision tool annexe for the railways. Federal Treasurer, Mr Lynch, resigned. Mr G. F. Paltridge appointed chief administrator of the new State Fire Authority. Esso Corporation granted licence for uranium and precious metals prospecting in the Rossarden area. The Prime Minister, Mr Fraser, announced that the Federal Government was committed to the construction of a second bridge for Hobart. Timber salvage operations commenced in the Pieman River area which was to be flooded due to hydro-electric development. Mr Lowe replaced Mr Neilson as Premier following the latter's resignation. Sir Zelman Cowen sworn in as Australia's Governor-General, succeeding Sir John Kerr. The Liberal-N.C.P. coalition returned to office with a substantial majority following the 10 December Federal election; in Tasmania, all five House of Representative seats retained by the Liberals who filled three of the five seats in the half-Senate elections. Mr W. McKinnon (A.L.P.) elected in by-election for the House of Assembly (Franklin). Mr R. Groom (Braddon) appointed as Minister for the Environment, Housing and Community Development and Mr K. Newman (Bass) as Minister for National Development in the new Federal Cabinet. Tasmania defeated India in a four-day cricket match at the T.C.A. Yacht races: *Kialoa* (U.S.A.) took line and handicap honours in the Sydney-Hobart race; *Anaconda* (Tas.) took line honours in the Melbourne-Hobart 'Westcoaster' race, *Hot Prospect* (Vic.) took handicap honours; *Invincible* (Vic.) took line honours and *Morning Mist* (Vic.) took handicap honours in the Queenscliffe to Devonport race. Drought conditions in many parts of the State the worst for 30 years. Forecast suggested that only one half of the State's apple crop would remain packable due to frost and hail damage. 112 people died on Tasmanian roads for the year. Tasmania's unemployment at the end of December reached a post-war record level of 7.18% or 12 621 people; the national average was 6.5%.

LATER INFORMATION

Chapter 3

Federal Elections, 10 December 1977

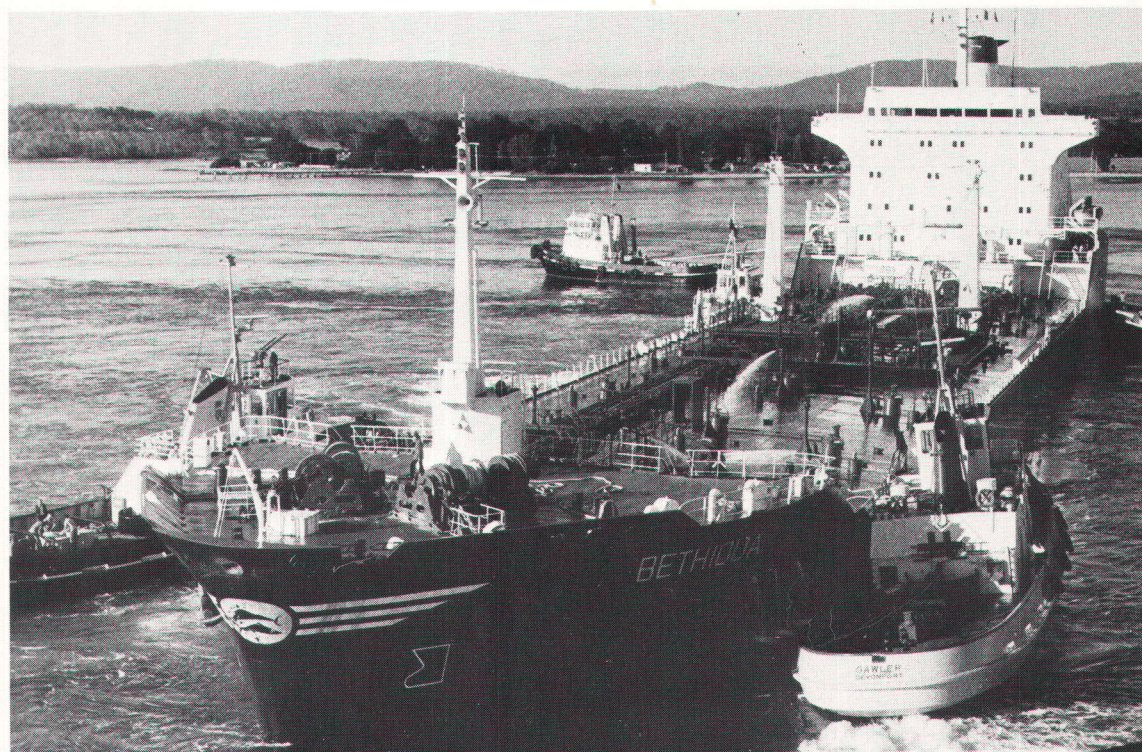
Elections for the Federal House of Representatives together with half-Senate elections were held on 10 December 1977. The Liberal-National Country Party Coalition was returned with a substantial majority in both Houses of Parliament. The state of the parties following the elections was as follows: (i) *House of Representatives*—Liberal Party, 67; National Country Party, 19; Australian Labor Party, 38; total, 124 (previously: Liberal, 68; N.C.P., 23; A.L.P., 36; total, 127); and (ii) *Senate*—Liberal, 29; N.C.P., 6; A.L.P., 26; Australian Democrats, 2; Independent, 1; total, 64 (previously: Liberal, 27; N.C.P., 8; A.L.P., 27; Australian Democrats, 1; Independent, 1; total 64).

Following an electoral redistribution declared in November 1977, the number of electorates for the House of Representatives was reduced from 127 to 124 (comprising losses of two, one and one seat for New South Wales, Victoria and South Australia, respectively, and a gain of one seat for Queensland).



Waterspout off the coast from Burnie (1 April 1977)

[*The Advocate, Burnie*]



Tugs attempting to move the petrol tanker *Bethioua*, grounded off George Town, December 1976

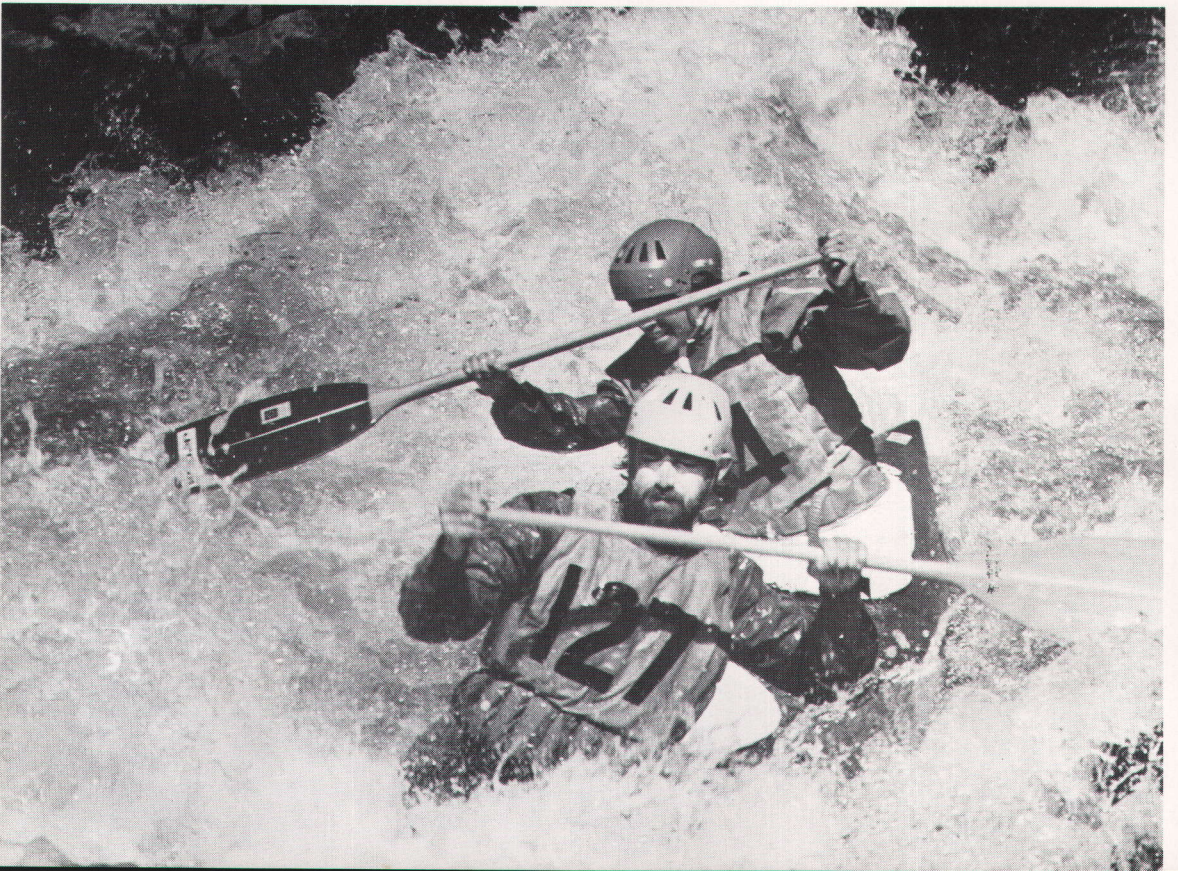
[*The Mercury, Hobart*]



Trout fishing at Brumby's Creek, near Cressy

[Tasmanian Film Corporation]

Riding the rapids on the slalom course near Brady's Lake *[By courtesy of the Hydro-Electric Commission]*





Tuna fishing at Pirates Bay

[Tasmanian Film Corporation]

Quamby Bluff, Deloraine

[Don Stephens] (By courtesy of the Department of Tourism)





Marakoopa Cave, near Mole Creek

[G. Middleton]



Skiing on Mt Mawson, Mt Field National Park

[By courtesy of the Department of Tourism]

All Tasmanian sitting members of the House of Representatives (all Liberals, see table on page 72 listing names, party affiliation and electoral division) were returned to their seats. In the half-Senate elections for Tasmania, Senators B. R. Archer (Liberal), D. J. Grimes (A.L.P.) and M. S. Walters (Liberal) were re-elected for six-year extensions of their existing terms which were to finish on 30 June 1978 and Messrs M. C. Tate (A.L.P.) and J. Watson (Liberal) were elected to the Senate for six-year terms to commence on 1 July 1978.

State Government Changes

Resignation of the Premier: On 20 September 1977, the Premier, the Hon. W. A. Neilson, announced that he would retire from politics before Christmas and become Tasmania's Agent-General in London (the term of the Agent-General at the time, Mr R. Neville, was due to expire on 15 January 1978). The Hon. D. A. Lowe, Deputy Premier, was unanimously elected on 9 November by the Labor Caucus to succeed Mr Neilson as Premier. On 1 December 1977 Mr Lowe was sworn in as Premier by the Governor, shortly after Mr Neilson had officially relinquished his commission to Sir Stanley Burbury. Subsequently on 13 December, Mr W. McKinnon (A.L.P.) was elected to replace Mr Neilson in the House of Assembly following a recount of votes and distribution of preferences from the 1976 elections, thus maintaining Labor's majority of one in the Lower House.

New Cabinet: A new State Cabinet was sworn in on 1 December 1977. Members of the Cabinet and their portfolios are listed below:

- The Hon. D. A. Lowe—*Premier, Minister for Industrial Relations and Manpower Planning.*
- The Hon. N. L. C. Batt—*Deputy Premier, Treasurer and Minister for Economic Planning and Development.*
- The Hon. B. K. Miller—*Attorney-General and Minister for Consumer and Ethnic Affairs.*
- The Hon. M. T. C. Barnard—*Minister for Tourism and Minister for Health.*
- The Hon. E. W. Barnard—*Minister for Primary Industry and Minister for Police and Road Safety.*
- The Hon. G. D. Chisholm—*Minister for Housing and Construction.*
- The Hon. D. J. Baldock—*Minister for Main Roads and Minister for Municipal Planning.*
- The Hon. H. N. Holgate—*Minister for Education, Recreation and the Arts.*
- The Hon. M. R. Polley—*Minister for Community Welfare and Minister for National Parks and Wildlife.*
- The Hon. A. B. K. Lohrey—*Minister for Resources and Energy and Minister for the Environment.*

Chapter 11

Railways, The Tasman Limited

One recommendation of the Joy Committee's Report into the Tasmanian Railway System (released in November 1977 and summarised in Chapter 11) was that, 'The Tasman Limited should be withdrawn as soon as possible . . .' due to the substantial loss incurred in its operation. Subsequently, at a meeting held in Adelaide on 8 February 1978, the Australian National Railways Commission decided to reduce the Tasman Limited passenger service to three days per week.

From 1 March 1978, the train was to operate between Hobart and Wynyard in both directions on Tuesdays, Thursdays and Fridays only. At the time of the decision, the one-way trip from Hobart to Wynyard took 8 hours 40 minutes for a journey of 385 kilometres and the adult fare was \$13.90.

Chapter 17

Indexes of Relative Retail Prices of Food

The table below shows indexes of relative retail prices of food for the six state capitals, Canberra and Darwin, and for selected Tasmanian towns, as at March, for recent years. The indexes for each year are expressed to the base: weighted average of the six state capitals = 100. For a particular year, they show comparative retail prices based on the same selected 'basket' of food and grocery items and the same weighting pattern for each locality. The items priced for calculation of the indexes are generally those priced for the Monthly Food Index for March of the Consumer Price Index of the same year but excluding snacks and take-away foods (the annual *Indexes of Retail Prices of Food in Queensland Towns* published by the Queensland Office of the Bureau lists the food items included for the year to which it relates). The indexes compare relative retail prices of food in various localities at each point in time; they do not show movement over time in each locality. Price data used for derivation of the indexes has been collected in special surveys of retail prices undertaken in March each year.

Index Numbers of Relative Retail Prices of Food Items (a)
(Base: weighted average of the six state capitals at each point of time=100)

City or town	At March								
	1970	1971	1972	1973	1974	1975	1976	1977	
Sydney	101	101	100	100	101	102	101	99	
Melbourne	99	99	100	101	99	97	98	99	
Brisbane	100	103	103	101	102	100	101	101	
Adelaide	98	96	97	98	99	101	102	103	
Perth	101	103	101	98	96	103	101	102	
Hobart	101	102	101	99	99	102	104	106	
Canberra	106	105	104	106	105	104	105	105	
Darwin	117	121	125	119	119	120	121	105	
Launceston	} <i>n.a.</i>	} <i>n.a.</i>	100	97	98	97	100	} <i>n.a.</i>	
Devonport			101	99	97	97	101		
Burnie			101	98	97	97	101		
Ulverstone			100	99	95	98	101		
Queenstown			109	105	107	108	108		
Scottsdale			99	99	100	103	104		

(a) These indexes compare retail prices between various localities of a selected basket of food items at each point in time. They do not show movement over time in each locality.

The indexes are subject to the following limitations:

- (i) As the indexes are compiled by pricing, in each town or city, the same list of major food items, specified as to quantity and as far as possible as to quality, the comparisons measure relative retail prices only for the field covered by the selected items as combined by a common set of weights. They cannot be considered as reflecting relative prices in other fields of expenditure. A common list of items or 'basket' such as this *does not reflect differences*

in living costs which result directly from differences in modes of living, e.g. as reflected by climate and availability of items, etc., or levels of living between localities. Users of these indexes should bear in mind that the degree of appropriateness of the items and weights used would vary from centre to centre, and that the differences in price levels as indicated by the indexes should be regarded as approximations only.

- (ii) In some instances, the relationship between towns in March 1976 may differ from that existing between them at another date during the year or in other years, because seasonal influences on prices of some items, e.g. potatoes and meat, may occur at different times in different localities. In these circumstances *it is desirable to study the run of index numbers for a number of years.*

PUBLICATION OF TASMANIAN STATISTICS

HOW TO OBTAIN CURRENT PUBLICATIONS

General

The Tasmanian Office of the Australian Bureau of Statistics is located in the *Commonwealth Government Centre* at 188 *Collins St, Hobart*. Requests for statistical publications can be made by calling at this address; by phoning, *Hobart 20 4495*; or by writing to the *Deputy Commonwealth Statistician, G.P.O. Box 66A, Hobart, 7001*.

Service to the public is not restricted to the distribution of publications. If no publication adequately covers the subject matter of the inquiry, then a special extraction of the data required may be undertaken if they are readily available from the basic records held in the office. The guide, *Catalogue of Publications 1977, Tasmanian Office*, includes descriptions of all Tasmanian Office publications together with a detailed subject index and is available free of charge.

Historical

Before the appointment of the first Government Statistician in Tasmania in 1867, statistics had been published in the official 'Blue Books' compiled by the Colonial Secretary during the period 1822-1855, and in volumes entitled *Statistics of Tasmania* after self-government was granted.

By the *Commonwealth and State Statistical Agreement Act 1924*, the Tasmanian Parliament ratified an agreement for the establishment of an office in Tasmania of the Australian Bureau of Statistics, such office to meet the statistical needs of the State Government; provision was made for the Deputy Commonwealth Statistician, a Federal Government officer, to hold, at the discretion of the State Government, the title of (State) Government Statistician. The first officer appointed in this way was L. F. Giblin, M.C., D.S.O., who had previously been the State Government Statistician. (It was not until the late 1950s that similar arrangements were made in the other Australian states.)

Statistics from 1804

In the Archives Office of Tasmania, the following series are available:

- (i) *Statistical Account of Van Diemen's Land or Tasmania, 1804 to 1854* compiled by Hugh M. Hull (Office of the Colonial Secretary).
- (ii) Official 'Blue Books' for the period 1822-1855.
- (iii) *Statistics of Tasmania*—annual publications from 1856 to 1922-23.
- (iv) *Statistics of the State of Tasmania*—annual publications commencing 1923-24 and continuing to 1967-68. (Copies of these volumes are held at the University Library, the State Library in Hobart, the Public Library in Launceston and the Tasmanian Office of the Australian Bureau of Statistics.) Although the bound volume entitled *Statistics of the State of Tasmania* has been discontinued as from the 1967-68 issue, the component parts are still published as separate bulletins.

Copies of publications listed under (i), (iii) and (iv) above, are available for inspection at the Tasmanian Office of the Bureau.

Current Publications of the Tasmanian Office

The Tasmanian Office of the Australian Bureau of Statistics is engaged in a continuous publication program, the statistics appearing in either 'for sale' or 'not for sale' publications.

The 'not for sale' publications (publications available free of charge) can be further dissected into annual bulletins and press releases. The press releases are issued with a view to making the statistical information available as soon as possible after compilation. Bulletins contain greater detail than press releases, but because of time taken to compile and print are issued some time after the period to which they refer. The two principal 'for sale' publications issued by the Tasmanian Office of the Bureau are the *Tasmanian Year Book* and *Pocket Year Book of Tasmania*.

Each issue of the *Monthly Summary of Statistics* includes a table listing all publications produced by the Tasmanian Office, together with details relating to the latest available issues and their dates of publication. The following table lists all recent publications issued by the Tasmanian Office:

Publications of the Tasmanian Office of the Australian Bureau of Statistics (a)

Ref. No.	Publication
GENERAL PUBLICATIONS	
1 103.6	Catalogue of Publications, Tasmania Office irr
1 304.6	Compendium of Municipal Statistics irr
1 101.6	Index of Towns, Localities and Standard Area Codes irr
1 303.6	Monthly Summary of Statistics m
1 302.6	Pocket Year Book of Tasmania (\$1.00; \$1.30 posted; 1977 issue) a
1 305.6	Statistical Summary of Tasmania (\$0.40; \$0.80 posted) irr
1 301.6	Tasmanian Year Book (\$8.00; posted—\$9.00 Tas., \$10.30 interstate; 1978 issue) a
STATISTICAL BULLETINS (generally at least 20 pages)	
7 101.6	Agricultural Industry a
8 701.6	Building Industry a
2 201.6	Census of Population and Housing 1976, Preliminary Characteristics irr
3 301.6	Death, Causes of a
3 101.6	Demography a
4 201.6	Education a
4 301.6	Hospital Morbidity a
6 301.6	Industrial Accident Statistics a
6 101.6	Labour, Wages and Prices a
5 501.6	Local Government Finance a
8 202.6	Manufacturing Establishments, Details of Operations and Small Area Statistics a
4 302.6	Mental Health Statistics a
8 401.6	Mining Industry
5 601.6	Private Finance a
4 501.6	Public Justice a
8 601.6	Retail and Selected Service Establishments irr
5 401.6	Trade and Shipping a
8 602.6	Wholesale Establishments irr
PRESS RELEASES	
7 501.6	Agricultural Commodities Produced, Value of a
7 102.6	Agricultural Statistics (preliminary) a
7 302.6	Apples and Pears Held in Cool Stores m (seasonal)
7 206.6	Bee Farming Statistics a
8 702.6	Building Approvals, Monthly Bulletin of m
8 703.6	Building Statistics, Quarterly Bulletin of q
7 301.6	Crop Statistics a
7 203.6	Dairy Industry, Statistics of the a
7 401.6	Farms, Number of, Employment, Machinery, Irrigation and Fertiliser Usage a
5 603.6	Friendly Societies, Report on a
7 303.6	Fruit Production a
7 305.6	Hop Production a
6 302.6	Industrial Disputes a
7 201.6	Livestock Statistics (preliminary) a
7 201.6	Livestock Statistics (final) a

Publications of the Tasmanian Office of the Australian Bureau of Statistics (a)—*continued*

Ref. No.	Publication
<i>PRESS RELEASES—continued</i>	
8 201.6	Manufacturing Census, Preliminary Results Analysed by Statistical Divisions a
7 202.6	Meat, Production of a
9 302.6	Motor Vehicle Census irr
9 301.6	Motor Vehicle Registrations m
3 202.6	Population and Vital Statistics q
3 201.6	Population of Local Government Areas a
7 304.6	Potato Statistics a
7 204.6	Poultry Statistics a
8 301.6	Productive Activity, Miscellaneous Indicators of m
9 401.6	Road Traffic Accidents Involving Casualties q
9 402.6	Road Traffic Accidents Involving Casualties $\frac{1}{2}$ yearly
8 203.6	Sawmilling, Woodchipping, etc. Statistics m
8 603.6	Tourist Accommodation Establishments (Occupancy Survey) q
8 604.6	Tourist Accommodation Establishments, Census of irr
5 402.6	Trade, Overseas a
7 205.6	Wool Production Statistics a

(a) Unless a price (excluding postage) is also given, the publication is available free of charge (in limited numbers). The symbols used indicate the frequency of publication as follows: m—monthly, q—quarterly, a—annual and irr—irregular.

TASMANIAN STATISTICS IN CENTRAL OFFICE PUBLICATIONS

Although publications of the Tasmanian Office of the Australian Bureau of Statistics make available statistics on many aspects of the State, there are some fields in which additional or more frequent information is available in publications of the Central Office.

How to Obtain Central Office Publications

Central Office printed publications may be *bought* direct from the Australian Government Publications and Inquiry Centres at 113 London Circuit, Canberra or 162 Macquarie St, Hobart, or from the Tasmanian Office of the Australian Bureau of Statistics. A standing order may be placed with the Australian Government Publishing Service, P.O. Box 84, Canberra, A.C.T., 2600, with whom a credit account may be arranged. In addition to printed publications for which a charge is made, there are other Central Office publications (mimeographed, etc.) which may be obtained free of charge from the Australian Statistician, Canberra (telephone (062) 52 7911).

Subject Matter of Central Office Publications

The fields of statistical inquiry covered in Central Office publications are very wide and the best way to obtain a guide to the material available is to write to: *The Australian Statistician*, P.O. Box 10, Belconnen, A.C.T. 2616 and ask for the booklet *Catalogue of Publications*. Copies of this guide are also available at the Tasmanian Office of the Bureau. This free, comprehensive guide lists the publications of the Central Office and of the state offices; in addition, it contains a subject index to information covered by Central Office publications. Readers with interest in a particular field are invited to call at, or write to, the Tasmanian Office which is in a position to give advice on what publications are available.

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Errata

The first sentence under 'Preferential Voting' on page 81 should read 'The order of candidates' names appearing on the voting paper is determined by ballot and candidates are not grouped to show party allegiance as in voting papers for the House of Assembly.'

The unit of production for the top three graphs on page 197 should be '000 *tonnes*, not '000 kilograms.