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*Tasmanian Year Book*



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**TASMANIAN YEAR BOOK**

**1980**







*Frontispiece: A Derwent Sunrise (from  
Marieville Esplanade)*

*[O. P. Bachinger Snr]*



**AUSTRALIAN BUREAU OF STATISTICS  
TASMANIAN OFFICE**



**TASMANIAN  
YEAR BOOK**

**No. 14: 1980**

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DEPUTY COMMONWEALTH STATISTICIAN  
AND GOVERNMENT STATISTICIAN OF TASMANIA**



A.B.S. Catalogue Number 1301.6

National Library of Australia card number and ISSN 0082-2116

By Authority:  
Wholly set up and printed in Australia by  
D. J. WOOLMAN, Government Printer, South Australia

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## SYMBOLS AND OTHER USAGES

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 but included in totals where applicable
n.y.a.	not yet available
p	preliminary—figure or series subject to revision
r	figure or series revised since previous issue
..	not applicable
-	nil or less than half the unit shown
—	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.

Where figures have been rounded, discrepancies may occur between sums of the component items and totals.

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 Appendix B 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 also 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*).

## 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 of the *Year Book* (the fourteenth) includes special articles on: The Lands Department; Municipal Amalgamation and the Chapman Report of March 1979; King Island Scheelite; Tasmania's Energy Future, including a summary of the Report on the Gordon River Power Development, Stage Two; Lactos Pty. Ltd.; Great Circle Routes and the Southern Ocean; the Tasmanian Fiesta; and Tasmania and Newfoundland: Island States with Much in Common.

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

Also covered in this issue are: the Ombudsman; museums and the performing arts; a summary of results from the 1978 survey of visitors departing from Tasmania; and the Export Finance and Insurance Corporation.

As far as possible, the latest available statistics and significant developments which have occurred during 1979 have been embodied in each chapter.

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. To the South Australian Government Printer and his staff I express my appreciation for their assistance and enthusiasm in printing the *Year Book*. My thanks also go to Advance Bookbinders who were responsible for binding this volume.

More detailed statistics relating to most matters treated in the *Year Book* are available in the other statistical publications issued by the Bureau. Information about ABS publications relating to Tasmania is provided in the section 'Publication of Tasmanian Statistics' which precedes the Index of Special Articles. Anyone requiring advice on what statistics are available or which publications may be of most use to them is invited to telephone the Information Officer on Hobart 20 4495.

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

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Australian Bureau of Statistics,  
HOBART, April 1980



# Chapter 1

## HISTORY AND CHRONOLOGY

### DISCOVERY

#### The Period of Dutch Exploration

In the works of authors of antiquity, references are found to a land called 'Terra Australis' but it is the Dutch who are credited with the discovery of both mainland Australia and Tasmania. The Dutch, with their trading posts in Java, represented the closest extension of European sea power near the north of the unknown continent and its discovery, either by accident or design, became inevitable.

In 1606, Captain William Jansz in the *Duyfken* was sent from Java to explore the islands of New Guinea and, crossing Torres Straits unawares, coasted along the west of Cape York Peninsula; this was the first of a series of voyages by Dutch captains who, in the next 30 years, acquired some knowledge of the western shores of the unknown land. Not all voyages were undertaken with the aim of exploration—Dirk Hartog's long journey along the western shore of Australia in 1616 resulted from his sailing too far east on the route from the Cape of Good Hope to Java. Some later captains on the same route even regarded the western Australian coast as a suitable landfall before turning north for Java—a commentary on the difficulty of navigation when longitude had to be established by dead reckoning.

In 1642, the Dutch East India Company despatched from Java an expedition of two vessels, the *Heemskirk* and *Zeehan*, under Captain Abel Tasman, with instructions to investigate the extent of the unknown land thought to exist between New Guinea and the western coast of Australia. One immediate aim of the Governor-General, Anthony Van Diemen, was to find a southern route from Java to Chile so that ships of the Company could either trade or plunder along the Pacific coast of South America; a question to be resolved was whether any land mass extending far south blocked such a route.

The original plan was to sail west to Mauritius, to run down to 52° or 54° south latitude and then to proceed east; assuming no land was discovered, it was then intended to turn north in either the longitude of eastern New Guinea or possibly of the Solomons. If Tasman had followed this plan in every detail he might have discovered the east coast of Australia, anticipating Cook's work by more than a century. As it turned out, the extreme southern latitudes were too hostile and accordingly Tasman was sailing east in latitude 42° south when he sighted the mountainous west coast of Tasmania on 24 November 1642.

The Dutch navigator skirted the south coast and made a landing on the east coast for water in Blackman Bay (from an anchorage south of Marion Bay). He then sailed north to St. Patricks Head, crossed the Tasman Sea and discovered New Zealand, returning to Java by a route to the north of New Guinea. Tasman had thus performed the feat of circumnavigating Australia in a single voyage without once sighting the Australian continent.

In honour of the Governor-General of the Indies, he named the first discovery Van Diemen's Land, imagining it to be the most southern extension of the Australian continent, an illusion that was only completely dispelled by Bass and Flinders when they circumnavigated the island in 1798. The Dutch did not follow up the discoveries of Tasman or their other explorers because they were interested in establishing trading posts only among

peoples with a higher degree of civilisation than the natives of Tasmania or mainland Australia appeared to possess. (Tasman's crew saw no natives in Tasmania but inferred their existence from sounds, cuts in trees and the smoke of fires.)

### The Period of British and French Exploration

One hundred and thirty years passed before Tasmania was visited again, this time by the French navigator Marion du Fresne in 1772; he virtually repeated Tasman's original landfall, skirted the south coast and came to anchor in the bay that bears his name (Marion). His visit is memorable for the first contact between Europeans and Tasmanians and for the slaying of the first native by gunfire. Du Fresne himself was killed by Maoris in New Zealand on the same voyage.

A year later, Captain Tobias Furneaux in the *Adventure* became separated from Captain Cook in the *Resolution* on the route to New Zealand and made for Tasmania to obtain water. He eventually anchored off Bruny Island in Adventure Bay but mistakenly believed himself to be in the area of Tasman's original landing which was at least 70 kilometres to the north-east. From this original error sprang a confusion in nomenclature which persists to this day (e.g. Frederick Henry Bay, first named in Tasman's record, appears on maps in an area that Tasman did not even see). Furneaux then sought to investigate the possibility of a strait separating Tasmania from the continent recently explored by Cook, but shoals in the islands bearing his name (Furneaux Group) caused him to abandon the project and make for New Zealand.

In 1777, Cook, on his third voyage, used the Adventure Bay anchorage without detecting Furneaux's navigational errors.

The settlement at Port Jackson in N.S.W. in 1788 put Tasmania on a major sailing route, the First Fleet passing south of the island on its way there. To have sailed north of the island would have invited shipwreck on the Australian 'mainland' of which Tasmania was then believed to be part. In the same year, Captain William Bligh put into Adventure Bay with the *Bounty* on his way to Tahiti and to the famous mutiny; he had been on Bruny Island before, as Cook's sailing master.

Captain Cox of the *Mercury* anchored in the Bay known as Cox Bight in 1789, chartered some of the south coast and explored the strait between Maria Island and the east coast.

The next visitor (1792) was Admiral Bruny D'Entrecasteaux commanding *Recherche* and *Esperance* and searching for La Perouse who had not been heard of since 1788 when he sailed from Botany Bay. The Admiral sailed north hoping to anchor in Adventure Bay, but a navigational error put his ships too far west with the happy result that he discovered the magnificent channel separating Bruny Island from the Tasmanian mainland and was the first to sail up the River Derwent. Leaving Tasmania, the expedition sailed as far west as Cape Leeuwin in Western Australia when it became imperative to take on water. It is an indication of the lack of knowledge then available that D'Entrecasteaux had to return to Adventure Bay to fill his casks. In the same year, Bligh put into Adventure Bay on his way to obtain breadfruit trees in the Pacific for transplanting in the West Indies.

The year 1794 was notable for the visit of Commodore John Hayes who had sailed from India with the *Duke of Clarence* and the *Duchess*; he explored the Derwent as far as Mt Direction and named Risdon Cove, later to be the site of the first settlement.

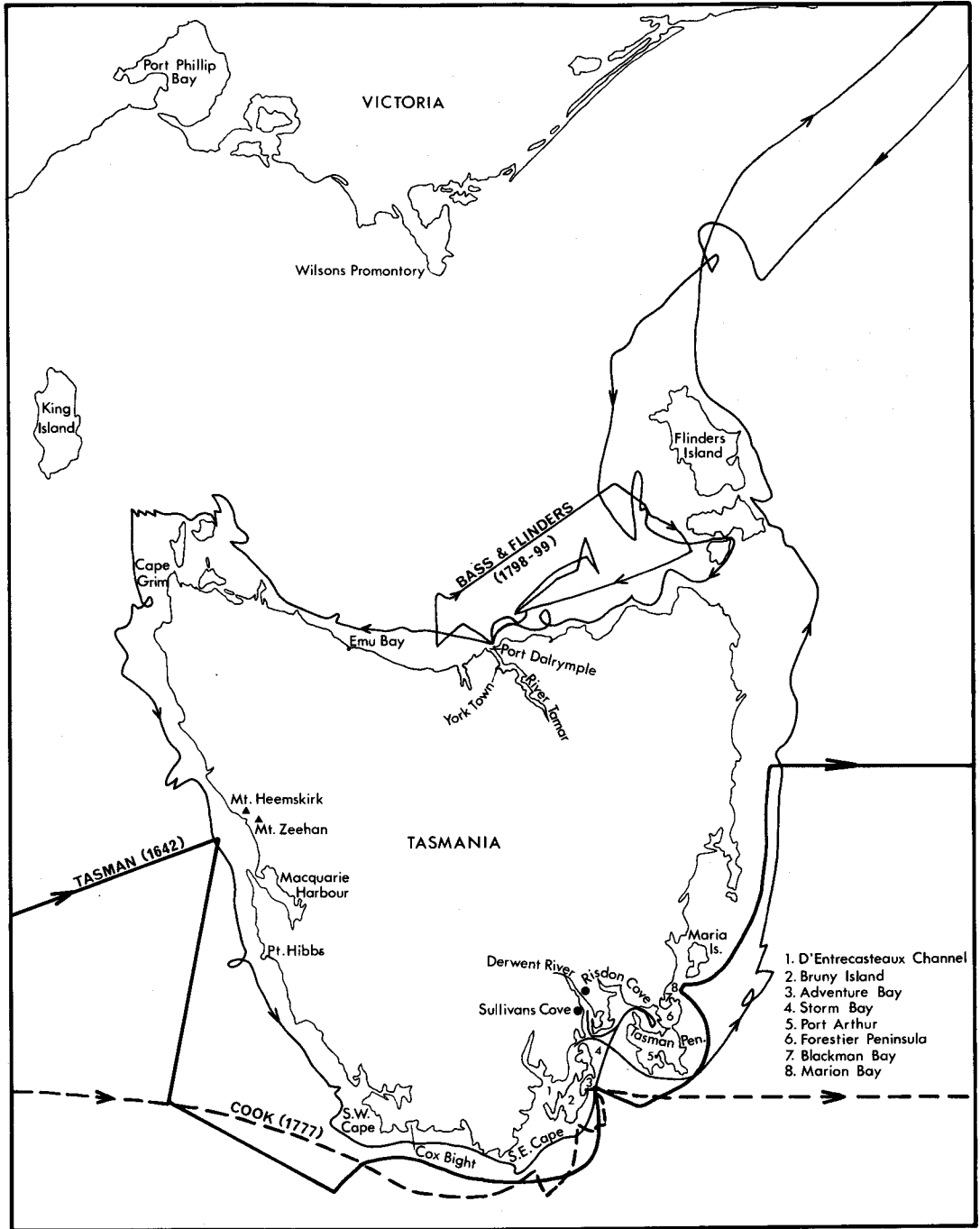
### Tasmania an Island

Two voyages now followed which established that Tasmania was an island. Surgeon George Bass in a whaleboat left Port Jackson in 1797, rounded Wilsons Promontory and discovered Western Port. The nature of tides and swells encountered told Bass that here was no bay but rather a strait of considerable magnitude. In 1798, Bass and Flinders were given the sloop *Norfolk* to decide the question for all time and they circumnavigated the island, commencing on a westerly course along the north coast where they discovered the Tamar Estuary.

### Fear of the French

In the original annexation of Australian territory by Cook in 1770, Tasmania was excluded since the southern limit was proclaimed as 38° south latitude. Formal possession of Tasmania was taken by Governor Phillip on 26 January 1788, when he read his commission to

### TASMANIA: DISCOVERY AND EXPLORATION





the people of the First Fleet at Sydney Cove. Now that it was established that Tasmania was an island, the authorities both in London and Sydney felt that some steps should be taken to block the French from making any claims to possession. The urgency of doing this was underlined by the arrival in D'Entrecasteaux Channel of Admiral Baudin with the *Geographe* and *Naturaliste* in 1802. The expedition's navigator, Freycinet, charted Tasman and Forestier Peninsulas and correctly identified the Frederick Henry Bay of the Dutch era. The expedition then called at Port Jackson before sailing south into Bass Strait where it was intercepted at King Island by Lieutenant Robbins in the *Cumberland*. Announcing his intention boldly to the French Admiral, the Lieutenant disembarked his small company and formally annexed the island in the name of King George III. Governor King at Port Jackson who gave Robbins his instructions was not satisfied that merely formal acts of annexation would block the French indefinitely and decided that permanent settlements were required if British Sovereignty were to be retained. To this decision can be attributed the settlement at Risdon (1803) and the Hobart and Port Dalrymple settlements of 1804.

### Geography of the Original Landing

The State map published by the Tasmanian Lands Department (1:250 000) makes easy the recognition of Tasman's landings on the east coast. His anchorage was near Visscher Island while the first landing was made by longboats which passed through the narrows into Blackman Bay. The second landing occurred in the south-east of North Bay where a lagoon proved too brackish for filling water casks.

The last landing was made near Tasman Bay where the navigator had hoped to take formal possession of the new land. The surf being too rough to get the longboat ashore, the carpenter swam through the waves, planted the Dutch flag and then fought his way back to the longboat.

## SETTLEMENT

### The First Settlement at Risdon (1803)

It will be observed that the original explorers of the Island (including the French) had very largely concentrated their attention on the south-east and, in particular, on the sea approaches to the Derwent. Faced with the necessity for establishing a settlement to assert British Sovereignty, Governor King had a number of possible sites to consider, including King Island, Port Phillip and Port Dalrymple (the Tamar Estuary). His eventual choice was the area of the Derwent Estuary and he reported his intention to the Admiralty as follows:

'My reasons for making this settlement are the necessity there appears of preventing the French gaining a footing on the east side of these islands; to divide the convicts; to secure another place for obtaining timber with any other natural productions that may be discovered and found useful; the advantages that may be expected by raising grain; and to promote the seal fishery.'

Commissioned to make the Derwent settlement, Lieutenant John Bowen sailed from Sydney with the *Albion* and *Lady Nelson*; the two vessels separated in a gale but were anchored at Risdon by 11 September 1803, when Bowen went ashore. The slenderness of Governor King's resources is apparent from the fact that the settlers—free, convict and military—numbered only 49 and that the *Albion* was a British whaler under temporary charter (she caught three sperm whales on the voyage while becalmed).

The responsibility for the choice of the Risdon site attaches ultimately to Bass who had made detailed investigations of the Derwent in 1798 from the *Norfolk*. He had reported as follows: 'The land at the head of Risdon Creek, on the east side, seems preferable to any other on the banks of the Derwent.' It was not surprising, therefore, that Bowen's commission from Governor King directed him to locate the new settlement in the Risdon area. In actual fact, the site ultimately proved unsuitable due to the inadequate stream and the poor landing place; these handicaps were aggravated by the wretchedness of the human material at Bowen's disposal, a characteristic not altered when the camp was increased to nearly 100 persons.

If the settlement has any claim to fame, it derives from an encounter with natives who descended on the camp on a hunting expedition and who were fired on by the soldiers in a state of panic. Whether the future barbarities of inter-racial war could have been avoided is an open question but this encounter was the first phase of a struggle that ended in the extinction of a race.

The final act of the Risdon settlement was played on 9 August 1804, when the *Ocean* sailed for Port Jackson with Lieutenant Bowen and most of his people; Lieutenant-Governor Collins at the new settlement at Hobart had decided to close down the Risdon camp and held such a low opinion of these early colonists that he retained only 13 convicts and one free settler.

### The Settlement at Hobart (1804)

If Lieutenant-Governor Collins had carried out his original instructions, then Hobart today might have been the name of the capital of Victoria situated on Port Phillip Bay. The British Cabinet, impressed by Governor King's warnings on possible French penetration, decided to carry out the occupation of Port Phillip direct from Britain and, to this end, commissioned Lieutenant-Colonel Collins (Royal Marines) to command an expedition in the *Calcutta* with the *Ocean* as tender to secure the strategic Bass Strait. Control of the Strait meant that the dangerous 1 100 kilometre journey around Van Diemen's Land was avoided and also prevented a hostile foreign power from threatening British sea lanes in the South Pacific.

The settlers eventually arrived, via Rio De Janeiro and the Cape of Good Hope, and formed a temporary camp near the site of the modern Sorrento township. For a variety of reasons, Collins was unhappy about the locality; he considered navigation hazardous, the soil poor and water inadequate. He was unwilling to develop promising land at the head of the bay due to the show of strength by large bands of natives and because of its distance from the open sea. Collins had seen the problems of isolation at Sydney and considered a settlement at the head of Port Phillip Bay unduly hazardous. With the wind in the wrong quarter a ship could be locked in the bay for several days thereby defeating the purpose of the settlement—a port to protect and control Bass Strait. Accordingly he wrote for advice to Governor King in Sydney and was left free to decide between the River Derwent and Port Dalrymple as possible sites for transfer of his command. He was probably swayed in his eventual choice of the River Derwent by its reputation as a safe harbour and the fact that Risdon had already been settled.

On 15 February 1804, Collins, with the first detachment from Port Phillip in the *Lady Nelson* and *Ocean*, anchored off the new settlement at Risdon. A quick inspection satisfied Collins that the site was quite unsuitable and he made his own reconnaissance, eventually selecting the area on the western bank known as Sullivans Cove and ordering that the expedition should be disembarked with all its stores in the vicinity of Hunters Island. In the same month, Collins reported to King that his two ships were 'lying within half a cable-length of the shore in nine fathoms of water'; the Lieutenant-Governor had selected gentle slopes for his settlement, located a fine stream running from Mt Wellington and found near the mouth of the stream depths of water which would accept the draught of any vessel of his day (or of the modern era).

The following table shows the early composition of the settlement at Sullivans Cove (but excludes details of the Risdon Camp):

Number Victualled at Sullivans Cove, 26 February 1804

Quality	Men	Women	Children
Military establishment .....	26	1	—
Civil establishment .....	6	—	—
Settlers .....	13	5	13
Convicts .....	178	9	8
Supernumeraries .....	(a) 3	—	—
Total .....	226	15	21

(a) Includes one Aboriginal from Port Jackson.

The strength of the Colony was increased to 433 persons in June 1804 when the *Ocean* returned from Port Phillip, where it had taken aboard the balance of the original expedition. From the camp on Sullivans Cove has sprung the present city and port of Hobart.

David Collins was no amateur in the field of colonisation—he had sailed with Governor Phillip as Judge Advocate in the First Fleet in 1788 and had acted as Secretary to the Governor till 1796 when he returned to Britain with excellent recommendations.

### The Settlement on the Tamar (1804)

While the Lieutenant-Governor was still in Port Phillip Bay, wondering where best to settle, he sent his namesake, William Collins, on a voyage of exploration to the Tamar Estuary. William Collins followed the river up as far as the Cataract Gorge and returned to Port Phillip with a good account of the possibilities of the Tamar for settlement; in his absence, however, the Lieutenant-Governor had made up his mind and was already preparing for the expedition to the Derwent.

Later Governor King received a despatch from Lord Hobart (Secretary of State for the Colonies) who, by a grotesque error, recommended the establishment of a settlement at Port Dalrymple 'upon the southern coast of Van Diemen's Land and near the eastern entrance of Bass' Straits'. If Lord Hobart really meant 'south' then Collins' move to the Derwent had anticipated his wishes. However, since Collins had in fact left Port Phillip, was it not necessary to re-occupy Port Phillip or possibly to watch the Strait from Port Dalrymple? King knew that Hobart's despatch was written in ignorance of Collins' move and accordingly decided to use his own initiative without raising questions of geography with the Secretary for Colonies.

In Hobart's despatch, Lieutenant-Colonel William Paterson (New South Wales Corps) was nominated as Lieutenant-Governor of the new colony. Paterson set sail with 57 soldiers and convicts in the *Integrity* and the *Contest* but after a month of adverse winds both ships were forced back to Port Jackson. A second attempt was made using *Buffalo*, *Lady Nelson*, *Francis* and *Integrity* and increasing the party to 181. This time the Tamar was successfully entered but H.M.S. *Buffalo* went aground and was, with some difficulty, brought to anchor in Outer Cove (George Town) on 4 November 1804. Lieutenant-Colonel Paterson decided that *Buffalo* must be immediately unloaded and accepted the Outer Cove site as a suitable camp while he undertook a more detailed reconnaissance of the Tamar.

Although he penetrated as far as the fertile site of Launceston, Paterson made the extraordinary decision to set up his headquarters at the head of West Arm and founded York Town, while still maintaining small establishments at Outer Cove, Low Head and Green Island. In deciding on York Town, one can only imagine that Paterson was guided purely by the strategic necessity, as was Collins at Sorrento, of being near to Bass Strait and that he gave little thought to the problem of soil fertility and cultivation.

In March 1806, Paterson was willing to admit that York Town was a most unsuitable site and he accordingly moved his headquarters to the present site of Launceston. Today, York Town and Risdon have one thing in common—the almost complete absence of any indication that settlements ever existed.

Paterson, before setting out on his expedition, had been involved in an argument as to his status but Governor King had resolved the matter by dividing Tasmania at the 42° parallel and making Collins and Paterson sovereign in their respective halves, but subordinate to him as Governor.

## 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 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*.
- 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. Advent of responsible self-government. 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 telegraph 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 Truganini, 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 (£A1/5s).
- 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-rays 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, Arbitration 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 Waters 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. 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. King Island's Naracoopa rutile 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. 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. Federal Labor Government re-elected. Women under State Wages Boards determinations awarded equal pay. European carp discovered in farm dams along the North-West Coast. 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. 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. 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. Temporary Bailey bridge across the Derwent opened. \$5m Police Academy completed at Rokeby. Hotels allowed to open for Sunday trading. Federal Liberal-Country Party Government elected with a majority in both Houses.
- 1976** Hobart recorded its highest ever maximum temperature of 40.8°C. Family Law Courts established in Tasmania. 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. A Tasmanian consortium investigated the modernisation of the Electrona carbide works, preventing an imminent shutdown. 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. Tasmania's budget surplus a record \$4.1m for 1975-76. 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. 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. 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.P.M. announced plans for a \$185m expansion project at Wesley Vale. 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. 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. 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. Total decline in jobs in the textile industry in Launceston over 2½ years reached almost 1 500. The Neilson Labor Government returned to power with a reduced majority: A.L.P., 18 seats; Liberal, 17 seats (H. of A.). A.N.M. Ltd announced new plant developments which would cost approximately \$13m.

- 1977** Further 73 retrenchments at Mt Lyell brought total to nearly 300 since November 1976. 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. 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. 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. T.C.A.E. F. M. radio began regular transmission. \$25m expansion program announced by A.P.P.M. Burnie. March quarter National Wage decision of 1.9 per cent increase up to \$200 per week and a flat \$3.80 thereafter announced. 'Price freeze' officially ended. One km long and 5 x 5 m Gordon Dam tailrace tunnel holed through. G. J. Coles submitted plans for \$7m K-Mart at Devonport. Report on education in Tasmania released. State Department of Planning and Development established. Comalco Aluminium (Bell Bay) Ltd began an expansion program to lift output by 20 per cent. State Government finished financial year with \$1.6m surplus in the Consolidated Revenue Fund. Plans approved for pedestrian mall in the centre of Hobart. South-bound freight subsidy to benefit the State by \$20m for the financial year 1976-77. Radar guns introduced for use by the Police. Federal grants to Tasmanian local government authorities totalled \$5.3m, an increase of \$1.3m over the previous year. 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. 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. 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 released. 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 \$7m West End shopping mall and car park complex. Federal-State tax sharing arrangements finalised; states to share 39.87 per cent of personal income tax collections from the preceding year. Carbide Industries Pty Ltd, announced \$5.5m re-development plan for its Electrona works. 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. Plans announced for \$3m convention centre in Launceston to be connected to the Albert Hall. 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. 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. Launceston Transport Revision Report recommended the spending of \$25m to upgrade Launceston's road system over the next 10 years. State Fire Authority established. 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. 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). Drought conditions in many parts of the State the worst for 30 years. Severe frost and hail damage to State's apple crop.
- 1978** Large scale drug operation involving the smuggling of cannabis oil to Tasmania from Thailand uncovered by narcotics agents. Direct flights between Tasmania and Sydney introduced on a trial basis. Detailed plans for a second Hobart bridge made public. State Government set up a Task Force to halt unnecessary State Government spending. Sir Stanley Burbury reappointed for an additional three-year term as Governor. Professor Peter Wilenski appointed head of an inquiry into the State Public Service. Plans for a \$20m expansion of the Alanvale Matriculation College, Launceston announced. Unemployment in Tasmania reached a post-war peak of 7.3 per cent (Commonwealth Employment Service figures) and 7.5 per cent (Australian Bureau of Statistics figures). Rebuilding of the Lactos cheese factory at Burnie completed after part of it had been destroyed by fire in the previous year. Minops Pty Ltd closed its West Coast tin mine. The ocean liner *Queen Elizabeth 2* arrived in Hobart as her first port of call on her maiden voyage to Australia. State Government refused to allow mining at

Precipitous Bluff. Tasman Limited service was reduced from six to three days per week. The Tasmanian Railways came under full control of the Australian National Railways Commission. The Arbitration Commission granted a plateau indexation rise of 1.5 per cent to a level of \$170 per week, and those earning more than \$170 per week received a flat \$2.60 per week. A major review to be undertaken by the H.E.C., of Tasmania's potential energy resources was announced. The review was to consider the energy potential from water, coal, gas, wind and sun, and liquid fuel production from sugar beet and wood. Dunlop Ltd announced the scrapping of 300 jobs at its Universal Textiles plant at Derwent Park. Negotiations aimed at producing natural gas from the Pelican Field (80 kilometres north of Burnie) began which could lead to the supply of natural gas to Tasmania and Victoria. Details of IPEC's proposed 'Tiger' cargo service across Bass Strait released. 360 employees of Savage River Mines stood down as a result of a strike by members of the A.M.W.S.U. Construction of a State Government office complex and an extensively landscaped pedestrian plaza in Launceston announced. 200 of the 540 jobs at the Universal Textiles plant saved following discussions between the Government and the Company. Impact study into the effects of all forms of gambling announced by the State Government, before consideration of a northern casino licence. A 200-mile fishing zone was adopted by Australia. The State Government was asked to guarantee a \$15m loan for the 'Tiger Line' service. After legislation, it was agreed that the State Treasurer could provide \$15m backing, but not until an impact study was completed. It was revealed that a loss of \$17.3m was incurred by public rail, shipping and ferry services during the 1976-77 financial year. Hobart's gas mains closed and consumers changed over to low-pressure gas. An earth tremor, centred in Bass Strait, shook coastal centres from Penguin to Boat Harbour. It recorded 4.5 on the open ended Richter Scale. Proposal for a new \$28m Claremont Community College announced. Ceilings imposed on the State Government work force required zero growth for the rest of the 1977-78 financial year and a one per cent growth rate in 1978-79. Announced that self-help drive by Mt Lyell Mines had cut subsidy requirement in half. The new \$4.6m Pieman River Railway Bridge and railway deviation handed over to Emu Bay Railway Company by the H.E.C. The film 'The Last Tasmanian' made considerable impact overseas. Senator Reg Wright announced his retirement from the Australian Liberal Party in protest at increased Parliamentary superannuation benefits. Widespread floods in the Fingal Valley and at Longford. The Full Bench of the Arbitration Commission handed down a national wage rise of 1.3 per cent which was a full flow-on from the March quarter C.P.I. figure. The Stanley Works Pty Ltd announced an expansion program which will create about 250 new jobs during the next five years. A.P.P.M. announced increased production at its Burnie mill following an upturn in demand which created approximately 80 new jobs. Tasmanian Education Next Decade (TEND) Report released. Tasmanian and Federal politicians granted wage rises of between \$39 and \$91 per week. The State Government announced rises in taxes and charges as a result of the Premier's Conference. The State Government decided not to back the 'Tiger Line' fast-freight project with a \$15m guarantee. The State budget deficit for 1977-78 was \$6.4m. The State Government agreed to pay \$27m to increase pensions for State parliamentarians. The State Government announced plans to establish a chair of Transport Economics at the University of Tasmania. The Australian National Railways Commission announced that all regular passenger train services in Tasmania would cease from the end of July. A 5 cents per litre petrol tax was proposed to replace all other existing motor vehicle taxes and charges but this idea was later dropped after an increased fuel tax was announced in the Federal Budget. Devonport Council approved construction of a pedestrian mall in Rooke Street. Federal Government gave the go-ahead for the new \$8m Antarctic base at Kingston. A major study of the State's coal reserves, by the Mines Department, revealed a potential deposit of 251 million tonnes in the Fingal Valley. Mr Neil Batt was elected Federal President of the A.L.P. The Federal and State Governments gave the go-ahead for a joint Japanese-Tasmanian fishing feasibility project off the State's coastline. The Federal Budget increased personal income tax by 1.5 cents in the dollar; Standard Medibank was abolished; petrol, beer, spirits and cigarette taxes were increased; a means test for pension increases for those 70 years of age or older introduced; automatic dole indexation to apply only to those with dependants. Sales tax on cars and station wagons was reduced from 27.5 per cent to 15 per cent. Federal Government confirmed its plans to proceed with the Australian Maritime College at Beauty Point. Bizjets commenced an air shuttle service between Smithton and Essendon (Victoria). The Federal and State Governments agreed to pay up to \$7.6m to keep the Mt Lyell copper mine in operation until mid-1980. The 'stand-by' air fare experiment began. A nine-man Private Forestry Council appointed to serve as an advisory body to the Forestry Commission on all matters relating to private forestry. The Arbitration Commission replaced quarterly national wage case hearings with six-monthly hearings to be held in October and April of each year. The Cartland Committee of Inquiry into South-West Tasmania proposed that an authority be set up to advise the Government on all future land-use in that part of the State. The 1979 Military Tattoo was cancelled because the State Government was not prepared to increase assistance beyond \$25 000. A survey revealed that the introduction of fluoride into Tasmanian water supplies cut the rate of dental decay amongst school children by more than half. The Victimless Crime Select Committee recommended legalisation of homosexuality and relaxation of marihuana smoking laws. Renison Ltd announced a \$20m expansion program at its West Coast plant as a result of increased world demand for tin. Tasmania lost its Military Tattoo to Victoria where the Government offered to provide a \$70 000 guarantee. The Tasmanian company, Watts Construction Pty Ltd, won the \$7m contract for the construction of the Antarctic Research Base at Kingston. T.C.A.E. (Mt Nelson campus) and the Hope Foundation were granted special 'F.M.' broadcast licences. The State Government approved a scheme to research and plan Tasmania's energy policy. This was intended to reduce the autonomy of the H.E.C. by bringing it under direct ministerial control and to broaden its role to cover all energy sources. A meeting of 350 George Town rate-payers called for the resignation of members of the George Town Municipal Council after demanding that rate increases be lowered from

18 to 12 per cent. State Cabinet accepted a recommendation that the Federal Hotels consortium be granted the Northern Licence to build the State's second casino. It was announced that construction of the \$7m country-club style casino could start in early 1979 at Mt Leslie in Prospect Vale. Tasmania obtained approval from the Loans Council to borrow \$110m to finance State Government works throughout the State. The Tasmanian Government Insurance Office announced its withdrawal from provision of medical and hospital insurance. Announced that a new 'fire tax' levied on dwellings would be introduced instead of payment as part of insurance premiums. The Federal Government agreed with the Tasmanian Government on the establishment of a trial Tasmania-New Zealand air link. Improved World copper prices helped to put the Mt Lyell Mining Company back on the road to a sound recovery. A Federal Cabinet reshuffle resulted in increased responsibilities for Tasmania's two Federal Ministers, Mr. Groom and Mr. Newman. A new 78-bed motel opened at Strahan. Plans announced for extensions to the Eastlands shopping complex to accommodate a new store for G.P. Fitzgerald and Co. Savage River Mines announced that it would double the area and the life expectancy of its open cut operations. The mine was expected to be viable for 25 years. The first half-yearly National Wage Case decision was for a full 4.0 per cent flow-on. The State Government acted to bring the Potato Industry Authority under ministerial control. The State Government officially handed over 13.3 hectares of land at Newnham to the Commonwealth Government for the Australian Maritime College. Johns Phoenix fabrication plant in Launceston closed after 124 years of operation. The road toll for 1978 was 106, six fewer than 1977. The first 'Tasmanian Fiesta' got off to a successful start. Unemployment in Tasmania at the end of December was 7.1 per cent of the total labour force (C.E.S. figures).

1979 See Appendix following Chapter 18.

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See also the Index of Special Articles which precedes the General Index at the back of this Year Book for a listing of historical articles included in the various editions of the *Tasmanian Year Book* (entered under 'Historical Articles').



## 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, the Tasmanian mainland extends from 40° 38' (the official northern boundary of Tasmania is 39° 12') to 43° 39' south latitude and from 144° 36' to 148° 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° 38' south latitude, 158° 53' east longitude and is bounded by the Southern Ocean.

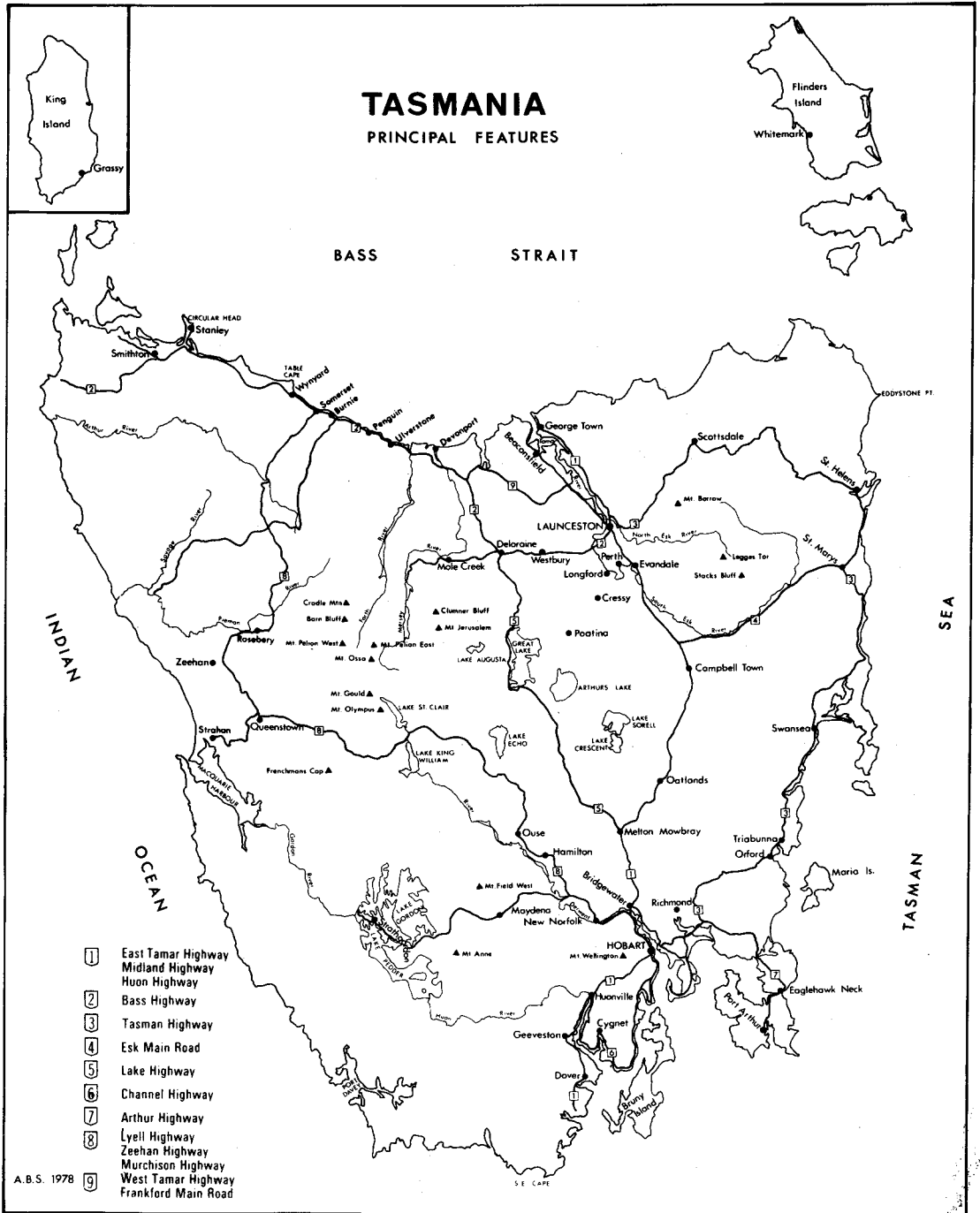
The area of the whole State, including the lesser islands, is 68 300 square kilometres or about 0.9 per cent of the total area of Australia (7 686 900 square kilometres); it is just under one-third the size of Victoria, the smallest mainland state, and is less than half the size of England and Wales.

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'.

##### Population Distribution

With a population of only 413 680 (at 30 June 1978), 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 1977 was 325 persons per square kilometre (area 151 207 square kilometres; population 49.1 million). To have this population density, Tasmania (area 68 300 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 three main areas: (i) the Hobart Statistical Division with about 40 per cent; (ii) the Launceston Statistical District with about 20 per cent; and (iii) the North Western Statistical Sub-division with a further 22 per cent. Only 75 per cent of Tasmania's population live in urban centres (localities with 1 000 or more persons); all other states are in the range from 80 to 90 per cent. This deviation from an Australian pattern is partly explained by the relative proximity of Launceston and the North-West Coast to the principal mainland markets. However, terrain and climate have also had a large influence on the distribution of the State's population.

### Principal Physical Features, Tasmania

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	Frenchmans Cap .....	1 443
Cradle Mountain .....	1 545	Mt Anne .....	1 417

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 (c) .....	28
Arthurs Lake (c) .....	64	Lake Augusta (c) .....	12

Rivers			
Name	Length (kilometres)	Name	Length (kilometres)
South Esk (d) .....	201	Huon .....	170
Gordon .....	185	Arthur .....	113
Derwent .....	182	Pieman .....	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.

## 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; and 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 surveys, 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 River Derwent without use of a dam and the river flow is adequate to service 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 was completed in 1978, creating the largest fresh-water storage in Australia. This does not exhaust the possibility of future hydro-electric development, as construction work on the Pieman River system has commenced with completion scheduled for 1986, 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 1978, farm statistics showed that 33 per cent of the State's area was occupied by rural holdings. Only 3.0 per cent of the area of rural holdings was under crop and a further 39.9 per cent under sown pasture. The remaining 57.1 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.

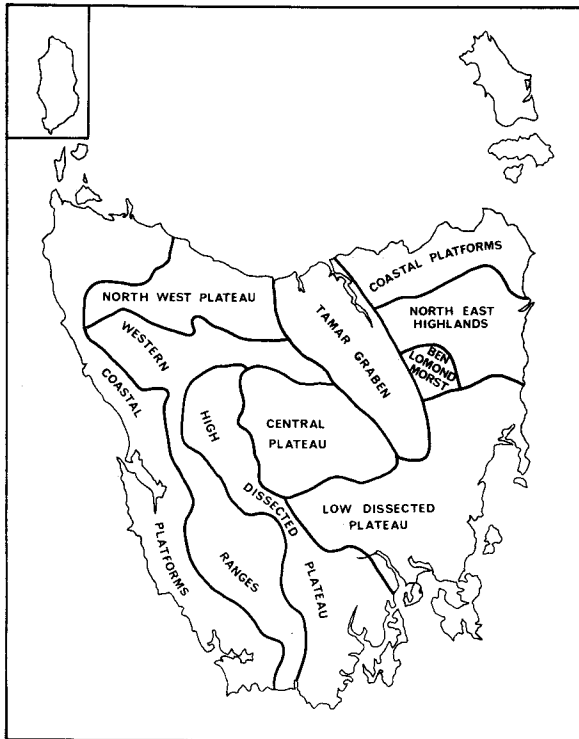
*High Dissected Plateau:* West of Lake St Clair, dolerite caps steeply-tilted sediments and the plateau is much dissected; it comprises a series of peaks and broken ridges. The coastlands in the extreme south of the region are rugged but in the D'Entrecasteaux Channel and Huon River areas, narrow coastal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

*Western Ranges:* The high dissected plateau is bounded 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 Strathgordon.

*Western Coastal Platforms:* Throughout almost the entire length of the west coast, an uplifted and much dissected penepplain 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 uninhabited. 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.

**Tasmania  
Physiographic Regions**



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

*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 1 525 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.

*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 Division seemed to be based on orcharding, small fruit and hop areas; while the South Eastern Division 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)

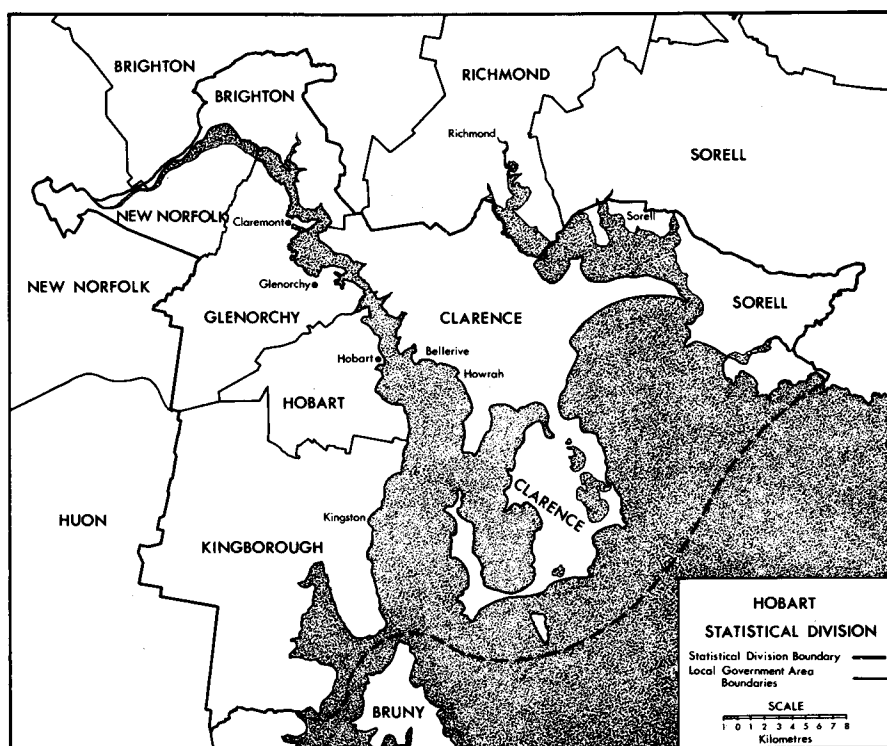
with Hobart as focus—Hobart and Southern Divisions; (ii) with Launceston as focus—Northern Division split into Tamar and North Eastern Subdivisions; and (iii) with Burnie-Devonport as focus—Mersey-Lyell Division split into North Western and Western Sub-divisions.

**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.

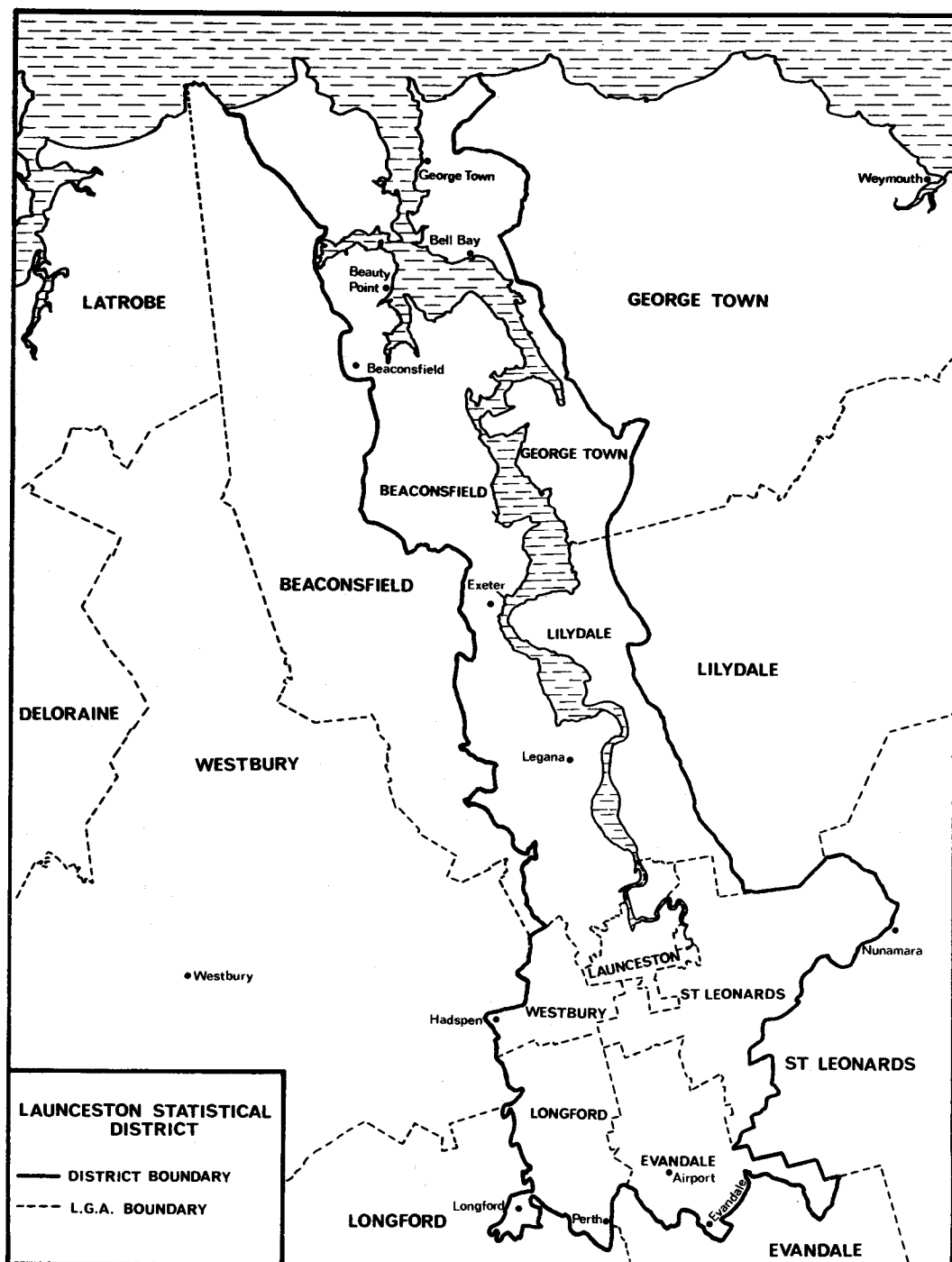


One important component of the Hobart Division is Urban Hobart, defined as the densely settled contiguous parts of the cities of Hobart and Glenorchy, and of the municipalities of Clarence and Kingborough. The boundaries of Urban Hobart and of the Hobart Division do not conform with borders defining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

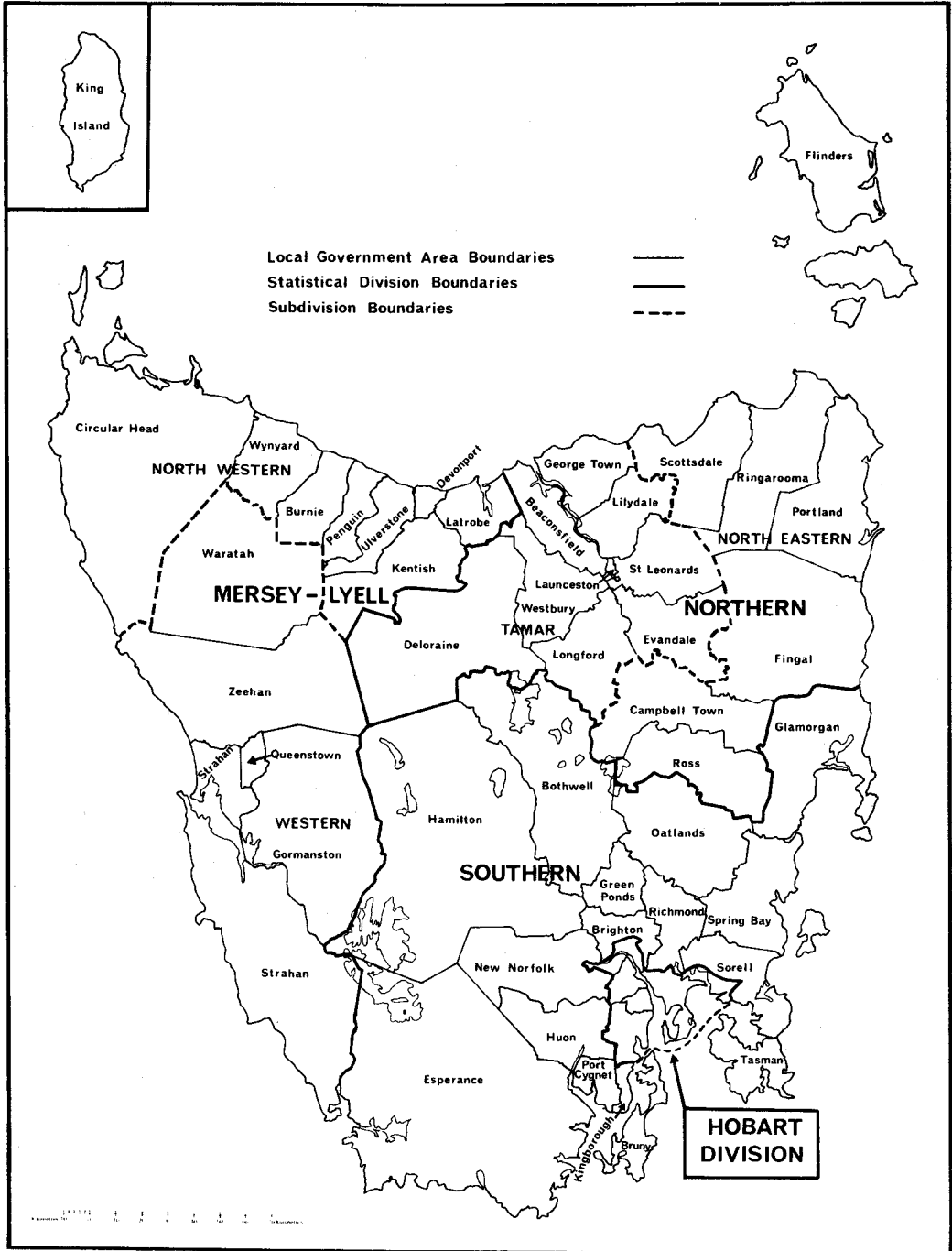
*Southern Division*

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.





Tasmania: Local Government Areas and Statistical Divisions



*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 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 Fleurieu, 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 next 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	
Three Hummock .....	70	Circular Head
Hunter .....	74	
Robbins .....	101	
Maria .....	101	Spring Bay Glamorgan Esperance
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	Campbell Town .....	1 440
Glenorchy (a) (H) .....	(b) 120	Fingal .....	2 730
Clarence (H) .....	250	Flinders .....	1 990
Brighton (H) (S) .....	440	Portland .....	1 580
Kingborough (H) (S) .....	350	Ringarooma .....	1 630
New Norfolk (H) (S) .....	1 320	Ross .....	1 240
Sorell (H) (S) .....	780	Scottsdale .....	1 290
Bothwell (S) .....	2 610	<b>North Eastern .....</b>	<b>11 900</b>
Bruny (S) .....	360	<b>NORTHERN .....</b>	<b>20 610</b>
Esperance (S) .....	6 190	Burnie .....	620
Glamorgan (S) .....	1 540	Circular Head .....	4 920
Green Ponds (S) .....	420	Devonport .....	120
Hamilton (S) .....	5 850	Kentish .....	1 190
Huon (S) .....	770	King Island .....	1 100
Oatlands (S) .....	1 540	Latrobe .....	550
Port Cygnet (S) .....	240	Penguin .....	430
Richmond (S) .....	570	Ulverstone .....	510
Spring Bay (S) .....	1 120	Wynyard .....	810
Tasman (S) .....	480	<b>North Western .....</b>	<b>10 240</b>
<b>HOBART .....</b>	<b>940</b>	Gormanston .....	2 870
<b>SOUTHERN .....</b>	<b>24 090</b>	Queenstown .....	140
Launceston (a) .....	(b) 28	Strahan .....	3 730
Beaconsfield .....	640	Waratah .....	2 710
Deloraine .....	2 920	Zeehan .....	3 000
Evandale .....	990	<b>Western .....</b>	<b>12 460</b>
George Town .....	650	<b>MERSEY-LYELL .....</b>	<b>22 700</b>
Lilydale .....	680	<b>TASMANIA .....</b>	<b>68 300</b>
Longford .....	1 000		
St Leonards .....	890		
Westbury .....	900		
<b>Tamar .....</b>	<b>8 700</b>		

(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 definitions of these areas.)

## 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 36.8 per cent of the State's total area has been alienated by grant or sale; the Crown still owns 61.4 per cent and the residual 1.8 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 32.2 per cent of the State's area.

Alienation and Occupation of Crown Lands, Tasmania at 30 June  
(\*000 Hectares)

Classification of land	Area				
	1974	1975	1976	1977	1978
Alienated (aggregate) (a) .....	2 731	2 755	2 751	2 743	2 517
In process of alienation (a) .....	135	159	154	146	120
Crown lands—					
Leased or licensed—					
Through Lands Department (a)—					
Pastoral .....	188	173	170	105	102
Other (b) .....	12	12	12	9	8
Through Mines Department (c) .....	36	38	47	49	55
Total .....	236	223	229	163	165
Forestry reservations (d)—					
State forests .....	1 345	1 372	1 474	1 475	1 494
Other (e) .....	686	668	567	704	702
Total .....	2 030	2 040	2 040	2 179	2 196
Other Crown land (a) .....	1 698	1 653	1 656	1 599	1 832
Total area of State .....	6 830	6 830	6 830	6 830	6 830

(a) Estimates only.

(b) For closer settlement and soldier settlement, and short-term.

(c) Includes a small area of private land leased through the Mines Department.

(d) Includes areas under pulpwood concessions and exclusive forest permits; see Chapter 8 for further

(e) 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 a large proportion of Crown 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, game reserves, conservation areas, national parks, nature reserves, Aboriginal sites and historic sites. Conservation areas are usually set aside for the protection of flora and fauna. Game reserves are a new category of reserve where controlled hunting is permitted but habitat and other wildlife are protected.

#### State Reserves

The following gives a brief description of the principal State reserves:

*Asbestos Range National Park*: Easily accessible from Launceston and Devonport, this park caters for family oriented recreation. The park extends along the north coast from Port Sorell to Greens Beach at the mouth of the Tamar. The vegetation includes eucalypt forests and coastal heathlands, as well as grassy paddocks which provide good grazing for many native animals including the reintroduced forester kangaroo.

*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*: This park, situated on the east coast, occupies the whole of Freycinet Peninsula together with Schouten Island and other offshore islands. 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.

*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 all year round. 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.

*Mt William National Park*: Bounded on the east by long white sandy beaches of the north-east coast, this park contains the largest single sample of coastal, dry, sclerophyll forest found in any reserve. It also contains 11 of the 14 different heath communities of north eastern Tasmania, and over half the native species of Tasmanian vertebrate animals.

**Port Arthur and Tasman Peninsula:** This historic and scenic area is 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 Eaglehawk Neck where guards were stationed and a line of dogs tethered to prevent escape from the Peninsula. This area 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 403 240 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, part of the rugged south coast, and adjacent offshore islands. 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, Conservation Areas, and Game Reserves*

The following table lists the Tasmanian national parks, their areas and locations. The 1976 *Year Book* includes details of other reserves (State reserves, historic sites, Aboriginal sites and nature reserves) and conservation areas under National Parks and Wildlife Service management at that time (an up-to-date list may be obtained from the National Parks and Wildlife Service). At 30 June 1979 the total area of State and game reserves was 684 704 hectares, while that of conservation areas was 346 398 hectares.

**National Parks, Tasmania at 30 June 1979**

Name	Area (hectares)	Date first gazetted	Location	Remarks
Asbestos Range . . . . .	4 281	7.7.76	North coast	Coastal heathland
Ben Lomond . . . . .	16 526	23.7.47	North-east	Mountainous, ski-field
Cradle Mt-Lake St Clair . . . . .	126 205	16.5.22	West central	Mountainous, lakes
Frenchmans Cap . . . . .	13 000	4.6.41	West central	Mountainous, scenic
Freycinet . . . . .	10 010	29.8.16	East	Coastal, red granite
Hartz Mountains . . . . .	6 470	24.5.39	South	Mountainous, scenic
Maria Island . . . . .	9 672	14.6.72	East	Wildlife, convict station
Mount Field . . . . .	16 257	29.8.16	South central	Mountainous, scenic, ski-field, temperate forest
Mount William . . . . .	10 595	3.10.73	North-east	Forester kangaroo, coastal
Rocky Cape . . . . .	3 000	21.6.67	North-west	Coastal heath, banksia
South West . . . . .	403 240	16.10.68	South-west	Rugged wilderness
Strzelecki . . . . .	4 215	15.3.67	Flinders Island	Mountainous, coastal
Total . . . . .	623 471	..	..	..

## 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 21.0°C and the mean minimum in winter, 4.8°C.

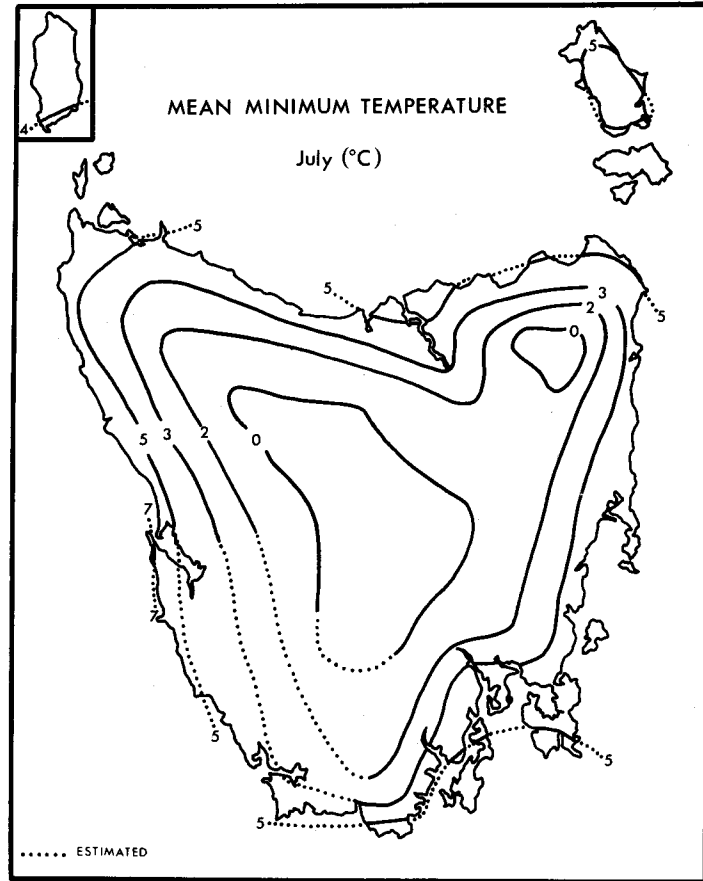
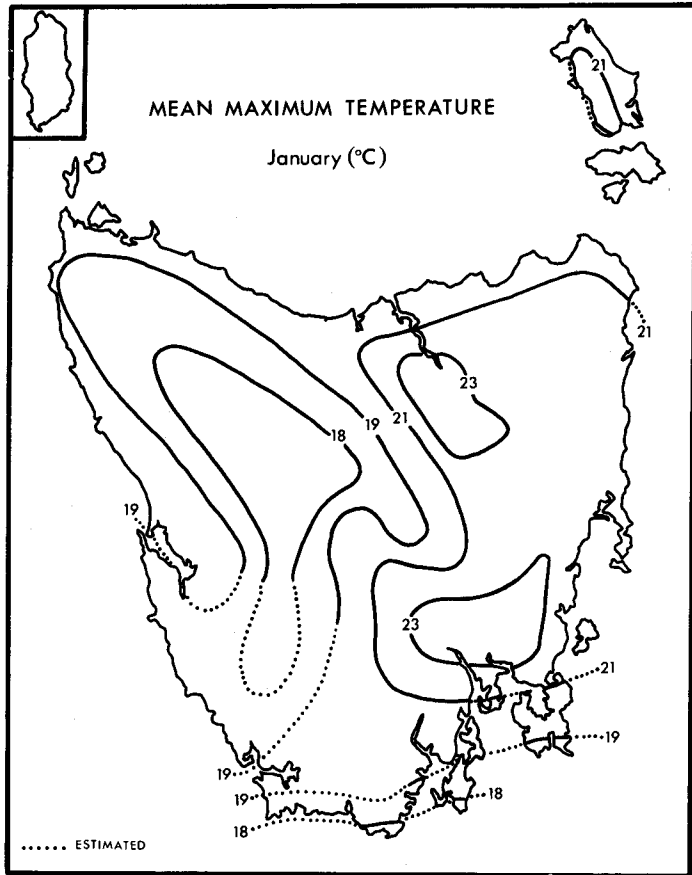
The mean maximum temperature for January and the mean minimum temperature for July over Tasmania are shown in the two accompanying maps. The mean maximum is the average of daily maxima for January; the mean minimum the average of daily minima for July.

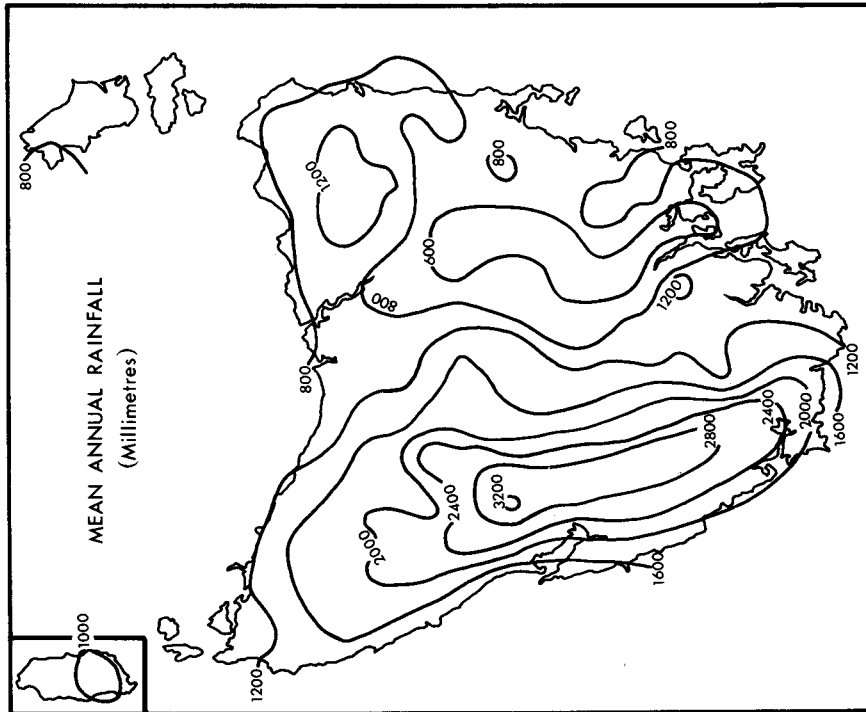
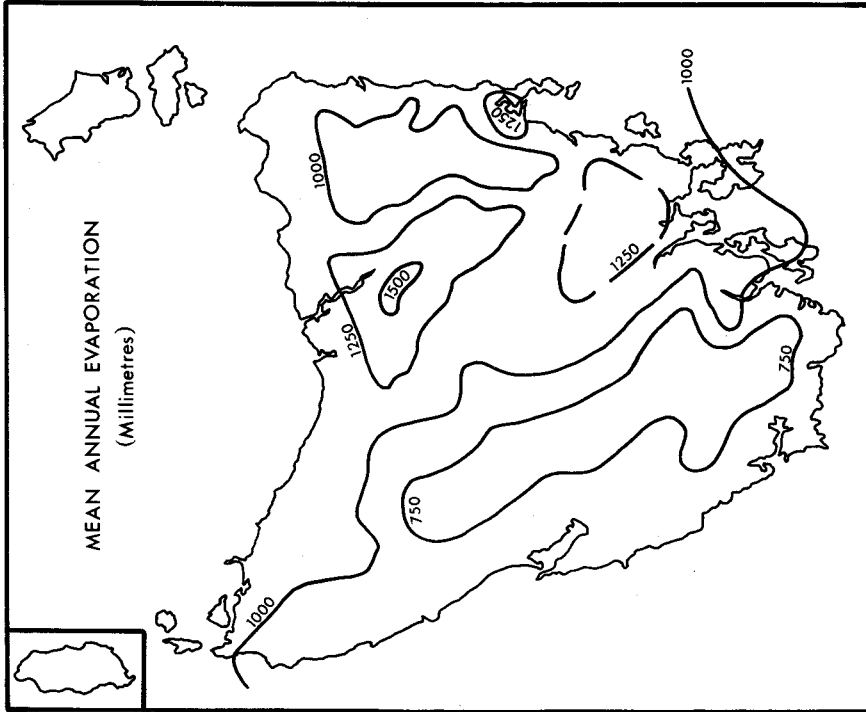
### **Rainfall**

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.

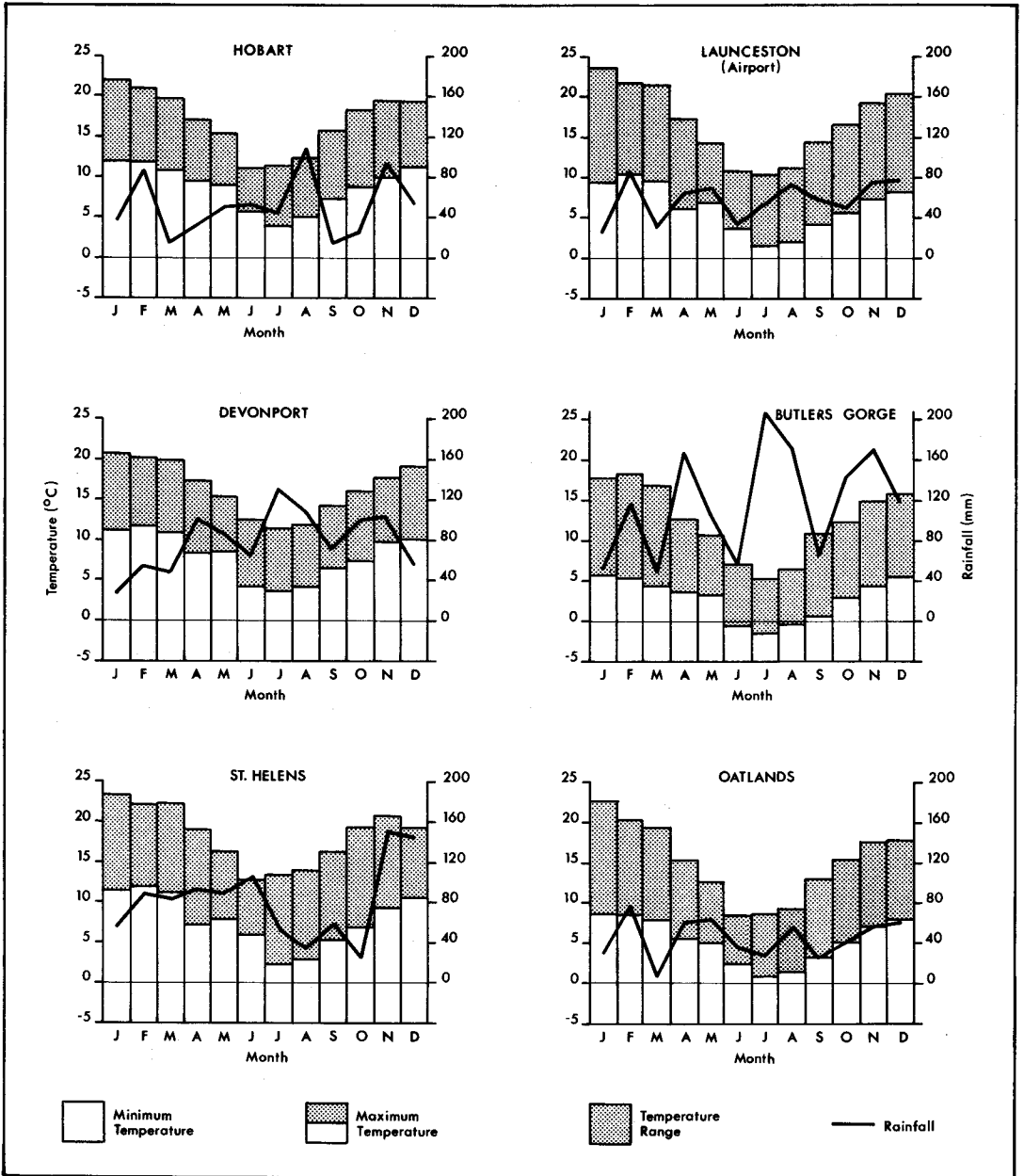
In the west, average annual rainfall ranges from 1 300 to 1 500 mm on the coast to 3 600 mm at Lake Margaret; in the north-east, from 550 mm on the coast to 1 300 on the highlands; while rainfall in the north-west ranges from 900 mm near the coast to 1 750 mm in the higher inland areas.

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.





Temperature and Rainfall at Selected Stations, 1978



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.

### **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 annual 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

*Climatic Data:* The next table gives the main climatic data for Hobart during the year 1978 on a monthly basis:

Hobart Weather in 1978

Month	Shade temperature				Mean daily hours of sunshine	Rainfall	
	Mean maxima	Mean minima	Extremes			1978	Long-term average
			Maximum	Minimum			
	°C	°C	°C	°C	hours	mm	mm
January .....	21.9	11.8	30.0	7.8	8.0	37	49
February .....	21.0	11.7	30.8	8.4	7.5	87	42
March .....	19.7	10.8	32.9	4.8	6.8	14	47
April .....	17.2	9.6	25.2	3.0	5.0	32	54
May .....	15.4	9.0	20.2	4.7	3.5	49	49
June .....	11.1	5.6	14.4	-0.9	2.3	51	58
July .....	11.4	3.8	16.7	-0.8	4.2	44	54
August .....	12.4	5.0	17.2	1.3	5.2	109	51
September .....	15.9	7.2	21.5	0.6	6.1	14	51
October .....	18.3	8.7	26.2	2.9	7.1	26	64
November .....	19.4	9.9	32.6	4.0	6.6	94	57
December .....	19.4	11.4	27.0	7.0	6.2	52	57
Total for year .....	..	..	..	..	..	608	633

*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 that for either 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 150 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.

### 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 recent years:

**Rainfall of Tasmania in Districts  
(Millimetres)**

Period	Northern	King Island	Central Plateau	Midlands
	Crops, dairying, forestry	Grazing, dairying	Grazing (mainly sheep)	
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
1977 .....	903	994	989	511
1978 .....	926	875	1 002	557
District average (a) .....	1 006	951	989	557

**Rainfall of Tasmania in Districts—continued**  
(Millimetres)

Period	Derwent Valley	South East	East Coast	West Coast	Flinders Island
	Fruit growing, grazing, forestry	Grazing, mining, forestry	Mining	Grazing	
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
1977.....	612	709	710	2 456	615
1978.....	684	752	880	2 194	823
<b>District average (a)</b> .....	<b>683</b>	<b>759</b>	<b>829</b>	<b>2 334</b>	<b>745</b>

(a) Long-term annual average based on 66 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	1974	1975	1976	1977	1978	Long-term average (a)
Avoca.....	735	875	571	527	668	567
Beaconsfield.....	1 271	1 328	833	869	951	959
Burnie (APPM).....	1 214	1 472	866	866	1 067	1 025
Campbell Town.....	599	725	494	528	582	551
Cressy Research.....	825	880	485	647	653	653
Deloraine (East).....	1 241	1 429	873	917	872	1 140
Franklin.....	941	1 015	913	702	827	911
Hobart (Weather Bureau).....	696	828	663	495	608	633
Hobart (Airport).....	655	735	622	484	511	577
Kettering.....	921	1 033	1 058	798	809	885
Launceston (Airport).....	873	820	520	632	687	717
Lilydale.....	1 202	1 138	960	930	857	981
Lymington.....	840	1 166	n.a.	711	768	798
Maydena.....	1 207	1 582	1 106	1 219	1107	1 233
New Norfolk.....	559	770	516	396	n.a.	550
Oatlands.....	610	675	543	463	529	572
Queenstown.....	2 400	2 782	2 486	2 576	2 515	2 537
Ringarooma.....	1 528	1 496	1 148	1 086	1 250	1 232
Savage River.....	1 886	2 311	1 974	n.a.	1 693	2 026
Smithton.....	1 223	1 413	1 045	1 118	1 109	1 112
St Helens.....	1 016	938	856	706	968	785
St Marys.....	1 909	1 372	1 150	872	1 193	1 035
Swansea.....	830	627	592	468	715	620
Triabunna.....	918	819	724	553	710	666
Ulverstone.....	1 214	1 361	771	872	954	971

(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 for recent years. 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 66-year period 1913-1978, i.e. the long-term average based on 66 years of record—details relating to annual rainfall and annual district average (normal) rainfall are shown in an earlier table).



Temperatures at Selected Stations, Tasmania, 1978—continued  
(°C)

Station	Maximum temperatures		Minimum temperatures		Mean temperatures	
	Mean for 1978 season (a)	Departure from normal (b)	Mean for 1978 season (c)	Departure from normal (b)	Mean for 1978 season	Departure from normal (b)
WINTER (June to August)						
Hobart .....	11.6	-0.4	4.8	0.0	8.2	-0.2
Launceston .....	12.2	-0.6	1.8	-0.2	7.0	-0.4
Cape Bruny .....	10.9	-0.4	6.2	+0.1	8.6	-0.2
Devonport .....	11.9	-0.9	4.3	-0.1	8.1	-0.5
Maydena .....	9.4	-0.7	1.7	+0.2	5.5	-0.3
Oatlands .....	8.8	-1.5	1.5	-0.1	5.2	-0.8
St Helens .....	13.5	-0.4	3.7	+0.5	8.6	0.0
Savage River .....	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Zeehan .....	10.9	-0.3	2.4	-1.2	6.6	-0.7
SPRING (September to November)						
Hobart .....	17.9	+1.2	8.6	+1.0	13.2	+1.1
Launceston .....	18.4	+0.8	6.6	0.0	12.5	+0.4
Cape Bruny .....	15.2	+0.4	8.6	+0.9	11.9	+0.7
Devonport .....	16.0	-0.5	7.8	+0.7	11.9	+0.1
Maydena .....	15.9	+1.0	4.8	+0.7	10.3	+0.8
Oatlands .....	15.3	-0.1	5.1	+0.8	10.2	+0.4
St Helens .....	18.9	+1.4	7.4	+0.8	13.1	+1.1
Savage River .....	13.7	+0.7	6.1	+0.8	9.9	+0.7
Zeehan .....	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

(a) Average of maximum daily temperatures for season.

(b) 'Normal' is the mean for the season averaged for the available years of record.

(c) 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 1979 the Department had a staff of 35 persons to carry out the task of environmental 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 the committee of 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, the 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. Committees appointed are—Noise Committee, Waste Committee, Air Committee and the Water 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. Guidelines have now been issued to operators and local government authorities setting out design and operation procedures to control pollution 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.

## THE LANDS DEPARTMENT

(This article was contributed by the Lands Department)

### Historical

The Lands Department is one of the oldest Departments of the State and of the Australian Colonies. Historians have commented that the part the Department and its officers have played in the development of Tasmania has been extensive and no history of the State could ever be written without reference to the surveyors, whose hands have controlled the pattern of development in the Colony since earliest times. Much of the early history of the State can be found in the survey records which are a principal source of information for historians.

Possibly the first surveyor of note was James Meehan who began service in 1803, but the first surveyor who could be termed 'Surveyor General' was George Harris who came to Hobart with Lieutenant Colonel David Collins. Harris drew the early plans of Hobart and from Mt Wellington, carried out a traverse survey from Hobart to the mouth of the River Derwent.

The first Survey Office was located at the corner of Bathurst and Murray Streets, Hobart. It was moved to Davey Street opposite the Army Barracks in 1826 and then, in 1863, to the building previously occupied by St. Marys Hospital at 34 Davey Street. When the Lands and Surveys Department's name was changed to the Department of Lands in 1974, the Department still occupied the Davey Street building but moved to the present Lands Building in Macquarie Street in 1977. Stage 2 of this building was almost completed by mid-1979 and it will also house the Registrar-General's Department, thereby bringing all matters relating to land transactions to a single location.

### Role

In recent years the role of the Lands Department has changed significantly. Broadly speaking, it has changed from that of a land dispenser, which was its purpose in the times of early settlement, to that of a land manager. There is now a much greater Government and public awareness of the value of the Crown estate and of the diminishing land resources available in Tasmania. The general function of the Department can be broadly stated as management of the Crown estate and co-ordination of the various activities of its six Divisions.

The re-written *Crown Lands Act* of 1976 modernised land dealing procedures and effectively brought all administrative procedures for dealing with Crown land into line with modern real estate practices.

Other recent developments in the role of the Department which are of significance include:

- (i) Assumption of responsibility for the control and management of the Public Offices Secretariat (which caters for all the accommodation requirements of the State Public Service and associated authorities) and the independent State Rental Determination Committee which is chaired by the Deputy Valuer General.
- (ii) Extension of the Department's role in the management of Crown lands set aside as State Recreation Areas and Protected Areas. This fits in with the general concept of providing proper management and control of land in conjunction with local authorities and other interested public bodies where multiple land usage is involved, so as to effectively manage the selected areas set aside for public recreation.
- (iii) The Government's decision that future allocation of all Crown lands be co-ordinated by the Lands Department.
- (iv) The Land Acquisition Bill which aims to co-ordinate acquisition processes within the Lands Department for the taking of land for public purposes to a greater extent than in the past. This Bill was expected to be passed by the end of 1979.
- (v) The adoption by the Government of the Rassaby Report on State mapping. This imposed a greater responsibility on the Lands Department to co-ordinate State mapping activities by Government departments and authorities and led to the creation of a State Mapping Council.

- (vi) The creation of a State Publications Centre within the Lands Department to co-ordinate the marketing of all publications and maps produced from State resources. Associated with this was the establishment of a public display area in the Lands Building for the display of plans of major State projects of public interest.
- (vii) Rationalisation of Government properties. Under the direction of the Government the Lands Department has undertaken an investigation of all Government-owned properties with a view to the rationalisation of their use and has implemented an ongoing review for the disposal of surplus properties.

#### *Statutes Administered by the Lands Department*

The following Acts of Parliament are administered by the Department: *Abandoned Lands Act 1973, Arnold's Lane Enabling Act 1926, Boundary Fences Act 1908, Crown Lands Act 1976, Department of Lands and Surveys Act 1970, Government House Land Act 1964, Land Reclamation Act 1886, Land Surveyors Act 1909, Land Valuation Act 1971, Lands Clauses Act 1857, Lands Resumption Act 1957, Marine Board of Launceston Sub-Letting Act 1918, Mersey Marine Board Reclamation of Lands Act 1910, Port of Hobart Reclamation Act 1954, Public Authorities' Land Acquisition Act 1949, Self's Point Land Act 1951, Survey Co-ordination Act 1944, Valuers' Registration Act 1974.*

#### **Organisation**

In February 1978, the Department was reorganised into six Divisions under the control of the Director-General of Lands. These are the Administration, Real Estate, Land Management, Valuation, Mapping and Survey Divisions.

The total staff of the Department as at 30 June 1979 was 360. District officers or representatives are located at Smithton, Burnie, Devonport, Launceston and Bridport.

The role and functions of the six Divisions are outlined in the following pages.

#### **Administration Division**

The role of the Administration Division is to provide the administrative services for the Department as a whole. Its functions include assisting the Director-General and assuring that Departmental policies are understood and carried out. The Division services all Lands Department personnel and those in authorities for which the Department is responsible under various awards and industrial categories.

#### *State Government Publications Centre*

As well as the normal administrative functions such as accounting, records and typing, the Division also includes the State Government Publications Centre which acts as a central distribution and dissemination point for publications produced by all State Government instrumentalities. The Centre is located on the ground floor of the Lands Building at 134 Macquarie Street, Hobart.

The Department's aerial photograph library is also housed in the Centre. This library currently contains approximately 250 000 aerial photographs covering the whole of the State at various scales. These photographs are catalogued and maintained by the centre's staff.

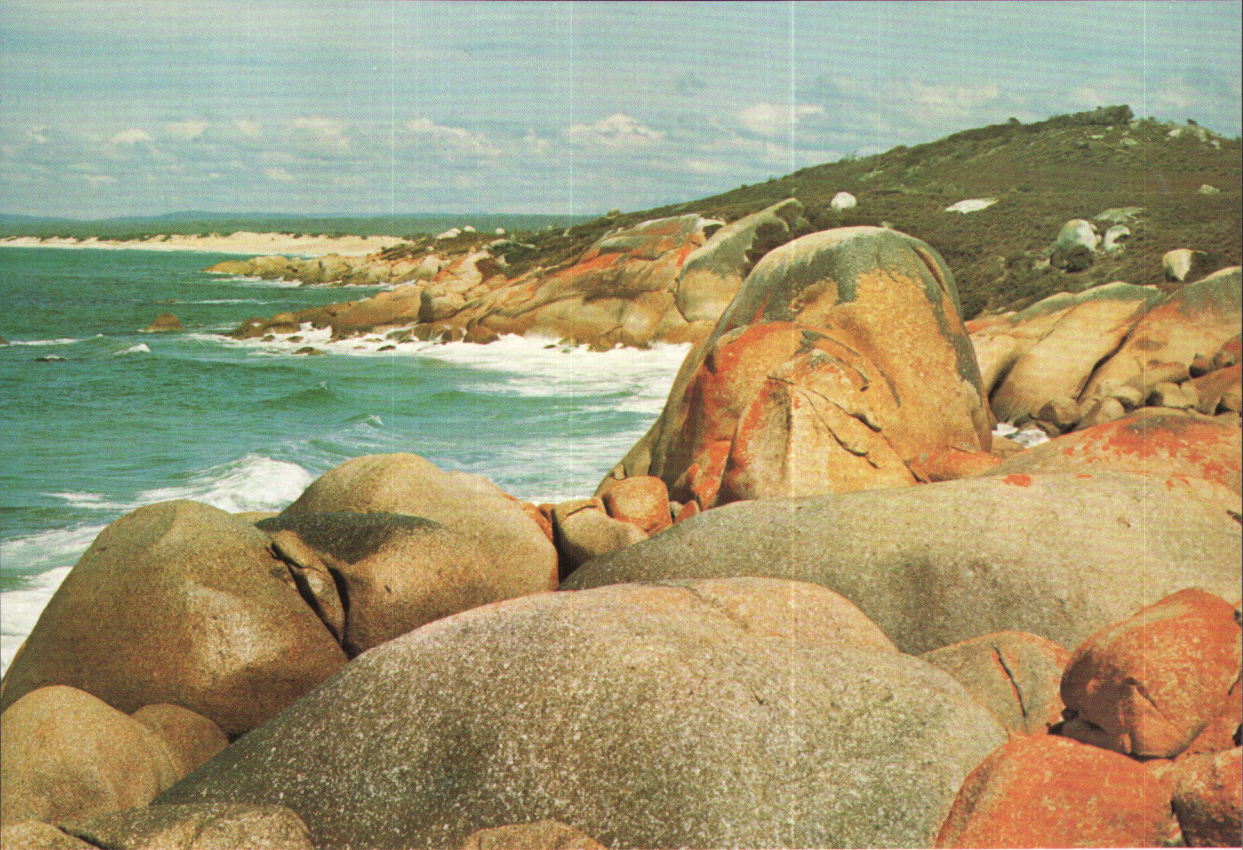
The biggest revenue earner for the Centre is the sale of Lands Department 'Tasmaps'. It is through the State Government Publications Centre that over 250 accredited Tasmap Agents on the mainland and in New Zealand are supplied with stocks of the 100 different editions of maps available.

The Centre has some 50 square metres of display space. This is made available to all State Government departments and instrumentalities so that the public may be made aware of the various functions and projects carried out or proposed by the Government. Examples are plans of the proposed second Hobart Bridge and the Gordon River Power Development, which were displayed in the Centre in 1978-1979, as well as special displays from such organisations as the United Nations and the Australian Heritage Commission.

#### *Public Offices Committee Secretariat*

The role of the Public Offices Committee Secretariat is to provide the administrative and secretarial facilities for the Public Offices Committee and the Public Offices Sub-committee.





*Typical coastline of north-eastern Tasmania (the Lands Department is concerned with the conservation of the State's coastal resources)*

*[Lands Department]*

*Bullock team working on land to be included in the Mount Roland Protected Area*







*Point Du Ressac, north of Marion Bay*

*[Lands Department]*



*Photography at high altitudes requires the Lands Department team to work on oxygen and in suitable clothing for sub-zero temperatures*





*Richea scoparia* in flower and cushion plants near Little Split Rock on the Central Plateau

[Lands Department]

Central Plateau view from near Mount Jerusalem, looking north to Mersey Crag with the Mersey Valley on the left







*Stereo photogrammetric plotter in use*

[Lands Department]

*Electronic distance measuring from a trigonometrical station*



The main Committee is comprised of the Minister for Housing and Construction as Chairman, the Director-General of Lands, the Under Treasurer, a Commissioner from the Public Service Board, the Commissioner for Town and Country Planning and the Director-General of Housing and Construction. This Committee investigates and advises on the purchase and sale of office accommodation, erection of new office buildings, the lease of premises where the rental exceeds \$20 000 per annum, modifications to Government-owned and leased properties costing in excess of \$200 000, the allocation of funds to departments for office accommodation purposes and the standards of furniture and furnishings of departments or sections of departments. The Sub-committee performs the day to day work delegated by the Committee proper.

### Real Estate Division

The primary role of the Real Estate Division is to act as the Government real estate office in providing for the implementation of Government policy in relation to Crown lands. The Division administers Crown land throughout the State under policy guidelines which are dynamic in nature, thereby necessitating the flexibility inherent in those sections of the *Crown Lands Act 1976* under which it operates. A broad outline of the main functions of the Division and the procedures involved follows:

#### *Sale, Leasing and Licensing of Crown Land*

The sale, leasing and licensing of Crown land is undertaken under the provisions of the *Crown Lands Act 1976*. The Act allows the Minister responsible to dispose of Crown land by any of the above methods subject to such terms and conditions as are considered appropriate. Where, in accordance with policy, an area may be sold, leased or licensed, extensive investigations are undertaken by the Division to ensure that disposal of the area concerned would not be detrimental to the Crown estate. This involves the direction of inquiries to numerous Government, semi-government, and (sometimes) private bodies and individuals to ensure that the area is not required for a public purpose and to ascertain the type and length of tenure which should be made available. When all pertinent information is to hand the Division may prepare a recommendation to the Minister as to the most appropriate future for the area concerned. That future may be:

- (i) Sale, by private treaty or auction.
- (ii) Lease, for a term of years, subject to the terms and conditions appropriate and for specific purposes such as shack sites, caravan parks, and marinas; and local government purposes such as recreation reserves, storage depots, garbage disposal sites, and many others.
- (iii) A temporary licence may be issued. This form of tenure is reserved for temporary activities such as removal of materials and short term occupations of Crown land.

#### *Reservation of Crown Land for Public Purposes*

Any Government Department which requires an area of Crown land submits a proposal to the Lands Department detailing its requirement. Investigation of proposals is then co-ordinated by the Real Estate Division and inquiries are made at the appropriate levels, to determine whether or not a proposal should be implemented. Proposals which fall into this category are primarily proposals for State Forests and State Reserves. The Division also arranges for reservation under Sections 8 and 12 of the *Crown Lands Act* of areas used by other departments, authorities and local government bodies for school sites, hospital sites, public roads, wharves, breakwaters, dams, reservoirs, residence sites, recreation reserves and any other public purpose considered appropriate. In many cases, reservations of this nature represent a step in the performance of the sale and leasing function of the Division as areas so reserved may subsequently be leased or sold.

#### *Acquisition of Private Lands*

Private lands required for public purposes may be acquired by agreement or compulsory process. This function is undertaken on behalf of all Government departments and authorities which do not have provisions within the Acts under which they operate to purchase private lands.

A department or authority which requires an area of land to be purchased on its behalf will liaise closely with the Division and when confirmation that an area to be acquired is available, the Division authorises the Valuer-General to undertake negotiations. If

negotiations are completed satisfactorily the Division will arrange for execution of an agreement and for a survey to be undertaken by the Survey Division, if required. Settlements are then arranged with the Crown Solicitor. If negotiations are unsuccessful and the land is still required, the Division may institute proceedings towards compulsory acquisition under the *Lands Resumption Act 1957*. Under that procedure the land concerned vests in the Crown upon registration of a notification at the Lands Titles Office or Deeds Office, as appropriate. Settlement is then effected by negotiation, by arbitration or by a Supreme Court hearing.

#### *Leasing and Rental of Private Property*

Private lands and buildings required for office accommodation and other public purposes may be leased or rented. The Division liaises with the Public Offices Committee and other departments to ascertain what buildings and lands are required. It then arranges for leases and rentals in accordance with those requirements, subject to terms and conditions as approved by the Director-General of Lands and the owner of the properties. This form of tenure is often more appropriate than outright purchase of a property.

#### *Abandoned Freehold Land*

The Government may obtain control of private lands which have been abandoned. The Division implements a procedure provided for in the *Abandoned Lands Act 1973* which results in such lands reverting to the Crown. The Crown subsequently accepts responsibility for the management of such land. Lands which are resumed in this manner may subsequently be dealt with under the provisions of the *Crown Lands Act 1976*.

#### *Legal Management of Crown Land*

The Division is responsible for the legal management of the Crown's estate in such matters as deterring illegal occupations and other offences to Crown lands. There are many instances where Crown land is occupied by persons without lawful authority. These range from the unauthorised cutting of trees on Crown land to the construction of structures such as shacks and slipways without authority. The *Crown Lands Act 1976* provides for prosecution in cases of offences of this nature and for the removal by the Crown of improvements effected without authority. Where appropriate, the Division may arrange for the erection of signs to advise the public of restrictions on the use of Crown land for varying purposes (such as the operation of off-road vehicles). The Real Estate Division liaises closely with the Land Management Division on matters of this nature where the day to day management of the Crown estate is concerned.

#### *Administration of the Boundary Fences Act 1908*

The Division receives many requests for cost sharing in relation to fencing along private/Crown land boundaries. These are investigated and may be referred to the department or authority responsible for the Crown land concerned. In some cases the Lands Department may share the costs involved. The Act specifies certain instances in which the Crown has a statutory responsibility to share fencing costs.

#### *Other Functions*

In addition to the functions outlined above the Division arranges for any Government building or residence which is temporarily not required by the Government to be rented to private groups and individuals.

Registers are maintained detailing all property dealings undertaken by the Division. The registers are designed to provide detailed information and statistics pertaining to the Division's total operation. This information and information presently stored in other Divisions is progressively collated. It will be computerised in the future to facilitate convenient retrieval of statistical information as an input to policy making, forward planning and as a source of accurate, property-orientated data for the Government.

### **Land Management Division**

In modernising the *Crown Lands Act 1935* to the present *Crown Lands Act 1976*, the Government recognised the need to retain and manage a permanent Crown land estate in accordance with multi-use principles to provide flexibility in land use as conditions and demands change over the years. The new Act formalised the policy of recent years and provides for the Department to assume a much more positive role as a land managing



authority while giving less emphasis to the disposal of land by sale. The Division, created by the 1978 re-organisation of the Department, evolved from the Conservation Section which in turn evolved from the Conservation Unit. The latter had been based at Bridport and was first set up as the Sand Dune Reclamation Unit in 1955.

The work of the Land Management Division now covers a wide range of tasks from scientific studies to the preparation of management plans, from sand dune reclamation and soil conservation to fire protection, park management and the removal of derelict structures. The Division determines physical conditions for lease and rental of lands and advises the Director-General on matters of land use policy.

#### *Assessment and Allocation of Crown Land*

In January 1978 State Cabinet set out guidelines for the orderly allocation of Crown lands. It was resolved that all departments wanting to acquire Crown land should apply to the Lands Department for that land and that the Lands Department should then seek comments from other authorities, as relevant, and should itself make an assessment of the land. This assessment task involves a study of the resources of the area involved to determine its potential for a variety of uses. This is used as a guide to the decision as to whether control of the land should be passed to the applicant authority or whether it should be used for some other purpose.

In addition to vetting applications by other authorities, the Land Management Division also undertakes studies of, and prepares management plans for, areas of Crown land to be brought under formal management control by the Department.

At this stage in Tasmania's development most land with an important dominant resource value has been alienated to private ownership or has been dedicated for special management as State Forest or State Reserve. At least in the more settled regions of the State, much of the remaining Crown land has not been alienated because it is 'marginal land' in terms of productive potential. Nevertheless, most remaining areas of Crown land throughout the State are valuable as a multiple use resource. Considered together, these lands provide a valuable bank of resources for many uses including water supply, rough grazing, supply of sand, gravel and minerals, and for public amenities and recreation. The value of such land to the community is enhanced if it is carefully managed following assessment of its potential.

#### *Protected Areas*

Large areas of multiple use land are being reserved under the *Crown Lands Act* as Protected Areas. The Land Management Division is responsible not only for the preparation of management plans for such areas but for the implementation of these plans, i.e. for the on-going day to day management and conservation of these areas.

Crown Land Wardens have been appointed around the State to be responsible for the general maintenance of Crown reserves, for law enforcement and to advise the public on any matters relating to the reserves.

The Central Plateau was the first Protected Area to be proclaimed under the 1976 Act. The Management Plan for the Central Plateau provides for development of water resources by the Hydro-Electric Commission, relief grazing of cattle on some parts, strict conservation of rare habitats and for a wide range of recreation activities.

#### *West Coast Agistment Area*

On the West Coast the Lands Department has a large agistment area used chiefly by Circular Head farmers for wintering cattle. This area, lying between the Arthur and Pieman Rivers, is rapidly growing in popularity for recreation. The Department has begun to develop camping and picnic areas and riding trails. There are several shack areas scattered along the coast, but, in future, it is likely that holiday homes will be confined to properly surveyed subdivisions, the first being at Arthur River. The Arthur-Pieman area has important scenic and archaeological sites and also includes mineralised areas. Some small mining ventures are well established.

Recently a start has been made, on a trial basis, on commercial harvesting of cast kelp in the area, while several commercial fishermen have their permanent bases set up at Temma.

It is proposed that this area will become a Protected Area and this outline gives an indication of the wide range of uses to be catered for.

### *State Recreation Areas*

In addition to Protected Areas, the Department is now also pursuing an active program of developing and managing state Recreation Areas, particularly those within reasonably close proximity to centres of urban population. State Recreation Areas are user-oriented parks although they may also serve to protect skylines, seashores and other landscape features. Although the Land Management Division has a skilled and well equipped work force to undertake development projects, it is the Department's policy to collaborate closely with local authorities and community groups and to involve councils in the development and maintenance of State Recreation Areas.

State Recreation Areas near Hobart provide or will provide for horse riding, motor cycle riding, picnicking, bathing, fitness jogging, rock climbing, shooting and other popular pursuits. In addition, some State Recreation Areas (or parts of them) provide facilities for quiet recreation and for the protection of bushland and native fauna close to towns.

### *Coastal Reserves*

A third very important category of Crown land reserves is that of Coastal Reserves. Being an island, Tasmania has a long and diverse shoreline most of which is Crown land. The coasts of the State constitute a very important amenity and recreation resource. But parts of the coast are also under heavy pressure for many other purposes such as port facilities, roads, industrial sites, mineral extraction, grazing, kelp harvesting and real estate development. The Land Management Division is closely involved in planning the use and management of coastal reserves and also in coastal conservation and reclamation works.

The staff of the Division have many years experience in a wide range of coast management problems and have developed expertise in such works as beach and sand dune reclamation and the construction of protective rock structures. The Division is also responsible for the development of access roads, picnic areas and other public facilities. In collaboration with the Survey Division the Land Management Division is responsible for the development of holiday home subdivisions.

## **Valuation Division**

The Valuation Division of the Lands Department is headed by the Valuer-General. It provides the widest and most comprehensive valuation and overall real estate advisory service of any Statutory Authority in Australia. It operates under the provisions of the *Land Valuation Act 1971* (previously 1950). The first staff for the development of the Division were recruited in 1947-48 and the Division officially came into being with the advent of the *Land Valuation Act 1950*.

Initially, the Division concerned itself principally with rating valuations (which were previously carried out by municipal councils) and valuations for land tax, probate and stamp duty. Since that time the expertise and resources of the Division have grown and become recognised to the extent that it is now called upon to provide all manner of opinions relative to land matters.

The Northern Regional Office is located in Launceston. The North West Regional Office's functions are carried out from two offices—one at Devonport and one at Burnie—for reasons of geographical convenience. Both regional offices act in close liaison with other Department functions in their regions.

### *Property Records*

There are about 180 000 separate valuation entries held on the Division's valuation rolls and the number is increasing at about two per cent per year. The land value, capital value and assessed annual value is determined and recorded for each property.

Two types of record are maintained as follows:

*The Roll Record:* The roll records are maintained entirely in Head Office by the clerical staff and constitute the official record. The roll records a considerable volume of identification and location material relative to each property. It also records the name and address of the property owners and rate paying lessees, simple description of improvements, area and dimensions and the complete record of all roll valuations made by the Division for each property.

*The Field Record:* The field records are maintained by the field staff and held in the field offices. They contain all the information contained in the roll record and, in addition, a large volume of material gathered about all properties following various field inspections over many years. Records include sketches of all houses and other major buildings, age, area and construction of these buildings, the area cleared, pertinent soil classifications, land usage, actual stock carried and carrying capacities, fencing and water improvements, rentals and lease information, office area and the details of all valuations made of the properties by the Division.

#### *Rating and Taxing Authorities Using Division Valuations*

The following rating and taxing authorities depend upon valuations provided by the Valuation Division:

- (i) All local government rating authorities (the 46 municipalities and three cities).
- (ii) The State Land Tax Branch of the State Treasury is provided with a complete record of valuation for each property in the State for land tax purposes.
- (iii) The State Grants Commission uses information provided by this Division in the apportionment of Commonwealth grants money as between the rating authorities.
- (iv) The Metropolitan Water Board relies upon apportionment of value totals between rating authorities in the Hobart area to arrive at the respective contributions required from each.
- (v) Various small Drainage Trusts require valuations for rating purposes within their special areas of jurisdiction for land draining purposes.
- (vi) The State Treasury relies upon valuations provided by the Division for probate, gift duty and other taxable situations.
- (vii) The Federal Treasury has long been accepting certificates of valuation issued by the Division as evidence of value for Federal probate purposes.

#### *Roll Work*

Roll work involves maintaining a separate valuation roll record and field record for each of the 180 000 properties involved. The field record for each of these properties must be progressively maintained and kept up-to-date as sales and other property ownership changes occur.

Progressively, over a five yearly cycle, a separate inspection and fresh valuation of each property is carried out. Following such revaluations, each rating authority concerned and the State Land Tax Branch are provided with new valuations lists containing all the updated valuations. Each owner of a revalued property is posted a Notice of Valuation. Each year the Grants Commission and Metropolitan Water Board are provided with Assessed Annual Value totals adjustments.

#### *Special Tax Work*

Upon the request of the executors of a deceased person's estate the Division carries out a special valuation of each property concerned for probate purposes and issues a Certificate of Valuation. Also, valuations are carried out for stamp duty purposes and Certificates of Valuation issued. Valuations as evidence of property value are made for many purposes.

#### *Loan Security Work*

The Division carries out valuations for loan security purposes such as valuations of industrial properties where loans from the Department of Planning and Development have been sought, of rural holdings for the Agricultural Bank, Housing Commission homes for Government financing, valuations of property where loans are sought from the Retirement Benefit Investment Trust, and for private lenders where the owner is in agreement.

#### *Acquisition Work*

The Division provides valuations for voluntary property purchases and compulsory acquisitions of land as required by State Government departments, commissions and instrumentalities. It is a requirement of the Auditor-General that before any land is purchased by any of the abovementioned, they must have the advantage of a valuation provided by the Valuer-General. Major city and municipal councils also utilise these services. Negotiations are conducted with the owners (or their professional representatives) on behalf of all State



Government departments, commissions and instrumentalities in the matter of voluntary purchase of property or compulsory acquisition of land. Agreements are finalised to the stage where contracts can be prepared. In the case of disputed claims, proofs of evidence for the Supreme Court are prepared and an officer of the Division appears in Court as an expert witness.

#### *Rental Determinations*

Rentals must be arranged by the Division for all space leased by Government authorities in all parts of the State where this space is privately owned. Such space includes extensive office areas, storage space, car parking space, etc. Rentals may need to be negotiated and terms and conditions agreed upon. Lease renewals are also handled.

Rental recommendations are made for Crown lands made available for leasing to private enterprise. Such land may be required for industrial, commercial or rural purposes. Other cases include land for sporting purposes, foreshore reserves, jetty sites, shack sites, etc. Rentals are also determined for Government houses occupied by Government employees such as teachers, police, forestry workers, Hydro-Electric Commission employees, railway personnel, etc. Rent for space for part-time use and shared use is also set by the Division. Such space may be for play areas, sporting grounds, sport centres, temporary classroom space and even paddock space for Cape Barren geese.

The Division also provides advice on leasing. Marine Boards owning industrial and commercial land seek information on leasing and municipal authorities require advice on rentals of properties which they own and wish to lease. The Tasmanian Totalizator Agency Board, which maintains premises in all parts of the State, the State Library Board and the Health Department with its many medical centres, are among others requesting frequent rental advice.

#### *Advice*

Various departments and instrumentalities require advice on the effects that various proposals may have on properties in an area if the work anticipated was to be implemented. The Valuer-General's opinion is also sought as to the economics of alternative proposals where more than one proposal may seem feasible. The Division also provides advice on the feasibility of proposed subdivisions and other developments. Studies are undertaken of the impact upon the environment and the associated effect on property values in an area likely to result from the development of certain proposed projects.

### **Mapping Division**

As a result of Departmental submissions, the Government commissioned, in January 1978, Mr. H. S. Rassaby, Director, Central Mapping Authority of New South Wales, to carry out a survey of mapping services in the State. Special emphasis was to be placed on the strengthening of the centralised service established in the Department of Lands for the benefit of departments, instrumentalities and local government.

The Mapping Division was established as a result of Cabinet adopting the recommendations in Mr. Rassaby's Report. The Division is made up of five branches, namely the Geodetic Survey, Photographic, Computing, Photogrammetric and Cartographic Branches.

#### *Functions*

The functions of the Mapping Division are, broadly, to produce and revise base maps, plans and aerial photographs of Tasmania to satisfy the requirements of the various State Government departments and other approved organisations. Specifically, it has sole responsibility for:

- (i) Establishing and maintaining the geodetic and precision levelling networks within the terms of the *Survey Co-ordination Act 1944*.
- (ii) Carrying out a continuing program of vertical aerial photography.
- (iii) Maintenance of an up-to-date library of aerial photography and remote sensing data.
- (iv) Preparation and up-dating of topographical and cadastral base mapping data for the State and publication of maps from this data at appropriate standard scales.

- (v) Co-ordinating the needs of other State Government departments and instrumentalities for aerial photography, remote sensing data, and topographic mapping.

Also, as resources permit, the Division produces thematic maps and provides consulting and production services to meet the needs of other departments and instrumentalities.

### Maps

Investigations have shown that the following map series are required to provide the base map needs of the State:

#### Existing:

- 1:500 000 topographical map of the whole State (1 map sheet completed in 1973).
- 1:250 000 topographical map of the whole State (4 map sheets to be completed in 1980).
- 1:100 000 topographical map of the whole State (50 map sheets completed in 1979).

#### New:

- 1:25 000 topographical/cadastral map of the whole State (411 map sheets).
- 1:10 000 topographical/cadastral orthophoto map of developed rural and urban areas of the State (917 map sheets).
- 1:2 000 topographical/cadastral orthophoto map of all towns and cities of the State (1 041 map sheets).

The Rassaby Report recommended that the 'New' map series (above) should be completed in a period of approximately 10 years. However, the existing map series must also be continually maintained in an up-to-date condition to retain its full value to users.

### Mapping Advisory Council

Cabinet approved the establishment of a State Mapping Advisory Council in December 1978. The Council's functions are:

- (i) Assessment of the need for topographical and cadastral mapping and aerial photography for the whole of Tasmania, and the available production capacity.
- (ii) To recommend each year to the Director-General of Lands, for approval, a map and aerial photography program for the Mapping Division.
- (iii) To review the progress of the adopted work program and assess priorities and the resources of staff and equipment needed by the Mapping Division to provide the required service.

The Council comprises: the Director of Mapping (Chairman); the Director of Mines or the Chief Geologist; the Commissioner of Forests or an Assistant Commissioner; the Assistant Director of Main Roads; the Chief Surveyor, Hydro-Electric Commission; and two members of the public eminent in their professions appointed by the Minister for Housing and Construction.

The Council's first program of work prepared for the Mapping Division took effect from 1 July 1979.

### Survey Division

The Survey Division is the oldest of the Divisions which now form the Lands Department. As mentioned in the 'Historical' section, the early Surveyors played a most important role in the development of the State and contributed in no small measure to the orderly growth of the Colony. In contemporary times this emphasis has changed and the Division's general role is now to provide services for the alienation of Crown land and to maintain the related survey and other records, as well as providing search facilities.

The Division also provides cadastral survey services for those Departments not having that capability. Acts of Parliament administered by the Division are the *Lands Surveyors Act 1909* and the *Survey Co-ordination Act 1944*.

#### Administration

The Division has a small administration section which handles the executive and clerical work, expenditure and revenue records, the ordering of supplies and equipment and maintenance of equipment inventories. The section also provides public counter facilities including purchase, sale and distribution of charts, plans and survey information and provides secretarial services for the Nomenclature Board and the Surveyors' Board.

*Regional Offices*

The State is divided into three regions for the administration and service of the Crown Estate. Each of these offices is under the control of a Regional Surveyor and principally their role is to:

- (i) Administer local surveys and survey matters.
- (ii) Prepare reports and proposals and development schemes including the overseeing of construction where necessary.
- (iii) Provide cadastral engineering investigation, detail and other services to meet Departmental requirements.
- (iv) Act as agents to other departments in procuring survey and other services from consultants.
- (v) Attend to inquiries and the provision of advice on survey matters to other departments and to the public.
- (vi) Examine plans and maintain adequate surveys.

*Survey Co-ordination*

A Survey Co-ordination Section has the daily function of serving both Departmental needs and State requirements under the *Survey Co-ordination Act*. With respect to State requirements, these functions include:

- (i) Registration of surveys, plans and documents.
- (ii) Provision of searches under the *Survey Co-ordination Act*.
- (iii) Maintenance of index plans and registers for public, State and Commonwealth purposes.
- (iv) Field inspection of: permanent mark proposals; installation, control and levelling traverses; and other surveys originating outside the Division.
- (v) The design and direction of triangulation extensions and control and levelling traverses undertaken by the Division.
- (vi) The testing of linear measures to State requirements under the *Land Surveyors Act*.

Functions with respect to Departmental requirements are:

- (i) Provision of drafting services including the production and maintenance of public charts, grant documents, survey plans, diagrams and proclamations.
- (ii) Office examination of plans lodged for registration.
- (iii) The registration on charts of the Crown's interests in land acquisitions and alienation of land.
- (iv) Preparation of searches for surveys, historical research and ascertainment of tenures.
- (v) Preparation and certification of accounts for services.
- (vi) Microfilming of survey records.
- (vii) Incidental and miscellaneous drafting tasks as required by other authorities having no drafting capabilities or ready access to Central Plan Office records.

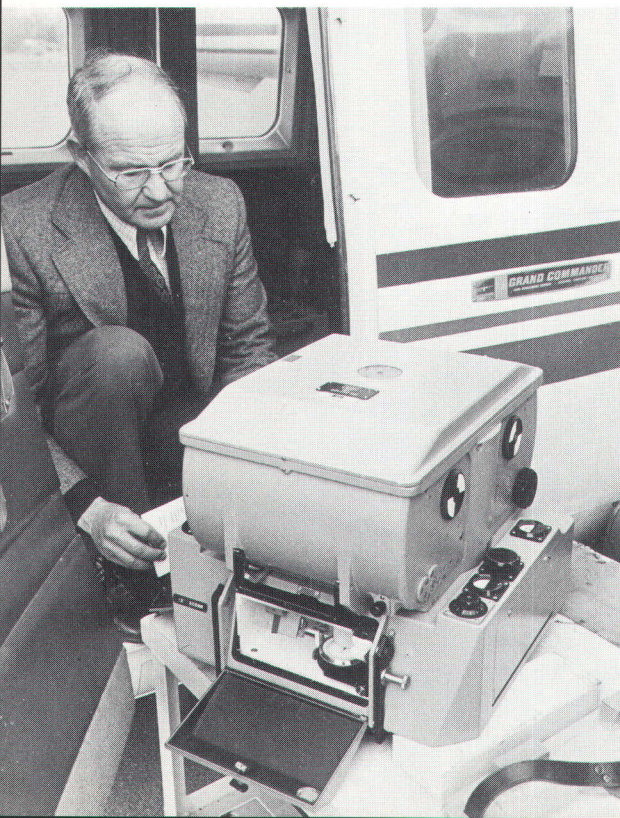
**Further References**

DAVIES, J. L. (ed.) *Atlas of Tasmania* (Lands and Surveys Department, Hobart, 1965)  
*Monthly Weather Review, Tasmania* (published monthly by the Bureau of Meteorology, Hobart)





*Aerial photography equipment ready for installation into charter aircraft*



*[Lands Department]*

*Hal McKinley supervising installation of the camera*

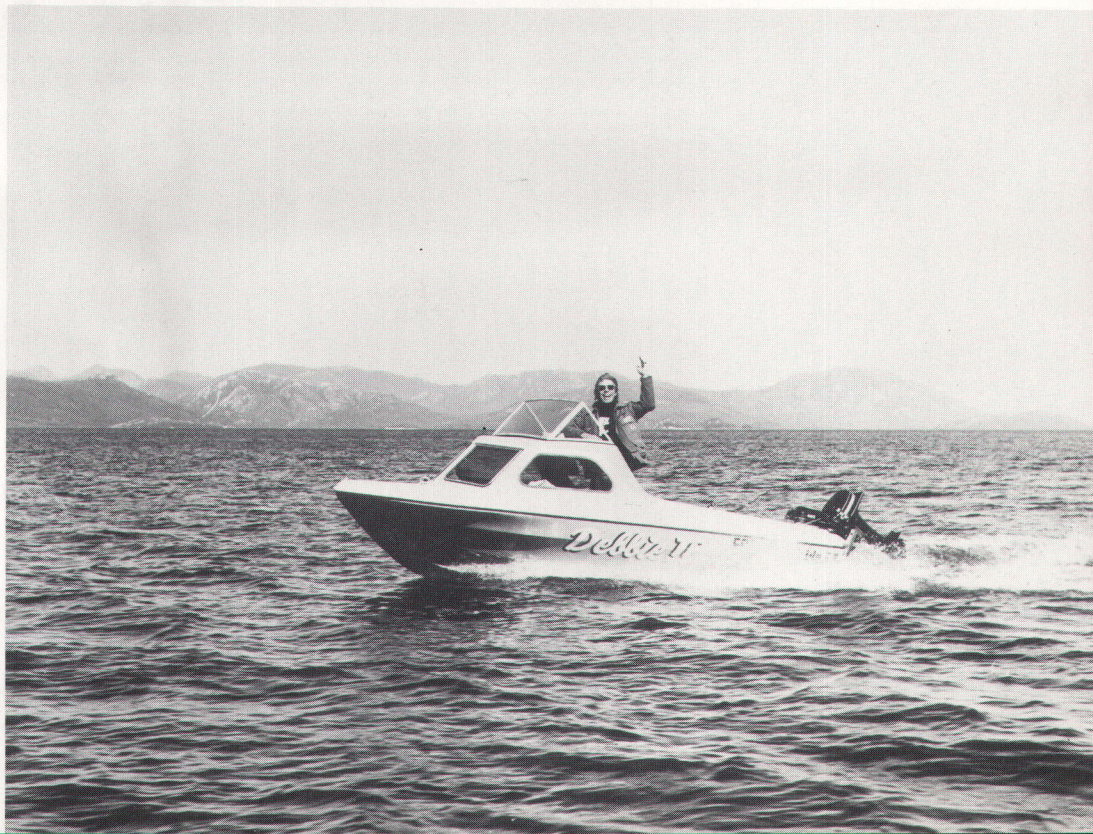




*Trout fishing on Lake Pedder*

*[Tasmanian Film Corporation]*

*Boating on Lake Pedder*





## 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
1977 (c).....	43	33	19	11	10	5	1	2	124

(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 124 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 'The Legislative Council—Preferential Voting' 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 10 December 1977, 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. (a) ....	Liberal	Braddon
Hodgman, M. ....	Liberal	Denison
Newman, K. E. (b) ....	Liberal	Bass

(a) Federal Minister for Housing and Construction.

(b) Federal Minister for National 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. In accordance with the *Senate Representation of Territories Act*, senators from the Northern Territory and A.C.T. are elected for the term of the House of Representatives. 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. 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 and 10 December 1977 (senators elected on 10 December 1977 commenced their terms of office on 1 July 1978), their party affiliation and year of retirement.

## Senate: Tasmanian Members

Senator	Party affiliation	Retires in year
Archer, B. R. ....	Liberal	1984
Grimes, Dr D. J. ....	A.L.P.	1984
Harradine, R. W. B. ....	Independent	1981
O'Byrne, J. H. ....	A.L.P.	1981
Rae, P. E. ....	Liberal	1981
Tate, M. C. ....	A.L.P.	1984
Townley, M. ....	Liberal	1981
Walters, M. S. (Mrs) ....	Liberal	1984
Watson, J. ....	Liberal	1984
Wriedt, K. S. ....	A.L.P.	1981

If a vacancy occurs in the Senate, the appropriate state government nominates a replacement, of the same political affiliation, 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-servicemen; 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. (The Constitution of the Commonwealth of Australia is reprinted in Chapter 1 of the *Year Book, Australia* (Cat. No. 1301.0).)

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 had come 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, KCMG, KCB, CBE	Governor	4. 8.33- 4. 8.45
Sir John Morris, KT	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 Edric 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 7 August 1979 the ministry, led by the Hon. D. A. Lowe, was:

**Ministry at 7 August 1979**

Name	House	Ministerial responsibilities (a)
The Hon. D. A. Lowe .....	Assembly	Premier; Economic Planning and Development; Energy
The Hon. N. L. C. Batt .....	Assembly	Deputy Premier; Treasurer; Finance; Forests
The Hon. B. K. Miller .....	Legislative Council	Attorney-General; Consumer and Ethnic Affairs; Racing, Gaming and Licensing
The Hon. M. T. C. Barnard .....	Assembly	Health; Tourism
The Hon. H. N. Holgate .....	Assembly	Education, Recreation and the Arts; Police and Emergency Services
The Hon. M. R. Polley .....	Assembly	Mines; National Parks and Wildlife; Lands
The Hon. J. A. Coughlan .....	Assembly	Housing and Construction; Community Welfare and Child Care
The Hon. T. G. Aulich .....	Assembly	Industrial Relations and Manpower Planning; Administrative Services
The Hon. M. W. Field .....	Assembly	Main Roads and Transport; Local Government
The Hon. J. J. Amos .....	Assembly	Primary Industry; the Environment; Water Resources

(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	1.12.77	32
D. A. Lowe .....	1.12.77		

(a) Tasmania had an unbroken succession of Labor premiers, starting with the Ogilvie Ministry (1934) until the electoral defeat of the Reece government 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.) The next elections were held on 28 July 1979, 17 months earlier than required.

*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 determined by ballot.
- (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, he is declared elected and his voting papers are set aside as finally dealt with.
- (v) Any candidates who secure a surplus of first preferences above the quota are declared elected.
- (vi) For each elected candidate, commencing with the one with the largest surplus, a transfer value is calculated by dividing the successful candidate's number of surplus first preference votes by his total number of first preferences. All his voting papers are then re-examined and the number of next available choice votes for each of the non-elected candidates determined and multiplied by the transfer value. The resulting numbers are added to the non-elected candidates respective numbers of first preference votes.
- (vii) Where a transfer raises the number of votes obtained by a candidate up to a quota, he is declared elected. That particular transfer is then completed but no further votes of any other candidate are transferred to him.
- (viii) In the case of a candidate who reaches a quota through transferred votes, his surplus votes above the quota are divided by the number of voting papers transferred to him in the last transfer. The resulting fraction is the transfer value which is applied to voting papers he obtained in the last transfer which are then transferred to remaining unelected candidates according to the next available choices.

- (ix) When transfers have been completed in respect of all candidates who obtained a surplus above a quota as a result of the above procedures, the candidate who is lowest on the poll is excluded and his voting papers are distributed to the remaining non-elected candidates according to the next available choices. His own first preference votes are transferred first, retaining a value of one each. Voting papers that have been transferred to him are dealt with in the order of the transfers already carried out and retain the respective transfer values at which he obtained them.
- (x) Steps (vi) to (ix) are continued, as necessary, until either seven candidates are elected or all candidates except seven have been excluded. In the latter case, unexcluded candidates not already elected are declared elected.

The scrutiny of preferences and distribution of choices cannot commence until all votes are to hand—this does not occur until the Friday following polling day. 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. A further significant advantage is that all electors have a wide choice of candidates *within* the major parties, whereas in single-member electorates there is often no choice of candidates for an elector determined to vote for a particular major party. In the latter case, an elector may be forced to vote for a candidate whom he considers to be less than competent.

The House of Assembly elections held on 28 July 1979 resulted in the re-election of the Lowe-led Labor Government. The Government's majority was increased from one seat to five, with the A.L.P. holding 20 seats and the Liberal Party 15. One minister in the previous administration lost his seat while 7 new members were elected. For the whole State, first preference votes cast, by party, were as follows: A.L.P., 129 973 (52.23%); Liberal Party, 98 845 (39.72%); Australian Democrats, 6 858 (2.76%); independents, 3 608 (1.45%); informal, 9 582 (3.85%); total, 248 866 (100.00%).

The next table shows the results of House of Assembly elections by parties from 1959:

Representation of Parties for the Whole State: House of Assembly

Election Year	Labor		Liberal		Other (a)	
	Proportionate share (b)	Seats won	Proportionate share (b)	Seats won	Proportionate share (b)	Seats won
1959.....	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	—
1979.....	19.01	20	14.46	15	1.53	—

(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.

#### Votes Recorded at Assembly Elections

Voting in general elections since 1959 is shown in the following table:

## House of Assembly Elections, Tasmania

Year of election	Electors on roll	Votes recorded		Informal votes	
		Number	As percentage of enrolled electors	Number	Percentage of total votes recorded
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
1979.....	265 428	248 866	93.8	9 582	3.9

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 had no obvious effect on the number of informal votes cast.

*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. The map shows new electoral boundaries that were adopted in November 1977 following an electoral redistribution for the House of Representatives.

## House of Assembly: Enrolments by Electorate at 30 June

Electorate	1974	1975	1976	1977	1978	1979
Bass.....	46 843	46 727	47 338	48 458	53 607	53 441
Braddon.....	51 685	52 652	54 500	55 511	50 858	51 212
Denison.....	52 192	50 516	52 278	51 453	54 769	54 355
Franklin.....	49 202	49 470	50 900	53 063	52 041	52 691
Wilmot.....	48 732	49 697	51 264	53 524	52 000	52 606
Total.....	248 654	249 062	256 280	262 009	263 275	264 305

*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. Next available choices 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.

#### *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.

#### *House of Assembly, Members*

The following table shows members of the House of Assembly and their party allegiance as at 7 August 1979:

**Members of the House of Assembly as at 7 August 1979**

Electoral Division	Member's name	Party affiliation
Bass .....	Barnard, The Hon. Michael Thomas Claude Beswick, Richard John Bushby, Maxwell Holmes Holgate, The Hon. Harold Norman James, Gillian Hilma Robson, Neil Maxwell Willey, Mary Lindsay Caroline	A.L.P. Liberal Liberal A.L.P. A.L.P. Liberal A.L.P.
Braddon .....	Bonney, Raymond Claude Cornish, Ronald Coughlan, The Hon. John Anthony Davies, Ronald Glen (a) Field, The Hon. Michael Walter Groom, Francis Roger Weldon, Michael William	Liberal Liberal A.L.P. A.L.P. A.L.P. Liberal A.L.P.
Denison .....	Amos, The Hon. Julian John Baker, Robert Wilfred Batt, The Hon. Neil Leonard Charles (b) Bingham, Eardley Max Devine, John Herbert Green, John Edward Mather, Robert	A.L.P. Liberal A.L.P. Liberal A.L.P. A.L.P. Liberal
Franklin .....	Adams, Godfrey Harry Aird, Michael Anthony Barnard, The Hon. Eric Walter (c) Beattie, John Maxwell Cleary, Thomas John Lowe, The Hon. Douglas Ackley (d) Pearsall, The Hon. Geoffrey Allan (e)	A.L.P. A.L.P. A.L.P. Liberal Liberal A.L.P. Liberal
Wilmot .....	Aulich, Terrance Gordon Baldock, Darrel John Braid, Ian Maxwell Gray, Robin Trevor Lohrey, Andrew Barnard (f) 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.

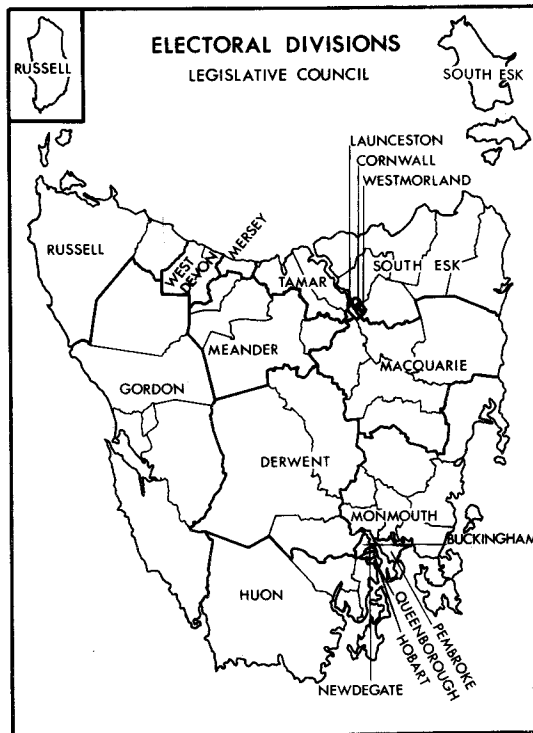
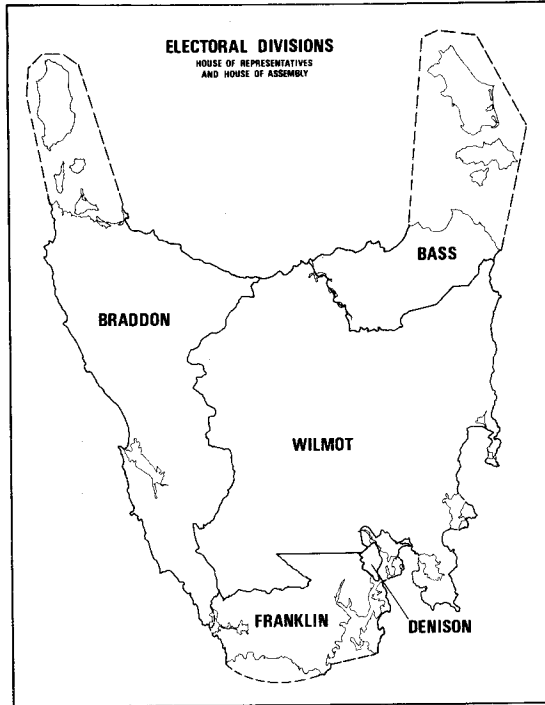
(b) Deputy Premier.

(c) Mr. E. W. Barnard, who resigned from Parliament on 10 September 1979, was originally selected as the Labor Party's nomination for Speaker. Following Mr. Barnard's resignation, Mr. Lohrey was appointed as Speaker.

(d) Premier.

(e) Leader of the Opposition.

(f) Speaker.



*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*

The order of candidates' names appearing on the voting papers is determined by ballot and candidates are not grouped to show party allegiance as in voting papers for the House of Assembly. (Prior to a 1973 amendment to the *Electoral Act* 1907, candidates' names appeared on ballot papers in alphabetical order.) 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 1979 the composition of the house was 16 independents and three 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*

Legislative Council electoral division boundaries, which are shown on an earlier map, have remained unchanged since September 1968. The following table shows the number of electors in each division as at 30 June for recent years:

**Legislative Council: Enrolments by Electorate at 30 June**

Division (a)	1974	1975	1976	1977	1978	1979
Buckingham (H) .....	15 446	14 791	14 940	14 571	15 544	16 076
Cornwall (L) .....	12 186	12 534	11 908	11 961	13 948	13 235
Derwent (R) .....	7 319	7 081	6 985	7 067	6 623	7 438
Gordon (S) .....	5 391	5 586	6 304	6 044	6 607	6 571
Hobart (H) .....	13 860	13 932	13 897	13 554	14 061	13 178
Huon (R) .....	10 590	11 035	11 444	11 507	13 855	13 817
Launceston (L) .....	11 537	11 416	14 284	14 378	14 781	14 092
Macquarie (R) .....	7 655	7 380	7 433	7 607	7 684	7 562
Meander (R) .....	7 639	7 996	7 938	8 694	8 495	8 445
Mersey (DU) .....	15 467	15 495	15 551	16 018	19 346	19 006
Monmouth (R) .....	7 952	10 019	10 422	10 653	11 175	12 001
Newdegate (H) .....	14 999	16 761	17 259	16 635	17 849	17 427
Pembroke (H) .....	19 283	19 363	19 607	24 663	25 617	24 970
Queenborough (H) .....	12 933	12 712	12 694	13 523	13 623	13 505
Russell (R) .....	9 973	12 137	12 253	12 000	12 910	12 796
South Esk (R) .....	10 463	10 162	10 206	10 461	10 855	10 787
Tamar (R) .....	8 890	8 935	9 080	8 932	9 821	11 115
West Devon (BP) .....	13 044	12 990	13 271	14 575	15 134	15 130
Westmorland (L) .....	10 935	11 045	11 385	11 346	11 996	13 530
Total .....	215 562	221 370	226 861	234 189	249 924	250 681

(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.

*Legislative Council Members*

The next table shows members of the Legislative Council (following the elections held in the Divisions of Derwent, Tamar and Westmorland on 26 May 1979), the electoral division which they represent and the year in which each will retire from the Council:

**Members of the Legislative Council, June 1979**

Electoral Division	Member's name	Year of retirement
Buckingham .....	Lowrie, The Hon. Kenneth Francis	1980
Cornwall .....	Le Fevre, The Hon. Vernon McKenzie	1984
Derwent .....	Batt, The Hon. Charles Leo (a)	1985
Gordon .....	Broadby, The Hon. Albert James	1982
Hobart .....	Venn, The Hon. Kathleen J. (a)	1982
Huon .....	Hodgman, The Hon. Peter	1984
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	1984
Monmouth .....	Bisdee, The Hon. Louis Fenn	1981
Newdegate .....	Miller, The Hon. Brian Kirkwall (a) (b)	1981
Pembroke .....	McKay, The Hon. Peter Charles	1983
Queenborough .....	Hodgman, The Hon. William Clark	1983
Russell .....	Fenton, The Hon. Charles Balfour Marcus (c)	1981
South Esk .....	Carins, The Hon. Lloyd Horton, OBE (d)	1980
Tamar .....	Hope, The Hon. Reginald Charles	1985
West Devon .....	Young, The Hon. William Thompson	1983
Westmorland .....	Gregory, The Hon. Oliver Harold	1985

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

(b) Leader for the Government in the Legislative Council; Attorney-General, Minister for Consumer and Ethnic Affairs and Minister for Racing, Gaming and Licensing.

(c) President.

(d) Chairman of Committees.



### 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 passing of 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 practicable 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 1979 was \$24 106.

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	
President .....	33½	Opposition .....	17
Leader of the Government ...	70	Government Whip .....	6
Chairman of Committees .....	20	Opposition Whip .....	6
Deputy Leader of the			
Government .....	11		

(a) The basic salary was set at \$22 464 in 1978 and raised to \$24 106 from July 1979.

(b) Salary in excess of basic rate (e.g. the Premier receives basic rate + 1.25 × basic rate), i.e. \$54 238 from July 1979).

*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 next table shows the electoral allowances payable as a proportion of the basic salary:

**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 \$24 106 in July 1979.

**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 under the various ministers but the allocation of responsibility is subject to change and Cabinet has the power to vary it at any time. The Cabinet portfolios and responsibilities set out below are those allocated by the Premier following the House of Assembly elections held on 28 July 1979. A table in the earlier section 'The Cabinet and Executive Government' lists the names of ministers holding the various portfolios.

**Cabinet Portfolios and Responsibilities as at 7 August 1979**

PREMIER, MINISTER FOR ECONOMIC PLANNING AND DEVELOPMENT, MINISTER FOR ENERGY	
Premier's Dept Audit Dept Hydro-Electric Commission	Public Service Board Dept Dept of Planning and Development Tasmanian Film Corporation
DEPUTY PREMIER, TREASURER, MINISTER FOR FINANCE, MINISTER FOR FORESTS	
Treasury Dept Agricultural Bank Forestry Commission	Tasmanian Government Insurance Office Motor Accidents Insurance Board Premiums Board of Tasmania
ATTORNEY-GENERAL, MINISTER FOR CONSUMER AND ETHNIC AFFAIRS, MINISTER FOR RACING, GAMING AND LICENSING	
Attorney-General's Dept Consumer Affairs Council Dept of Immigration and Ethnic Affairs Prison's Dept Solicitor-General's Dept	Public Trust Office Registrar-General's Dept Supreme Court and Sheriff's Dept Racing and Gaming Commission Totalizator Agency Board

## Cabinet Portfolios and Responsibilities as at 7 August 1979—continued

MINISTER FOR HEALTH, MINISTER FOR TOURISM	
Dept of Health Services Dept of Tourism	Mental Health Services Commission
MINISTER FOR EDUCATION, RECREATION AND THE ARTS, MINISTER FOR POLICE AND EMERGENCY SERVICES	
Education Dept Police Dept	State Emergency Services State Library
MINISTER FOR MINES, MINISTER FOR NATIONAL PARKS AND WILDLIFE, MINISTER FOR LANDS	
Dept of Mines Lands Dept	National Parks and Wildlife Service
MINISTER FOR HOUSING AND CONSTRUCTION, MINISTER FOR COMMUNITY WELFARE AND CHILD CARE	
Dept of Housing and Construction	Dept of Social Welfare
MINISTER FOR INDUSTRIAL RELATIONS AND MANPOWER PLANNING, MINISTER FOR ADMINISTRATIVE SERVICES	
Dept of Labour and Industry Electoral Dept Supply and Tender Dept	Government Printing Office Royal Botanical Gardens Tasmanian Museum and Art Gallery
MINISTER FOR MAIN ROADS AND TRANSPORT, MINISTER FOR LOCAL GOVERNMENT	
Main Roads Dept Metropolitan Transport Trust Division of Municipal Planning	Transport Commission Local Government Office
MINISTER FOR PRIMARY INDUSTRY, MINISTER FOR THE ENVIRONMENT, MINISTER FOR WATER RESOURCES	
Dept of Agriculture Dept of the Environment Inland Fisheries Commission Metropolitan Water Board	North-West Regional Water Authority Rivers and Water Supply Commission Tasmanian Fisheries Development Authority Tasmanian Grain Elevators Board

## OMBUDSMAN

Following passage of the *Ombudsman Act 1978*, an Ombudsman for Tasmania was appointed in mid-1979. The Act came into force on 10 September 1979. Tasmania's first Ombudsman was Mr. C. R. Woodhouse, previously Commonwealth Deputy Commissioner for Taxation in Tasmania, who was appointed for a five-year term.

*Role and Powers*

The Ombudsman is empowered by the *Ombudsman Act 1978* and delegation from the Commonwealth Ombudsman to investigate complaints from citizens about administrative acts of State and Commonwealth Government departments, State statutory authorities, prescribed Commonwealth authorities and local government authorities. The Ombudsman, who is appointed by the Governor, is independent of any authority or Minister of the Government. However, Parliament may refer any matter within the Ombudsman's jurisdiction to him for investigation and report. The Ombudsman is answerable to the Parliament of Tasmania. The ombudsman system provides a free, expeditious and informal means for the ventilation of grievances of citizens who feel aggrieved by administrative decisions or omissions. This involves carrying out impartial inquiries at a high level and making recommendations for the resolution of grievances where appropriate.

The Ombudsman has wide powers under the Act to investigate complaints and to recommend action to correct injustices or unlawful action by government departments and instrumentalities. His investigatory powers include those of a Board of Inquiry referred to in Section 14 of the *Evidence Act 1910*. Fines of up to \$1 000 are provided in cases where persons are found guilty of an offence under the Ombudsman Act by not co-operating with the Ombudsman. The Ombudsman has the power to enter and inspect any premises occupied or used by a public authority.

*Jurisdiction*

A person may complain to the Ombudsman about any decision, act, omission, proposal or recommendation relating to a matter of administration by a Government department, a State or prescribed Commonwealth authority set up by Act of Parliament, or any local government authority or by their officers. The State Ombudsman's jurisdiction is limited by Parliament—it does not extend to: (i) action taken for the purpose of promotion of legislation; (ii) acts of counsel or legal advisers to the Crown or a public authority; (iii) judicial matters or acts; (iv) conditions of service determined under Part V of the Public Service Act; (v) matters where a person has a right to review or legal remedy, unless the Ombudsman considers it is not reasonable for that person to resort to such action; (vi) acts of private persons, businesses or companies; or (vii) acts of the Auditor-General. Similar restrictions apply to the Ombudsman's delegated Commonwealth jurisdiction.

*Complaints*

Any person who considers that he has not been properly or fairly dealt with or who feels he has suffered an injustice as the result of any administrative act of a Government department or authority or any local government authority or their officers may take his grievance to the Ombudsman. The complaint should be made to him by the person directly affected by the administrative act complained of or, if the complainant so wishes, by a Member of Parliament on his behalf or, if the complainant is unable to act for himself, by some other person on his behalf. Corporate or unincorporate bodies may also make complaints.

Complaints may be brought to the notice of the Ombudsman by telephone, personal visit or by letter but it is generally preferable that a complaint be made in writing. There are no forms to fill in but a detailed account of the matter complained about with appropriate references to or copies of any correspondence with the Department, etc. involved, is desirable.

Grievances should be submitted without delay and within two years (State) or one year (Commonwealth) after the cause of the complaint has arisen. It is usually desirable that a person first endeavours to remedy his complaint by direct approach to the department, etc. concerned. If satisfaction is not obtained, he should proceed promptly to lodge his complaint with the Ombudsman.

Conduct of investigations by the Ombudsman is essentially informal. He is not required to hold any formal hearings and he may regulate his procedures as he sees fit. All investigations are conducted in private; privacy of communication of complaints is extended to persons in the care or custody of government institutions. All complainants are informed of the final results of the Ombudsman's investigations.

**ACTS OF STATE PARLIAMENT****Summary of State Acts, 1978**

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.

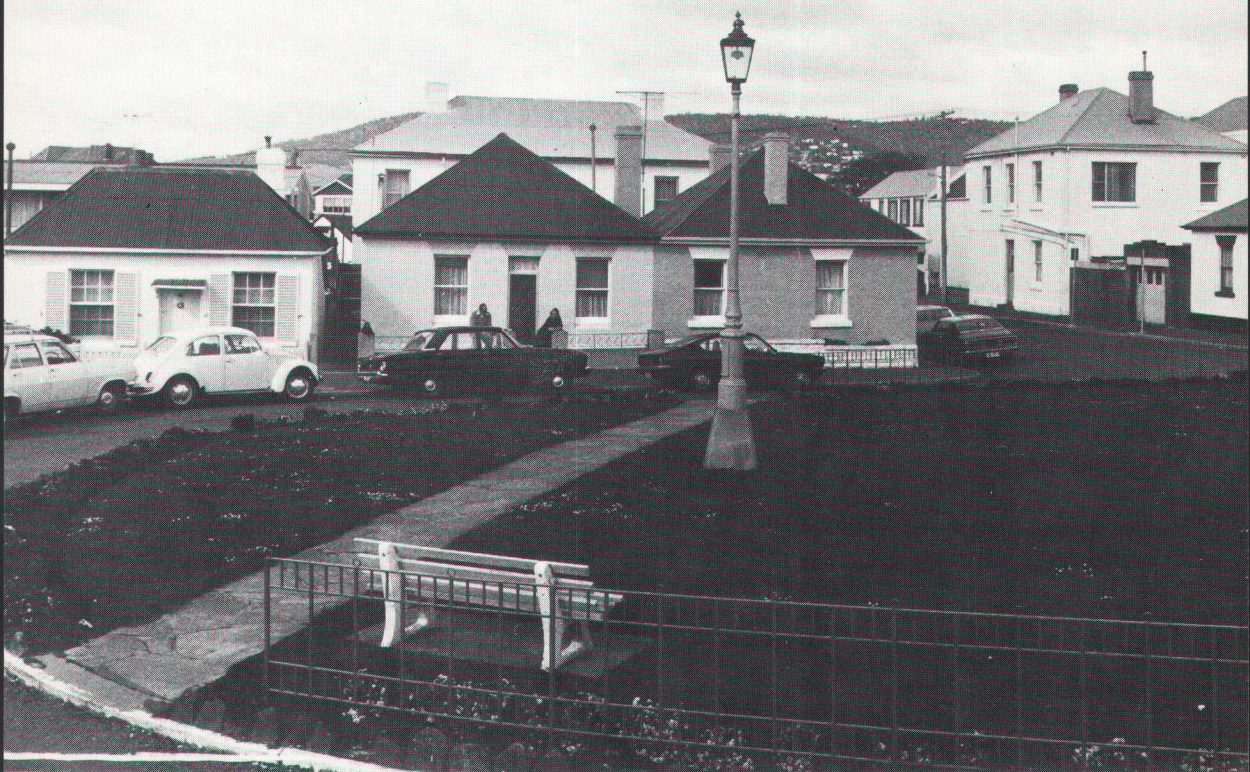
(RS Audit Act 1952)—An Act to repeal an Act of this title passed in 1952 and to substitute new legislation.

Where an Act amends an earlier Act or is to be incorporated and read as one with the Principle Act, the year quoted in brackets (e.g. A 1952) refers to the year in which the Principal Act was passed; all subsequent amendments are inferred.

## State Acts, 1978

Number	Short title and summary
1	Limitation (A 1974)—provision relating to right of action.
2	Conveyancing and Law of Property (A 1884)—provided remainderman or reversioner the right to take action for possession in certain circumstances.
3	Conveyancing and Law of Property (No. 2) (A 1884)—miscellaneous provisions.
4	Administration and Probate (A 1935)—miscellaneous provisions.
5	Companies (A 1962)—set out new schedule of fees payable to the Registrar of Companies.
6	State Advances (A 1935)—authorised the Director-General of Housing and Construction to delegate his functions as a member of the Board of Management of the Agricultural Bank; limits on advances to farmers for the purchase of properties and for property development, etc. removed.
7	Public Account (A 1957)—increased maximum amounts that may be issued and applied from the Loan Fund in respect of underestimated or unforeseen expenditure.
8	Loan Fund Supply 1978-1979—provided for the Treasurer to issue and apply up to \$44m out of the Loan Fund for the 1978-79 year.
9	Consolidated Revenue Fund Supply 1978-1979—provided for the issue and application of \$127 374 000 for the service of the 1978-79 year out of the Consolidated Revenue Fund.
10	Traffic (Infringement Notices) (A 1925)—provisions relating to the service, acceptance and withdrawal of traffic infringement notices.
11	Local Government (Rates and Charges Remissions) (A 1977)—miscellaneous amendments relating to compulsory remission of rates, etc.
12	Homes (A 1935)—amendments relating to provision of advances for the purchase of homes.
13	Lending of Money (A 1976)—removed limitation on rates of interest until 30 June 1980.
14	Ipec Holdings Limited (Bass Strait Shipping Service) Loan Guarantee—authorised the Treasurer to guarantee the repayment of moneys proposed to be borrowed by Ipec Holdings Ltd. and the Interstate Parcel Express Co. Pty. Ltd. for setting up and conducting a cargo shipping service between Northern Tasmania and Westernport, Victoria.
15	Carbide Industry Development (A 1976)—increased the maximum of loans by the carbide industry in Tasmania allowed to be guaranteed by the Government to \$6.5m.
16	Deceased Persons' Estates Duties (A 1931)—provisions relating to dealings with property of deceased persons and provision of notices of death; land of deceased persons to be brought under the Real Property Act 1862.
17	Housing Agreement—authorised the execution by the State of a rental housing and home purchase assistance agreement between the Commonwealth and State.
18	Mining (A 1929)—provisions relating to the appointment of the Director of Mines and wardens of mines.
19	Marine (A 1976)—composition of the Marine Board of Burnie and specification of voting districts to elect Board wardens.
20	Transport (A 1938)—amended provisions relating to the constitution of the Transport Commission and appointment of Associate Commissioners for Transport.
21	Water (A 1957)—amended provisions relating to drainage and irrigation rights and water rates.
22	Retirement Benefits (Transferred Library Employees)—provisions relating to the retirement benefits of persons transferred to employment by the Tasmanian Libraries Board.
23	Crown Lands (A 1976, A Department of Lands and Surveys Act 1970)—provided for the Director of Lands to become the Director-General of Lands.
24	Co-operative Industrial Societies (A 1928)—amendments to provisions relating to the registration of societies under the Act.
25	Henry Jones Limited (Huon Pine) Agreement—provided for the Forestry Commission to purchase from Henry Jones Ltd. up to 4 507 m <sup>3</sup> of Huon Pine saw logs to be stored by the Company in a floating storage boom on Lake Gordon.
26	Consolidated Revenue Fund Appropriation 1978-1979—appropriation of supply from Consolidated Revenue for the service of the 1978-79 year.
27	Loan Fund Appropriation 1978-1979—authorised the issue and application of moneys from the Loan Fund for service of the 1978-79 year.
28	Commercial and Inquiry Agents (A 1974)—provisions relating to payment of costs where an objection is lodged under the Principal Act.
29	Substandard Housing Control (A 1973)—provided for the delegation of powers by the Director-General of Housing and Construction.
30	Real Property (Special Vesting Orders) (A 1973)—provisions relating to extensions of time within which applications for title may be made to the Recorder of Titles.
31	Companies (No. 2) (A 1962)—set the fee payable by a public company upon lodging its annual return at \$200.
32	Business Names (A 1962)—miscellaneous amendments relating to the registration and use of business names.
33	Marine (No. 2) (A 1976)—provisions relating to the retirement of wardens of the Marine Board of Circular Head.
34	Metropolitan Water (A 1961)—raised the maximum amount the Metropolitan Water Board is permitted to borrow from \$10m to \$45m.





*Arthur Circus in historic Battery Point, Hobart*



*[Tasmanian Film Corporation]*

*Hampden Road, Battery Point*





*Two views of Battery Point*

*[Tasmanian Film Corporation]*





## State Acts, 1978—continued

Number	Short title and summary
35	Industrial Development (A 1954, R Coal Mining Industry (Government Assistance) 1952)—extended provisions of the Principal Act to cover the mining of coal.
36	Medical (A 1959)—provided for the granting of full registration to persons granted limited registration under the Act in certain circumstances.
37	National Parks and Wildlife (A 1970)—minor amendment relating to offences under the Act.
38	Weights and Measures (A 1934)—amendments to the required specifications for classes of loaves of bread by weight.
39	Consolidated Revenue Fund Supplementary Appropriation 1977-1978—appropriation of a further sum from Consolidated Revenue for the service of the 1977-78 year.
40	Churches of Christ Tasmania (R Associated Churches of Christ Property Management Act 1930)—provided for the constitution and function of the Churches of Christ, Tasmania and for the vesting of certain property in that body on trust.
41	Ambulance (A 1977)—extended the date of expiry of the Principal Act until 31 December 1978.
42	Hydro-Electric Commission (Contributions) (P Hydro-Electric Commission Act 1944)—provided that the Commission pay 5 per cent of its retail sales revenue to Consolidated Revenue quarterly, commencing with the March quarter 1979.
43	Petroleum Products Subsidy (A 1965)—miscellaneous, minor amendments.
44	Motor Accidents (Liabilities and Compensation) (A 1973)—amendments relating to the Premiums Board and amounts payable in respect of funeral benefits.
45	Appeal Costs Fund (A 1968)—miscellaneous amendments.
46	Sale of Blood (A 1964)—widened the definition of 'blood' used in the Act.
47	Apiaries—provided for the control of diseases in bees, and for regulation and control of the keeping of bees and of the sale and export of honey.
48	Long Service Leave (Casual Wharf Clerks) (A 1966)—money to be transferred to the Casual Wharf Clerks Long Service Leave Fund from Consolidated Revenue if the Fund is deficient; regular actuarial inquiries into the state of the Fund to be made.
49	Deceased Persons' Estates Duties (No. 2) (A Deceased Persons' Estates Duties Act 1931)—reduced death duty payable in respect of estates left to children descendants etc. by 50 per cent up to 31 December 1979 and abolished such death duty thereafter.
50	Coroners (A 1957)—amendments relating to jurisdiction of coroners.
51	Education (A 1932)—provisions relating to the Director of North West Community Education.
52	Traffic (Special Penalties) (A 1925)—increased special penalties applying under provisions of the Principal Act and under certain regulations made pursuant to the Act.
53	Child Protection (A 1974)—miscellaneous amendments.
54	Racing and Gaming (A 1952)—gave the Racing Trust authority to lease, or obtain a licence for the use of land.
55	Land Tax (P Land and Income Taxation Act 1910)—fixed the rates of land tax payable in respect of 1978-79.
56	Nurses' Registration (A 1952)—amendments relating to the training and registration of nurses.
57	Retirement Benefits (Transferred Court Officers)—made provision for retirement benefits of persons employed in courts of petty sessions who are transferred to employment with the State Public Service.
58	Retirement Benefits (A 1970)—minor amendments relating to rights of contributors.
59	Superannuation (A 1938)—minor amendments relating to rights of contributors.
60	Retirement Benefits (Transferred Tasmanian College of Advanced Education Employees) (P Retirement Benefits Act 1970)—made provision for the retirement benefits of persons employed by the Council of Advanced Education who had transferred to employment with the University of Tasmania.
61	Builders Registration (A 1977)—amendments relating to the constitution and proceedings of the Building Industry Contractors Registration Board.
62	Fire Brigades (A Fire Brigades Act (No. 2) 1977)—extended the date of expiry of the Principal Act from 31 December 1978 to 30 June 1979.
63	Public Health (A 1962, A Local Government Act 1962)—miscellaneous amendments.
64	Environment Protection (A 1973)—amendments to provisions relating to appeals to the Environment Protection Appeal Board.
65	Softwood Forestry—authorised execution of an agreement between the Commonwealth and the State in respect of Commonwealth financial assistance towards planting and tending State softwood plantations.
66	State Employees (Long-Service Leave) (A 1950)—minor amendment relating to allowances payable to eligible employees.
67	Trustee Companies (Amalgamation) (A Trustee Companies Act 1953)—facilitated the amalgamation of The Equity Trustees Company of Tasmania Ltd. and The Tasmanian Permanent Executors and Trustees Association Ltd. to become the Tasmanian Permanent Executors and Equity Trustees Ltd.
68	Launceston Gas Company Loan Guarantee and Subsidy (A 1976)—allowed the Treasurer to guarantee an overdraft of up to \$300 000 obtained by the Company for use in obtaining temporary accommodation.



## State Acts, 1978—continued

Number	Short title and summary
69	Stamp Duties (A 1931)—miscellaneous amendments.
70	Companies (A 1962)—amendment relating to company branch registers.
71	Apple and Pear Crop Insurance (A 1967)—validated actions taken under the Principal Act since 1 January 1976.
72	Land and Income Taxation (A 1910)—miscellaneous amendments.
73	Stamp Duties (No. 2) (A 1931)—amendments relating to stamp duties imposed on certain loans.
74	Trustee Companies (A 1953)—amendments to provisions relating to the holding, controlling, disposal, etc. of shares in certain trustee companies.
75	Traffic (Miscellaneous Provisions) (A Traffic Act 1925)—miscellaneous amendments.
76	Lands Building Agreement—provided for the sale by the Government of the Lands Building to the Motor Accidents Insurance Board for \$10 085 332.
77	North West Regional Water (A 1976)—amendment of provisions in relation to the North West Regional Water Authority's borrowing powers.
78	Metropolitan Water (No. 2) (A Metropolitan Water Act 1961)—amendment of provisions in relation to the Metropolitan Water Board's borrowing powers.
79	Water (No. 2) (A 1957)—amendment of provisions in relation to the Rivers and Water Supply Commission's borrowing powers.
80	Dairy Produce (A 1932)—provisions relating to the quality and packaging of dairy blend, margarine and butter substitutes.
81	Northern Casino (R Northern Casino Act 1972, Northern Casino (Supplemental Agreement) Act 1973)—allowed the establishment of a casino in the Municipality of Westbury by the Tasmanian Country Club Pty. Ltd. and provided for the Casino's regulation.
82	Ombudsman—made provision for the appointment and functions of an Ombudsman in Tasmania.
83	Road Safety (Alcohol and Drugs) (A 1970, A Traffic Act 1925)—miscellaneous amendments.
84	Potato Industry (A 1977)—placed the Potato Industry Authority of Tasmania under ministerial control.

## Further References

*ABS Publication*

*Year Book, Australia (1301-0)* (normally annual, combined 1977 and 1978 issue released October 1978, 783 pp.)

*Other Publications*

*Acts of the Parliament of Tasmania* (annual, Tasmanian Government Printer, Hobart)

*Tasmanian Statutes 1826-1959* (Consolidated reprint) (Tasmanian Government Printer, Hobart, 1960-1967)

*The Tasmanian Almanac* (published annually by Mercury-Walch, Hobart)

TOWNSLEY, W. A. *The Government of Tasmania* (University of Queensland Press, 1976)

# Chapter 4

## LOCAL GOVERNMENT

### HISTORICAL

#### Structure

##### *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 16th 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 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.

#### *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.

## MUNICIPAL AMALGAMATION AND THE CHAPMAN REPORT OF MARCH 1979

### Introduction

Sir Bede Callaghan, in June 1977 in his conclusions to the Commonwealth Government's *Inquiry into the Structure of Industry and the Employment Situation in Tasmania*, commented:

'... the local government structure appears to be inappropriate to the tasks of modern management. There is a large number of municipalities and grounds exist for rationalisation and some amalgamations.' (8.1, 'The current situation summarised').

With the following table Sir Bede summarised early growth in the number of local government areas and subsequent inquiries into local government set up by the State Government:

**'History of the Number of Municipalities in Tasmania, 1865 to 1977**

Year	Number of municipalities, etc.	Comment
1865	32	30 municipal districts were created in addition to the existing City of Hobart and Town of Launceston. Only 19 of the districts had councils.
1880	33	An additional district was created bringing the number of basic L.G.A.s to 33.
1906	33	The <i>Local Government Act</i> (1906) provided for a commission which should divide the State into not more than 60 municipalities which would absorb the responsibilities of the multitude of small trusts, boards, etc., which had specific charge over schools, water supply, recreation grounds, etc. (e.g. there were 105 road trusts).
1907	52	The resulting Commission recommended the creation of 50 municipalities, of which three were later absorbed into Hobart and Launceston, respectively: New Town and Queenborough; and Invermay.
1938	49	A Royal Commission was created which reported the following year that the number of local government units should be reduced to: 2 cities; 3 urban municipalities; 34 rural municipalities; total, 39 authorities. These recommendations were never implemented.
1960-61	49	The Select Committee of the House of Assembly led to the <i>Local Government Authority Act</i> of 1962. The Act allowed two years for a municipal commission to report on a range of local government issues.
1965	49	The report was published from the Commission which advised a radical reduction of units to only 2 cities and 18 municipalities. High Court litigation ensued concerning the validity of the Act relating to the Commission. This was amended but the report was never acted upon.
1972	49	The personnel of a new commission were appointed and the resulting report, delivered in 1974, recommended less drastic changes to the existing boundaries: 3 cities (with Launceston enlarged) and 32 municipalities. These proposals were not implemented because of strong opposition. Permission and encouragement was given for voluntary amalgamation.

Source: Municipal Commission of Tasmania, Report on Matters Relating to Local Government, 1974.'

### Board of Inquiry, 1978

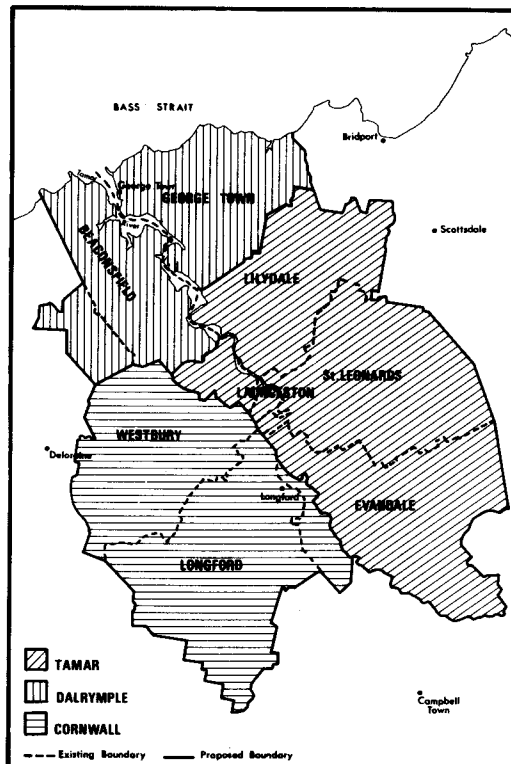
On 25 July 1978 the Minister for Municipal Planning constituted a board of inquiry to report upon local government in Launceston and related areas. This initiative was taken after no firm acceptances had been made in the preceding years to the Government's invitation that municipalities put forward schemes of voluntary amalgamation.

Membership of the Board of Inquiry comprised Dr. Ralph J. K. Chapman of the University of Tasmania, Chairman, Mr. W. D. Libby of the Federal Department of National Development and Mr. A. C. G. DeGaris, a local government consultant from Victoria.

### Terms of Reference

The terms of reference included the investigation of the financial and economic effects of possible changes, any improvements to the effectiveness of local government likely to result, the inter-relationship between authorities in the area and the State Government, and other matters incidental thereto.

### New Local Government Authorities Proposed by the Chapman Report



### Recommendations

The board's inquiry centred around the eight local government areas in the Tamar Valley, namely: the City of Launceston and the Municipalities of Beaconsfield, Evandale, George Town, Lilydale, Longford, St. Leonards and Westbury. The Board's report, tabled in Parliament in June 1979, recommended that the Tamar Valley would be best served by the dissolution of the existing eight councils and the creation of three new authorities to replace them.

The largest authority (*City of Tamar*) would comprise the existing City of Launceston; the Municipalities of Lilydale and St. Leonards, most of Evandale, the urban areas of Prospect Vale (presently in the Municipality of Westbury), and Riverside including Legana

(presently in the Municipality of Beaconsfield). The Municipality of George Town together with most of the Municipality of Beaconsfield and the portion of the Municipality of Westbury north of Sugarloaf Mountain would form the second authority recommended to be named *Municipality of Dalrymple*. The southern authority (*Municipality of Cornwall*) would encompass the Municipality of Longford, that part of the Municipality of Evandale west of the South Esk River and the Municipality of Westbury less the excisions to the City of Tamar and the Municipality of Dalrymple.

The Board further recommended that one northern regional water authority should administer the present water supplies for the area as a whole.

The proposed new city of Tamar is an attempt to endow the City of Launceston with a broader rating base which includes all suburban users of the central business district. Tamar also would make available abundant undeveloped land for housing sub-divisions, industrial estates, etc.

The summary report denies that the municipalities of Dalrymple and Cornwall are just the left overs from the other dismembered local government units:

'The northern and southern regroupings are not solely to tidy up the picture but use the sustained growth of Westbury and George Town to give a new focus to the somewhat declining neighbouring areas.'

#### Action

During the July 1979 State election campaign the Premier, Mr. Lowe, promised action on municipal amalgamation by the Government upon re-election. He specified that the Launceston area would be the first to be considered and foreshadowed similar consolidation on the North-West Coast and elsewhere, depending on circumstances and the willingness to merge of the municipalities involved. Mr. Lowe did not commit himself to the detailed recommendations of the most recent Board of Inquiry, but referred also to the alternative approaches taken by the succession of preceding inquiries listed in the table above.

### 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 in Tasmania 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 process of removing this function from the municipalities should be completed by June 1980 when all local government courts will be administered by the State.

#### *Population*

The estimated population of Tasmania's local government areas at 30 June 1978 ranged from as low as 320 in Bruny Municipality to a high of 49 670 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 Glenorchy the electors elect the Mayor. However, the Mayor of Launceston is elected by council members. 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. Under section 329 of the *Local Government Act 1962* each local government authority has to submit its accounts annually to the Auditor-General. 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.

### Total Receipts and Payments

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

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

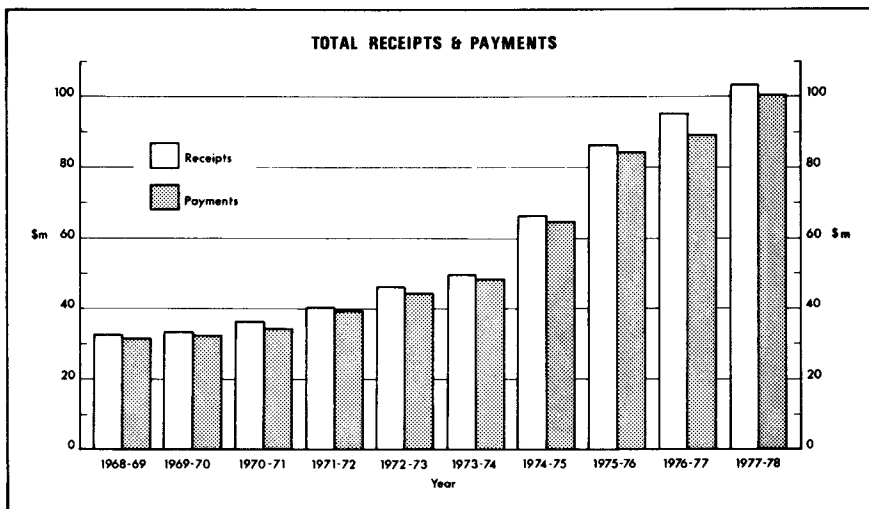
Year	Receipts			Payments			Surplus (+) or deficit (-)
	Revenue accounts (a)	Loan accounts (b)	Total	Revenue accounts	Loan accounts	Total	
1972-73	37 000	9 473	46 473	34 552	9 668	44 220	+2 253
1973-74	40 376	9 521	49 897	39 641	8 803	48 444	+1 453
1974-75	52 313	13 994	66 307	52 224	12 677	64 901	+1 406
1975-76 r	68 381	18 344	86 724	65 112	19 306	84 418	+2 306
1976-77 r	75 693	19 553	95 246	68 520	20 579	89 099	+6 147
1977-78	82 661	21 187	103 848	77 528	23 135	100 663	+3 184

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

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

The following graph summarises receipts and payments over recent years:

**Local Government Authorities, Tasmania: Total Receipts and Payments**



### Revenue of Local Government Authorities

The largest proportion of local government revenue comes from rates (50 per cent in 1977-78) which are direct charges on owners of property.

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



## Local Government

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

Source	1975-76 <i>r</i>		1976-77 <i>r</i>		1977-78	
	Amount	Per cent of total	Amount	Per cent of total	Amount	Per cent of total
Rates and licences—						
Ordinary services .....	27 162	31.3	32 002	33.6	33 840	32.6
Business undertakings—						
Water .....	6 986	8.1	8 364	8.8	9 578	9.2
Sewerage .....	5 544	6.4	6 861	7.2	8 024	7.7
Total .....	39 692	45.8	47 227	49.6	51 442	49.6
Grants (a)—						
General purpose .....	2 292	2.6	4 004	4.2	5 290	5.1
Specific purpose—						
Roads .....	3 644	4.2	4 118	4.3	5 547	5.3
Other ordinary services .....	8 329	9.6	3 664	3.8	3 053	2.9
Business undertakings—						
Water .....	1 618	1.9	1 667	1.8	1 807	1.7
Sewerage .....	871	1.0	589	0.6	512	0.5
Total specific purpose .....	14 463	16.7	10 039	10.5	10 919	10.5
Total all grants .....	16 755	19.3	14 043	14.7	16 209	15.6
Other Revenue Fund receipts (b)—						
Ordinary services .....	7 450	8.6	8 190	8.6	8 950	8.6
Business undertakings—						
Water .....	993	1.1	1 013	1.1	1 222	1.2
Sewerage .....	498	0.6	596	0.6	757	0.7
Abattoirs .....	1 781	2.1	1 784	1.9	1 764	1.7
Other receipts (c) .....	2 954	3.4	4 073	4.3	3 502	3.4
Total other revenue fund receipts .....	13 677	15.8	15 655	16.4	16 195	15.6
Other Loan Fund receipts—						
Loans—						
Ordinary services .....	8 016	9.2	8 954	9.4	12 350	11.9
Business undertakings—						
Water .....	1 236	1.4	2 037	2.1	769	0.7
Sewerage .....	6 607	7.6	6 894	7.2	5 395	5.2
Other receipts (d)—						
Ordinary services .....	695	0.8	226	0.2	561	0.5
Business undertakings—						
Water .....	5	—	96	0.1	560	0.5
Sewerage .....	43	—	114	0.1	366	0.4
Total other loan fund receipts .....	16 601	19.1	18 321	19.2	20 002	19.3
Total ordinary services .....	60 543	69.8	65 230	68.5	73 093	70.4
Total business undertakings .....	26 182	30.2	30 015	31.5	30 755	29.6
Total receipts .....	86 724	100.0	95 246	100.0	103 848	100.0

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

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

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

(d) 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.

## Rates

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 fixtures 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 1978:

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

Local government authority	Year of revaluation (a)	Total capital value		Assessed annual value		Land value (b) 1978
		1977	1978	1977	1978	
Glenorchy .....	1978	231.61	576.54	17.33	39.17	185.90
Hobart .....	1974	552.27	570.76	38.64	39.77	171.23
Launceston .....	1975	307.02	315.92	25.03	25.85	97.67
Clarence .....	1974	279.93	293.08	17.04	17.79	86.04
Devonport .....	1977	271.88	285.46	16.59	17.36	82.85
Kingborough .....	1977	219.98	232.98	11.31	12.04	90.64
Burnie .....	1975	161.49	168.38	10.13	10.60	60.79
St. Leonards .....	1976	137.06	142.66	9.35	9.73	34.19
Wynyard .....	1977	108.22	110.35	5.77	5.88	40.15
George Town .....	1977	102.48	106.40	6.39	6.67	22.95
New Norfolk .....	1976	98.13	100.15	5.36	5.48	18.59
Brighton .....	1978	27.16	92.06	1.43	4.53	38.35
Circular Head .....	1973	46.92	86.99	2.40	4.42	33.93
Sorell .....	1977	77.84	78.45	3.83	3.86	32.53
Westbury .....	1978	29.77	78.28	1.56	4.25	32.10
Beaconsfield .....	1974	72.34	75.54	4.48	4.66	21.17
Lilydale .....	1976	71.54	73.19	4.59	4.68	21.24
Ulverstone .....	1974	66.85	69.81	3.77	3.93	23.99
Scottsdale .....	1977	55.76	57.58	2.80	2.90	21.28
Latrobe .....	1976	54.86	56.72	2.84	2.94	21.12
Kentish .....	1978	18.49	49.67	0.94	2.41	21.48

## Local Government

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

Local government authority	Year of revaluation (a)	Total capital value		Assessed annual value		Land value (b) 1978
		1977	1978	1977	1978	
Deloraine .....	1976	41.89	42.45	2.00	2.04	16.79
Portland .....	1978	10.37	36.53	0.62	1.95	15.29
Esperance .....	1978	13.40	35.55	0.73	1.70	10.95
Longford .....	1974	33.11	34.20	1.79	1.86	14.23
Evandale .....	1977	33.21	33.41	1.75	1.76	14.45
Oatlands .....	1976	32.22	32.54	1.36	1.37	14.65
Hamilton .....	1977	31.91	31.91	1.44	1.44	15.61
Zeehan .....	1976	26.88	28.93	1.79	1.90	2.84
Huon .....	1975	27.11	27.67	1.30	1.33	8.70
King Island .....	1976	26.76	27.04	1.32	1.34	12.66
Queenstown .....	1976	24.95	25.82	1.79	1.82	3.07
Campbell Town .....	1977	25.09	25.05	1.22	1.22	12.26
Remaining Municipalities .....	..	213.49	239.64	10.16	11.43	101.51
Total Tasmania .....	..	3 531.99	4 241.72	218.86	260.11	1 401.17

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

(b) As from 1 July 1976: (i) land tax is levied upon land value and not unimproved value; (ii) unimproved land value is no longer determined.

The table that follows shows the value of property in Tasmania for recent years:

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

Year	Total capital value	Unimproved value	Assessed annual value	Year	Total capital value	Unimproved value	Assessed annual value	Land value
1973	1 995.91	511.39	124.61	1976	2 902.51	763.67	185.36	932.08
1974	2 317.03	619.19	147.41	1977	3 531.99	n.a.	218.86	1 155.61
1975	2 570.15	696.26	165.47	1978	4 241.72	n.a.	260.11	1 401.17

## 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, Tasmania  
(\$'000)

Rate	1975-76	1976-77	1977-78
Ordinary services (b)—			
General .....	r 13 484	r 15 901	15 936
Street lighting .....	290	343	413
Road .....	7 939	9 300	10 032
Health .....	673	761	842
Sanitary and garbage .....	712	851	1 007
Recreation and reserves .....	2 024	2 450	2 799
Halls and community centres .....	r 160	r 142	176
Library .....	296	315	283
Fire brigade .....	467	557	634
Drainage .....	249	r 302	362
Other .....	r 99	r 102	205
Total .....	r 26 394	r 31 024	32 688

**Rates Received (a) by Local Government Authorities, Tasmania—continued**  
(\\$'000)

Rate	1975-76	1976-77	1977-78
Business undertakings—			
Water .....	6 986	8 364	9 578
Sewerage .....	r 5 544	r 6 861	8 024
Total .....	r 12 530	r 15 225	17 601
Grand total .....	38 924	46 249	50 289
Percentage increase (c) .....	22.4	18.8	8.7

(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.

### 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.

In 1973 the Commonwealth Parliament passed the *Grants Commission Act 1973* repealing the *Commonwealth Grants Commission Act 1933*. The 1973 Act laid down procedures for local government authorities to apply for financial assistance from the Commonwealth and for such applications to be the subject of inquiry and report by the Grants Commission. It also provided that the grants to the states for local authorities should be provided in such a way as to promote financial equality between local authorities and regional groupings of such authorities.

These arrangements were replaced in 1976 by the tax sharing arrangements described below, and the Grants Commission ceased to be responsible for recommending amounts to be paid to specific local authorities (*Commonwealth Grants Commission Act 1976*).

#### *Local Government Assistance Under The Tax Sharing Arrangements*

The arrangements agreed to in 1976 between the Commonwealth and the states for the sharing of personal income tax collections with local government, and subsequently incorporated in the *Local Government (Personal Income Tax Sharing) Act 1976*, are broadly as follows:

- (i) each year local government in the states will be entitled to a fixed percentage of net personal income tax collections in the previous year;
- (ii) the amount so derived will be divided among the states in specified proportions which are subject to recommendation by the Commonwealth Grants Commission;
- (iii) each state will allocate a minimum of 30 per cent of the assistance among local authorities on a basis which takes into account the respective populations of those local authorities, but which may also take into account the respective sizes and the respective population densities, and any other matters agreed upon between the Commonwealth and the state concerned;
- (iv) the remaining assistance will be allocated among the local authorities, having regard to their respective financial needs, on the recommendation of State Grants Commissions.

The Act currently provides that the fixed percentage (of the previous year's net personal income tax collections) for local government in the States is 1.52 per cent. That entitlement is to be increased to 1.75 per cent for 1979-80 subject to passage of legislation to amend the *Local Government (Personal Income Tax Sharing) Act 1976*.

#### *Conditions of Operation*

For 1978-79, the Federal Government allocated \$179.4m to the states for distribution to local governments. The distribution of this amount 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, 1978-79**

State	Percentage of total	Amount of grant (\$'000)
New South Wales .....	36.4977	65 487
Victoria .....	25.4513	45 666
Queensland .....	16.8606	30 252
South Australia .....	8.6010	15 433
Western Australia .....	9.3897	16 848
Tasmania .....	3.1997	5 741
Total .....	100.0000	179 427

For 1978-79, 30 per cent (\$1.7m) of the Tasmanian allocation (\$5.7m) was distributed on a per head of population basis. The balance (\$4.0m) was distributed by the State Grants Commission as equalisation grants.

#### *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. It 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.

For 1976-77 the Commission decided that an equal allocation should be made between revenue and expenditure components but, in so doing, included the 'per capita' element (30 per cent) of the funds in the revenue component. The Commission, in 1977-78, re-examined this basis of allocation and came to the conclusion that, overall, it tended to unduly favour larger municipalities. It is now leaning to the view that allocation to revenue and expenditure components should be equal within the amount available for equalisation grants. In order that the impact on any municipality should not be too great, the Commission decided to go only part of the way in 1977-78, 38.4 per cent being for revenue inequalities, and 61.6 per cent for expenditure inequalities. This trend was continued in 1978-79, the allocations for revenue and expenditure inequalities being 45 and 55 per cent respectively. The next table shows the allocation of federal grants to revenue and expenditure components and the per capita grants portion for the last three years:

**Federal Financial Assistance Grants to Local Government, Tasmania  
(\$'000)**

Allocation	1976-77	1977-78	1978-79
Equalisation grants—			
Revenue disabilities .....	800	1 422	1 809
Expenditure disabilities .....	2 002	2 281	2 210
Total .....	2 802	3 703	4 019
Per capita grant .....	1 202	1 587	1 722
Total grant .....	4 004	5 290	5 741

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 Commission*

The following table provides details of financial assistance to Tasmanian municipalities from distributions under the revised scheme for 1977-78 and 1978-79:

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

Local government area	1977-78				1978-79			
	Per capita grant	Equalisation grant	Total grant	Per head of population (b)	Per capita grant	Equalisation grant	Total grant	Per head of population (b)
	\$'000	\$'000	\$'000	\$	\$'000	\$'000	\$'000	\$
Beaconsfield .....	49	110	159	12.32	54	113	167	12.53
Bothwell .....	3	25	28	33.33	4	33	37	44.01
Brighton .....	19	60	79	14.06	24	68	92	14.36
Bruny .....	1	14	15	46.88	1	16	17	54.20
Burnie .....	77	164	241	12.35	82	175	257	13.19
Campbell Town .....	6	28	34	20.99	7	29	36	22.52
Circular Head .....	30	124	154	19.82	33	128	161	20.73
Clarence .....	165	364	529	12.25	181	364	545	12.43
Deloraine .....	19	63	82	17.01	20	74	94	19.47
Devonport .....	84	169	253	11.58	92	200	292	13.25
Esperance .....	12	45	57	17.98	13	57	70	22.32
Evangdale .....	6	30	36	21.82	7	30	37	21.85
Fingal .....	11	59	70	24.56	12	62	74	26.51
Flinders .....	4	43	47	47.96	4	45	49	50.12
George Town .....	26	62	88	12.74	29	68	97	13.61
Glamorgan .....	5	25	30	22.22	6	29	35	25.31
Glenorchy .....	166	232	398	9.34	179	232	411	9.65
Gormanston .....	2	18	20	52.63	2	16	18	53.32
Green Ponds .....	3	23	26	29.89	4	23	27	30.99
Hamilton .....	14	58	72	21.56	14	63	77	24.93
Hobart .....	197	135	332	6.63	210	160	370	7.45
Huon .....	19	74	93	19.02	21	74	95	19.33
Kentish .....	16	59	75	18.66	17	81	98	24.91
King Island .....	11	54	65	24.07	11	59	70	26.15
Kingborough .....	54	118	172	11.68	62	126	188	12.11
Latrobe .....	22	50	72	12.72	24	51	75	13.21
Launceston .....	129	140	269	8.19	138	155	293	9.00
Lilydale .....	34	98	132	14.80	37	106	143	15.98
Longford .....	21	43	64	11.70	23	49	72	13.06
New Norfolk .....	40	88	128	12.50	43	88	131	12.77
Oatlands .....	9	41	50	22.52	9	50	59	26.72
Penguin .....	20	51	71	13.92	21	56	77	15.00
Port Cygnet .....	8	39	47	22.71	9	45	54	25.69
Portland .....	6	28	34	20.12	7	32	39	22.60



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

Local government area	1977-78				1978-79			
	Per capita grant	Equalisation grant	Total grant	Per head of population (b)	Per capita grant	Equalisation grant	Total grant	Per head of population (b)
Queenstown	\$'000	\$'000	\$'000	\$	\$'000	\$'000	\$'000	\$
Richmond	18	114	132	29.60	19	96	115	27.32
Ringarooma	7	32	39	22.81	7	40	47	27.43
Ross	9	44	53	23.66	9	55	64	29.01
St Leonards	2	21	23	41.82	2	23	25	46.87
Scottsdale	72	150	222	11.78	79	163	242	12.60
Sorell	16	35	51	12.56	17	65	82	20.11
Spring Bay	17	89	106	23.93	19	89	108	23.09
Strahan	7	45	52	28.73	8	45	53	28.90
Tasman	2	20	22	51.16	2	23	25	57.69
Ulverstone	4	25	29	30.53	4	35	39	41.92
Waratah	48	111	159	12.76	52	115	167	13.32
Westbury	8	43	51	24.17	9	52	61	28.21
Wynyard	22	49	71	12.66	24	61	85	14.76
Zeehan	46	114	160	13.52	50	114	164	13.69
Tasmania	20	77	97	17.90	23	86	109	18.91
Tasmania	1 587	3 703	5 290	12.88	1 722	4 019	5 741	13.87

(a) Excludes grants for specific purposes. Comprises: (i) grants to municipalities on a population basis; and (ii) equalisation grants as determined by the State Grants Commission.

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

## 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.

## Loan Receipts

At 30 June 1978 the aggregate loan debt of all local government authorities was \$136 284 800, of which only \$6 555 600 (i.e. 4.8 per cent) was owed to the State Government. The main 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, Tasmania: Loan Account Receipts (\$'000)

Particulars	1973-74	1974-75	1975-76 r	1976-77 r	1977-78
Loan raisings for—					
Sewerage	2 590	4 871	6 607	6 894	5 395
Road, street and bridge construction	2 564	2 449	3 536	4 625	6 398
Water supply	766	831	1 236	2 037	769
Recreational facilities	830	712	1 369	1 417	1 538
Other	1 823	3 397	3 112	2 911	4 414
Total raisings	8 574	12 260	15 860	17 885	18 514

**Local Government Authorities, Tasmania: Loan Account Receipts—continued**  
(**\$'000**)

Particulars	1973-74	1974-75	1975-76 r	1976-77 r	1977-78
Government and semi-government grants . . . . .	668	1 459	1 742	1 232	1 185
Other receipts (a) . . . . .	279	274	742	436	1 488
<b>Total receipts . . . . .</b>	<b>9 521</b>	<b>13 994</b>	<b>18 344</b>	<b>19 553</b>	<b>21 187</b>

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

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.
- (iii) The ability of an authority to repay its debt. The *Local Government Act 1962* restricts the total indebtedness of an authority to 10 times its average annual income for the preceding three financial years.

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

**Local Government Authorities, Tasmania: 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	
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 . . . . .	1 245	10 430	11 675	2 379	95 513	97 892	3 367
1975-76 . . . . .	1 583	14 277	15 860	4 463	105 202	109 665	3 766
1976-77 . . . . .	594	17 291	17 885	4 973	117 977	122 950	4 345
1977-78 . . . . .	1 646	16 868	18 514	6 556	129 729	136 285	5 005

(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 increased in recent years due to arrangements under the National Sewerage Program, whereby the Federal Government made advances to the State. These funds were then loaned by the State Government to local government authorities. This scheme was phased out at the end of 1976-77.

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.

**Expenditure of Local Government Authorities***Revenue Fund Payments*

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

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

Payments for—	1975-76 r	1976-77 r	1977-78
Ordinary services—			
General administration .....	6 184	7 085	8 128
Loan charges—Interest .....	3 784	4 509	5 181
Redemption .....	2 445	2 609	3 235
Sinking fund contributions .....	223	232	242
Total .....	6 451	7 350	8 658
Public works and services—			
Recreational facilities and reserves .....	6 595	5 609	6 346
Halls and community centres .....	823	1 043	1 133
Roads, bridges and street construction .....	13 997	14 521	15 433
Garbage, sanitary, etc. ....	1 996	2 233	2 448
Health and welfare .....	872	1 016	1 329
Street lighting .....	646	752	914
Parking .....	1 065	1 140	1 278
Private and other works .....	1 863	1 679	1 674
Other .....	2 183	2 136	2 300
Total .....	30 041	30 131	32 855
Grants .....	1 593	1 843	2 162
Other payments .....	3 198	2 253	2 791
Total ordinary services .....	47 466	48 661	54 595
Business undertakings—			
Water supply—			
Loan charges—Interest .....	989	1 080	1 239
Redemption .....	763	775	874
Sinking fund contributions .....	29	30	26
Total .....	1 780	1 885	2 139
Other payments (a) .....	7 339	8 315	9 794
Total water supply .....	9 119	10 200	11 933
Sewerage—			
Loan charges—Interest .....	2 332	3 070	3 756
Redemption .....	968	1 073	1 290
Sinking fund contributions .....	90	99	123
Total .....	3 389	4 242	5 169
Other payments (b) .....	3 527	3 754	4 094
Total sewerage .....	6 917	7 996	9 263

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

Payments for—	1975-76 r	1976-77 r	1977-78
Abattoirs—			
Loan charges—Interest .....	62	91	146
Redemption .....	30	39	58
Sinking fund contributions .....	12	14	22
Total .....	104	145	226
Other payments (b) .....	1 506	1 517	1 511
Total abattoirs .....	1 610	1 662	1 738
Total business undertakings .....	17 646	19 858	22 933
Grand total .....	65 111	68 520	77 527
Percentage increase (c) .....	24.7	5.2	13.1

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

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

(c) Over previous year.

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 above table.

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, Tasmania**  
**(\$'000)**

Year	Adminis- tration (a)	Loan charges				Other payments		Total
		Interest	Redemp- tion (b)	Sinking fund contribu- tions (b)	Business under- takings (c)	Roads, streets, bridges	Other	
1972-73 .....	3 074	4 918	3 322	281	7 253	8 042	7 664	34 552
1973-74 .....	3 604	5 307	3 660	297	8 673	8 336	9 765	39 641
1974-75 .....	4 831	5 974	4 204	308	9 415	12 288	15 204	52 224
1975-76 r .....	6 184	7 166	4 205	354	12 372	13 997	20 834	65 111
1976-77 r .....	7 085	8 751	4 496	375	13 587	14 521	19 705	68 520
1977-78 .....	8 128	10 322	5 457	413	15 400	15 433	22 376	77 528

(a) Administration charged to ordinary services only.

(b) Includes redemption from sinking fund.

(c) Metropolitan Water Board reimbursements to Hobart, Glenorchy, Clarence and Kingborough have been netted off against revenue fund payments as from 1974-75.

## Loan fund payments

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

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

Purpose	1973-74	1974-75	1975-76 r	1976-77 r	1977-78
Water .....	1 145	1 041	2 118	2 856	2 576
Sewerage .....	2 487	4 229	7 542	7 672	5 767
Drainage .....	351	448	460	801	769
Road, street and bridge construction .....	2 462	2 751	3 467	4 498	7 205
Recreational facilities .....	1 108	1 018	1 859	1 632	1 659
Halls and community centres .....	377	968	1 676	510	206
Other .....	873	2 224	2 186	2 611	4 953
<b>Total .....</b>	<b>8 803</b>	<b>12 677</b>	<b>19 306</b>	<b>20 579</b>	<b>23 135</b>
Percentage increase (a) .....	-8.9	44.0	52.3	6.6	12.4

(a) Over previous year.

## Employees of Local Government Authorities

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

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

Particulars	1973	1974	1975	1976 (b)	1977 r	1978
<b>General administration—</b>						
Males .....	529	543	558	479	506	533
Females .....	222	235	290	283	277	281
Persons .....	751	778	848	762	783	814
<b>All other services—</b>						
Males .....	2 152	1 957	2 807	1 956	2 404	2 304
Females .....	37	29	165	156	160	184
Persons .....	2 189	1 986	2 972	2 112	2 564	2 488
<b>Total—</b>						
Males .....	2 681	2 500	3 365	2 435	2 910	2 837
Females .....	259	264	455	439	437	465
Persons .....	2 940	2 764	3 820	2 874	3 347	3 302

(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 from 1976 are not strictly comparable with those for 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. The Board 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 arrangement 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 1978 the loan debt of the Board to the State Treasury was \$17.90m and to other lenders \$9.58m.

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	1973-74	1974-75	1975-76	1976-77	1977-78
<b>INCOME</b>					
Municipal contributions—					
Hobart .....	1 202	1 392	1 701	1 998	2 226
Glenorchy .....	717	806	953	1 084	1 162
Clarence .....	697	750	942	1 155	1 205
Kingborough .....	133	150	192	255	278
Special consumers .....	385	315	302	361	401
Direct earnings, Southern Regional Scheme .....	324	367	473	426	600
Other revenue .....	92	142	215	245	222
<b>Total .....</b>	<b>3 550</b>	<b>3 921</b>	<b>4 778</b>	<b>5 524</b>	<b>6 093</b>
<b>EXPENDITURE</b>					
Reimbursement of working expenses—					
Hobart .....	414	542	729	841	911
Glenorchy .....	299	406	483	564	574
Clarence .....	145	194	190	245	335
Kingborough .....	67	80	88	112	125
Bulk supply, operation costs .....	639	733	972	1 012	1 291
Administrative expenses .....	101	141	147	184	172
Interest .....	1 300	1 452	1 684	1 933	2 093
Depreciation .....	369	411	449	490	531
Superannuation (a) .....	—	—	—	—	157
<b>Total .....</b>	<b>3 334</b>	<b>3 960</b>	<b>4 742</b>	<b>5 382</b>	<b>6 189</b>

(a) In 1977-78 a fund was established to meet future superannuation commitments.



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	1973-74	1974-75	1975-76	1976-77	1977-78
<b>Hobart—</b>					
Construction and improvement .....	183	202	382	354	503
Loan redemption and conversion .....	33	86	38	37	34
<b>Total .....</b>	<b>215</b>	<b>288</b>	<b>420</b>	<b>391</b>	<b>537</b>
<b>Glenorchy—</b>					
Construction and improvement .....	121	113	360	401	282
Loan redemption and conversion .....	155	178	43	45	42
<b>Total .....</b>	<b>276</b>	<b>291</b>	<b>403</b>	<b>446</b>	<b>325</b>
<b>Clarence—</b>					
Construction and improvement .....	44	69	42	322	140
Loan redemption and conversion .....	49	94	43	50	70
<b>Total .....</b>	<b>94</b>	<b>163</b>	<b>85</b>	<b>372</b>	<b>210</b>
<b>Kingborough—</b>					
Construction and improvement .....	93	278	167	122	219
Loan redemption and conversion .....	13	52	23	10	8
<b>Total .....</b>	<b>106</b>	<b>331</b>	<b>190</b>	<b>132</b>	<b>228</b>
<b>Total—</b>					
Construction and improvement .....	441	662	951	1 199	1 145
Loan redemption and conversion .....	250	410	147	142	154
<b>Grand total .....</b>	<b>691</b>	<b>1 073</b>	<b>1 098</b>	<b>1 341</b>	<b>1 299</b>

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 1977-78 totalled \$1 600 000, of which \$850 000 was raised by external borrowings and \$750 000 was applied from its Depreciation Fund. The Board did not receive an allocation from the State Loan Fund. Capital expenditure incurred during the year included \$123 000 for conversion of the Kingborough Pipeline from low to high pressure, \$48 000 for replacement of a section of burst main at Tea Tree and \$1 300 000 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:* This 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. Water taken from the North Esk at Watery Plains is treated at Chimney Saddle, where plant capacity is 29.5 megalitres per day. Total income from the scheme during 1978-79 was \$1 278 000 which included sale of water to: (i) municipalities, \$936 000; (ii) industrial users, \$256 000; and (iii) wayside consumers, \$85 000. At 30 June 1979, capital cost of the scheme amounted to \$10.9m.

*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. Water for the scheme is drawn from Trevallyn Lake on the South Esk River and can be treated at a rate of 18 megalitres per day. 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 1978-79 was \$462 000 while expenses of the scheme were \$305 000. Capital cost of the scheme to 30 June 1979 was \$2.7m.

*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 and the Shelley Beach area. Capacity of the scheme is 2.5 megalitres per day. Income for the year 1978-79 was \$26 000, while expenses amounted to \$68 000. Capital cost of the Prosser River Scheme to 30 June 1979 amounted to \$442 000. In 1979 the running of the treatment works was taken over by the Commission.

*Curries River Dam:* 1979 saw the completion of the Curries River dam (capacity 12 000 megalitres) and 8 kilometres of 850 mm/650 mm pipeline to Bell Bay at a total cost of \$1.25 million. This is the first step in a scheme to supplement both the North Esk and West Tamar supplies and extend the latter to Greens Beach.

## 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 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 Commissioner for Town and Country Planning functions as a corporation sole under the *Local Government Act 1962* and in respect of his statutory powers is responsible to Parliament. On 14 July 1978, the Town and Country Planning Commission was combined with the Local Government Office to form the Division of Municipal Planning. Administratively, this is a division of the Premier's Department, but functionally it is responsible to the Minister for Municipal Planning.

### *Functions*

Briefly, the function of the Commissioner is to approve municipal planning schemes and to certify that subdivision proposals are in accordance with these 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 months 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 and determines 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; or (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; and (x) ancillary or consequential works.

### *Subdivision Approvals*

Except where the Commissioner authorises a council or master planning authority to deal with subdivision 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 subdivision plans without reference to the Commissioner may be withdrawn by him.) When considering subdivision 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 and powers to effect a co-ordination of development was passed by the House of Assembly late in 1975. Early in 1976 this was referred to a Select Committee by the Legislative Council.

The Select Committee sat on a total of 19 occasions and received evidence from 87 witnesses in Tasmania, Victoria and South Australia. However, the Bill, and the Committee, lapsed when Parliament was prorogued in November 1976. Although the Committee was re-appointed in March 1977 and continued its inquiries, a change of policy by the Government occurred. The Bill was not revived, the Select Committee's terms of reference became invalid and its inquiries therefore had no relevance.

### *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 of the 1978 *Tasmanian Year Book*.

### *Planning Appeal Board*

The Planning Appeal Board consists of a Chairman, who must be a legal practitioner or barrister, and two other members, at least one of whom must be experienced in town and country planning. Persons affected by the decisions of a local government authority in approving or refusing planning approvals may appeal to the Planning Appeal Board. The Board's determination of an appeal must be given effect to by the municipality. Its decision is conclusive and binds all parties to the appeal. Notices of appeal must be lodged with the Clerk to the Commissioner for Town and Country Planning.

### *Regional Planning Authorities*

The State Government now subsidises each of the three Regional Planning Authorities (i.e. the Southern Metropolitan Planning Authority, the Tamar Regional Master Planning Authority, and the North-West Master Planning Authority) on a dollar for dollar basis by matching the amount contributed by their constituent members. In return for this assistance each Authority is required to undertake planning studies and administer rural subdivision controls delegated to it by the Town and Country Planning Commissioner. The subdivision powers are administered within the context of a guideline policy handed down to each Authority by the Commissioner.

## **Southern Metropolitan Planning Authority**

### *Introduction*

The Southern Metropolitan Planning Authority was established in 1978 following an amendment to the *Local Government Act 1962*. The new Authority replaces the former Southern Metropolitan Master Planning Authority which was disbanded in 1973.

### *Representation and Distributions*

Constituent members of the Authority are the Cities of Hobart and Glenorchy, the Municipalities of Clarence, Kingborough and Brighton, and the Marine Board of Hobart. Under the Act, each constituent member provides one representative on the Authority, and there is provision for a Government nominee.

*Duties of the Authority*

The *Local Government Act* prescribes the following as duties of the Authority:

- (i) To determine the policies that should be adopted with respect to the use and development of the land within the districts of its constituent municipalities, particularly having regard to the desirability of the promotion of the region as an entity in economic, administration and social terms.
- (ii) In regard to matters affecting two or more constituent municipalities, it shall give or arrange the giving of information, advice and assistance.
- (iii) It shall take steps as appear practicable to co-ordinate the activities of the authorities and persons concerned.

*Functions of the Authority*

The Authority has undertaken to provide comprehensive data and information on the region, and is undertaking a variety of studies which will provide a basis for a strategic plan of the metropolitan area.

**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. In 1978, the Port of Launceston Authority became a constituent member.

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

*Regional Plan*

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.

The current major activities of the Authority concern the preparation of planning schemes and outline development plans for councils. The Authority administers rural subdivision controls delegated to it by the Town and Country Planning Commission.

The Authority has undertaken the following major planning studies: (i) Tamar Outline Development Plan, 1971; (ii) Tamar Tourist Development Plan, 1973; (iii) Tamar Region Plan, 1975; (iv) Tamar Estuary—River Management Plan, 1975; (v) Tamar Engineering

Services Study, 1975; (vi) Tamar Sewerage Strategy Study; (vii) North-East Tasmania Regional Recreation Plan; and (viii) North-East Tasmania Region Study for the State Strategy Plan.

The Authority is also involved in industrial and employment promotion studies and activities of the Tamar Region. Some of these have been: (i) a survey of Secondary Industry in the Tamar Region, 1973; (ii) a strategy for employment promotion in the Tamar Region, 1976; (iii) Potential Employment Opportunities in the Tamar Region, 1976; and (iv) joint production of the film "Tamar, The Living Valley".

The Authority encouraged the establishment of the Australian Maritime College in Launceston. It has given evidence at committees of inquiry, such as investigations into town and country planning, forest regeneration, pollution, transport, land tenure, population, the national estate and education.

#### 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 90 000, 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.

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 coasts 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.

In 1978 the Authority was delegated the task of administering rural sub-division controls by the Town and Country Planning Commissioner. The Authority is also presently engaged in the promotion of industry, based on the raw materials of the region, and tourism in the area.

#### Further References

##### *ABS Publications:*

- Local Government Finance, Tasmania (5501-6) (annual, 1977-78 issue released 30-4-79, 33 pp.).  
Australian Municipal Information System (AMIS) Manual (1103-0) (irregular, latest issue released in March 1977—this Manual describes the AMIS computer data base system which contains a range of data on a comparable basis for all Australian local government areas. Output from the system is available on request).  
Public Authority Finance: State and Local Authorities (5504-0) (annual, Canberra Office publication, 1976-77 released 16-1-79, 95 pp.).

##### *Other Publications:*

- Report of the Auditor-General and the Statement of Public Accounts* (published annually by the Tasmanian Government Printer, Hobart).



## **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 from 1977-78 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. income tax, customs and excise, 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's Consolidated Revenue Fund:

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

Particulars	1975-76	1976-77	1977-78
<b>GENERAL PURPOSE FUNDS</b>			
Financial assistance grants .....	156 816	—	—
Personal income tax entitlement (a) .....	—	186 294	214 150
Capital grants .....	30 372	31 901	33 496
<b>Total .....</b>	<b>187 188</b>	<b>218 195</b>	<b>247 646</b>
<b>SPECIFIC PURPOSE PAYMENTS</b>			
Revenue payments—			
Payments under financial agreement—			
Interest on State debt .....	534	534	534
Sinking fund on State debt .....	2 100	2 069	2 225
Universities .....	13 658	r 15 939	17 505
Colleges of advanced education .....	7 011	8 678	9 256
Technical and further education .....	1 087	969	1 110
Schools .....	9 327	11 049	12 121
Pre-schools and child care .....	1 720	2 006	2 071
Public hospitals (Medibank) .....	31 000	18 918	31 621
Community health .....	1 265	2 038	2 603
School dental scheme .....	1 547	1 475	1 684
Unemployment relief .....	700	—	—
Regional employment development scheme .....	1 521	—	—
Tasman Bridge disaster .....	1 400	1 715	730
Assistance for local government .....	2 292	4 004	5 290
Other .....	5 294	r 4 050	2 934
<b>Total revenue payments .....</b>	<b>80 456</b>	<b>r 73 444</b>	<b>89 684</b>
Capital payments—			
Universities .....	2 589	r 1 061	1 008
Colleges of advanced education .....	5 313	404	1 598
Technical training .....	887	1 665	1 970
Schools .....	4 477	4 266	6 186
Pre-schools and child care .....	1 764	5	—
Hospitals .....	2 090	3 000	3 350
Housing advances .....	22 220	24 220	25 220
Roads .....	20 097	20 716	21 916
Sewerage .....	1 984	500	—
Tasman Bridge disaster .....	16 300	13 785	5 870
Assistance to primary industry .....	3 354	2 419	363
Other .....	7 043	r 3 956	7 588
<b>Total capital payments .....</b>	<b>88 118</b>	<b>r 75 997</b>	<b>75 069</b>
<b>Total specific purposes payments .....</b>	<b>168 574</b>	<b>r 149 441</b>	<b>164 753</b>
<b>GENERAL AND SPECIFIC PURPOSE PAYMENTS</b>			
<b>Total payments (b) .....</b>	<b>355 762</b>	<b>r 367 636</b>	<b>412 400</b>
<b>Percentage increase (c) .....</b>	<b>25.8</b>	<b>3.3</b>	<b>12.2</b>

(a) Financial assistance grants have been replaced by personal income tax entitlements from 1976-77; see later section 'Personal Income Tax Sharing with the States'.

(b) 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.

(c) Over previous year.

### *Financial Assistance Grants*

Under the *Federal States Grants (Income Tax Reimbursement) Act 1942* the states received general revenue grants for vacating the field of income tax. Various formulae were used to calculate each state's grant. From 1959 to 1975-76 the method was to annually increase the grant by multiplying the previous year's grant by: (i) the state's percentage increase in population; (ii) the percentage increase in average wages for Australia; and (iii) a betterment factor. The betterment factor was: 1.2 per cent from 1965-66 to 1970-71; 1.8 per cent from 1971-72 to 1975-76; and 3.0 per cent for 1976-77.

### *Personal Income Tax Sharing with the States*

Commencing in 1976-77 financial assistance grants were replaced by personal income tax sharing arrangements between the Commonwealth and the states. This was a central element in the 'new federalism' policy of the Fraser Coalition Government. The income tax sharing between the Commonwealth and states was introduced in two stages. The first stage became operative in 1976-77; the second stage required further Commonwealth and state legislation. Federal legislation for Stage 2 was passed during 1977-78.

The principal elements of Stage 1 are:

- (i) The states receive a given percentage (39.87) of the net personal income tax collections for the previous year. This replaced the previous arrangement whereby the amount was 33.6 per cent of the collections for that year. The changes were enacted following the recommendations of the October 1977 Premiers' Conference.
- (ii) For the first four years of the scheme (1976-77 to 1979-80) the Commonwealth has guaranteed that no state will receive less than it would have under the old financial assistance grant formula.
- (iii) The total entitlement for all states is first decided. The amount is then divided between each of the states on the basis of each state's population and a relativity factor based on 1975-76 financial assistance grant receipts.
- (iv) The four less populous states can continue to apply for special grants in addition to their basic income tax sharing entitlements.
- (v) There will be periodic reviews of relativities between states.

In 1977-78 Tasmania received \$214 150 000 under the new system. The actual calculated share was \$214 000 000 but, under the old financial assistance grants formula, Tasmania would have received \$214 150 000. (State receipts equal to receipts under the financial assistance grants formula are guaranteed for the first four years of Stage 1.)

Under Stage 2 each state may legislate to impose a surcharge on personal income tax in the state or to give a rebate of personal income tax payable under Commonwealth law. The state bears the cost of any such rebate. The Commonwealth will collect the surcharge or grant the rebate as the state's agent. In the case of a surcharge levied by one of the four less populous states the Commonwealth will make equalisation arrangements. These will ensure that the state will get the same relative advantage from the surcharge as a state with a broader personal income tax base.

### *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; (iv) the withdrawal of Tasmania as a claimant state from 1974-75; and (v) the withdrawal of South Australia as a claimant state from 1975-76.

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
1972-73 .....	1 934	1975-76 .....	2 100
1973-74 .....	2 044	1976-77 .....	2 069
1974-75 .....	2 141	1977-78 .....	2 225

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 1978.

The 1927 Financial Agreement brought into effect by the *Financial Agreement Act 1928* was amended during 1975-76 with retrospective effect from 30 June 1975. The total of \$1 000 million of state debt was formally transferred to the Commonwealth.

#### *Grants for Non-reproductive Capital Works*

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 1972-73 to 1977-78 have been (in \$m): 1972-73, 982; 1973-74, 867; 1974-75, 1 087; 1975-76, 1 291; 1976-77, 1 356; and 1977-78, 1 434. The proportion of the total states' capital works program provided by Federal Government grants in this period has been: 1972-73, 25.3 per cent; 1973-74, 32.1; 1974-75, 32.1; and 33.3 for 1975-76 to 1977-78 inclusive. For 1978-79 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) the 1972-73 figure includes 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 failed to reach agreement. Tasmania's share of the 1977-78 grant was \$33.50m which was credited to the State's Loan Fund.

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

#### *Federal Government Aid For Roads*

Financial assistance to the states for roads during the triennium 1977-78 to 1979-80 has been mainly provided under the *Federal State Grants (Roads) Act 1977*. The Act was based on the former Commonwealth Bureau of Roads' *Report on Roads in Australia 1975*. The Federal Government decided to make \$475m available to the states in 1977-78 and that the total grants in 1978-79 and 1979-80 would be equivalent in real terms to the 1977-78 grant. The legislation also established expenditure quotas for each state to be met from its own funds. In 1978-79 total grants under the 1977 legislation totalled \$508m. This included \$2.9m paid under an earlier Act. For 1979-80 the Commonwealth intends paying out \$546m.

The Commonwealth also provides aid to the states for planning and research projects related to roads. For the three years 1977-78 to 1979-80 the assistance is being paid under the *Transport Planning and Research (Financial Assistance) Act 1977*. For 1977-78 the

Commonwealth met two-thirds of the expenditure on approved programs of projects. For 1978-79 and 1979-80 one half of such expenditure will be met by the Commonwealth.

The following table shows amounts received by Tasmania for recent years for general road expenditure and for transport planning and research projects:

**Federal Government Aid for Roads: Payments to Tasmania**  
(**\$'000**)

Year	Payments for roads (a)	Year	Payments for transport planning and research (b)
1974-75 .....	18 400	1974-75 .....	185
1975-76 .....	19 900	1975-76 .....	198
1976-77 .....	20 500	1976-77 .....	216
1977-78 .....	21 700	1977-78 .....	195
1978-79 .....	23 208	1978-79 .....	173

(a) Grants paid under general roads Acts.

(b) Grants paid under the *Urban Public Transport (Research and Planning) Act 1974*, *Transport (Planning and Research) Act 1974* and the *Transport Planning and Research (Financial Assistance) Act 1977*.

**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 below:

- (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 is 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 1977-78 larger authorities are those semi-government and local government authorities borrowing more than \$1m in a year. (For 1977-78 borrowings approved by the Loan Council for larger Tasmanian semi-government and local government authorities amounted to \$34 444 000.)

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
1970-71 .....	34 570	1973-74 .....	(c) 43 467	1976-77 .....	63 802
1971-72 .....	(b) 47 020	1974-75 .....	54 952	1977-78 .....	66 992
1972-73 .....	(b) 51 252	1975-76 .....	60 743	1978-79 .....	66 992

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

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

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

For 1970-71 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
1969-70 .....	7 600	1972-73 .....	(a)	1975-76 .....	22 380
1970-71 .....	8 700	1973-74 .....	16 445	1976-77 .....	24 226
1971-72 .....	(a)	1974-75 .....	26 369	1977-78 .....	25 220

(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. Main expenditures from it 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, Tasmania  
(\$'000)

Particulars	1974-75	1975-76	1976-77	1977-78
Cash and investments at beginning of year . . . . .	8 852	6 518	29 189	25 989
Receipts—				
Consolidated Revenue Fund . . . . .	268 522	(a) 322 091	396 617	444 263
Borrowings for new capital purposes . . . . .	54 952	60 743	63 807	66 992
Other Loan Fund receipts . . . . .	40 104	47 898	48 039	52 223
Net increase, Trust and Special Funds . . . . .	-1 067	8 704	199	-2 908
Total . . . . .	362 510	439 436	508 662	560 570
Expenditure—				
Consolidated Revenue Fund . . . . .	282 065	(a) 317 947	395 033	450 706
Loan Fund, public works and purposes . . . . .	82 778	98 818	116 823	123 459
Discount . . . . .	—	—	5	—
Total . . . . .	364 844	416 765	511 861	574 165
Percentage increase . . . . .	30.3	14.2	22.8	12.2
Cash and investments at end of year . . . . .	6 518	29 189	25 989	12 393

(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 record 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, Tasmania  
(\$'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
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
1977 . . . . .	+1 583	2 926	21 479	25 989	1 655	1 411	22 923	25 989
1978 . . . . .	-6 443	265	18 571	12 393	-8 849	1 454	19 788	12 393

(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, Tasmania**  
(\$'000)

Year	Opening balance	Transactions			Closing balance
		Budget result, Consolidated Revenue	Special grant adjustment (a)	Deficits charged to Loan Fund (b)	
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
1976-77 .....	-9 400	+1 583	-	+9 400	+1 583
1977-78 .....	+1 583	-6 443	-	-1 583	-6 443

(a) It was 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. These provide that, in relation to Consolidated Revenue, the Treasurer may authorise transfers between votes within certain sub-divisions 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) The net loss incurred by the Transport Commission each year is met from the Consolidated Revenue Fund. The Commission's net loss occurs principally in respect of government shipping services which it administers. The Commission's gross receipts and expenditure are excluded from the Fund.

- (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 January 1978. However, the 5 per cent tax on revenue was re-introduced in January 1979.
- (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.

Consolidated Revenue Fund: Surpluses and Deficits, Tasmania  
(\$'000)

Year	Revenue	Expenditure	Budget Result	Aggregate net deficit at end of year
1972-73 .....	181 866	185 998	-4 132	29 358
1973-74 .....	206 947	210 097	-3 150	32 508
1974-75 .....	268 522	282 065	-13 544	46 052
1975-76 .....	(a) 322 091	(a) 317 947	(a) +4 144	41 908
1976-77 .....	396 617	395 033	(b) +1 583	(b) 41 908
1977-78 .....	444 263	450 706	-6 443	48 351

(a) As reported by the State Treasurer, and may disagree slightly with figures used later in this chapter which have been adjusted for remissions of casino tax.

(b) Surplus in this year transferred to Loan Fund.

#### Deficit Funding

While the aggregate of all deficits at 30 June 1978 was \$48 351 000, the sum of \$41 908 000 has been charged against the Loan Fund as 'revenue deficits funded'; thus \$6 443 000 is carried as a negative balance in the Accumulated Revenue Account.

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, Tasmania  
(\$'000)

Budget result			Budget result		
Year	Amount	Treatment	Year	Amount	Treatment
1972-73 .....	-4 132	Funded	1976-77 .....	+1 583	Transferred to Loan Fund
1973-74 .....	-3 150	Funded			Fund
1974-75 .....	-13 544	Funded			Funded
1975-76 .....	+4 144	Offset	1977-78 .....	-6 443	

## Consolidated Revenue Fund—Receipts

The following table shows Tasmanian Consolidated Revenue Fund receipts for recent years:

Consolidated Revenue Fund: Receipts, Tasmania  
(\$'000)

Item	1975-76	1976-77	1977-78
<b>Federal Government grants—</b>			
Financial agreement . . . . .	534	534	534
Income tax entitlement (a) . . . . .	—	186 294	214 150
Financial assistance (a) . . . . .	156 816	—	—
Education . . . . .	8 501	11 269	11 204
Health . . . . .	(b) 20 023	(b) r 32 400	(b) 38 165
Social welfare . . . . .	458	599	764
Unemployment relief . . . . .	700	—	—
Local Government . . . . .	—	4 004	5 290
<b>Total . . . . .</b>	<b>187 032</b>	<b>r 235 100</b>	<b>270 107</b>
<b>Debt charge recoveries (c)—</b>			
Interest . . . . .	33 835	42 215	45 432
Sinking fund . . . . .	4 807	4 576	4 930
<b>Total . . . . .</b>	<b>38 641</b>	<b>46 791</b>	<b>50 362</b>
State taxation (d) . . . . .	74 691	r 88 233	90 891
Victorian lotteries agreement . . . . .	331	1 065	1 696
<b>Territorial revenue—</b>			
Forestry . . . . .	4 159	5 313	5 615
Other property income, etc. . . . .	2 926	4 737	5 701
<b>Total . . . . .</b>	<b>7 085</b>	<b>10 050</b>	<b>11 316</b>
<b>Departmental revenue, fees, etc.—</b>			
Education . . . . .	260	327	366
Health . . . . .	659	911	1 142
Law and order . . . . .	2 973	3 353	3 845
Tourism . . . . .	1 061	1 064	1 048
Other (e) . . . . .	9 029	r 9 723	13 490
<b>Total . . . . .</b>	<b>13 982</b>	<b>r 15 378</b>	<b>19 891</b>
<b>Grand total . . . . .</b>	<b>(f) 321 761</b>	<b>396 617</b>	<b>444 263</b>
<b>Percentage increase . . . . .</b>	<b>19.8</b>	<b>23.3</b>	<b>12.0</b>

(a) Personal income tax entitlements replaced financial assistance grants from 1976-77.

(b) Includes receipts under the Medibank agreement, 1975-76, \$15 889 000; 1976-77, \$26 156 000; 1977-78, \$31 221 000.

(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 Department of Main Roads and Construction of: for 1975-76, \$5.50m; 1976-77, \$6.24m; 1977-78, \$6.80m.

(f) 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 Mean Population, Tasmania

Item	1975-76 r (\$)	1976-77 (\$)	1977-78	
			Amount (\$)	Per cent
Federal Government grants .....	460.4	r 574.7	655.4	60.8
State taxation .....	183.9	r 215.7	220.6	20.5
Debt charge recoveries .....	95.1	114.4	122.2	11.3
Departmental revenue, fees, grants, etc. ....	34.4	r 37.6	48.3	4.5
Territorial revenue .....	17.4	24.6	27.5	2.6
Victorian lotteries agreement .....	0.8	2.6	4.1	0.4
<b>Total .....</b>	<b>792.1</b>	<b>969.5</b>	<b>1 078.1</b>	<b>100.0</b>

## State Taxation

During 1977-78 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 by far 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, Tasmania

Tax or licence	1975-76	1976-77	1977-78	
			Amount	Per cent
	\$'000	\$'000	\$'000	
Pay-roll tax .....	31 014	35 217	36 748	40.4
Motor taxes (a) .....	14 884	19 001	21 775	24.0
Stamp duties (b) .....	10 743	13 787	14 013	15.4
Deceased persons' estates duties .....	5 461	6 536	5 166	5.7
Land tax .....	4 349	3 773	3 930	4.3
Liquor tax and licences .....	2 782	3 443	3 774	4.2
Racing taxes .....	1 644	2 329	2 538	2.8
Casino tax and licence fees .....	1 674	r 2 177	2 084	2.3
Hydro-Electric Commission statutory levy .....	1 712	1 604	585	0.6
Soccer Football Pools tax .....	108	254	265	0.3
Entertainment tax .....	246	93	-	-
Other licences .....	73	19	13	-
Tobacco tax and licence fees .....	1	-	-	-
<b>Total (c) .....</b>	<b>74 691</b>	<b>r 88 233</b>	<b>90 891</b>	<b>100.0</b>

(a) See following section 'Motor Taxes'.

(b) 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').

(c) Excluded are the following amounts received from the Victorian Government under the Victorian Lotteries Agreement: 1975-76, \$331 000; 1976-77, \$1 065 000; 1977-78, \$1 696 000.

**Motor Taxes:** In the preceding table motor taxes are shown as \$21 775 000 for the year 1977-78. The next table shows how this figure can be reconciled with motor tax figures published by the State Treasurer:



**Motor Taxes (a) Paid to Consolidated Revenue Fund, Tasmania, 1977-78**  
(\$'000)

Item	Amount	
Motor taxes (a) .....	21 775	
Less Stamp duty on—Vehicle registration (b) .....	3 655	} 8 396
Third party insurance (b) .....	456	
Traffic fees (c) paid to—Police Department .....	2 186	
Consolidated Revenue Fund .....	2 099	
'Motor tax' as published by State Treasurer .....	13 379	

(a) See preceding table 'State Taxation Collections Paid into Consolidated Revenue'.

(b) Treated as 'stamp duties' tax items by the State Treasurer.

(c) Includes motor vehicle registration fees, drivers' licences, charges for number plates, transfer of ownership fees and learners' permits.

Not all State taxation is paid into the Consolidated Revenue Fund, as shown in the following table:

**State Taxation Collections Paid to Special Funds, Tasmania**  
(\$'000)

Particulars	1975-76	1976-77	1977-78
Motor taxation—			
Retained by Transport Commission .....	104	101	96
Paid to the State Highways Trust Fund .....	156	210	-
Racing taxation—			
Paid to racing clubs and Racing Commission .....	1 007	1 022	895
Insurance companies—			
Contributions to fire authorities .....	2 473	2 975	3 434
<b>Total .....</b>	<b>3 740</b>	<b>4 308</b>	<b>4 425</b>

The following table summarises total State taxation collections:

**Total State Taxation Collections, Tasmania (a)**  
(\$'000)

Particulars	1975-76	1976-77	1977-78
Paid into—Consolidated Revenue .....	74 691	r 88 233	90 891
Special Funds .....	3 740	4 308	4 425
Adjustment (b) .....	+133	+23	+298
<b>Total .....</b>	<b>78 564</b>	<b>r 92 564</b>	<b>95 614</b>

(a) Taxation is described more fully in a subsequent section, 'Taxation in Tasmania'.

(b) An adjustment item is necessary to reconcile items referring to different accounting periods.

**Debt Charge Recoveries**

After Federal Government grants and State taxation, debt charge recoveries is the next largest receipt item in Consolidated Revenue. The next table shows details of the interest and sinking fund payments made by various authorities on advances which have been made to them by the State Government. These advances have been made primarily from State loan borrowings and the Government attempts to recover amounts roughly equal to its liability for debt charges.

**Debt Charge Recoveries: Consolidated Revenue Fund, Tasmania**  
(\$'000)

Source of recovery	Interest			Sinking fund contributions		
	1975-76	1976-77	1977-78	1975-76	1976-77	1977-78
<b>Agricultural Bank—</b>						
Housing .....	295	r 347	463	—	—	—
State Advances Act .....	343	r 441	515	—	—	—
Closer settlement .....	127	148	168	—	—	—
Returned soldier settlement .....	14	15	14	—	—	—
Other .....	9	r 1	2	—	—	—
Herd Improvement Board .....	25	39	31	3	2	3
Forestry Department .....	828	1 016	1 178	—	—	—
Government Printing Office .....	16	17	18	3	3	3
Housing Department .....	1 430	1 508	1 711	234	247	274
Hydro-Electric Commission .....	27 151	32 019	35 129	3 784	3 993	4 320
King Island Abattoirs Board .....	32	36	38	5	5	5
<b>Loans to industry—</b>						
Aluminium industry agreement ..	158	98	98	—	—	—
Iron ore (Savage River agreement)	175	165	155	—	—	—
Other .....	414	625	750	—	—	—
Metropolitan Transport Trust .....	206	326	315	30	42	40
Metropolitan Water Board .....	1 033	1 167	1 263	160	161	169
Rivers and Water Supply Commission	343	391	409	46	47	48
Tasmanian Grain Elevators Board ..	98	115	112	15	17	17
Tourism development .....	187	273	331	—	—	—
Transport Commission .....	553	612	527	528	59	48
Other .....	397	r 2 856	2 207	—	—	2
<b>Total .....</b>	<b>33 835</b>	<b>42 215</b>	<b>45 432</b>	<b>4 807</b>	<b>4 576</b>	<b>4 930</b>

*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, Tasmania (a)**  
(\$'000)

Purpose	1975-76	1976-77	1977-78
General administration <i>n.e.c.</i> .....	32 802	r 38 214	42 813
<b>Law, order and public safety—</b>			
Law courts and legal services .....	4 603	5 764	5 973
Correctional and custodial services .....	2 960	3 501	3 959
Police services .....	16 146	19 084	21 055
Fire protection .....	1 571	2 005	2 132
Road safety .....	262	350	403
Other .....	r 190	r 395	567
<b>Total .....</b>	<b>r 25 732</b>	<b>r 31 099</b>	<b>34 089</b>
<b>Education—</b>			
General administration, regulation and research .....	4 681	r 6 533	10 094
Student transport .....	3 930	4 394	4 870
Primary and secondary .....	67 351	r 79 031	86 378
Technical .....	6 128	7 596	9 327
University .....	18	19	36
Other higher education .....	4 753	5 651	6 320
Special schools .....	1 682	2 069	2 467
Other .....	680	55	16
<b>Total .....</b>	<b>89 223</b>	<b>r 105 348</b>	<b>119 508</b>
<b>Health—</b>			
General administration, regulation and research .....	r 1 453	1 727	2 537
Mental health .....	8 353	9 682	10 571

**Consolidated Revenue Fund: Expenditure by Purpose, Tasmania (a)—continued**  
(\$'000)

Purpose	1975-76	1976-77	1977-78
Other hospital and clinical services .....	45 380	59 943	68 698
Preventive services .....	554	564	138
Maternal and infant health .....	859	975	1 136
Other health services .....	3 478	5 093	6 253
Ambulance services .....	713	1 136	1 552
<b>Total .....</b>	<b>r 60 790</b>	<b>79 120</b>	<b>90 885</b>
<b>Social security and welfare—</b>			
General administration, regulation and research .....	693	r 906	1 030
Aged persons .....	286	396	366
Unemployed and sick persons and unemployment relief .....	763	r 4 340	1 746
Family and child care and assistance .....	r 2 070	r 2 487	2 862
Other .....	1 455	1 940	3 364
<b>Total .....</b>	<b>r 5 267</b>	<b>r 10 069</b>	<b>9 369</b>
Housing .....	2 351	3 573	3 316
Community and regional development .....	196	438	52
Protection of the environment .....	507	493	600
<b>Recreation and related cultural services—</b>			
Cultural facilities .....	4 577	r 5 768	6 584
Support for creative and performing arts .....	25	25	25
Recreational facilities .....	1 637	r 2 542	2 882
Other .....	1 032	r 1 275	819
<b>Total .....</b>	<b>7 270</b>	<b>r 9 610</b>	<b>10 311</b>
<b>Economic services—</b>			
General administration, regulation and research .....	1 754	r 2 103	7 059
Soil and water resources management .....	5 728	7 348	8 712
Forest resources management .....	3 865	4 207	5 381
Other services to agricultural and pastoral industries .....	9 193	10 577	11 657
Mining and services to mining .....	1 951	2 214	2 360
Manufacturing and services to manufacturing .....	487	914	1 272
Electricity supply services .....	122	133	168
Water supply services .....	1 724	r 1 952	2 065
<b>Transport and communication—</b>			
Roads and ancillary services .....	9 269	r 11 990	14 713
Sea transport .....	212	r 242	326
Urban bus services .....	5 156	6 030	6 615
Other .....	3 308	4 589	3 951
Other .....	4 278	4 879	5 999
<b>Total .....</b>	<b>47 046</b>	<b>r 57 177</b>	<b>70 277</b>
Other (including debt charges) .....	r 46 763	r 59 893	69 489
<b>Total .....</b>	<b>(b) r 317 947</b>	<b>r 395 034</b>	<b>450 708</b>
Percentage increase .....	r 12.7	r 24.2	14.1

(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.)

### 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, Tasmania  
(\$'000)**

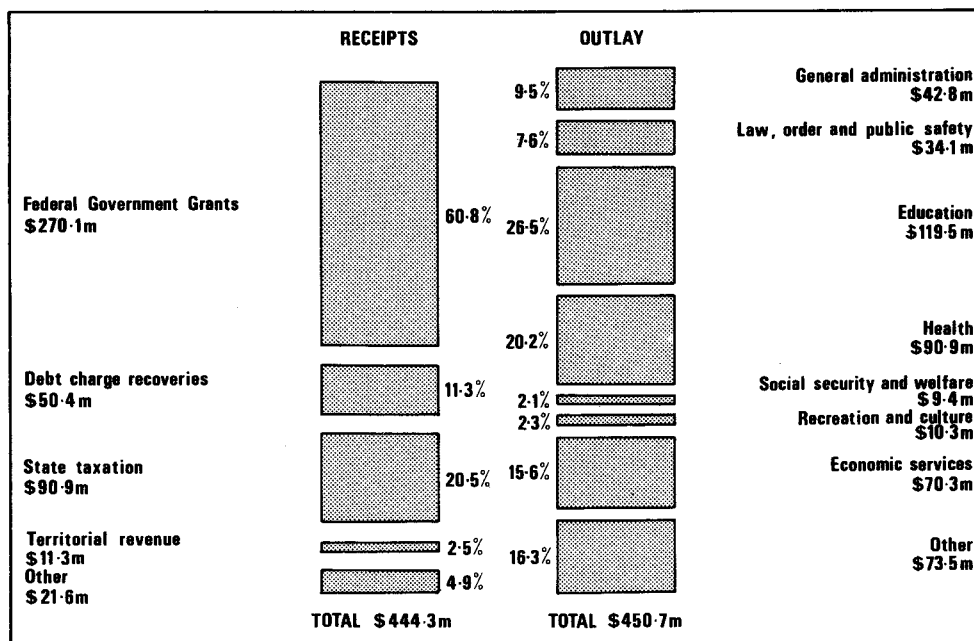
Particulars	Interest			Sinking fund contribution		
	1975-76	1976-77	1977-78	1975-76	1976-77	1977-78
Expenditure from Consolidated Revenue .....	(a) 47 041	(a) 56 211	(a) 64 215	(b) 7 004	(b) 6 869	(b) 7 535
Recovered from semi-government bodies, etc. ....	33 835	42 215	45 432	4 807	4 576	4 930
Net burden on Consolidated Revenue (c) .....	13 206	13 996	18 783	2 197	2 293	2 605

(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.

**Consolidated Revenue Fund, Tasmania, 1977-78**



**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 shipping and bus services. The principal charge in 1977-78 under this item was in respect of the net loss incurred by the Transport Commission during 1976-77 (\$3 918 610). Another major item was a contribution of \$6 615 000 to the Metropolitan Transport Trust which experienced a net trading loss of \$6 604 550 in 1977-78.

**Roads and Bridges**

The chief expenditure under this item in 1977-78 was a transfer of \$13 379 003 to the State Highways Trust Fund, representing revenue received from motor tax and public vehicles fees. Grants totalling \$3 196 000 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, \$346 441 769 being received in 1977-78, \$349 349 649 being expended and the balance in the funds changing from \$21 478 843 (1 July 1977) to \$18 570 963 (30 June 1978).

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, Tasmania, 1977-78**  
(\$'000)

Account	Receipts	Expenditure
Income Tax Deductions Suspense Account (a) .....	47 161	47 161
Hydro-Electric Commission London Suspense Account (b) .....	260	260

- (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, Tasmania, 1977-78**  
(\$'000)

Account	Receipts	Expenditure
Tasmanian University (Commonwealth Grants) Account (a) .....	18 528	18 528
Recurrent Grants to Non-Government Schools Account (b) .....	4 086	4 086
Home Builders No. 3 Account (c) .....	6 864	6 637

- (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, Tasmania, 1977-78**  
(\$'000)

Item	Receipts	Expenditure
Federal Government contribution .....	21 700	-
Grants from Consolidated Revenue .....	13 379	-
Roads, bridges, jetties, ferries and planning .....	1 460	37 350
Self-balancing entries .....	6 187	4 828
Fund entries .....	42 726	42 178

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, Tasmania, 1977-78  
(\$'000)**

Item	Receipts	Expenditure
Grants from Consolidated Revenue (a) .....	5 313	-
Expenditure on forestry .....	-	5 425
Reimbursement, Softwood Forestry Agreement .....	112	-
Self-balancing entries .....	1 980	1 980
<b>Fund entries .....</b>	<b>7 405</b>	<b>7 405</b>

(a) Consolidated Revenue recorded forestry receipts of \$5 313 000 in 1976-77; this sum therefore became the 1977-78 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 are shown in the following table:

**State Loan Fund: Receipts, Tasmania  
(\$'000)**

Particulars	1975-76	1976-77	1977-78
Loans raised for new capital purposes .....	60 743	63 802	66 992
Loans raised for redemption and conversion (a) .....	92 049	64 205	86 705
Non specific grants from Federal Government .....	30 372	31 901	33 496
	183 164	159 908	187 193
Specific grants from Federal Government—			
Education .....	6 703	5 545	6 759
Health and mental health .....	3 049	4 152	4 943
Urban public transport .....	2 380	253	732
Other .....	456	74	51
<b>Total .....</b>	<b>12 588</b>	<b>10 024</b>	<b>12 484</b>
Payments from State sources (b)—			
Industrial Development Act .....	811	913	1 112
Aluminium Industry Act .....	767	162	-
Transport Act .....	710	1 744	485
State Advances Act .....	611	718	1 031
Homes Act .....	556	630	587

**State Loan Fund: Receipts, Tasmania—continued**  
(\$'000)

Particulars	1975-76	1976-77	1977-78
Tourist accommodation and facilities loans .....	185	205	312
Other .....	1 298	1 742	2 716
<b>Total</b> .....	<b>4 938</b>	<b>6 114</b>	<b>6 243</b>
<b>Total Loan Fund receipts</b> .....	<b>200 690</b>	<b>176 046</b>	<b>205 920</b>

(a) For the redemption and conversion of existing loans.

(b) Payments and repayments under provisions of various State Acts.

The following table shows annual gross and net loan expenditure. The net loan expenditure for 1977-78 (\$104.9m) was 4.8 per cent less than for 1976-77.

**Loan Fund: Gross and Net Loan Expenditure, Tasmania**  
(\$'000)

Year	Loan expenditure		Year	Loan expenditure	
	Gross	Net		Gross	Net
1972-73 .....	76 813	67 243	1975-76 .....	98 895	81 369
1973-74 .....	73 947	64 603	1976-77 .....	126 316	110 178
1974-75 .....	90 182	76 056	1977-78 .....	123 647	104 920

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, Tasmania**  
(\$'000)

Particulars	1975-76	1976-77	1977-78
(i) Gross loan expenditure .....	98 895	126 316	123 647
Less Repayments .....	4 938	6 114	6 243
Less Federal Government grants .....	12 588	10 024	12 484
<b>Net loan expenditure</b> .....	<b>81 369</b>	<b>110 178</b>	<b>104 920</b>
(ii) Gross borrowings for new capital purposes .....	60 743	63 802	66 992
Federal Government grant .....	30 372	31 901	33 496
Movement in Loan Fund balance (a) .....	-9 823	+14 382	+2 661
Transfer from Accumulated Revenue Account .....	-	-	1 583
Other (b) .....	77	93	188
<b>Net loan expenditure</b> .....	<b>81 369</b>	<b>110 178</b>	<b>104 920</b>

(a) Negative sign (-) indicates an increase from opening to closing balance, plus sign (+) indicates a decrease.

(b) 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, Tasmania (a)**  
(\$'000)

Purpose	1975-76	1976-77	1977-78
General administration, <i>n.e.c.</i> .....	5 434	5 983	9 250
Law, order and public safety— Law courts and legal services .....	565	246	1 410



Loan Fund Payments Classified by Purpose, Tasmania (a)—continued  
(\$'000)

Purpose	1975-76	1976-77	1977-78
Correctional and custodial services	119	622	1 889
Police services	3 987	2 221	2 572
Fire protection services	109	250	80
Other	55	24	63
Total	4 836	3 363	6 014
Education—			
General administration, regulation and research	5 953	9 407	7 136
Primary, pre-school and secondary	18 062	15 182	17 396
Technical	1 424	4 539	3 550
Adult education	32	162	445
Special schools	320	528	158
Total	25 792	29 817	28 685
Health—			
Mental health	603	730	1 762
Other hospital and clinical services	6 990	10 143	18 144
Ambulance services	101	201	48
Total	7 694	11 074	19 954
Social security and welfare—			
Aged persons	2 408	1 112	430
Family and child care and assistance	56	36	116
Total	2 464	1 148	547
Housing and home finance services	3 084	6 709	6 024
Recreation and related cultural services—			
Cultural facilities	362	463	1 224
Recreational facilities	608	2 053	4 384
Total	969	2 516	5 608
Economic services—			
Soil and water resource management	200	250	325
Forest resources management	6 250	8 863	9 992
Services to agricultural, pastoral and fishing industries	2 352	2 843	2 581
Mining and services to mining	109	184	157
Manufacturing and services to manufacturing	1 303	3 697	1 907
Electricity supply	29 700	31 000	23 000
Water supply services	683	1 244	2 535
Transport and communication—			
Road and ancillary systems	1 179	5 697	4 075
Rail transport	1 691	524	1 502
Sea transport	247	—	—
Urban transport	3 730	—	732
Other	1 101	1 912	570
Total	48 544	56 214	47 377
Deficit on Consolidated Revenue Fund	—	9 400	—
Sinking fund and redemption (incl. conversions)	92 049	64 205	86 705
Total payments from Loan Fund	190 868	190 428	210 164

(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, Tasmania  
(\$'000)

Particulars	1975-76	1976-77	1977-78
Total payments from Loan Fund .....	190 868	190 428	210 164
Less Debt service transactions—			
Conversion (Australia) .....	78 096	56 911	83 264
Conversion (State Savings Bank Agreement) .....	960	960	960
Redemption from new cash borrowing .....	12 994	6 334	2 481
Loan Fund expenditure for new capital purposes .....	98 818	126 223	123 459
Plus Capital appreciation on special bonds .....	77	93	188
Gross Loan Fund expenditure .....	98 895	126 316	123 647
Less Total repayments to Loan Fund .....	17 526	16 138	18 727
Net Loan Fund expenditure (a) .....	81 369	110 178	104 920

(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 must 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

Prior to 1 July 1975, 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 1978: At Current Rates of Exchange, Tasmania

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	864 980	—	864 980
London .....	£ sterling	1 216	£ stg 0.6152	1 977
New York .....	U.S.\$	2 798	U.S.\$ 1.1470	2 439
Canada .....	Canadian \$	579	Can. \$ 1.2891	449
Netherlands .....	Guilders	645	Guilders 2.5590	252
Total .....	..	..	..	870 097

(a) Exchange rates at 30 June 1978 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, Tasmania  
(\$'000)**

At 30 June	Debt redeemable in—						Total debt	Interest payable
	London	New York	Canada	Switzerland	Netherlands	Australia		
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
1977.....	2 570	3 276	537	—	292	804 336	811 012	60 437
1978.....	1 977	2 439	449	—	252	864 980	870 097	68 233

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.

*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, Tasmania  
(\$'000)**

Particulars	1974-75	1975-76	1976-77	1977-78
Loans raised for—				
New capital purposes .....	54 952	60 743	63 807	66 992
Conversion purposes .....	40 692	79 056	57 871	84 224
Redemption of maturing loans .....	24 412	12 994	6 334	2 481
Total raisings .....	120 057	152 792	128 012	153 697
Less Loans redeemed—				
By conversion .....	40 692	79 056	57 871	84 224
From new cash raisings .....	24 290	12 917	6 241	2 293
From National Debt Sinking Fund (a) .....	8 831	9 284	6 685	8 094
Debt transferred to Commonwealth .....	—	(b) 131 600	—	—
Net increase in public debt .....	46 244	—80 065	57 215	59 086
Debt at end of year .....	833 862	753 797	811 012	870 097

(a) Includes a balancing item due to fluctuation in exchange rates during the year, the actual redemption being \$9 674 000 in 1974-75, \$9 177 000 in 1975-76, \$7 213 000 in 1976-77, and \$8 138 000 in 1977-78.

(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	1974-75	1975-76	1976-77	1977-78
Balance at beginning of period .....	1 974	1 268	1 208	2 952
Contributions—				
From—Federal Government .....	2 141	2 100	2 069	2 225
State Government .....	6 805	7 000	6 869	7 535
Interest received (net) .....	21	17	19	50
Funds available .....	10 941	10 385	10 165	12 761
Less Redemption and re-purchase at current rates of exchange .....	9 674	9 177	7 213	8 138
Balance at end of period .....	1 268	1 208	2 952	4 623

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, 1977-78 (a)**

Tax	Amount (\$'000)		Per head of population (\$)	
	Tasmania (b)	Federal Government (c)	Tasmania	Federal Government
Income (personal and company) .....	—	15 335 332	—	1 082·90
Customs and excise .....	—	3 865 307	—	272·95
Sales .....	—	1 757 702	—	124·12
Pay-roll .....	36 748	19 524	89·17	1·38
Probate and succession duties .....	5 166	95 823	12·54	6·77
Motor .....	21 870	—	53·07	—
Stamp duties .....	14 013	—	34·00	—
Land .....	3 930	—	9·54	—
Racing .....	3 732	—	9·06	—
Liquor .....	3 774	—	9·16	—
H.E.C. statutory levy .....	585	—	1·42	—
Levy on insurance companies for fire authorities .....	3 434	—	8·33	—
Entertainment .....	—	—	—	—
Casino tax and licence fees .....	2 084	—	5·06	—
Soccer football pools tax .....	265	—	0·64	—
Coal export duty .....	—	100 165	—	7·07
Primary production tax .....	—	179 368	—	12·67
All other .....	13	170 861	0·03	12·07
Total .....	95 614	21 524 082	232·02	1 519·91

(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 1977-78 amounted to \$51.5m or \$124.97 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 (\$232.02, \$1 519.91 and \$124.97) and arrive at a figure of \$1 876.90 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 have been handled in state offices of the Taxation Department. 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	1975-76	1976-77	1977-78
Collected in Tasmania—			
Income tax (a) .....	263 264	308 595	347 815
Estate duty (a) .....	1 757	1 176	1 511
Gift duty .....	233	771	198
Stevedoring industry charge .....	1 980	1 739	1 127
Primary production taxes .....	2 752	3 360	3 486
Sales tax .....	23 052	27 730	28 456
Customs .....	6 308	8 310	8 067
Excise .....	57 832	60 082	62 777
Other .....	265	398	593

**Taxation Collected by the Federal Government in Tasmania and Elsewhere,  
and Estimated Incidence in Tasmania—continued**  
(\$'000)

Tax	1975-76	1976-77	1977-78
Total collected in Tasmania .....	357 443	412 161	454 030
Collected elsewhere in Australia (b)—			
Sales tax .....	15 463	17 241	19 215
Customs .....	19 183	23 082	22 629
Estimated incidence (c) .....	392 089	452 484	495 874

(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 in 1977-78, each state was given 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 1976-77 (income year 1975-76) 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 in respect of dependants, life assurance, etc. up to 1974-75; net income less deductions for gifts to approved funds or institutions and for allowable housing loan interest for 1975-76.

The following table dissects the number of taxpayers, income tax assessed, etc. by grade of net income for the income year 1975-76. Average weekly earnings per employed male unit (see Chapter 17) for Tasmania in 1975-76 were \$157.80 (equivalent to an annual salary of \$8 206).

**Tasmania, Income Tax: Income Year 1975-76—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
Under 3 000 .....	2 399	4 569	6 968	4.6	18 809	18 658	487
3 000- 3 499 .....	2 765	4 488	7 253	9.3	23 539	23 228	1 316
3 500- 3 999 .....	2 790	4 080	6 870	13.8	25 734	25 359	2 073

## Tasmania, Income Tax: Income Year 1975-76—Individuals (a)—continued

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
4 000- 4 499 .....	3 046	3 925	6 971	18.4	29 598	29 203	2 906
4 500- 4 999 .....	3 261	3 687	6 948	22.9	32 991	32 501	3 683
5 000- 5 499 .....	3 579	3 592	7 171	27.6	37 686	37 109	4 696
5 500- 5 999 .....	4 308	3 577	7 885	32.7	45 355	44 577	6 184
6 000- 6 499 .....	5 313	3 762	9 075	38.7	56 827	55 835	8 375
6 500- 6 999 .....	6 360	3 720	10 080	45.3	68 021	66 686	10 567
7 000- 7 499 .....	7 043	2 902	9 945	51.8	72 067	70 563	11 589
7 500- 7 999 .....	7 587	2 114	9 701	58.1	75 140	73 484	12 476
8 000- 8 499 .....	7 389	1 763	9 152	64.1	75 488	73 743	12 961
8 500- 8 999 .....	6 750	1 606	8 356	69.6	73 048	71 380	13 094
9 000- 9 499 .....	5 950	1 123	7 073	74.2	65 389	63 866	12 027
9 500- 9 999 .....	5 089	861	5 950	78.1	57 985	56 654	11 007
10 000-10 999 .....	7 922	1 266	9 188	84.1	96 183	94 137	19 302
11 000-11 999 .....	5 598	914	6 512	88.3	74 665	73 323	16 344
12 000-12 999 .....	3 960	479	4 439	91.2	55 376	54 425	12 943
13 000-13 999 .....	2 681	380	3 061	93.2	41 198	40 496	10 219
14 000-14 999 .....	2 195	283	2 478	94.9	35 878	35 308	9 333
15 000-19 999 .....	4 393	586	4 979	98.1	84 438	82 896	24 818
20 000-24 999 .....	1 240	188	1 428	99.1	31 483	30 732	11 139
25 000-29 999 .....	524	81	605	99.5	16 484	16 014	6 586
30 000-49 999 .....	590	72	662	99.9	24 379	23 805	11 282
50 000 and over .....	149	26	175	100.00	12 452	12 337	6 902
Total .....	102 881	50 044	152 925	..	1 230 210	1 206 315	242 312

(a) For definitions, see text above.

## Tasmania, Income Tax: Individuals (a)

Income year	Number of taxpayers			Net income	Taxable income (c)	Net income tax assessed		
	Males	Females	Persons			Total	Per taxpayer	
							Amount	Increase (b)
				\$'000	\$'000	\$'000	\$	per cent
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
1975-76 .....	102 881	50 044	152 925	1 230 210	1 206 315	242 312	1 585	42.5

(a) For definitions, see text above.

(b) Increase on previous year.

(c) Up to 1974-75, net income less concessional deductions in respect of dependants, etc. From 1975-76, such concessional deductions in respect of dependants, rates, life assurance, etc. were replaced by tax rebates which are deducted from gross tax payable to arrive at net tax assessed.

## 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 (\$13 379 000 in 1977-78) 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, Tasmania (a)**  
(\\$'000)

Tax	1975-76	1976-77	1977-78
Deceased persons' estates duties .....	5 461	6 536	5 166
Entertainment tax .....	246	93	-
Stamp duties (excluding bookmakers' tickets)—			
Cheques .....	1 153	1 178	1 221
Bills of exchange and lading .....	1	6	7
Hire purchase and related agreements .....	1 381	2 110	2 319
Legal documents, etc. ....	5 044	6 270	6 047
Adhesive revenue stamps .....	411	466	556
Insurances .....	2 623	3 600	3 712
Marketable securities .....	129	157	151
Land tax .....	4 349	3 773	3 930
Motor taxation—			
Paid to—Consolidated Revenue .....	14 884	19 001	21 775
Special funds .....	260	311	96
Tax paid to fire authorities (b) .....	2 473	2 975	3 434
Liquor tax and related licences (c) .....	2 782	3 443	3 774
Racing and gaming taxes—			
Paid to—Consolidated Revenue .....	1 644	2 329	2 538
Adjustment (d) .....	+133	+23	+299
Special funds .....	1 007	1 022	895
Pay-roll tax .....	31 014	35 217	36 748
Hydro-Electric Commission statutory levy .....	1 712	1 604	585
Casino tax and licence fees .....	1 674	1 989	2 084
Soccer football pools tax .....	108	254	265
Tobacco tax and licence fees .....	1	-	-
Sundry licences—			
Auctioneers and estate agents .....	8	7	1
Environment Protection Act .....	56	-	-
Other (including Firearms Act) .....	10	12	12
<b>Total .....</b>	<b>78 564</b>	<b>92 376</b>	<b>95 614</b>
Percentage increase .....	23.8	17.6	3.5

(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

Rates of tax were changed by the *Land Tax Act 1976*. The main provisions of the Act were: (i) land tax on rural land was abolished from 1976-77 onwards; (ii) land tax was to be levied on land values, not unimproved values; (iii) exemption of tax in respect of urban land valued at \$4 699 or less, compared with the previous exemption up to \$1 999; and (iv) land valued at between \$4 700 and \$10 000 attracted less tax than previously.

The rates of land tax assessed on urban land values for the years 1976-77 and 1977-78 are shown in the following table:

**State Land Tax: Urban Land, Tasmania, 1976-77 and 1977-78**

Taxable land value bracket	Marginal tax rate (a)	Tax payable	
		On land value in bracket specified in first column	On higher figure in first column
\$	cents per \$	\$	\$
Up to 4 500	-	-	-
4 501- 15 000 (b)	1.0	105	105
15 001- 25 000	1.2	120	225
25 001- 50 000	1.4	350	575
50 001-100 000	2.0	1 000	1 575
100 001-150 000	2.5	1 250	2 825
Over 150 000	3.0	-	-

(a) Tax payable in respect of each dollar in the range specified.

(b) No tax is payable where the land value is \$4 699 or less.

The *Land Tax Act 1977* maintained the provisions of the 1976 Act for 1977-78 together with provision for a home owner's rebate. For 1977-78, home owners could claim a rebate of land tax if the land value of urban land owned was less than \$25 000. The amount of the rebate was as follows:

- (i) where the land value of the relevant land was not more than \$15 000, the full amount of land tax otherwise payable; and
- (ii) where the land value of the relevant land was from \$15 001 to \$24 999, \$105 less \$10.50 for each full \$1 000 by which the land value exceeded \$15 000.

**State Land Tax: Value of Taxable Properties and Tax Assessed, Tasmania  
(\$'000)**

Year	Gross unimproved value				Gross land value of urban land	Tax assessed			
	Urban	Rural	Compo-site (a)	Total		Urban	Rural	Compo-site (a)	Total
1972-73 .....	296 176	21 011	26 392	343 579	n.a.	2 494	178	283	2 954
1973-74 .....	310 740	20 860	29 724	361 324	n.a.	2 522	177	335	3 035
1974-75 .....	359 069	25 113	32 123	416 304	n.a.	3 167	221	416	3 803
1975-76 .....	414 793	29 109	33 305	477 207	n.a.	3 776	256	393	4 425
1976-77 (b) .....	..	..	..	..	334 866	3 800	-	-	3 800
1977-78 .....	..	..	..	..	452 356	4 771	-	-	4 771

(a) Properties made up of both urban and rural land.

(b) From 1976-77 onwards land tax on rural land was abolished. Land tax is now levied on land value *not* unimproved value.

**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 1977-78:

**State Deceased Persons' Estate Duties  
Number of Estates, Net Value and Tax Assessed, Tasmania, 1977-78**

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 .....	31	-	3	-	-
501- 1 000 .....	21	-	15	-	-
1 001- 1 500 .....	13	1	14	-	9.0
1 501- 2 000 .....	11	-	20	-	-
2 001- 3 000 .....	36	5	84	1	157.8
3 001- 4 000 .....	27	3	80	1	231.0
4 001- 5 000 .....	41	11	176	2	187.5
5 001- 6 000 .....	33	6	189	1	96.2
6 001- 8 000 .....	47	16	338	5	327.6
8 001- 10 000 .....	72	25	635	7	270.1
10 001- 15 000 .....	205	59	2 530	50	852.2
15 001- 20 000 .....	213	143	3 624	104	725.1
20 001- 30 000 .....	358	239	8 575	370	1 547.3
30 001- 40 000 .....	255	160	8 373	386	2 409.6
40 001- 50 000 .....	135	89	5 692	354	3 977.8
50 001-100 000 .....	276	207	16 169	1 349	6 514.7
100 001-150 000 .....	68	67	6 419	915	13 661.3
150 001 and over .....	55	54	8 354	2 043	37 813.8
Adjustments .....	..	..	-	-22	..
Total .....	1 897	1 085	61 289	5 564	..

(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, Tasmania**  
(\$'000)

Particulars	1975-76	1976-77	1977-78
Motor tax .....	8 045	10 251	12 384
Public vehicle fees (a) .....	605	880	1 091
Stamp duty on—Third party insurance .....	428	440	456
Vehicle registration .....	2 706	3 407	3 655
Other traffic fees (b) .....	3 205	4 124	4 284
Total .....	14 988	19 102	21 870
Paid into Consolidated Revenue Fund .....	14 884	19 001	21 775
Retained by Transport Commission .....	104	101	96

(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 1977-78 was \$13 379 000.)

**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, Tasmania**  
(\$'000)

Fees	1975-76	1976-77	1977-78
Percentage fees (a)—			
General, club, on-licences .....	2 360	2 825	3 249
Off-licences .....	379	580	508
Other fees .....	44	39	18
Total .....	2 782	3 443	3 774

(a) Based on liquor purchases by hotels and direct sales by wholesalers to the public.

**Gambling Taxation**

The following table shows gambling turnover for recent years:

**Turnover from the Major Forms of Legal Gambling, Tasmania**  
(Source: Tasmanian Racing and Gaming Commission)  
(\$ million)

Particulars	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
Racing—						
T.A.B. ....	..	7.6	27.0	33.0	38.6	41.8
On-course tote .....	1.6	1.7	2.0	2.3	2.3	2.2
Bookmakers .....	62.0	63.0	42.0	47.7	47.5	47.3
Total racing turnover .....	63.6	72.3	71.0	83.0	88.4	91.3

**Turnover from the Major Forms of Legal Gambling, Tasmania**  
(Source: Tasmanian Racing and Gaming Commission)—*continued*  
(\$ million)

Casino .....	29.1	31.0	34.4	40.5	44.0	p 50.6
Tattersalls & Tattslotto .....	1.5	1.9	2.1	6.9	11.0	16.9
Soccerpools .....	..	..	0.4	0.9	0.9	1.0
Raffles .....	n.a.	n.a.	n.a.	n.a.	n.a.	(a) 2.2
Other minor gambling (a) (b) .....	n.a.	n.a.	n.a.	n.a.	7.0	9.5
Total gambling turnover .....	n.a.	n.a.	n.a.	n.a.	n.a.	p 171.5

(a) Estimates only.

(b) Lucky envelopes, bingo, punch boards, etc.

*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 for recent years are shown in the next table:

**State Racing Taxation: Collection and Distribution, Tasmania**  
(\$'000)

Particulars	1975-76	1976-77	1977-78
<b>RACING TAXATION RECEIPTS</b>			
Totalisator tax (a) .....	1 641	2 069	2 395
Bookmakers' commission and licences .....	1 078	1 234	1 274
Stamp duty on bookmakers' tickets .....	65	71	56
Refunds .....	-	-	6
Total .....	2 785	3 374	3 732
<b>DISTRIBUTION OF RACING TAXATION RECEIPTS</b>			
Paid into Consolidated Revenue Fund .....	1 644	2 329	2 538
Adjustment (b) .....	+133	+23	+299
Commission payable to racing clubs .....	1 007	1 022	895
Total .....	2 785	3 374	3 732

(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.

*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 for recent years:

**Payments to Tasmanian Government Based on Sale of Tattersalls Lottery Tickets**  
(\\$)

Year	Amount	Year	Amount
1972-73 .....	200 059	1975-76 .....	330 660
1973-74 .....	227 770	1976-77 .....	(a) 1 065 487
1974-75 .....	300 810	1977-78 .....	1 695 564

(a) Includes \$135 533 due for the year 1975-76 but not received until July 1976.

*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, Tasmania**  
(\\$'000)

Particulars	1975-76	1976-77	1977-78
Casino tax .....	(a) 1 646	1 959	2 054
Licence fee .....	28	30	30
<b>Total .....</b>	<b>1 674</b>	<b>1 989</b>	<b>2 084</b>

(a) Total tax paid \$1 975 000; amount of remission \$329 000.

**Further References**

*ABS Publications Produced by the Canberra Office*

Public Authority Finance: State and Local Authorities (5504.0) (annual, 1976-77 issue released 16-1-79, 95 pp.).

Public Authority Finance: Taxation (5506.0) (annual, 1977-78 released 28-5-79, 39 pp.).

*Other Publications*

*Report of the Auditor-General and the Statement of Public Accounts* (published annually by the Tasmanian Government Printer, Hobart)

## 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 30th June 1976 is included in the 1979 *Year Book* (pp. 124 to 132) but not in this edition. A table showing employed persons at 30 June 1976 by occupational groupings was not included in the 1979 *Year Book* but is included in this edition in the section 'Occupation of the Population.'

##### *Census Post-Enumeration Surveys*

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 per cent in the 1976 Census (2.709 per cent 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 count; and (ii) intercensal estimates based on the application of vital and migration statistics to census based 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.

##### 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)**  
(<sup>'000 Persons</sup>)

State or territory	1901	1933	1947	1954	1961	1966 (b)	1971 (c)	1976 (c)
N.S.W. ....	1 355	2 601	2 985	3 424	3 917	4 238	4 679	4 914
Victoria ....	1 201	1 820	2 055	2 452	2 930	3 220	3 520	3 746
Queensland ....	498	947	1 106	1 318	1 519	1 674	1 881	2 112
S.A. ....	359	581	646	797	969	1 095	1 185	1 262
W.A. ....	184	439	502	640	737	848	1 043	1 170
<b>Tasmania</b> ....	<b>172</b>	<b>228</b>	<b>257</b>	<b>309</b>	<b>350</b>	<b>371</b>	<b>390</b>	<b>407</b>
N.T. ....	5	5	11	17	27	57	92	101
A.C.T. (d) ....	-	9	17	30	59	96	146	203
<b>Australia</b> ....	<b>3 774</b>	<b>6 630</b>	<b>7 579</b>	<b>8 987</b>	<b>10 508</b>	<b>11 599</b>	<b>12 937</b>	<b>13 915</b>

(a) Censuses of 1911 and 1921 are not shown.

(b) Includes full-blood Aborigines from 1966.

(c) Adjusted for under-enumeration. Census figures up to 1966 are as recorded.

(d) Part of N.S.W. prior to 1911.

The average annual (compound) increase in population for Tasmania from 1971 to 1976 (based on adjusted population) was 0.85 per cent. The corresponding Australian annual rate of population increase was 1.47 per cent.

#### Interstate Arrivals and Departures

From 1 January 1979 the Tasmanian Office of the Australian Bureau of Statistics has ceased collection of its series of recorded interstate and overseas arrivals and departures. The Tasmanian State Department of Tourism has, in the meantime, developed a series, commencing from the September quarter of 1971, paralleling the Bureau's collection but with a different basis. It is the Department of Tourism's figures which will be published from this issue.

The table below shows recorded arrivals and departures of interstate passengers travelling either by air or sea. The following persons are *not* included: passengers under three years of age, accompanied by an adult; passengers travelling on chartered flights with minor carriers; passengers travelling on private or VIP flights; and passengers arriving or departing on overseas ships.

**Recorded Interstate Arrivals and Departures: Tasmania**  
(Source: Department of Tourism)

Year	Arrivals	Departures	Quarter ending	Arrivals	Departures
1972. ....	356 561	355 224	1977—30 September.	122 638	119 865
1973. ....	450 707	448 556	31 December.	145 181	122 162
1974. ....	508 449	502 488	1978—31 March ....	161 353	175 466
1975. ....	510 639	514 278	30 June .....	119 813	127 635
1976. ....	509 356	507 384	30 September.	122 144	120 124
1977. ....	538 665	530 535	31 December.	153 965	136 068
1978. ....	557 275	559 293	1979—31 March ....	161 891	175 878
			30 June .....	132 272	140 949

#### 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, and the estimated population for 1978:

**Population in Local Governments Areas and Statistical Divisions at 30 June**

Local government area (statistical division and sub-division in bold type)	Census (a)				Estimated (b)
	1961	1966	1971	1976	1978
Hobart (H) .....	54 021	53 257	52 410	50 570	49 660
Glenorchy (H) .....	35 682	39 053	42 630	42 600	42 590
Clarence (H) .....	23 140	30 236	37 090	42 360	43 860
Brighton (H) (S) .....	2 115	2 207	2 330	4 970	6 380
Kingborough (H) (S) .....	10 025	10 322	10 810	13 940	15 500
New Norfolk (H) (S) .....	10 217	10 315	10 610	10 240	10 250
Sorell (H) (S) .....	2 878	3 309	3 630	4 350	4 660
Bothwell (S) .....	1 288	1 008	810	840	830
Bruny (S) .....	504	400	310	320	320
Esperance (S) .....	3 436	3 740	3 510	3 180	3 150



## Population in Local Government Areas and Statistical Divisions at 30 June—continued

Local government area (statistical division and sub-division in bold type)	Census (a)				Estimated (b)
	1961	1966	1971	1976	1978
Glamorgan (S) .....	1 128	1 125	1 120	1 330	1 370
Green Ponds (S) .....	969	880	880	870	860
Hamilton (S) .....	4 178	4 329	4 060	3 550	3 090
Huon (S) .....	5 460	5 264	4 750	4 870	4 890
Oatlands (S) .....	2 691	2 501	2 130	2 210	2 220
Port Cygnet (S) .....	2 754	2 550	2 070	2 060	2 090
Richmond (S) .....	1 673	1 658	1 580	1 690	1 720
Spring Bay (S) .....	1 155	1 205	1 410	1 770	1 820
Tasman (S) .....	1 108	1 126	1 030	950	930
<b>HOBART</b> .....	<b>130 236</b>	<b>141 311</b>	<b>153 140</b>	<b>162 660</b>	<b>166 470</b>
<b>SOUTHERN</b> .....	<b>34 186</b>	<b>33 174</b>	<b>30 030</b>	<b>30 010</b>	<b>29 720</b>
Launceston .....	38 118	37 217	35 090	33 080	32 550
Beaconsfield .....	8 550	9 983	10 970	12 550	13 330
Deloraine .....	5 574	5 205	4 810	4 820	4 840
Evandale .....	1 608	1 554	1 460	1 600	1 690
George Town .....	3 677	5 101	6 030	6 790	7 130
Lilydale .....	6 744	7 841	8 300	8 830	8 970
Longford .....	6 762	5 354	5 140	5 430	5 510
St Leonards .....	11 032	13 660	16 080	18 400	19 210
Westbury .....	4 581	4 964	4 860	5 530	5 730
<b>Tamar</b> .....	<b>86 646</b>	<b>90 879</b>	<b>92 740</b>	<b>97 030</b>	<b>98 960</b>
Campbell Town .....	1 893	1 753	1 640	1 620	1 590
Fingal .....	4 475	3 791	3 440	2 930	2 790
Flinders .....	1 407	1 234	970	980	980
Portland .....	1 274	1 391	1 500	1 650	1 730
Ringarooma .....	3 056	2 866	2 470	2 260	2 220
Ross .....	672	617	540	550	540
Scottsdale .....	3 417	3 628	3 610	3 980	4 080
<b>North Eastern</b> .....	<b>16 194</b>	<b>15 280</b>	<b>14 170</b>	<b>13 970</b>	<b>13 930</b>
<b>NORTHERN</b> .....	<b>102 840</b>	<b>106 159</b>	<b>106 910</b>	<b>111 000</b>	<b>112 890</b>
Burnie .....	16 745	18 611	19 940	19 620	19 470
Circular Head .....	7 733	7 884	7 980	7 770	7 750
Devonport .....	14 276	16 758	19 790	21 550	22 010
Kentish .....	4 167	5 614	5 320	4 110	3 930
King Island .....	2 784	2 462	2 790	2 750	2 690
Latrobe .....	4 367	4 807	5 110	5 570	5 660
Penguin .....	4 673	4 677	4 790	5 020	5 160
Ulverstone .....	9 365	10 150	11 050	12 190	12 550
Wynyard .....	8 835	9 564	10 600	11 680	11 950
<b>North Western</b> .....	<b>72 945</b>	<b>80 527</b>	<b>87 370</b>	<b>90 260</b>	<b>91 170</b>
Gormanston .....	507	540	490	400	330
Queenstown .....	4 624	4 393	5 120	4 720	4 200
Strahan .....	565	470	450	440	430
Waratah .....	367	698	1 940	2 080	2 150
Zeehan .....	3 191	3 489	4 360	5 220	5 750
<b>Western</b> .....	<b>9 254</b>	<b>9 590</b>	<b>12 360</b>	<b>12 860</b>	<b>12 860</b>
<b>MERSEY-LYELL</b> .....	<b>82 199</b>	<b>90 117</b>	<b>99 730</b>	<b>103 120</b>	<b>104 030</b>
Migratory .....	879	675	410	570	570
<b>TASMANIA</b> .....	<b>350 340</b>	<b>371 436</b>	<b>390 220</b>	<b>407 360</b>	<b>413 680</b>
Launceston Statistical District (c) .....	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	82 330	84 000

(a) Census figures for 1961 and 1966 are as recorded; 1971 and 1976 Census figures have been adjusted for under-enumeration.

(b) Estimated by taking account of dwelling completions, electoral roll and child endowment counts, information supplied by Council Clerks and other considerations.

(c) Delineated in 1976.

## Urban and Rural Population

*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 31st Conference of Statisticians in 1969, the following resolutions relating to the delimitation of urban areas based substantially on Dr. Linge's report were passed:

- (i) At each Census a boundary shall be defined for each population cluster of 1 000 or more population (special rules apply to known holiday resorts). These clusters are to be known as urban centres, and are moving boundaries which are to be adjusted after each Census.
- (ii) Around each urban centre with a population of at least 100 000, a further boundary shall be defined to contain the anticipated urban development for a period of at least 20 years. This boundary which is fixed, should delimit an area which is socially and economically oriented towards the urban centre.
- (iii) In delimiting urban centres with 25 000 or more population, all contiguous census collection districts which have a population density of 200 or more persons per square kilometre shall be included (subject to certain special rules).
- (iv) Urban centres with less than 25 000 population shall be delimited subjectively (e.g. by the inspection of aerial photographs, by field inspection, etc.).

*Revised Criteria, 1976*

For the 1976 Population Census, the statisticians agreed that the concept of *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 a population of at least 100 000). This decision affected Tasmania since the Launceston area met these criteria. The Launceston Statistical District was therefore established.

*Populations Centred on Hobart and Launceston*

Populations centred on Hobart and Launceston are compiled and published on a two boundary basis for each centre. For Hobart the two boundary concept was introduced in 1966; for Launceston in 1976. The boundaries are:

- (i) A fixed outer boundary to enclose expected urban growth over the next 20 to 30 years. For Hobart this is the Hobart Statistical Division which is broadly the cities of Hobart and Glenorchy, Clarence municipality and parts of Kingborough, New Norfolk, Brighton and Sorell municipalities. The comparable Launceston area is the Launceston Statistical District comprising the city of Launceston and parts of seven neighbouring municipalities. See Chapter 2 for maps of the two areas.
- (ii) A moving inner boundary which moves out towards the fixed outer boundary as urban growth occurs. Urban Hobart comprises the contiguous urban portions of the cities of Hobart and Glenorchy and of the municipalities of Clarence and Kingborough. It stretches from Granton in the north to Taroona in the south on the western shore of the Derwent and on the eastern shore from Risdon Vale southward to Tranmere and Rokeby. Urban Launceston is the continuous area of urban development centred on Launceston City and includes parts of the municipalities of Beaconsfield, Westbury, Evandale, St Leonards and Lilydale.

The following tables give details of the components of the Hobart Statistical Division and Launceston Statistical District:

## 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.

## 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.

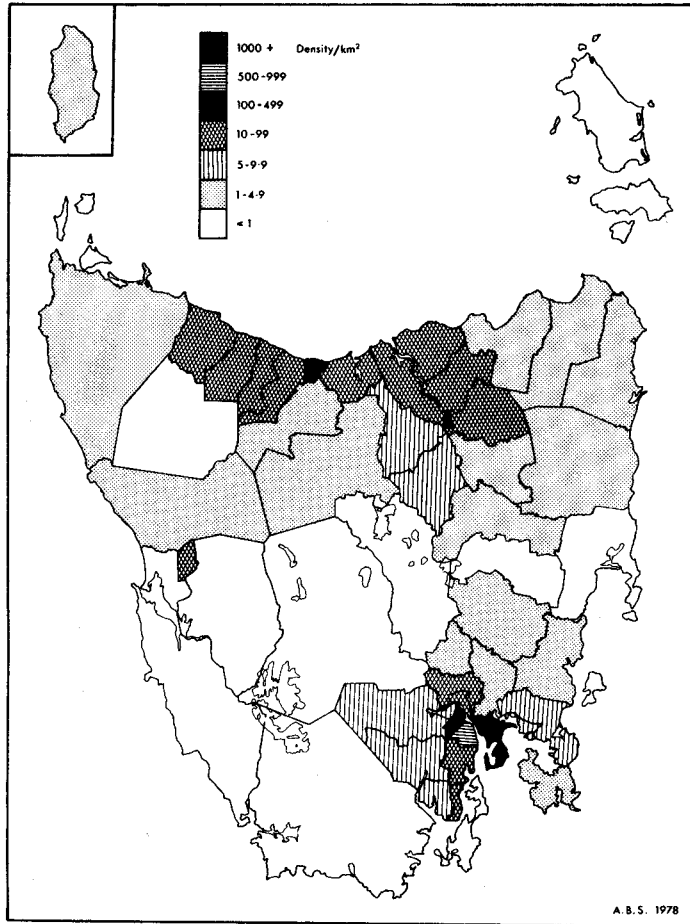
(b) Adjusted for under-enumeration.

(c) Delineated in 1976.

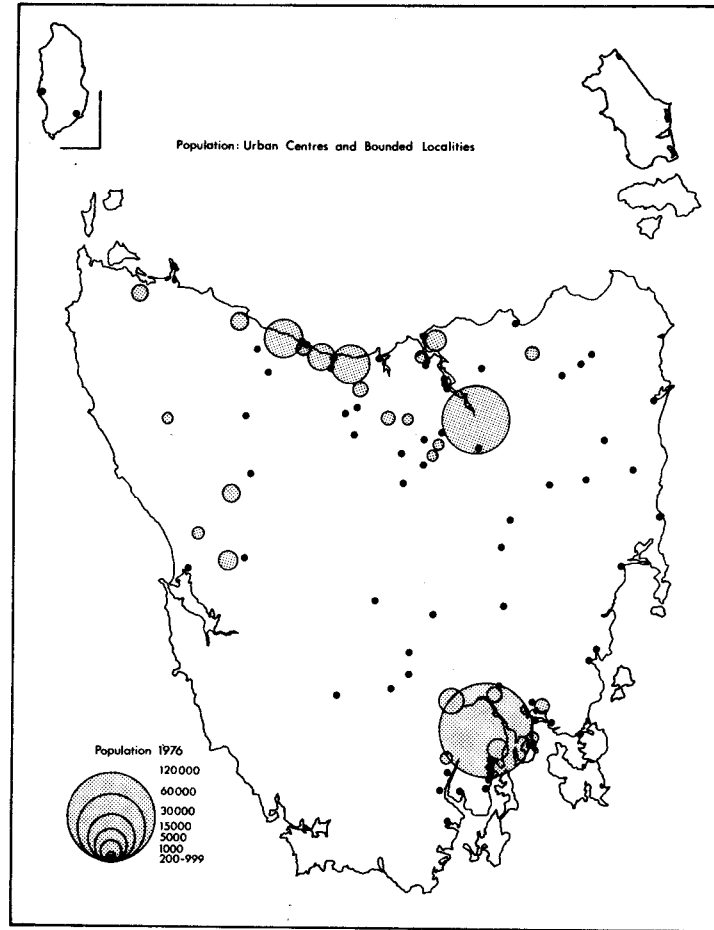
## Details of Urban Centres and Bounded Localities

The 1979 edition of the *Year Book* includes a table (page 120) which sets out the urban and rural populations of each Tasmanian local government area at the Census of 30 June 1976. The next table shows the population of each urban centre and bounded locality as determined at the 1971 and 1976 Censuses. Population clusters of over 1 000 persons are classified as urban centres; in the case of urban centres with a population of 25 000 or more, only those contiguous areas having a population density of 200 or more persons per square kilometre are included (special rules have been applied in the case of holiday resorts where housing density is taken into account).

Population Density: Tasmanian Municipalities, 1978



Populations of Urban Centres



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
Bicheno . . . . .	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 . . . . .	r1 116	1 212
Evandale . . . . .	472	529	Scottsdale . . . . .	1 815	1 855
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
Geeveston . . . . .	958	900	Sorell-Midway Point . . . . .	2 029	2 231
George Town . . . . .	4 838	5 413	Stanley . . . . .	715	650
Gormaston . . . . .	409	358	Strahan . . . . .	429	416
Grassy . . . . .	767	718	Strathgordon . . . . .	1 270	912
Gravelly Beach . . . . .	466	522	Sulphur Creek . . . . .	421	401
Hadspen . . . . .	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	Wynard . . . . .	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 recorded at Census) have been *adjusted* for under-enumeration. Localities with less than 1 000 persons are *as recorded*.

### Occupation of the Population

At the Censuses of 30 June 1971 and 1976 details were obtained about: (i) the type of work done (occupation) by the employed; and (ii) the establishment, firm or business in which the employed worked. A table showing the employed by industry (based on (ii)) is included on pages 129 and 130 of the 1979 *Year Book*; the following table (based on Census answers to the type of work done questions) dissects the employed population by occupation:

## Employed Population in the Labour Force at 30 June by Occupation, Tasmania

Occupation	Census, 1971		Census, 1976			
	Persons	Proportion of total employed	Males	Females	Persons	Proportion total employed
Architects, engineers and surveyors, professional .....	422	0.28	1 469	13	1 482	0.90
Chemists, physicists and other physical scientists .....	172	0.11	293	12	305	0.19
Biologists, veterinarians, agronomists and related scientists .....	274	0.18	319	39	358	0.22
Medical practitioners .....	460	0.31	475	88	563	0.34
Dentists .....	73	0.05	91	20	111	0.07
Nurses, including trainees .....	3 248	2.16	274	4 032	4 306	2.63
Professional medical workers .....	215	0.14	278	255	533	0.33
Teachers .....	5 148	3.43	2 628	4 616	7 244	4.42
Clergy and members of religious orders .....	420	0.28	311	56	367	0.22
Law professionals .....	239	0.16	262	16	278	0.17
Artists, entertainers, writers and related workers .....	798	0.53	586	287	873	0.53
Draftsmen and technicians .....	3 555	2.37	2 116	386	2 502	1.53
Other professional, technical and related workers .....	1 184	0.79	1 129	560	1 689	1.03
Administrative and executive officials, government .....	499	0.33	496	12	508	0.31
Employers, managers, workers on own account .....	8 604	5.73	7 719	1 258	8 977	5.48
Book-keepers and cashiers .....	2 267	1.51	678	1 091	1 769	1.08
Stenographers and typists .....	4 399	2.93	32	3 458	3 490	2.13
Other clerical workers .....	14 215	9.46	8 242	10 452	18 694	11.40
Insurance, real estate salesmen, valuers .....	802	0.53	788	64	852	0.52
Commercial travellers and manufacturers agents .....	1 241	0.83	920	102	1 022	0.62
Proprietors, shopkeepers, shop assistants, etc. ....	10 212	6.80	4 212	6 613	10 825	6.60
Farmers and farm managers .....	7 499	4.99	5 599	2 154	7 753	4.73
Farm workers including farm foremen .....	4 853	3.23	3 171	888	4 059	2.48
Wool classers .....	58	0.04	56	-	56	0.03
Hunters and trappers .....	5	0.00	1	-	1	0.00
Fishermen and related workers .....	522	0.35	391	13	404	0.25
Timber getters and other forestry workers .....	1 062	0.71	1 017	10	1 027	0.63
Miners, mineral prospectors and quarrymen .....	1 940	1.29	1 735	6	1 741	1.06
Well drillers, oil, water and related workers .....	15	0.01	13	-	13	0.01
Mineral treaters .....	385	0.26	355	7	362	0.22
Deck and engine officers—ship .....	118	0.08	218	2	220	0.13
Deck and engine room hands, ship and boatmen .....	194	0.13	378	1	379	0.23
Air pilots, navigators and flight engineers .....	27	0.02	31	-	31	0.02
Drivers and firemen—rail transport .....	217	0.14	244	-	244	0.15
Drivers—road transport .....	5 196	3.46	5 323	237	5 560	3.39
Guards, and conductors—railway .....	86	0.06	93	-	93	0.06
Inspectors, supervisors, controllers—transport .....	495	0.33	494	4	498	0.30
Telephone, telegraph, telecommunication operators .....	701	0.47	159	449	608	0.37
Postmasters, postmen and messengers .....	874	0.58	644	199	843	0.51
Workers in transport and communication .....	172	0.11	185	28	213	0.13
Spinners, weavers, knitters, dyers and related workers .....	2 327	1.55	747	900	1 647	1.00
Tailors, cutters, furriers and related workers .....	732	0.49	497	486	983	0.60

## Employed Population in the Labour Force at 30 June by Occupation, Tasmania—continued

Occupation	Census, 1971		Census, 1976			
	Persons	Proportion of total employed	Males	Females	Persons	Proportion total employed
Leather cutters, lasters, sewers and related workers .....	117	0.08	81	41	122	0.07
Furnacemen, rollers, moulders, metal makers .....	1 148	0.76	799	2	801	0.49
Instrument makers, jewellers and related workers .....	367	0.24	366	43	409	0.25
Metal tradesmen, mechanics, etc. ....	8 712	5.80	9 077	49	9 126	5.57
Electricians and related workers .....	4 114	2.74	4 436	29	4 465	2.72
Metal and electrical production—process workers .....	1 467	0.98	1 006	146	1 152	0.70
Carpenters, wood machinists, etc. ....	6 095	4.06	5 935	50	5 985	3.65
Painters and decorators .....	1 333	0.89	1 370	16	1 386	0.85
Bricklayers, plasterers, construction workers .....	2 801	1.86	3 172	21	3 193	1.95
Printing trades workers .....	873	0.58	667	133	800	0.49
Pottery, glass and clay workers .....	137	0.09	124	9	133	0.08
Millers, bakers, food and drink workers .....	3 737	2.49	2 850	1 188	4 038	2.46
Chemical, sugar, paper, production—process workers .....	2 613	1.74	1 643	118	1 761	1.07
Rubber, plastic, concrete, production—process workers .....	595	0.40	544	120	664	0.41
Packers, wrappers, labellers .....	690	0.46	157	259	416	0.25
Stationary engine, excavating, lifting operators .....	2 662	1.77	2 514	2	2 516	1.53
Storemen and freight handlers .....	3 220	2.14	3 062	52	3 114	1.90
Labourers not included elsewhere .....	5 656	3.77	6 498	290	6 788	4.14
Fire brigade, police and protective workers .....	1 382	0.92	1 813	63	1 876	1.14
Housekeepers, cooks, maids, etc. ....	3 897	2.59	598	3 860	4 458	2.72
Waiters, bartenders .....	1 357	0.90	601	1 160	1 761	1.07
Caretakers, cleaners—buildings .....	1 955	1.30	904	1 695	2 599	1.59
Barbers, hairdressers and beauticians .....	817	0.54	119	656	775	0.47
Launderers, dry cleaners and pressers .....	465	0.31	107	288	395	0.24
Athletes, sportsmen and related workers .....	71	0.05	84	18	102	0.06
Photographers and camera operators ..	128	0.09	85	21	106	0.06
Undertakers and crematorium workers ..	24	0.02	39	2	41	0.03
Service, sport, recreation workers .....	1 527	1.02	656	1 232	1 888	1.15
Members of armed services .....	426	0.28	331	22	353	0.22
Inadequately described or not stated ..	5 904	3.93	3 973	5 268	9 241	5.64
Total employed population .....	150 215	100.00	108 280	55 667	163 947	100.00

## VITAL STATISTICS

## Summary of Principal Statistics, Tasmania

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, Tasmania

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	
1973.....	3 395	7 326	3 347	137	8.58	18.51	8.46	18.7
1974.....	3 567	7 398	3 484	123	8.93	18.51	8.72	16.6
1975.....	3 242	6 982	3 340	128	8.01	17.26	8.26	18.3
1976.....	3 477	6 702	3 389	77	8.53	16.45	8.32	11.5
1977.....	3 166	6 735	3 269	99	7.71	16.40	7.96	14.7
1978.....	3 148	6 788	3 311	97	7.65	16.41	8.00	14.3

(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. Therefore, 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 16.40 (1977).
- (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 1977 (16.40 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 of children aged *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. 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 since then has had a marked effect on the crude death. 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. (A Perinatal death is defined as: (i) the death of a viable foetus (product of conception of at least 20 weeks gestation or of a weight not less than 400 grams) at any time up to the complete expulsion or extraction from its mother; and (ii) the death of a child born alive, where the death occurs at any time before the twenty-ninth day after the date of birth of the child. Details relating to perinatal deaths are included in the annual bulletins *Demography, Tasmania* (3101.6) and *Causes of Death, Tasmania* (3301.6).)

## Marriages

The following table analyses the ages of all bridegrooms and brides contracting marriages registered in 1978:

Bridegrooms and Brides by Age, Tasmania, 1978

Age last birthday (years)	Bridegrooms		Brides	
	Number	Per cent of total	Number	Per cent of total
Under 20 .....	220	6.99	899	28.56
20-24 .....	1 514	48.09	1 302	41.36
25-29 .....	676	21.47	407	12.93
30-34 .....	254	8.07	193	6.13
35-39 .....	143	4.54	103	3.27
40-44 .....	97	3.08	68	2.16
45-49 .....	74	2.35	59	1.87
50-54 .....	56	1.78	40	1.27
55-59 .....	36	1.14	28	0.89
60-64 .....	31	0.98	16	0.51
65 and over .....	47	1.49	33	1.05
Total .....	3 148	100.00	3 148	100.00

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), Tasmania

Particulars	1973	1974	1975	1976	1977	1978
Average age of bridegrooms—						
Bachelors .....	24.0	23.9	23.5	23.8	24.0	24.0
Widowers .....	57.9	58.9	57.0	55.3	56.2	56.7
Divorcees .....	38.4	38.5	37.3	37.7	37.7	37.6
All bridegrooms .....	26.1	26.0	23.7	27.0	27.3	27.4
Average age of brides—						
Spinsters .....	21.2	21.2	20.8	21.2	21.2	21.4
Widows .....	49.9	49.2	51.2	47.9	47.1	51.0
Divorcees .....	35.5	34.5	35.2	33.9	33.8	33.4
All brides .....	23.3	23.2	23.0	24.2	24.4	24.7

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, Tasmania

Year	Age in Years						Persons under 21 years	
	15	16	17	18	19	20	Number	Percentage of all marriages
Bridegrooms								
1973 .....	—	—	4	111	218	375	708	20.85
1974 .....	—	—	7	144	220	393	764	21.42
1975 .....	—	—	6	105	213	348	672	20.73

## Demography

## Marriages: Persons Under 21 Years of Age, Tasmania—continued

Year	Age in Years						Persons under 21 years	
	15	16	17	18	19	20	Number	Percentage of all marriages
<b>Bridegrooms</b>								
1976.....	—	—	4	111	191	347	653	18.78
1977.....	—	—	1	77	156	286	520	16.42
1978.....	—	—	3	66	151	285	505	16.04
<b>Brides</b>								
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
1976.....	1	61	169	410	459	476	1 576	45.33
1977.....	2	57	128	375	432	367	1 361	42.99
1978.....	1	43	105	317	433	406	1 305	41.45

## Conjugal Condition of Persons Marrying, Tasmania

Year	Bridegrooms				Brides		Total marriages
	Bachelors	Widowers	Divorcees	Spinsters	Widows	Divorcees	
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
1976.....	2 798	98	581	2 805	132	540	3 477
1977.....	2 521	89	556	2 498	122	546	3 166
1978.....	2 508	107	533	2 467	125	556	3 148

## Marriages, Religious and Civil, Tasmania

Particulars of celebration	1973	1974	1975	1976	1977	1978
<b>Religious rites—</b>						
Church of England.....	1 265	1 350	1 147	1 067	989	959
Catholic.....	696	693	645	595	539	515
Presbyterian (a).....	148	155	134	128	66	34
Methodist.....	466	440	407	442	212	—
Congregational.....	53	51	31	28	14	—
Baptist.....	89	89	103	94	91	77
Churches of Christ.....	19	22	21	34	24	22
Salvation Army.....	35	38	26	17	26	33
Seventh-day Adventist.....	5	5	10	5	5	12
Uniting Church (b).....	—	—	—	—	—	428
Other.....	112	123	114	130	94	109
<b>Civil ceremonies (c).....</b>	507	601	604	937	1 106	959
<b>Total.....</b>	<b>3 395</b>	<b>3 567</b>	<b>3 242</b>	<b>3 477</b>	<b>3 166</b>	<b>3 148</b>

(a) From 1978 figures relate to 'Continuing Presbyterians' only, following the amalgamation of the Presbyterian, Methodist and Congregational Churches.

(b) In 1978 Presbyterian, Methodist and Congregational Churches amalgamated to form the 'Uniting Church'.

(c) 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. The commencement of the Family Court of Australia had a dramatic effect on the figures. In 1976 dissolutions of marriage represented 50.62 per cent of the number of marriages contracted for that year (1 760 dissolutions compared with 3 477 marriages).

The following table gives the number of petitions filed by husbands and wives respectively, and the number of dissolutions of marriage during the recent years. Every decree of dissolution of marriage is now, in the first instance, a decree *nisi* and is normally made absolute after a period of one month. Previously the period was three months.

Petitions Filed and Dissolutions Granted, Tasmania

Particulars	1972	1973	1974	1975	1976(a)	1977
Petitions for dissolution (b) filed by—						
Husband .....	237	281	309	287	n.a.	n.a.
Wife .....	288	354	444	444	n.a.	n.a.
Total petitions .....	525	635	753	731	2 180	1 038
Dissolutions (b) granted on petition of—						
Husband .....	200	186	240	242	675	396
Wife .....	246	258	296	349	1 085	738
Total dissolutions .....	446	444	536	591	1 760	1 134

(a) The Family Law Court came into operation in 1976.

(b) Includes nullities of marriage and judicial separations.

The following three tables dissect dissolutions of marriage granted during 1977 by ages of parties at the time of marriage, by ages of parties at the time of dissolution and by the duration and issue of marriage:

Dissolutions of Marriage (a): Ages of Parties at Time of Marriage, Tasmania, 1977

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 .....	150	17	—	—	1	—	2	170
20-29 .....	396	403	15	1	—	—	7	822
30-39 .....	10	48	27	2	1	—	4	92
40-49 .....	4	6	10	13	1	—	—	34
50-59 .....	—	3	1	1	2	1	—	8
60 and over .....	—	—	—	1	2	2	—	5
Not stated .....	—	3	—	—	—	—	—	3
Total wives .....	560	480	53	18	7	3	13	1 134

(a) Includes nullities of marriage and judicial separations.

## Dissolutions of Marriage (a): Ages of Parties at Time of Dissolution, Tasmania, 1977

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 .....	—	1	—	—	—	—	—	1
20-29 .....	8	292	8	—	—	—	1	309
30-39 .....	1	165	242	10	1	—	6	425
40-49 .....	—	10	90	114	6	3	3	226
50-59 .....	—	2	4	51	54	13	3	127
60 and over .....	—	—	1	4	20	18	—	43
Not stated .....	—	—	—	3	—	—	—	3
Total wives .....	9	470	345	182	81	34	13	1 134

(a) Includes nullities of marriage and judicial separations.

## Dissolutions of Marriage (a): Duration of Marriage and Issue, Tasmania, 1977

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 .....	105	65	21	3	4	—	198	132
5-9 .....	92	94	123	28	6	5	348	474
10-14 .....	22	33	72	45	28	6	206	456
15-19 .....	13	16	42	36	15	20	142	379
20-24 .....	33	25	30	18	1	3	110	158
25-29 .....	37	18	3	1	—	1	60	32
30 and over .....	56	9	4	1	—	—	70	20
Total .....	358	260	295	132	54	35	1 134	1 651

(a) Includes nullities of marriage and judicial separations.

(b) Under 21 years of age.

## Births

The following 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, Tasmania

Age group (years)	1974	1975	1976	1977	1978	
					Number	Per cent
10-14 .....	7	7	8	11	6	0.1
15-19 .....	1 056	992	854	873	846	12.5
20-24 .....	2 699	2 605	2 545	2 395	2 417	35.6
25-29 .....	2 433	2 278	2 202	2 359	2 335	34.4
30-34 .....	852	777	801	869	914	13.5
35-39 .....	278	261	223	184	233	3.4
40-44 .....	69	59	65	40	31	0.5
45 and over .....	4	3	4	4	6	0.1
Total births .....	7 398	6 982	6 702	6 735	6 788	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, Tasmania

Particulars	1973	1974	1975	1976	1977	1978
Births of—						
Males .....	3 744	3 760	3 605	3 464	3 463	3 438
Females .....	3 582	3 638	3 377	3 238	3 272	3 350
Total .....	7 326	7 398	6 982	6 702	6 735	6 788
Masculinity (a) .....	104.52	103.35	106.78	106.98	105.84	102.63

(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, Tasmania, 1978

Age group (years)	Nuptial births		Ex-nuptial births		All births		
	Male	Female	Male	Female	Male	Female	Total
10-14 .....	—	—	4	2	4	2	6
15-19 .....	197	232	206	211	403	443	846
20-24 .....	1 138	1 027	131	121	1 269	1 148	2 417
25-29 .....	1 097	1 121	67	50	1 164	1 171	2 335
30-34 .....	439	413	31	31	470	444	914
35-39 .....	100	116	9	8	109	124	233
40-44 .....	13	13	2	3	15	16	31
45 and over .....	4	1	—	1	4	2	6
Total .....	2 988	2 923	450	427	3 438	3 350	6 788

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, Tasmania

Particulars	1974	1975	1976	1977	1978
Nuptial—					
First born (a) .....	2 456	2 349	2 263	2 317	2 217
Subsequent birth .....	4 154	3 875	3 733	3 635	3 694
Ex-nuptial .....	788	758	706	783	877
Total births .....	7 398	6 982	6 702	6 735	6 788
Ex-nuptial births as percentage of total births .....	10.7	10.9	10.5	11.6	12.9

(a) In case of multiple births with no previous issue, the first child born alive is recorded as 'First born' and a subsequent child or children as 'Subsequent birth'.

It should be noted that 'First born' in 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, Tasmania

Particulars	1973	1974	1975	1976	1977	1978
Age Specific Birth Rates (a)						
Age group (years)—						
10-14 .....	0.3	0.3	0.3	0.4	0.6	0.3
15-19 .....	58.6	54.6	50.0	44.0	r 43.8	41.9
20-24 .....	166.9	165.6	153.4	153.0	r 141.3	139.8
25-29 .....	162.8	163.1	147.1	136.5	r 147.4	144.9
30-34 .....	71.4	70.7	61.8	61.2	r 61.9	61.8
35-39 .....	27.6	26.3	23.9	19.5	r 15.7	19.7
40-44 .....	8.2	6.5	5.8	6.4	r 3.9	3.0
45-49 .....	0.5	0.3	0.3	0.4	0.4	0.6
Fertility Rate (b)						
Fertility rate .....	90	88	81	77	r 76	75
Crude Birth Rate (c)						
Crude birth rate .....	18.5	18.5	17.3	16.4	16.4	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.

### Total Fertility, and Gross and Net Reproduction Rates

*Total fertility* for a population is obtained either by summing single age-specific birth rates for a year and dividing by 1 000 or by summing five-year age-specific birth rates, multiplying by five and dividing by 1 000. The result represents the hypothetical number of children a woman would bear throughout her child bearing years if she experienced the age-specific birth rates for that particular year during her lifetime.

The *gross reproduction rate* is derived from *total fertility* and the ratio of female to total births. It indicates the number of female children who would be born on average to women, supposing the rates from which it was calculated were to apply throughout the reproductive period. It is an indication of the extent to which the population is reproducing itself except that it does not allow for females who failed to survive to the end of their childbearing period. The *net reproduction rate* allows for such mortality. It is obtained by multiplying the age-specific rates by the survivor proportions in the corresponding age group of the stationary or life table population. Mortality in childhood and young adulthood is now so low that there is little difference between current gross and net reproduction rates.

A net reproduction rate of one indicates that the reproduction pattern for the particular year is such as to replace the current generation of mothers by an equivalent number of daughters, if continued.

The next table gives total fertility rates and gross and net reproduction rates for Tasmania for recent years. If the net reproduction rate of a country falls below unity the population will ultimately decrease and die out (assuming there is no net immigration gain) unless fertility is raised and/or mortality lowered. The fact that the population may be currently increasing is irrelevant.



Total Fertility, and Gross and Net Reproduction Rates, Tasmania *r*

Year	Total fertility	Gross reproduction rate	Net reproduction rate
1973.....	2.504	1.224	1.190
1974.....	2.452	1.208	1.174
1975.....	2.235	1.084	1.051
1976.....	2.107	1.017	0.988
1977.....	2.075	1.008	0.980
1978.....	2.060	1.017	0.988

## 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, Tasmania

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
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
1977.....	99	14.7	3.1	3.3	0.7	7.6
1978.....	97	14.3	4.7	3.1	0.6	5.9

(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, Tasmania

Cause	1974	1975	1976	1977	1978
009 Diarrhoeal diseases.....	1	2	—	2	—
036 Meningococcal infection.....	—	1	2	—	—
000-008 } Other general diseases (a).....	3	6	—	3	3
010-035 } .....					
037-315 } .....					
320 Meningitis.....	—	—	—	1	1
321-389 Other diseases of the nervous system and sense organs.....	—	1	—	2	—
390-458 Diseases of the circulatory system.....	2	1	—	—	1
460-466 Acute respiratory infection (except influenza).....	2	—	1	1	—
470-474 Influenza.....	—	—	—	—	—
480-486 Pneumonia.....	5	12	5	4	3
490-493 Bronchitis, emphysema and asthma.....	—	—	—	—	—
500-519 Other diseases of respiratory system.....	1	—	—	—	—
520-577 Diseases of the digestive system.....	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.....	18	22	8	16	18

## Infant Mortality: Causes of Death Under One Year, Tasmania—continued

Cause		1974	1975	1976	1977	1978
760-763	Certain maternal conditions .....	5	8	1	1	—
764-768}	Birth injury, difficult labour and other anoxic and hypoxic conditions .....	21	16	18	18	26
772,776}						
769-771}						
773-775}	Other causes of perinatal mortality .....	30	30	14	12	15
777-779}						
780-796	Symptoms and ill-defined conditions (b) .....	33	26	25	37	28
800-999	Accidents, poisonings and violence .....	1	1	1	2	2
Total .....		123	128	77	99	97

(a) Principally infective and parasitic diseases.

(b) Includes sudden death in infancy syndrome; 33 in 1974, 26 in 1975, 24 in 1976, 37 in 1977 and 28 in 1978.

## Deaths

A marked difference exists between male and female crude death rates as shown in the following table:

## Male and Female Deaths and Crude Rates, Tasmania

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	
1973 .....	1 894	1 453	3 347	9.53	7.38	r 8.46	1.291
1974 .....	1 954	1 530	3 484	9.75	7.68	r 8.72	1.270
1975 .....	1 849	1 490	3 339	9.12	7.38	r 8.26	1.236
1976 .....	1 850	1 539	3 389	9.06	7.57	r 8.32	1.197
1977 .....	1 865	1 404	3 269	9.07	6.85	7.96	1.324
1978 .....	1 840	1 471	3 311	8.90	7.10	8.00	1.251

## 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 that follows, three-year periods have been selected appropriate to the censuses of 1947, 1971 and 1976.

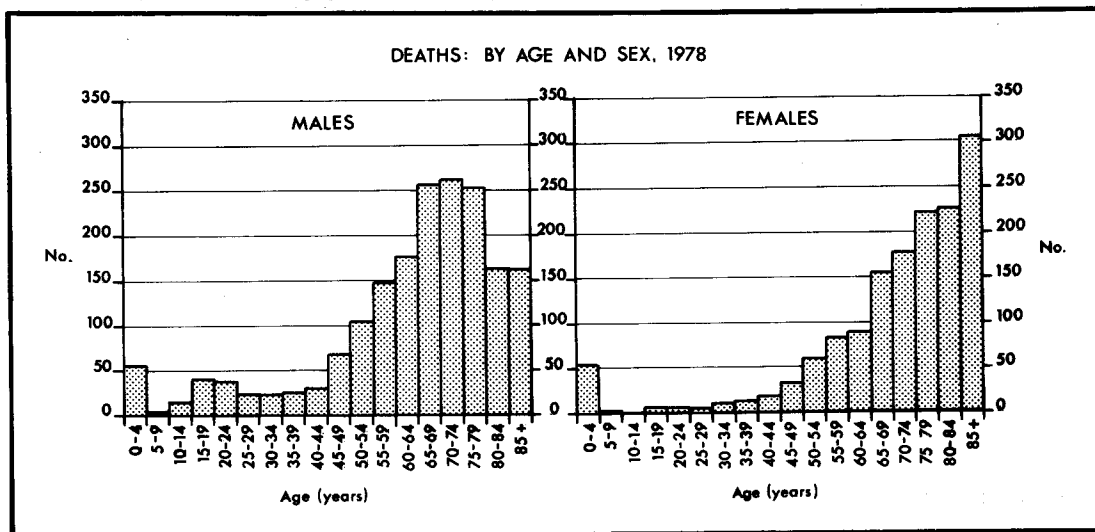
## Death Rates for Specific Age Groups (a), Tasmania

Age group (years)	Males			Females			Persons		
	1946-48	1970-72	1975-77	1946-48	1970-72	1975-77	1946-48	1970-72	1975-77
0-4 .....	9.13	4.46	3.68	7.24	2.93	3.01	8.21	3.71	3.35
5-9 .....	1.15	0.47	0.49	0.69	0.36	0.27	0.92	0.42	0.39
10-14 .....	0.67	0.56	0.42	0.39	0.30	0.31	0.53	0.43	0.36
15-19 .....	1.62	2.42	2.18	1.46	0.60	0.57	1.54	1.53	1.39
20-24 .....	2.10	2.10	2.03	1.79	0.53	0.30	1.94	1.32	1.17
25-29 .....	2.12	1.87	1.13	1.74	0.83	0.66	1.93	1.37	0.90
30-34 .....	2.27	1.84	1.45	1.90	0.79	0.79	2.09	1.33	1.13

Death Rates for Specific Age Groups (a), Tasmania—continued

Age group (years)	Males			Females			Persons		
	1946-48	1970-72	1975-77	1946-48	1970-72	1975-77	1946-48	1970-72	1975-77
35-39	3.10	2.10	1.94	2.59	1.34	1.25	2.85	1.73	1.60
40-44	3.93	3.43	3.26	3.51	1.89	2.05	3.73	2.69	2.67
45-49	5.88	5.36	6.00	4.66	3.10	3.57	5.28	4.25	4.83
50-54	9.52	9.65	9.21	7.84	5.79	5.36	8.65	7.74	7.29
55-59	16.98	15.77	14.68	10.03	8.26	9.26	13.44	12.06	11.97
60-64	23.87	25.71	23.64	17.30	12.82	8.97	20.53	19.19	16.18
65-69	41.82	41.10	38.01	27.35	22.40	18.68	34.56	31.51	28.10
70-74	58.43	64.05	61.75	49.47	37.51	34.22	53.80	48.92	46.52
75-79	103.22	94.96	94.52	77.00	62.46	54.53	89.78	74.91	70.52
80-84	156.64	140.11	139.12	123.49	99.45	90.67	138.41	114.30	106.39
85 and over	292.36	220.56	231.82	220.32	204.67	190.16	250.16	210.54	202.98

(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 1978, diseases of the heart (items 25 to 29) accounted for 34.5 per cent of all deaths (1 142 deaths out of the total of 3 311 deaths). The comparable figures for 1977 were 1 163 deaths (35.6 per cent) out of the total of 3 269 deaths. Other major causes of death in 1978 (with 1977 figures in brackets) were: cancer, all forms (item 19), 661 (622); cerebrovascular disease, (item 30), 394 (370); motor vehicle accidents, (item 47), 114 (131); and all other accidents, (item 48), 89 (90).

Causes of Death: Numbers and Rates, Tasmania, 1978

Cause of death	International classification	Number of deaths	Rate per 100 000 of mean population	Percentage of total deaths
1-4. (a)	(a)	1	—	—
5. Tuberculosis of respiratory system	010-012	3	1	0.1
6. Other tuberculosis including late effects	013-019	2	—	0.1
7-16. (b)	(b)	1	—	—

## Causes of Death: Numbers and Rates, Tasmania, 1978—continued

Cause of death	International classification	Number of deaths	Rate per 100 000 of mean population	Percentage of total deaths
17. Syphilis and its sequelae	090-097	1	—	—
18. All other infective and parasitic diseases	(c)	6	1	0.2
19. Malignant neoplasms—				
Digestive organs and peritoneum	150-159	220	53	6.6
Trachea, bronchus and lung	162	128	31	3.9
Breast	174	53	13	1.6
Genito-urinary organs	180-189	104	25	3.1
Leukaemia	204-207	18	4	0.5
Other malignant and lymphatic neoplasms	(d)	138	33	4.2
20. Benign and unspecified neoplasms	210-239	6	1	0.2
21. Diabetes mellitus	250	36	9	1.1
22. Nutritional deficiencies	260-269	1	—	—
23. Anaemias	280-285	9	2	0.3
24. Meningitis	320	2	—	0.1
25. Active rheumatic fever	390-392	1	—	—
26. Chronic rheumatic heart disease	393-398	25	6	0.8
27. Hypertensive disease	400-404	48	12	1.5
28. Ischaemic heart disease	410-414	930	225	28.1
29. Other forms of heart disease	420-429	138	33	4.2
30. Cerebrovascular disease	430-438	394	95	11.9
31. Influenza	470-474	2	—	0.1
32. Pneumonia	480-486	137	33	4.2
33. Bronchitis, emphysema and asthma	490-493	154	37	4.7
34. Peptic ulcer	531-533	16	4	0.5
35. Appendicitis	540-543	1	—	—
36. Intestinal obstruction and hernia	{ 550-553	3	1	0.1
	{ 560	5	1	0.2
	{ 571	29	7	0.9
37. Cirrhosis of liver				
38. Nephritis and nephrosis	580-584	10	2	0.3
39. Hyperplasia of prostate	600	—	—	—
40. Abortion	640-645	1	—	—
41. {Other complications of pregnancy, childbirth and the puerperium. Delivery without mention of complication	{ 630-639	—	—	—
	{ 650-678	—	—	—
42. Congenital anomalies	740-759	26	6	0.8
43. {Birth injury, difficult labour and other anoxic and hypoxic conditions	{ 764-768	3	1	0.1
	{ 772-776	23	6	0.7
	{ 760-763	—	—	—
44. Other causes of perinatal mortality	{ 769-771	7	2	0.2
	{ 773-775	2	—	0.1
	{ 777-779	6	1	0.2
45. Symptoms and other ill-defined conditions	780-796	43	10	1.3
46. All other diseases	{ Remainder of 240-738	316	76	9.5
47. Motor vehicle accidents	810-823	114	28	3.4
48. All other accidents	{ 800-807	—	—	—
	{ 825-949	89	22	2.7
49. Suicide and self-inflicted injuries	950-959	49	12	1.5
50. All other external causes	960-999	10	2	0.3
All causes	..	3 311	795	100.0

(a) 000, 001, 004-006, 008, 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) 002, 003, 005, 007, 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 1-4 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) bacillary dysentery and amoebiasis; (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; and (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 causes 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' (000-136). 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, Tasmania, 1978**

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 .....	28	28.9	93.3
	776	Anoxic and hypoxic conditions .....	22	22.7	100.0
	740-759	Congenital anomalies .....	18	18.6	69.2
	460-519	Diseases of respiratory system .....	3	3.1	1.0
	777	Immaturity unqualified .....	4	4.1	100.0
	..	Other causes .....	22	22.7	-
		All causes .....	97	100.0	2.9
1-4 .....	800-999	Accidents and violence .....	5	38.5	1.9
	140-209	Cancer (all forms) (a) .....	-	-	-
	740-759	Congenital anomalies .....	1	7.7	3.8
	..	Other causes .....	7	53.8	-
		All causes .....	13	100.0	0.4
5-14 .....	800-999	Accidents and violence .....	15	62.5	5.7
	140-209	Cancer (all forms) (a) .....	7	29.2	1.1
	460-519	Diseases of respiratory system .....	-	-	-
	..	Other causes .....	2	8.3	-
		All causes .....	24	100.0	0.7
15-19 .....	800-999	Accidents and violence .....	39	83.0	14.9
	140-209	Cancer (all forms) (a) .....	3	6.4	0.5
	..	Other causes .....	5	10.6	-
		All causes .....	47	100.0	1.4

## Principal Causes of Death in Age Groups, Tasmania, 1978—continued

Age group in years	Inter- national 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)
20-24 .....	800-999 ..	Accidents and violence .....	36	80.0	13.7
		Other causes .....	9	20.0	—
		All causes .....	45	100.0	1.4
25-34 .....	800-999 390-398 400-404 410-429 140-209 ..	Accidents and violence .....	42	65.6	16.0
		Diseases of heart .....	7	10.9	0.6
		Cancer (all forms) (a) .....	8	12.5	1.2
		Other causes .....	7	10.9	—
		All causes .....	64	100.0	2.0
35-44 .....	800-999 140-209 390-398 400-404 410-429 430-438 460-519 ..	Accidents and violence .....	19	21.6	7.3
		Cancer (all forms) (a) .....	26	29.5	3.9
		Diseases of heart .....	22	25.0	1.9
		Cerebrovascular diseases .....	7	8.0	1.8
		Diseases of respiratory system .....	4	4.5	1.3
		Other causes .....	10	11.4	—
		All causes .....	88	100.0	2.7
45-54 .....	390-398 400-404 410-429 140-209 800-999 460-519 430-438 ..	Diseases of heart .....	90	34.2	7.9
		Cancer (all forms) (a) .....	79	30.0	12.0
		Accidents and violence .....	26	9.9	9.9
		Diseases of respiratory system .....	19	7.2	6.0
		Cerebrovascular diseases .....	12	4.6	3.0
		Other causes .....	37	14.1	—
		All causes .....	263	100.0	7.9
		55-64 .....	390-398 400-404 410-429 140-209 430-438 460-519 800-999 440-448 ..	Diseases of heart .....	181
Cancer (all forms) (a) .....	140			28.3	21.2
Cerebrovascular diseases .....	40			8.1	10.2
Diseases of respiratory system .....	46			9.3	14.6
Accidents and violence .....	34			6.9	13.0
Diseases of arteries .....	7			1.4	6.5
Other causes .....	46			9.3	—
All causes .....	494			100.0	14.9
65-74 .....	390-398 400-404 410-429 140-209 430-438 460-519 440-448 250 ..			Diseases of heart .....	319
		Cancer (all forms) (a) .....	207	24.4	31.3
		Cerebrovascular diseases .....	97	11.4	24.6
		Diseases of respiratory system .....	75	8.8	23.8
		Diseases of arteries .....	34	4.0	31.5
		Diabetes .....	15	1.8	41.7
		Other causes .....	101	11.9	—
		All causes .....	848	100.0	25.6

## Principal Causes of Death in Age Groups, Tasmania, 1978—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)
75 and over.....	390-398 400-404 410-429 430-438 460-519 140-209 440-448 250 ..	Diseases of heart.....	519	39.1	45.4
		Cerebrovascular diseases.....	236	17.8	59.9
		Diseases of respiratory system.....	166	12.5	52.7
		Cancer (all forms) (a).....	191	14.4	28.9
		Diseases of arteries.....	64	4.8	59.3
		Diabetes.....	13	1.0	36.1
		Other causes.....	138	10.4	—
		All causes.....	1 327	100.0	40.1

(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. The next table summarises deaths from heart diseases for recent years:

## Deaths from Heart Diseases (All Causes) (a), Tasmania

Year	Number of deaths			Death rate per 100 000 of mean population	Deaths as a percentage of deaths from all causes
	Males	Females	Persons		
1973.....	699	460	1 159	293	34.6
1974.....	660	504	1 164	291	33.4
1975.....	673	526	1 199	296	35.9
1976.....	710	515	1 225	301	36.1
1977.....	666	497	1 163	283	35.6
1978.....	651	491	1 142	276	34.5

(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), Tasmania

Year	Number of deaths			Death rate per 100 000 of mean population	Deaths as a percentage of deaths from all causes
	Males	Females	Persons		
1973.....	313	259	572	145	17.1
1974.....	339	275	614	154	17.6
1975.....	330	263	593	147	17.8
1976.....	328	290	618	152	18.2
1977.....	346	276	622	151	19.0
1978.....	371	290	661	160	20.0

(a) List items 140-207 in 1950; 140-209 from 1968.

## Lung Cancer

Considerable interest has been shown in lung cancer 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), Tasmania

Year	Males	Females	Persons	Year	Males	Females	Persons
1973 .....	75	8	83	1976 .....	112	15	127
1974 .....	104	12	116	1977 .....	104	19	123
1975 .....	103	20	123	1978 .....	110	26	136

(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  $x + 1$

$e^{\circ}_x$ : 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 ( $e^{\circ}_x$ ) can be taken as 67.81 years as from birth.

The above calculation shows the derivation of  $e^{\circ}_x$  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  $e^{\circ}_x$  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:

$$d_x = l_x - l_{x+1}$$

$$p_x = \frac{l_x}{l_{x+1}}$$

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			

## Demography

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:

$$\frac{100\,000}{6\,781\,000} \times \frac{1\,000}{1} \text{ per 1 000 years lived;}$$

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 persons per annum). 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.

#### Further References

##### *ABS Publications Produced by the Tasmanian Office:*

- Demography, Tasmania (3101.6) (1977 issue released 6-12-78, 36 pp.)
- Population of Local Government Areas, Tasmania (3201.6) (annual, 30 June 1978 released 22-11-78, 2 pp.)
- Population and Vital Statistics, Tasmania (3202.6) (quarterly, March Qtr 1979 released 13-8-79, 2 pp.)
- Causes of Death Tasmania (3301.6) (annual, 1978 released 14-8-79, 23 pp.)

##### *ABS Publications Produced by the Canberra Office:*

- Making Sense of the Census (1976 Census of Population and Housing Australia) (2129.0) (released 14-7-78, 26 pp.)
- Characteristics of the Population: Local Government Areas (Preliminary, 1976 Census of Population and Housing), Tasmania (2206.0) (released 1-9-78, 92 pp.)
- Populations and Dwellings in Local Government Areas and Urban Centres (Preliminary 1976 Census of Population and Housing), Tasmania (2406.0) (released 15-11-77, 18 pp.)
- Population and Dwellings: Summary Tables (1976 Census of Population and Housing), Tasmania (2414.0) (expected to be released in October 1979, 15 pp.)
- Population and Dwellings: Cross Classified Tables (1976 Census of Population and Housing), Tasmania (2 423.0) (released 29 May 1979, 55 pp.)
- Characteristics of the Population and Dwellings in Local Government Areas (1976 Census of Population and Housing), Tasmania (2432.0) (released August 1979, 498 pp.)
- Estimated Age Distribution of the Population: States and Territories of Australia (3201.0) (annual, 1977 released August 1979, 13 pp.)
- Population and Vital Statistics (Preliminary) (3211.0) (quarterly, March Qtr 1979 released 8-8-79, 4 pp.)
- Population and Vital Statistics (3212.0) (quarterly, December Qtr 1978 released 24-9-79, 14 pp.)

Projections of the Population of the States and Territories of Australia (3214-0) (annual, 1978-2011 released 15-5-79, 27 pp.)

Births (3301-0) (annual, 1977 released 2-3-79, 20 pp.)

Deaths (3302-0) (annual, 1977 released 19-3-79, 26 pp.)

Causes of Death (3303-0) (annual, 1977 released April 1979, 107 pp.)

Perinatal Deaths (3304-0) (annual, 1976 released 31-5-78)

Australian Life Tables (3305-0) (irregular, 1970-72 released 26-10-76)

Marriages (3306-0) (annual, 1977 released 21-11-78, 16 pp.)

Divorces (3307-0) (annual, 1976 released 29-11-78, 23 pp.)

Social Indicators (4101-0) (annual, 1978 released May 1978)

*Other Publications:*

*Obstetric and Neonatal Report, Tasmania* (produced annually by the State Committee of the Royal College of Obstetricians and Gynaecologists and the Department of Obstetrics and Gynaecology, University of Tasmania, 1978 issue released in September 1979).

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## Chapter 7

### AGRICULTURE

#### THE 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 establishments 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 is a significant activity and 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 principally compiled from census returns of livestock and crop production collected from establishments undertaking agricultural activity 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 establishments growing crops are generally 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.

The following tables give an indication of the seasonality of agricultural production in Tasmania. It should be noted that variations from the periods specified occur owing to variety of seed, district, seasonal conditions and scheduling of shearing.

## Times of Planting and Harvesting Principal Crops, Tasmania

Crop	Time of planting	Harvesting period	Crop	Time of planting	Harvesting period
Cereals—			Fruit—		
Barley .....	Sept. to Nov.	Feb. to Mar.	Apples .....	..	Feb. to May
Oats .....	Mar. to Oct.	Nov. to Mar.	Apricots .....	..	Jan. to Feb.
Wheat .....	May to Sept.	Jan. to Feb.	Peaches .....	..	Jan. to Feb.
Vegetables—			Pears .....	..	Feb. to April
Beans, French and runner .....	Sept. to Oct.	Feb. to Mar.	Plums .....	..	Jan. to Feb.
Peas, green .....	Aug. to Oct.	Dec. to Feb.	Raspberries .....	..	Dec. to Jan.
Potatoes—			Currants .....	..	Jan. to Feb.
Early .....	June to Aug.	Dec. to Feb.	Gooseberries .....	..	Nov. to Dec.
Late .....	Sept. to Nov.	Feb. to Oct.	Strawberries .....	..	Nov. to Jan.
Tomatoes .....	Oct. to Nov.	Feb. to April			
Other crops—					
Hops .....	..	Feb. to April			
Field peas .....	July to Sept.	Jan. to April			

## Main Shearing, Lambing and Slaughtering Periods, Tasmania

Activity	Period
Shearing (a) .....	September to December
Lambing—	
Spring .....	August to October
Autumn and winter .....	March to July
Slaughtering for export—	
Lambs (a) .....	November to March

(a) The period shown is that in which the seasonal activity is more pronounced.

## Agricultural Establishment—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 creation of a new register of agricultural businesses in 1974-75 the opportunity was taken to streamline the Agricultural Census by redefining the basic Census unit, an establishment undertaking agricultural activity, as: 'an area of land (at one or more locations) which is operated as a unit by a legal entity for agricultural purposes with an estimated annual value of agricultural operations of \$1 500 or more'.

The estimated value of operations for 1977-78 was obtained for each establishment by applying unit values to the commodity data reported on the 1978 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 farms 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 establishments undertaking agricultural activity so as to exclude the sub-commercial ones; and (ii) the industry classification of establishments. It is *not* a method of calculating *actual* gross income of farms.

The total effect of the new definition was not felt in 1975-76 as a resistance factor had been introduced to prevent rural establishments which were 10 hectares or more in extent being excluded from the tabulations. These establishments were excluded from the 1976-77 tabulations if their value of agricultural operations remained below \$1 500. The exclusion of these establishments accounted for a large percentage of the total decrease of approximately 2 000 (25 per cent) in the number of establishments in the 1976-77 tabulations from the previous year.

An analysis undertaken to investigate the possible effect of the new definition on census totals suggests that, except for 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 a crop 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

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. (An *enterprise* is defined as that unit comprising all operations in Australia of a single, operating legal entity. See also 'Economic Censuses and Surveys' in Chapter 18 for an explanation of the concepts of 'enterprise' and 'establishment'.) The industry class of an agricultural enterprise is determined basically according to the predominant activity as measured after the application of unit values to commodity data.

The following table shows for 1976-77 all agricultural enterprises in Tasmania with an estimated value of operations of \$1 500 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, Tasmania, 1977-78**  
(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 .....	267	123	106	42	39	32	609
Sheep .....	387	205	212	84	79	86	1 053
Meat cattle .....	802	108	56	15	3	2	986
Milk cattle .....	355	589	464	82	22	5	1 517
Pigs .....	99	32	45	12	7	6	201
Orchard and other fruit .....	141	84	102	50	40	17	434
Vegetables—potatoes .....	61	55	111	33	21	10	291
Vegetables—other .....	42	58	72	41	27	29	269
Other .....	198	78	80	31	18	28	433
<b>Total .....</b>	<b>2 352</b>	<b>1 332</b>	<b>1 248</b>	<b>390</b>	<b>256</b>	<b>215</b>	<b>5 793</b>

(a) An agricultural enterprise may comprise more than one establishment which undertakes agricultural activity. Column headings have been rounded to the nearest thousand dollars.

## Size of Agricultural Establishments

In the following table, rural establishments have been classified to size groups. The table shows the number and area of rural establishments in these groups for each statistical division.

Classification of Rural Establishments by Size, Tasmania 1977-78

Statistical Division	Under 50 ha	50-99 ha	100-299 ha	300-999 ha	1 000 ha & over	Total
Number of establishments—						
Hobart .....	127	47	67	28	5	274
Southern .....	318	247	393	242	229	1 429
Northern .....	348	386	736	429	188	2 087
Mersey-Lyell .....	648	744	753	180	26	2 351
Tasmania .....	1 441	1 424	1 949	879	448	6 141
Area of establishments—('000 ha)						
Hobart .....	2	4	11	15	9	41
Southern .....	8	18	68	128	647	869
Northern .....	10	28	128	219	620	1 005
Mersey-Lyell .....	20	54	119	86	88	367
Tasmania .....	37	104	324	448	1 364	2 281

## Number of Establishments with Crops or Livestock

At 31 March 1978 there were 6 141 establishments which satisfied the new definition of an agricultural establishment (see earlier this Chapter). The following table shows the number of establishments growing selected principal crops or carrying livestock; this gives some indication of farming activities on a broad basis only, since the same establishment may be included more than once in the figures (in an extreme case, one establishment could be included 11 times):

Number of Establishments Growing Principal Crops or Carrying Livestock, Tasmania

Particulars	1973-74	1974-75	1975-76(a)	1976-77(a)	1977-78
Number of agricultural establishments (at 31 March) .....	9 375	9 052	8 214	6 154	6 141
Establishments—					
Growing—					
Grain (b)—					
Barley .....	441	387	386	358	385
Oats .....	312	174	117	197	151
Wheat .....	91	39	47	53	40
Hops .....	76	50	28	26	22
Vegetables (c)—					
Potatoes .....	624	805	664	684	636
Onions .....	65	101	66	43	48
Fruit (c)—					
Orchard tree .....	612	486	425	398	367
Small fruit .....	244	249	211	r 168	169



Number of Establishments Growing Principal Crops or Carrying Livestock, Tasmania—*continued*

Particulars	1973-74	1974-75	1975-76 (a)	1976-77 (a)	1977-78
Establishments ( <i>continued</i> )—					
Carrying—					
Cattle .....	8 098	7 986	7 229	5 541	5 428
Sheep .....	3 784	3 844	3 579	3 062	3 127
Pigs .....	1 185	1 010	974	900	851

(a) Not comparable with previous years, see definition of 'Agricultural Establishment', given earlier.

(b) Eight hectares and over up to 1973-74; 10 hectares and over from 1974-75.

(c) 0.4 hectares and over up to 1971-72; 0.5 hectares and over from 1972-73.

## Land Utilisation on Agricultural Establishments

Agricultural establishments undertaking agricultural activity at present occupy 33.4 per cent of Tasmania's area of 6 830 000 hectares; details of land utilisation follow:

Land Utilisation on Agricultural Establishments, Tasmania  
(Hectares)

Type of usage	1967-68	1975-76	1976-77	1977-78
Crops (excluding sown pastures harvested) (a) .....	103 973	60 030	r 64 718	69 686
Sown pastures (b) .....	745 505	935 164	r 903 526	909 862
Balance (used mainly for grazing) .....	1 813 039	1 464 062	r 1 340 055	1 301 729
Total area of all establishments .....	2 662 520	2 459 256	2 308 299	2 281 277

(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, Tasmania  
(Hectares)

Area	1967-68	1975-76	1976-77	1977-78
Area used for crops (a) .....	103 973	60 030	r 64 718	69 686
Area double-cropped .....	4 380	2 076	r 2 531	2 299
Sown pastures harvested (b) .....	65 877	73 717	73 264	49 081
Total area of crops .....	174 229	135 823	r 140 514	121 066

(a) As shown in previous table.

(b) Includes lucerne.

## Definition of 'Sown Pasture'

Sown pasture is pasture which has been developed by the sowing of non-indigenous grasses or legumes. The next table shows the total area of sown pasture and distinguishes between areas *cut* for various purposes and areas simply grazed:

**Sown Pasture, Tasmania: Classification of Total Area  
(Hectares)**

Particulars	1967-68	1975-76	1976-77	1977-78
Pasture harvested—				
Hay .....	62 711	70 262	69 730	46 480
Seed .....	965	628	1 018	922
Green feed or silage .....	4 046	2 827	2 516	1 679
Total pastures harvested .....	67 722	73 717	73 264	49 081
Pastures not harvested .....	679 628	861 447	830 262	860 781
Total sown pasture .....	747 349	935 164	903 526	909 862

**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, Tasmania: Summary  
(Hectares)**

Crop	1967-68	1975-76	1976-77	1977-78
Section 1 (a)—				
Cereals for grain .....	28 948	17 045	20 019	17 332
Legumes mainly for grain .....	2 425	591	606	757
Crops for hay (b) .....	9 662	1 305	2 271	2 121
Crops for green feed or silage (c) .....	43 528	21 962	19 901	26 622
Fruit—Orchard tree .....	8 231	3 586	3 265	3 071
Berry and small .....	575	492	457	449
Vegetables for sale for human consumption .....	11 799	11 235	12 583	12 224
Hops .....	650	513	587	567
Oil poppies .....	(d)	4 240	6 117	7 969
Other crops .....	689	1 136	r 1 444	872
Total section 1 (e) .....	106 507	62 106	r 67 250	71 985
Section 2—				
Pasture harvested for hay, seed, green feed or silage (f)—				
Pasture hay .....	62 711	70 262	69 730	46 480
Pasture seed .....	965	628	1 018	922
Pasture harvested for green feed or silage .....	4 046	2 827	2 516	1 679
Total section 2 .....	67 722	73 717	73 264	49 081
Total area of crops .....	174 229	135 823	r 140 514	121 066

(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 1977-78 area involved was 2 299 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, Tasmania 1977-78

Crop	Area (hectares)	Production		
		Unit of quantity	Total	Yield per hectare
Cereals for grain—				
Barley .....	11 444	tonnes	19 403	1.7
Oats .....	4 616	"	4 279	0.9
Wheat .....	1 257	"	1 545	1.2
Legumes mainly for grain—				
Horse beans .....	32	tonnes	30	0.9
Field peas—				
Blue .....	326	"	417	1.3
Grey and other .....	393	"	344	0.9
Hay—				
Pasture (incl. lucerne) .....	46 480	tonnes	166 495	3.6
Oaten .....	1 845	"	5 140	2.8
Other .....	276	"	713	2.6
Orchard tree fruit—				
Bearing—				
Apples .....	2 601	tonnes	63 444	24.4
Apricots .....	56	"	268	4.8
Pears .....	103	"	1 913	18.7
Other .....	25	..	..	..
Non-bearing .....	286	..	..	..
Berry and small fruit—				
Bearing—				
Currants (black and red) .....	209	tonnes	681	3.3
Gooseberries .....	10	"	44	4.5
Loganberries .....	24	"	142	6.0
Raspberries .....	102	"	552	5.4
Strawberries .....	21	"	84	4.1
Non-bearing .....	84	..	..	..
Vegetables for human consumption—				
Beans, French and runner .....	1 143	tonnes	8 296	7.3
Peas, green (a)—				
For processing .....	6 221	"	27 223	4.4
Sold in pod .....	7	"	7	0.9
Potatoes .....	3 592	"	107 240	29.9
Turnips, swede and white .....	179	"	2 490	13.9
Other .....	1 081	..	..	..
Pasture seed (incl. lucerne) .....	922	kg	172 441	187.0
Other crops—				
Hops (b) .....	567	tonnes	1 201	2.1
Oil poppies .....	7 969	..	n.p.	n.p.

(a) Ex-shell weight.

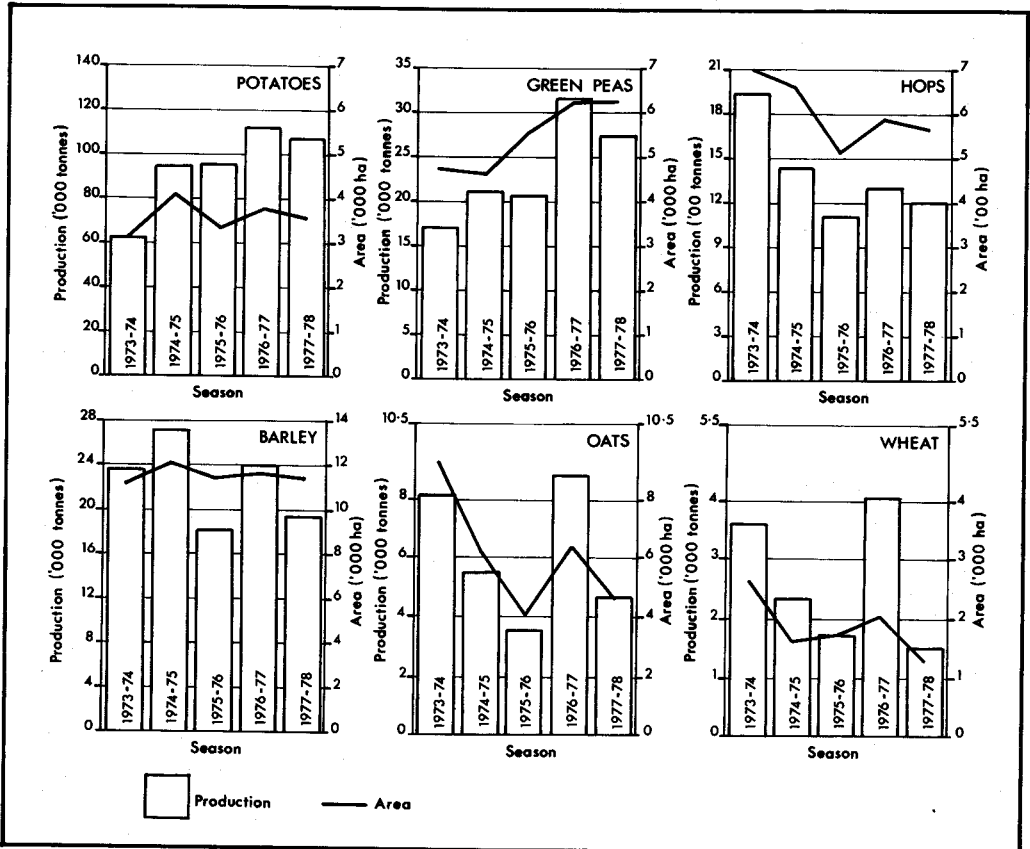
(b) Production is expressed as dry weight.

## 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 six years are shown in the following graphs:

Selected Crops: Production and Area Harvested,



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 importance of potatoes, peas, French and runner beans for processing; and (ii) the declining importance of orchards and small fruit, and of wheat and oats for grain. Oil poppies have become an important crop in recent years but details are not included as the figures relating to production are not available for publication.

## Selected Principal Crops, Tasmania: Area and Production

Crop	1967-68	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78
Area (Hectares)							
Barley for grain	9 733	12 802	11 121	12 020	11 475	11 644	11 444
Oats for grain	14 314	6 477	9 173	6 069	3 924	6 387	4 616
Wheat for grain	4 864	4 251	2 521	1 535	1 644	1 980	1 257
Total hay	72 373	58 387	91 924	80 483	71 567	72 001	48 601
Field peas	2 251	1 146	1 038	1 439	447	415	719
Pasture seed	965	840	3 982	2 219	628	1 018	922
Hops (a)	650	616	703	662	513	587	567
Beans, French and runner	421	738	1 089	1 078	1 054	1 277	1 143
Peas, green—							
For processing	6 021	4 779	4 750	4 635	5 525	6 363	6 221
Sold in pod	27	21	11	16	13	11	7
Potatoes	4 435	3 330	3 127	4 143	3 354	3 705	3 592
Orchard (tree) bearing—							
Apples	6 048	4 980	4 148	3 335	2 947	2 741	2 601
Pears	494	345	278	194	145	114	103
Berry and small fruit, bearing—							
Currants (black and red)	222	232	216	228	208	207	209
Loganberries	38	38	39	31	37	23	24
Raspberries	183	198	179	169	139	115	102
Strawberries	27	24	15	13	11	15	21
Production (Tonnes)							
Barley for grain	20 096	18 711	23 790	27 266	18 389	24 571	19 403
Oats for grain	18 430	7 144	8 247	5 496	3 497	8 801	4 279
Wheat for grain	8 548	7 701	3 510	2 282	1 728	3 929	1 545
Total hay	314 060	233 037	461 459	384 257	327 239	344 549	172 348
Field peas	3 248	1 047	1 750	2 959	586	765	761
Pasture seed	273	166	1 130	558	141	246	172
Hops (b)	1 363	1 450	1 949	1 439	1 129	1 330	1 201
Beans, French and runner	3 988	6 237	8 840	7 982	10 077	10 996	8 296
Peas, green (c)—							
For processing	24 460	18 976	17 139	21 070	20 680	31 632	27 223
Sold in pod	36	27	18	11	8	8	7
Potatoes	80 327	78 286	62 866	95 610	95 614	112 269	107 240
Apples	151 322	126 430	107 060	90 230	68 712	71 781	63 444
Pears	10 431	6 040	6 180	3 160	2 853	1 434	1 913
Currants (black and red)	980	905	865	951	470	575	681
Loganberries	232	271	239	248	154	222	142
Raspberries	1 135	1 466	946	1 216	656	563	552
Strawberries	109	112	103	94	72	84	84

(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 during 1977-78 at its lowest level this century while the area of oats for grain decreased by 28 per cent from 1976-77. The following table shows the Tamar Statistical Sub-division as the major grain growing district with 42 per cent of the total area. The Northern Statistical Division accounted for 58 per cent of the total area of cereals for grain in 1977-78:

**Area of Cereals for Grain by Statistical Division, 1977-78**  
(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 .....	2 588	5 118	1 364	6 482	2 374	—	2 374	11 444
Oats .....	1 410	1 819	1 221	3 040	166	—	166	4 616
Wheat .....	617	344	249	593	47	—	47	1 257
Other .....	3	12	—	12	—	—	—	15
<b>Total .....</b>	<b>4 618</b>	<b>7 293</b>	<b>2 834</b>	<b>10 127</b>	<b>2 587</b>	<b>—</b>	<b>2 587</b>	<b>17 332</b>

(a) Statistical sub-division.

**Legumes Mainly for Grain**

The following table illustrates the geographical distribution of legumes mainly grown for grain and shows the Tamar Statistical Sub-division to be the major producing area:

**Area of Legumes Mainly for Grain by Statistical Division, 1976-77**  
(Hectares)

Crop	Hobart and Southern	Northern			Mersey-Lyell			Total Tasmania
		Tamar (a)	North Eastern (a)	Total	North Western (a)	Western (a)	Total	
Horse beans .....	24	6	—	6	2	—	2	32
Field peas—								
Blue .....	—	300	—	300	26	—	26	326
Grey, etc .....	119	191	20	211	63	—	63	393

(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 by Statistical Division, 1976-77**  
(Hectares)

Crop	Hobart and Southern	Northern			Mersey-Lyell			Total Tasmania
		Tamar (a)	North Eastern (a)	Total	North Western (a)	Western (a)	Total	
Hay—								
Pasture .....	5 941	12 077	7 382	19 459	21 053	27	21 080	46 480
Oaten .....	304	824	307	1 131	410	—	410	1 845
Other .....	48	104	40	144	84	—	84	276
<b>Total .....</b>	<b>6 293</b>	<b>13 005</b>	<b>7 729</b>	<b>20 734</b>	<b>21 547</b>	<b>27</b>	<b>21 574</b>	<b>48 601</b>
Crops for green feed or silage (b) .....	9 174	7 772	6 130	13 902	5 205	20	5 225	28 301

(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 50 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 38 per cent of the State's cattle and is the principal dairying area.

The principal green feed crop is oats (approximately 40 per cent of the total green feed area); other green feed crops include soft turnips, rape, chou moellier, barley, millet, ryecorn and wheat.

#### Orchard Tree Fruit and Berry and Small Fruit

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.

Area of Orchard Tree and Berry and Small Fruit by Statistical Division, 1977-78  
(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 .....	2 304	506	14	520	247	-	247	3 071
Berry and small fruit .....	405	2	19	21	24	-	24	449

(a) Statistical sub-division.

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, Tasmania

Year	Currants (black and red)		Loganberries		Raspberries		Strawberries	
	Bearing area	Production	Bearing area	Production	Bearing area	Production	Bearing area	Production
	hectares	tonnes	hectares	tonnes	hectares	tonnes	hectares	tonnes
1948-49 (a) .....	812	2 735	86	380	844	3 449	101	395
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
1976-77 .....	207	575	23	222	115	563	15	84
1977-78 .....	209	681	24	142	102	552	21	84

(a) Representative year from period when small fruit areas were at their highest level.

With the continued decline in apple production, the gross value of the apple crop for 1977-78 represented only 23 per cent 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, Tasmania

Season	Area		Number of trees		Production		
	Bearing	Non-bearing	Bearing	Non-bearing	Total	Yield	
						Per hectare	Per bearing tree
	hectares	hectares	'000	'000	tonnes	kg	kg
1972-73 .....	4 980	1 097	1 977	435	133 449	26 790	68
1973-74 .....	4 148	837	1 647	332	113 012	r 27 246	69
1974-75 .....	3 335	508	1 323	202	95 247	r 28 633	72
1975-76 .....	2 947	385	1 220	160	72 529	r 24 671	60
1976-77 .....	2 741	311	1 132	128	71 781	r 26 187	63
1977 78 .....	2 601	261	1 091	110	63 444	24 390	58

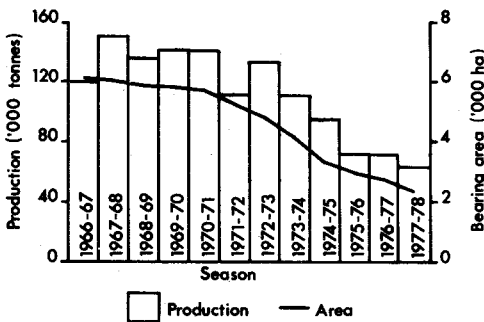
**Economic Problems:** In recent years, economic problems related to the importance of overseas markets and shipping costs have prompted the introduction of assistance to apple growers through schemes providing a stabilisation price for each variety of apple exported at risk to European markets. In the 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: 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; 1976-77, \$527 000; and 1977-78, \$258 000.

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; 1975-76, \$742 000; 1976-77, \$78 000; and 1977-78, \$169 000.

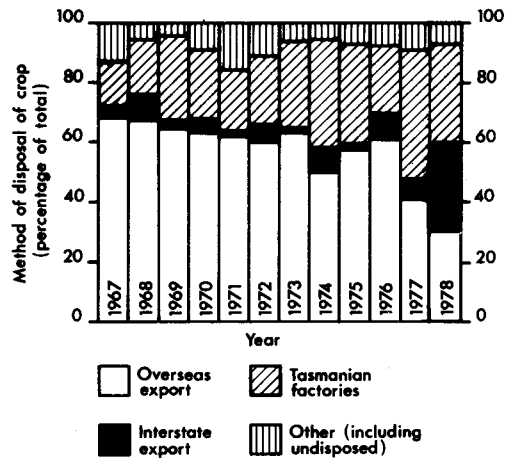
As shown earlier in this Chapter, the number of holdings with at least 0.5 hectares of orchard tree fruit (apples, pears, apricots, etc.) was only 367 at 31 March 1978 compared to 398 in 1977, 425 in 1976 and 486 in 1975; this decline is indicative of the serious problems facing the industry.

A wide variety of apples is produced in Tasmania but many only in small quantities. Of the total production of 63 444 tonnes in 1977-78, two varieties accounted for 40 per cent (granny smith, 18 per cent and democrat, 22 per cent) while jonathon, delicious (golden and other) and sturmer pippin accounted for a further 43 per cent between them.

**Apples: Bearing Area and Production**



**Disposal of the Tasmanian Apple Crop**





### 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 by Statistical Division, 1977-78**  
**(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	1	20	—	20	1 123	—	1 123	1 143
Peas, green.....	5	1 357	429	1 786	4 438	—	4 438	6 228
Potatoes.....	213	106	215	321	3 058	—	3 058	3 592
Turnips, swede and white	50	12	18	30	99	—	99	179
Other vegetables.....	165	145	90	235	682	—	682	1 082
<b>Total.....</b>	<b>433</b>	<b>1 640</b>	<b>751</b>	<b>2 391</b>	<b>9 399</b>	<b>—</b>	<b>9 399</b>	<b>12 224</b>

(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) in order to meet changing brewery demand and the market for hop extract. 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 1 201 tonnes in 1977-78 was 56 per cent of the total Australian hop production of 2 160 tonnes. The next table shows details of area, production and gross value over a six-year period:

**Hops, Tasmania: Area, Production and Gross Value**

Season	Number of growers	Total area	Production		
			Total (a)	Yield per hectare (a)	Value
		hectares	tonnes	kg	\$'000
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
1976-77.....	26	587	1 330	2 266	2 254
1977-78.....	22	567	1 201	2 118	1 763

(a) Dry weight.

### Oil Poppies

Initially, oil poppies were grown on the mid North-West Coast, but more recently these 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 1977-78 the total area of oil poppies was 7 969 hectares compared with 6 117 hectares in the previous year and 4 240 hectares in 1975-76, the distribution being: Hobart and Southern statistical divisions, 1 188 hectares; Northern, 3 550 hectares; and Mersey-Lyell, 3 232 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 geographical distribution (in hectares) of areas yielding pasture seed in 1977-78 was as follows: Northern, 792; Hobart and Southern, 59; Mersey-Lyell, 71; total, 922. The area of pasture seed fluctuates widely depending on farming conditions; in 1973-74, 3 982 hectares yielded 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	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78
Clover—White .....	6 643	22 197	22 480	6 460	6 643	765
Other .....	—	7 577	2 027	1 815	1 060	1 050
Ryegrass—Perennial .....	75 338	563 870	278 258	68 432	112 718	60 151
Hybrid .....	19 146	86 713	10 343	4 740	5 620	5 440
Italian .....	35 929	399 425	210 774	36 813	74 643	91 715
Cocksfoot .....	336	11 157	13 350	13 751	32 433	12 320
Other grasses .....	28 161	38 993	20 679	8 543	12 570	1 000
Total .....	165 553	1 129 932	557 911	140 554	245 687	172 441

(a) Includes all pasture seed harvested, whether as a separate crop or from an area sown to grain crops.

#### All Other Crops

In the earlier table 'Area of Principal Crops' the item 'Other crops' (872 hectares in 1977-78) includes lavender, flower seeds, cut flowers, lupins, mint 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 establishments undertaking agricultural activity; 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 Establishments

The following summary table shows the number of livestock on agricultural establishments for recent years:

**Livestock on Agricultural Establishments, Tasmania, at 31 March  
(<sup>'000</sup>)**

Year	Cattle	Sheep	Pigs	Horses
1974 .....	884.2	3 963.8	68.4	n.a.
1975 .....	920.8	4 136.2	64.0	n.a.
1976 (a) .....	909.2	4 248.9	69.8	n.a.
1977 (a) .....	818.8	4 014.6	64.6	n.a.
1978 .....	733.3	3 969.3	64.2	6.9
Tasmanian numbers as proportion of Australian total (1977-78) .....	%	%	%	%
	2.5	3.0	2.9	n.a.

(a) Not directly comparable with earlier years; see definition of 'Agricultural Establishment' given earlier.

### Cattle

#### Classification

The traditional way of classifying cattle has been to call them either 'dairy' or 'beef' cattle but this has led to confusion 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 organised to distinguish between: (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 1976-77 and 1977-78 farm censuses are given in the following table. This closely follows the lay-out of the collection form.

#### Classification of Cattle on Agricultural Establishments at 31 March, Tasmania

Description	1977	1978
Milk Cattle		
<b>Dairy breed bulls used or intended for service—</b>		
Bulls 1 year and over .....	2 598	2 342
Bull calves under 1 year intended for service .....	980	897
<b>Dairy cows and heifers—</b>		
Cows, in milk and dry .....	128 297	117 829
Heifers, 1 year and over .....	31 670	27 897
Heifers calves, under 1 year .....	26 734	24 112
<b>House cows (in milk and dry) and heifers</b> .....	2 299	2 259
<b>Total milk cattle</b> .....	<b>192 578</b>	<b>175 336</b>
Meat cattle		
<b>Beef breed bulls used or intended for service</b>		
Bulls 1 year and over .....	11 299	10 146
Bull calves, under 1 year intended for service .....	3 518	3 683
<b>Other cattle and calves (not included above) mainly for meat production—</b>		
Cows and heifers, 1 year and over .....	286 203	256 938
Heifer calves, under 1 year .....	94 291	82 764
Other calves under 1 year .....	110 845	98 263
Other cattle, 1 year and over .....	120 097	106 133
<b>Total meat cattle</b> .....	<b>626 253</b>	<b>557 927</b>
<b>Total cattle and calves for all purposes</b> .....	<b>818 831</b>	<b>733 263</b>

The geographical distribution of holdings with cattle is shown below:

**Distribution of Cattle in Statistical Divisions, 31 March 1978**

Statistical division or sub-division	Number of establishments with cattle	Total dairy cattle (a)	Total beef cattle (b)	Total cattle
Hobart and Southern .....	1 356	14 233	127 007	141 240
Northern—				
Tamar .....	1 239	41 267	118 597	159 864
North Eastern .....	643	21 019	133 781	154 800
Total .....	1 882	62 286	252 378	314 664
Mersey-Lyell—				
North Western .....	2 183	98 817	177 103	275 920
Western .....	7	—	1 439	1 439
Total .....	2 190	98 817	178 542	277 359
Total Tasmania .....	5 428	175 336	557 927	733 263

(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 change in classification of cattle (outlined above) 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 Establishments at 31 March, Tasmania**

Year	Number of establishments 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
1978 (b) .....	5 428	12 488	404 923	209 719	106 133	733 263

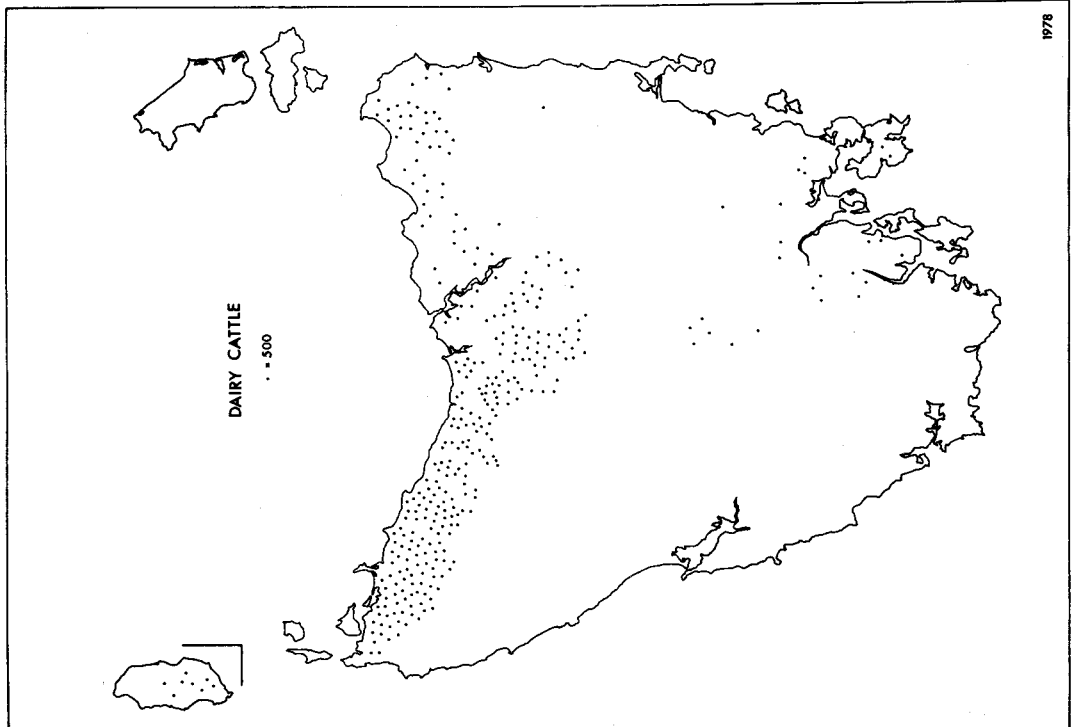
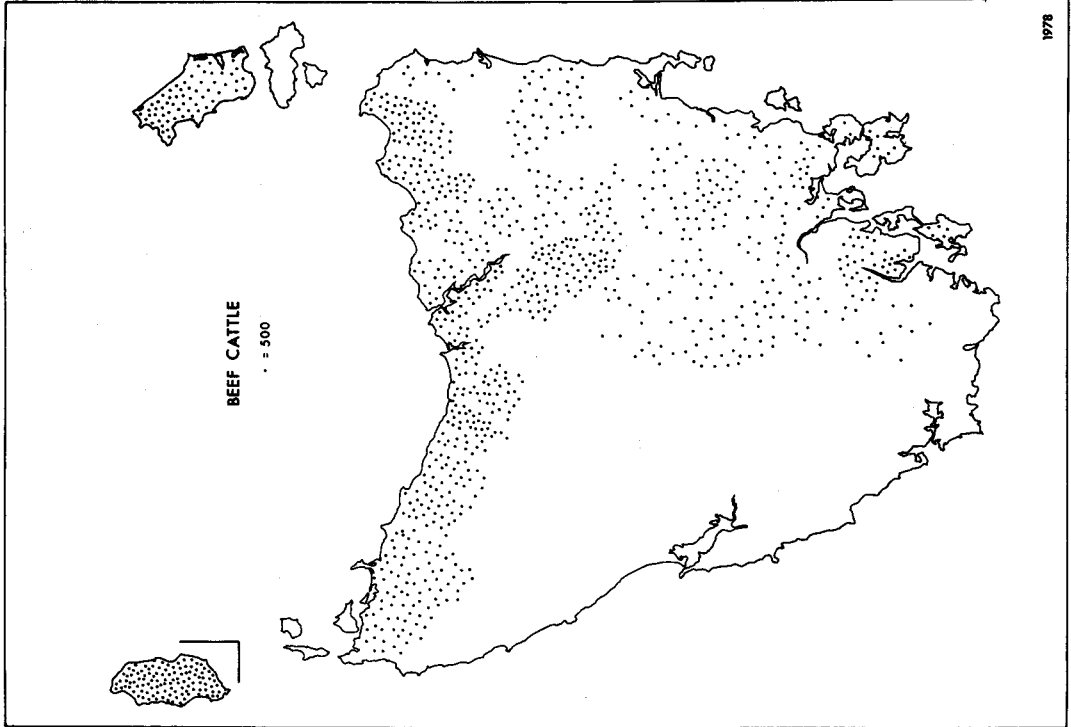
(a) The specification of 'Bull calves (under 1 year)' from 1963-64 may affect the comparability of the series.

(b) Not directly comparable with earlier years; see definition of 'Agricultural Establishment', given earlier.

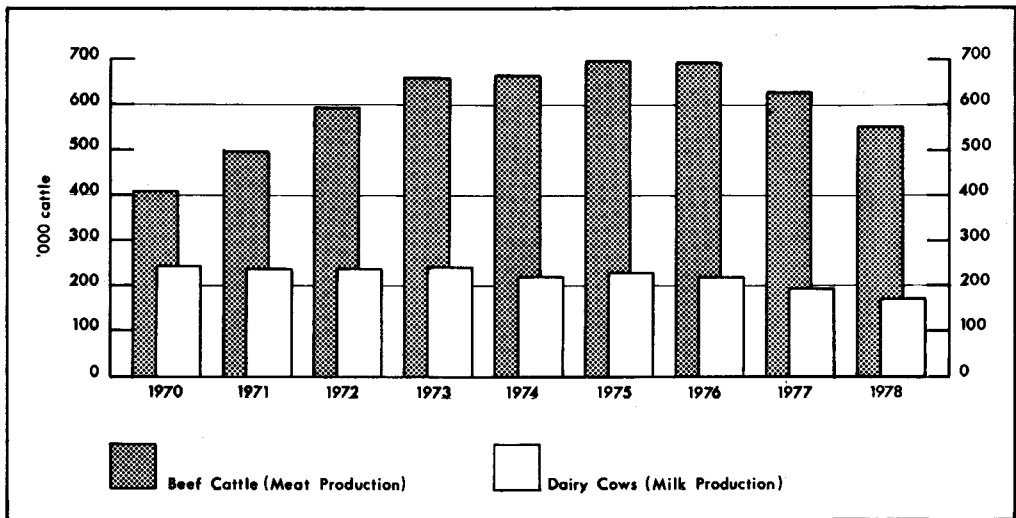
**Breeds of Cattle**

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.



Numbers of Beef and Dairy Cattle, Tasmania, 1970-1978  
(Cattle Mainly for Meat Production and Cattle Mainly for Milk Production)



### Sheep

The table below shows sheep numbers on agricultural establishments for recent years:

Sheep on Agricultural Establishments, at 31 March, Tasmania  
('000)

Year	Sheep	Year	Sheep	Year	Sheep	Year	Sheep
1967	4 321.2	1970	4 559.6	1973	3 824.4	1976 (a)	4 248.9
1968	4 428.2	1971	4 517.2	1974	3 963.8	1977 (a)	4 014.6
1969	4 394.5	1972	4 236.7	1975	4 136.2	1978	3 969.3

(a) Not directly comparable with earlier years; see definition of 'Agricultural Establishment' given earlier.

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 1978 and Lambing 1977 Season, by Statistical Division

Particulars	Hobart and Southern	Northern			Mersey-Lyell			Total Tasmania
		Tamar (a)	North Eastern (a)	Total	North Western (a)	Western (a)	Total	
Establishments with sheep.....no.....	1 004	928	429	1 357	764	2	766	3 127
Sheep ('000)—								
Rams (1 year and over)	18.9	14.3	11.8	26.2	3.6	—	3.6	48.7
Breeding ewes.....	738.1	485.8	421.5	907.3	134.5	—	134.5	1 780.0
Other ewes (1 year and over).....	80.5	39.8	47.3	87.1	6.5	—	6.5	1 740.0

Description of Sheep at 31 March 1978 and Lambing 1977 Season, by Statistical Division—*continued*

Particulars	Hobart and Southern	Northern			Mersey-Lyell			Total Tasmania
		Tamar (a)	North Eastern (a)	Total	North Western (a)	Western (a)	Total	
Sheep ('000) <i>continued</i> —								
Wethers (1 year and over) .....	481.6	165.5	248.4	413.9	27.0	—	27.0	922.5
Lambs and hoggets (under 1 year) .....	457.9	253.2	260.1	513.2	72.9	—	72.9	1 044.1
Total .....	1 777.0	958.5	989.2	1 947.7	244.5	—	244.5	3 969.3
Lambing, 1977 season—								
Ewes mated .....	696.9	455.0	399.1	854.1	121.0	—	121.0	1 672.1
Lambs marked .....	641.9	414.3	356.5	770.8	116.1	—	116.1	1 528.9
Marking ratio (b) ... (%)	92.1	91.1	89.3	90.3	96.0	—	96.0	91.4

(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 and gives details of lambing on a State basis:

## Description of sheep at 31 March and Details of Lambing Summary, Tasmania

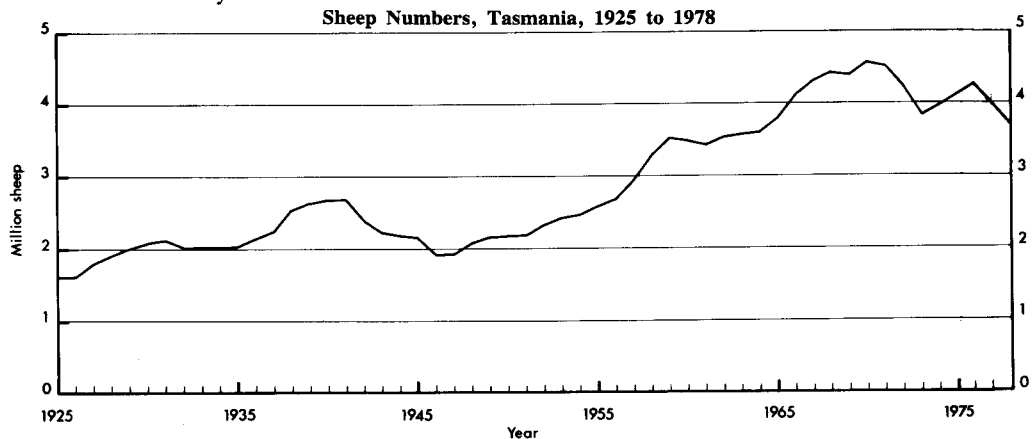
Particulars	1968	1973	1974	1975	1976(a)	1977(a)	1978
Establishments with sheep .....	5 294	3 973	3 784	3 844	3 579	3 062	3 127
Sheep ('000)—							
Rams (1 year and over) .....	49	48	47	50	50	48	49
Breeding ewes .....	1 954	1 711	1 788	1 846	1 835	1 793	1 780
Other ewes (1 year and over) .....	203	212	194	209	225	185	174
Wethers (1 year and over) .....	1 072	895	937	998	1 057	1 007	923
Lambs and hoggets (under 1 year)	1 150	960	998	1 034	1 082	982	1 044
Total .....	4 428	3 824	3 964	4 136	4 249	4 015	3 969
Lambing (b)—							
Ewes mated .....	1 779	1 604	1 535	1 644	1 677	1 640	1 672
Lambs marked—							
Number .....	1 522	1 369	1 361	1 466	1 515	1 378	1 529
Marking ratio (c) .....	85.6	85.3	88.7	89.2	90.4	84.0	91.4

(a) Not directly comparable with earlier years; see definition of 'Agricultural Establishment' given earlier.

(b) In the season preceding the year named.

(c) 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 1970s:



*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-breeds. 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. The following table shows the main breeds of sheep (including rams) as percentages of total sheep:

Proportion of Breeds of Sheep at 31 March, Tasmania (a)  
(Per Cent)

Breed	1967	1968	1969	1970	1971	1974	1977
Polwarth .....	39.9	40.5	41.7	42.5	43.6	44.0	42.6
Corriedale .....	19.5	18.0	17.3	15.4	14.4	13.1	12.4
Merino .....	8.0	7.1	7.7	7.9	8.9	10.7	10.5
Cormo .....	—	—	—	0.5	1.0	1.9	3.0
Romney marsh .....	2.2	2.0	1.9	1.2	1.3	0.7	1.1
Other breeds (b) .....	3.0	3.0	3.3	3.5	3.9	4.4	5.4
Comebacks .....	10.5	10.7	11.1	12.6	11.8	14.8	13.9
Cross-breeds .....	17.0	18.7	17.0	16.4	15.0	10.4	11.1
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, 1976 or 1978.

(b) Recognised breeds of sheep which individually, in 1977, accounted for about one per cent or less of all sheep; includes cheviot, dorset horn, border leicester, English leicester, ryeland, southdown, suffolk, lincoln, poll dorset, shropshire, hampshire down and perendale.

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:

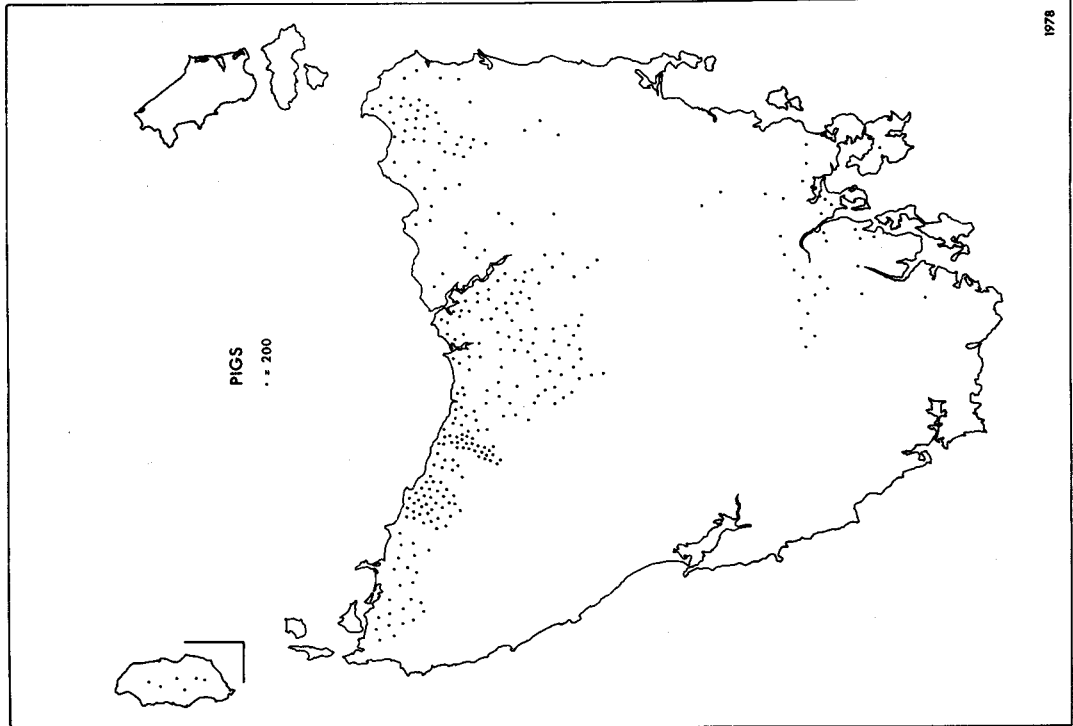
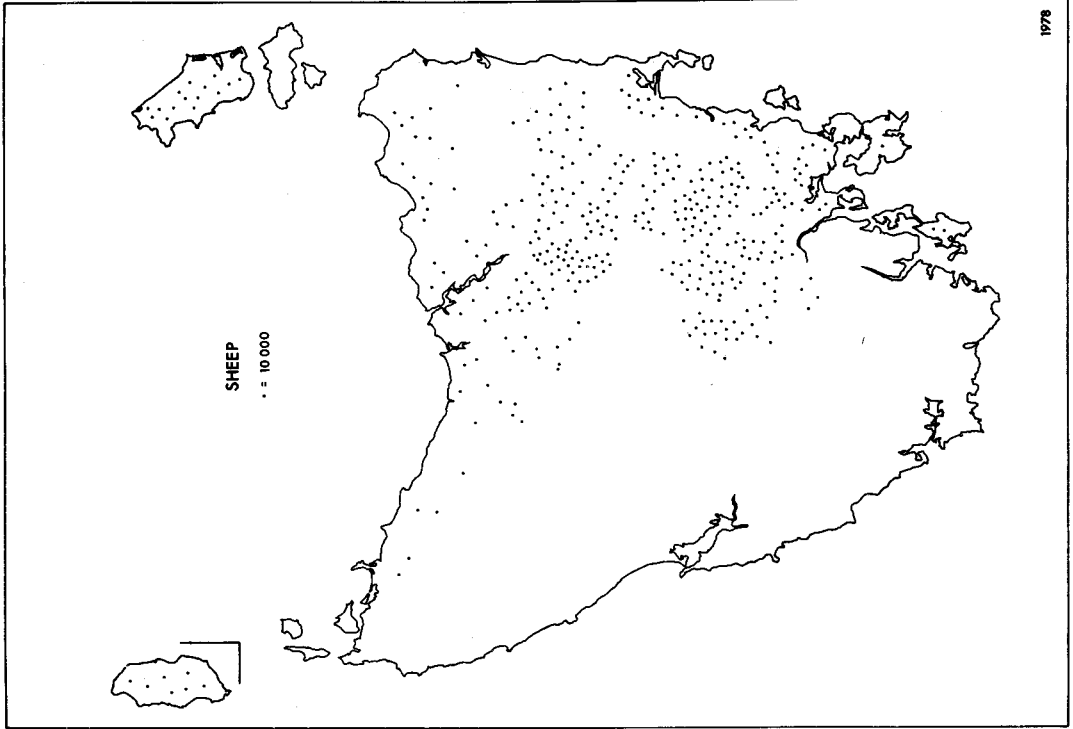
Distribution of Pigs by Statistical Division at 31 March 1978

Particulars	Hobart and Southern	Northern			Mersey-Lyell			Total Tasmania
		Tamar (a)	North Eastern (a)	Total	North Western (a)	Western (a)	Total	
Establishments with pigs (no.)	188	245	102	347	314	2	316	851
Pig numbers—								
Boars .....	160	284	122	406	358	2	360	926
Breeding								
sows .....	1 429	2 356	1 340	3 696	3 857	18	3 875	9 000
Other (b) .....	7 382	13 717	9 248	22 965	23 906	57	23 963	54 310
Total pigs .....	8 971	16 357	10 710	27 067	28 121	77	28 198	64 236

(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 meaningful 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 from 1955:

**Pigs on Agricultural Establishments at 31 March, Tasmania: Summary**

Year	Establishments 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
1978 (b).....	851	926	9 000	54 310	64 236

(a) Includes baconers and porkers, backfatters, stores, weaners, suckers and slips.

(b) Not directly comparable with earlier years; see definition of 'Agricultural Establishment', given earlier.

### 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 recent years 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
1972-73.....	15 973	2 180	18 154	1975-76.....	17 962	1 989	19 951
1973-74.....	16 021	1 528	17 549	1976-77.....	16 174	1 935	18 109
1974-75.....	17 147	1 741	18 888	1977-78.....	16 950	1 974	18 924

(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 6 years.

Total wool production of 21 861 000 kilograms in 1969-70 is 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
1968-69 .....	15 799	1971-72 .....	20 413	1974-75 .....	15 947
1969-70 .....	16 513	1972-73 .....	17 735	1975-76 .....	17 436
1970-71 .....	17 146	1973-74 .....	16 963	1976-77 .....	r 16 204

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 is excluded from the above table.

*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
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
1976-77 .....	3 492	737	4 229	15 247	927	16 174	4.37	1.26	3.82
1977-78 .....	3 483	759	4 242	15 947	1 003	16 950	4.58	1.32	4.00

(a) Includes crutchings from sheep.

In 1977-78, 44 per cent of the shorn wool produced in Tasmania came from the Hobart and Southern Statistical Divisions combined; the Tamar and North-Eastern Sub-divisions contributed 23 and 28 per cent of the total, respectively.

The next table shows the geographical distribution of shorn wool production:

**Shearing and Shorn Wool Obtained (a) by Statistical Division, 1977-78**

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 .....	1 621	790	903	1 693	169	-	169	3 483
Lambs .....	275	205	217	422	62	-	62	759

## Shearing and Shorn Wool Obtained (a) by Statistical Division, 1977-78—continued

Particulars	Hobart and Southern	Northern			Mersey-Lyell			Total Tasmania
		Tamar (b)	North Eastern (b)	Total	North Western (b)	Western (b)	Total	
SHORN WOOL OBTAINED (tonnes)								
From—Sheep .....	7 222	3 561	4 413	7 974	751	—	751	15 947
Lambs .....	309	285	309	594	100	—	100	1 003
Total .....	7 531	3 847	4 722	8 568	851	—	851	16 950
AVERAGE YIELD (c) (kg)								
Sheep .....	4.45	4.51	4.89	4.71	4.45	—	4.45	4.58
Lambs .....	1.13	1.39	1.42	1.41	1.62	—	1.62	1.32

(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. Prior to the devaluation of the Australian dollar in November 1976, the floor price was set at 275 cents for the 1976-77 season. After the devaluation the price was raised to 284 cents and remained at this level for 1977-78. In 1978-79 it was increased to 298 cents per kilogram.

## 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
1949-50 .....	131	9 530	1973-74 .....	192	31 973
1959-60 .....	114	16 508	1974-75 .....	137	23 890
1964-65 .....	109	19 050	1975-76 .....	157	28 420
1969-70 .....	88	18 081	1976-77 .....	210	34 993
1972-73 .....	229	(b) 37 481	1977-78 .....	209	36 908

(a) Includes value of shorn wool, fellmongered and dead wool and estimated value of wool exported on skins.

(b) Includes Government wool deficiency payment of \$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	
	1976-77	1977-78	1976-77	1977-78
Finer than 18 .....	0.7	0.3	0.1	—
18 .....	2.5	1.6	1.4	1.1
19 .....	3.0	2.9	5.2	5.5
20 .....	1.6	1.6	9.7	11.9
21 .....	12.0	11.2	20.4	22.2
22 .....	15.5	14.3	21.8	20.3
23 .....	12.8	12.9	15.4	12.9
24 .....	12.1	12.4	6.9	6.1
25 .....	11.2	11.7	3.8	3.4
26 .....	5.1	6.0	3.4	3.0
27 .....	6.9	6.5	3.1	3.0
28 .....	3.9	3.8	2.4	2.7
29 .....	0.3	0.3	0.2	0.2
30 .....	5.9	7.6	3.0	3.8
32 .....	0.2	0.2	0.1	0.1
33 .....	2.0	2.4	0.9	1.3
34 .....	0.1	0.1	—	—
35 .....	0.5	1.0	0.2	0.3
36 .....	—	—	—	—
38 .....	0.7	0.8	0.3	0.3
Coarser than 38 .....	0.2	0.3	—	0.1
Oddments .....	2.7	2.1	1.8	1.8
Total .....	100.0	100.0	100.0	100.0

(a) A micron equals one millionth of a metre; the measurement relates to fibre diameter.

While the proportion of fine wool is comparatively low in the Tasmanian clip (since the State is historically and climatically a producer of cross-bred wool), growers offering fine wool sell a high proportion of superfine merino wool at premium prices.

#### Clean Wool Yield

In 1977-78 the Tasmanian proportion of auctioned greasy wool classified as 'finer than 25 mean microns' was 57 per cent, whereas the corresponding Australian proportion was 80 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): 1973-74, 191.82 (181.16); 1974-75, 137.46 (126.99); 1975-76, 156.57 (143.25); 1976-77, 210.00 (182.73); 1977-78, 208.62 (187.14). 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 next table which suggests that Tasmanian wool is freer from dust and vegetable matter than wool produced in 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)						
	1967-68	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78
New South Wales .....	55-91	57-64	58-33	60-54	61-06	60-78	61-28
Victoria .....	58-70	59-29	60-24	61-55	62-02	61-14	62-01
Queensland .....	54-68	54-89	55-96	59-04	58-91	58-68	59-46
South Australia .....	52-53	54-01	56-77	58-76	57-90	56-70	56-88
Western Australia .....	55-01	52-29	54-26	57-69	58-42	57-50	56-91
<b>Tasmania .....</b>	<b>62-14</b>	<b>63-14</b>	<b>65-05</b>	<b>66-21</b>	<b>67-01</b>	<b>66-86</b>	<b>67-42</b>
Australia .....	56-13	56-43	58-08	59-93	60-18	59-21	59-93

(a) Wool from other Australian states is not sold at Tasmanian auctions so, for Tasmania, 'State of sale' and 'State or origin' are virtually the same except that some wool from Tasmania (mainly King and Flinders Islands) is sold at Victorian auctions.

### Meat

#### Slaughtering

The following table summarises slaughtering activity for recent years:

**Stock Slaughtered (a) for Human Consumption, Tasmania: Summary**  
(\*000)

Year	Cattle and calves	Sheep and lambs	Pigs	Year	Cattle and calves	Sheep and lambs	Pigs
1972-73 .....	261	1 278	152	1975-76 .....	348	1 069	94
1973-74 .....	259	825	116	1976-77 .....	358	993	100
1974-75 .....	262	980	101	1977-78 .....	362	1 037	92

(a) In all registered slaughtering establishments and on farms.

To fully record the level of meat production for human consumption, statistics are obtained in respect of operations in abattoirs, other slaughtering establishments and factories, and slaughtering on farms.

The next table analyses the items 'Cattle and calves' and 'Sheep and lambs':

**Stock Slaughtered (a) for Human Consumption, Tasmania**  
(\*000)

Year	Cattle and calves				Sheep and lambs			Pigs
	Bulls, bullocks & steers	Cows and heifers	Calves	Total	Sheep	Lambs	Total	
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 .....	164	119	65	348	455	614	1 069	94
1976-77 .....	145	140	73	358	469	524	993	100
1977-78 (b) .....	161	133	69	362	387	650	1 037	92

(a) In all registered slaughtering establishments and on farms.

(b) In 1977-78 the on-farm components of total livestock slaughtered were: cattle and calves, 5 644; sheep and lambs, 58 633; and pigs, 1 114.

#### Meat Production

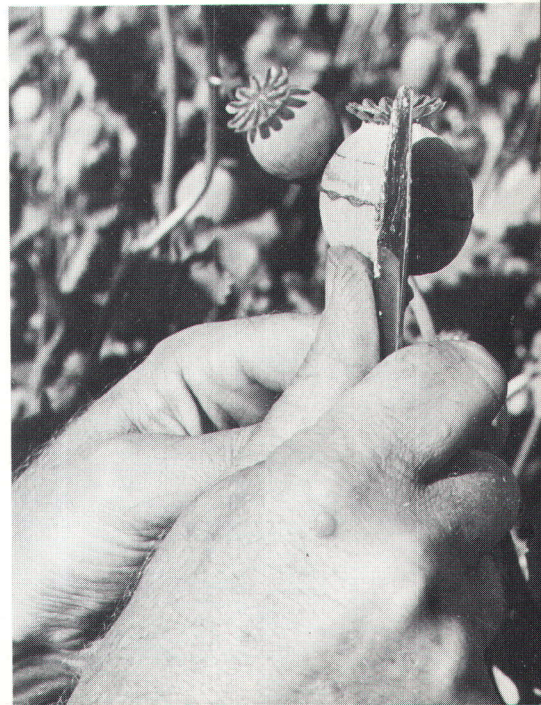
Statistics of actual carcass weight rather than numbers of stock slaughtered provide a more precise measure of actual meat production and annual trends. The necessary weight





*Oil poppies*

[Tasmanian Film Corporation]







*Sheep muster in the Midlands*

*[Tasmanian Film Corporation]*

*Sheep sale at Oatlands*





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 covering the same field as the previous tables on slaughtering are shown in the following table:

**Production of Meat, Tasmania**  
(**'000 tonnes—Carcass Weight**)

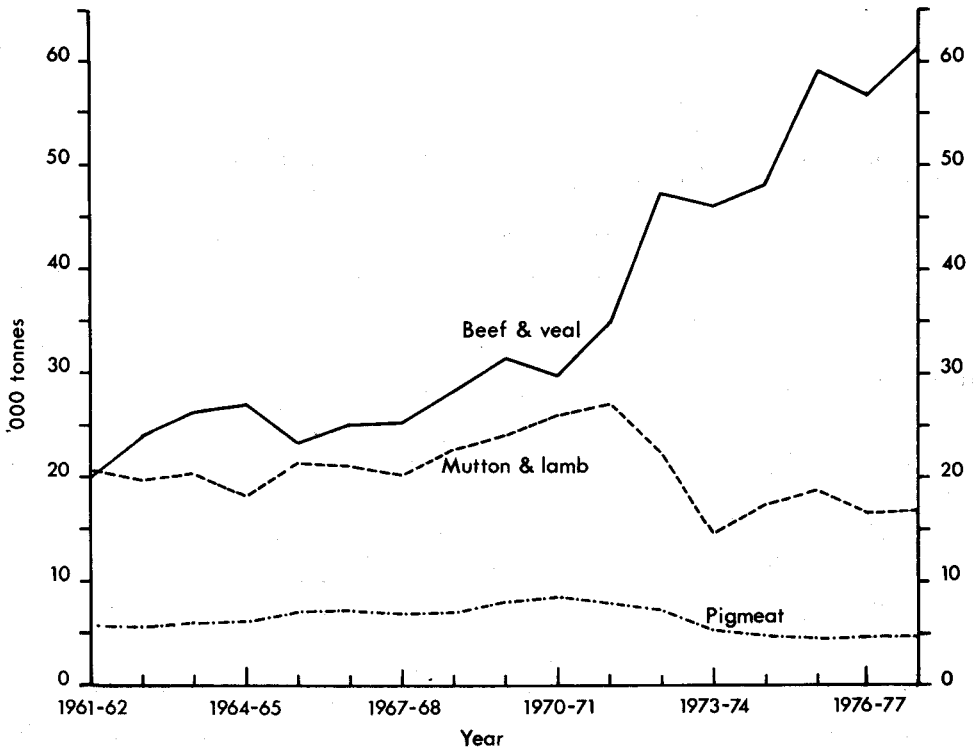
Year	Beef and veal			Mutton and lamb			Pigmeat (a)	Total meat
	Beef	Veal	Total	Mutton	Lamb	Total		
1972-73 .....	46.9	0.5	47.5	12.2	10.3	22.5	7.4	77.4
1973-74 .....	45.7	0.6	46.3	6.7	8.1	14.8	5.5	66.5
1974-75 .....	47.6	0.7	48.3	8.0	9.5	17.5	4.9	70.7
1975-76 .....	57.9	1.2	59.2	9.0	9.8	18.8	4.5	82.5
1976-77 .....	55.8	1.6	57.4	8.5	8.2	16.7	4.9	79.0
1977-78 .....	59.8	1.6	61.3	7.0	9.8	16.9	4.8	83.0

(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 weight cannot be directly compared with production weight since the former includes boneless meat and meat which has had its fat content reduced, while the latter is in terms of carcass weight.

**Meat Production (Carcass Weight), Tasmania**



**Exports of Meat, Tasmania, 1977-78**  
(Tonnes)

Destination	Beef and veal	Lamb	Mutton	Pork	Offal (edible)	Bacon and ham
Interstate .....	1 361	1 392	204	212	13	27
Overseas .....	14 359	865	2 120	6	1 131	-
<b>Total .....</b>	<b>15 720</b>	<b>2 257</b>	<b>2 324</b>	<b>218</b>	<b>1 144</b>	<b>27</b>

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	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78
Beef and veal .....	44.2	47.0	37.7	43.2	r 48.3	49.6
Mutton .....	53.7	40.5	55.0	67.8	r 74.1	69.4

(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 Export Works

At 30 June 1978 there were eight establishments in Tasmania licensed to export meat. These were located at Launceston (two), Hobart, Longford, Smithton, Devonport, Somerset and King Island.

### Bacon and Ham

In the tables on meat production, the product from pig slaughtering has been referred to as 'pigmeat'. A large proportion of 'pigmeat' is converted into ham and bacon in Tasmania. 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 1944-45:

**Production of Bacon and Ham, Tasmania**  
(Tonnes)

Year	Bacon and ham			Year	Bacon and ham		
	Factory (a)	Farm	Total (b)		Factory (a)	Farm	Total (b)
1944-45 .....	1 140	69	1 209	1972-73 (c) ..	1 902	n.a.	1 902
1949-50 .....	963	44	1 007	1973-74 .....	1 931	n.a.	1 931
1954-55 .....	1 008	36	1 044	1974-75 .....	2 169	n.a.	2 169
1959-60 .....	1 138	24	1 162	1975-76 .....	2 356	n.a.	2 356
1964-65 .....	1 177	13	1 190	1976-77 .....	2 434	n.a.	2 434
1969-70 .....	<u>1 403</u>	n.a.	<u>1 403</u>	1977-78 .....	2 505	n.a.	2 505

(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 1977-78 Tasmania's production of milk was 381 million litres which was about nearly 10 per cent lower than the level in 1976-77.

The following table summarises milk production and utilisation since 1964-65:

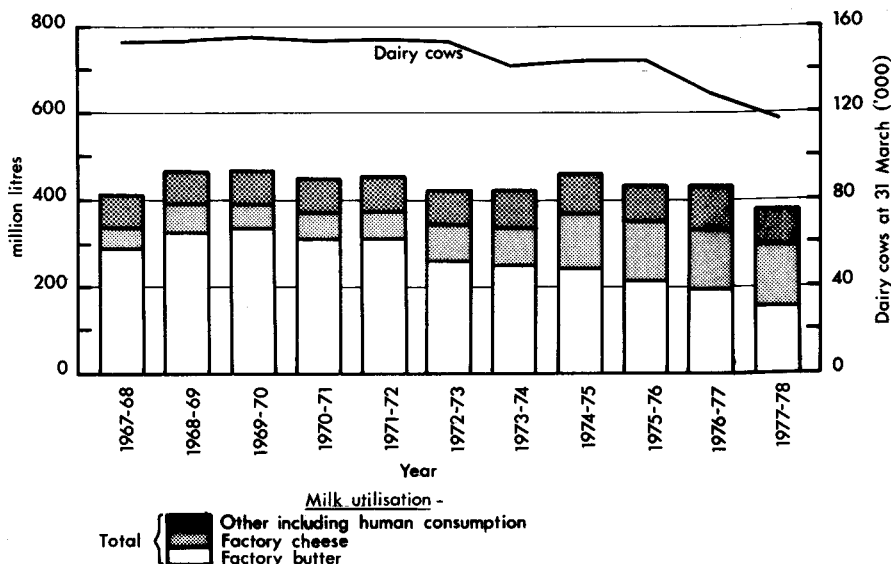
Milk Production and Milk Utilisation, Tasmania: Summary

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
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
1976-77	197 244	131 333	94 094	422 671	128 297	3 053
1977-78	159 903	138 612	82 183	380 697	117 829	3 037

(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, Tasmania



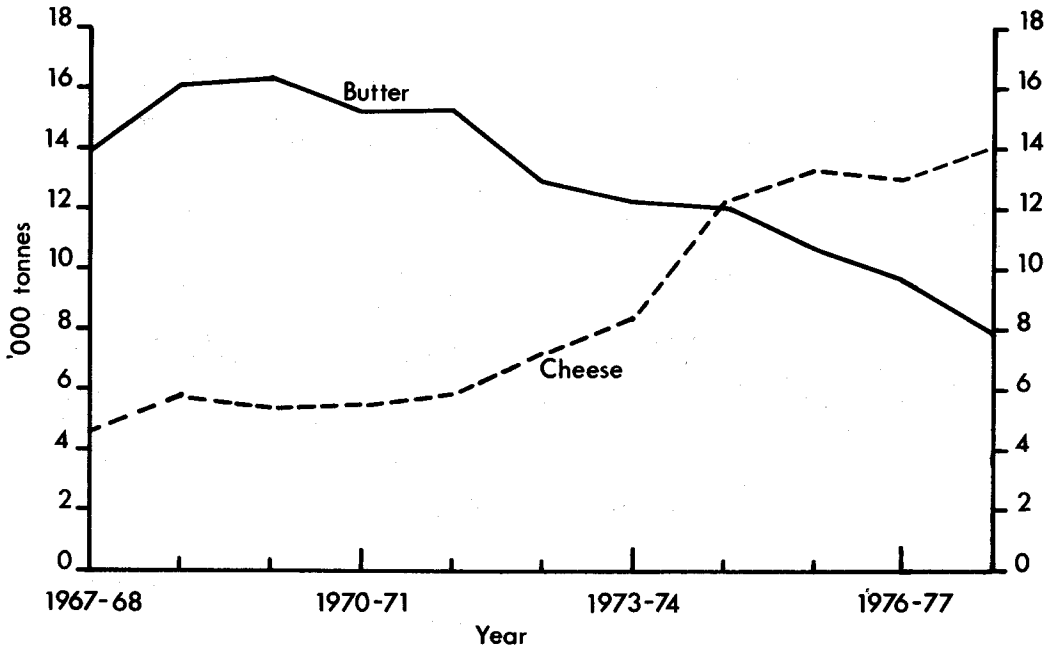
The following table shows details of factory production of butter and cheese for recent years:

Factory Production of Butter and Cheese (Tonnes)

Year	Butter (a)	Cheese	Year	Butter (a)	Cheese
1972-73	12 947	7 218	1975-76	10 762	13 332
1973-74	12 398	8 475	1976-77	9 707	13 156
1974-75	12 196	12 387	1977-78	7 910	13 903

(a) Includes butter equivalent of butter oil.

## Butter and Cheese Production, Tasmania

*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 1977-78 the State's average butter consumption of 7.7 kg per head of population was still well above the Australian figure of about 5.0 kg per person.

*Disposal of Butter*

Tasmania is a butter exporting state. The quantity of butter exported interstate and overseas varies from year to year depending on seasonal and market conditions.

Details of production, exports and consumption of butter within Tasmania for recent years are given in the following table:

**Butter (a): Production, Exports and Local Consumption, Tasmania (Tonnes)**

Year	Production (factory)	Net exports (b)	Local consumption (c)	Year	Production (factory)	Net exports (b)	Local consumption (c)
1972-73 .....	12 947	7 514	4 452	1975-76 .....	10 762	9 955	3 532
1973-74 .....	12 398	8 275	4 176	1976-77 .....	9 707	4 387	3 068
1974-75 .....	12 196	5 071	4 052	1977-78 .....	7 910	6 385	3 183

(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 beekeeping statistics from 1972-73, is restricted to details from apiarists with 40 or more hives:

**Bee-farming, Tasmania**

Year	Apiarists	Hives	Honey produced		Beeswax produced	
			Quantity	Average per productive hive	Quantity	Average per productive hive
	no.	no.	tonnes	kg	tonnes	kg
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
1976-77 .....	72	12 635	553	58.1	8.2	0.86
1977-78 .....	71	12 302	759	73.3	12.4	1.20

Of the 71 apiarists with 40 or more hives in 1977-78, 29 with 100 or more hives contributed 88.9 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. The 1977-78 season was an exceptional year for leatherwood honey with 606 tonnes produced, 65 per cent above the previous record level. It accounted for 80 per cent of total honey production compared with 37 per cent the previous year and 59 per cent in 1975-76. The following table gives details of Tasmanian exports and imports of honey:

**Production, Imports and Exports of Honey, Tasmania**  
(\*000 kg)

Year	Production (a)	Imports	Exports
1972-73 .....	388	105	220
1973-74 .....	455	123	218
1974-75 .....	574	120	244
1975-76 .....	626	133	370
1976-77 .....	553	122	367
1977-78 .....	759	56	269

(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 1968 there were 184 poultry farms with a total of 195 600 hens and laying pullets; by 1978 the number of farms had decreased to 70 with 214 200 hens and laying pullets and 421 500 other poultry. A size classification of the 70 farms in 1978 shows that 26 farms (only 37 per cent of farm numbers) possessed 88 per cent of laying stock. Thirty-seven per cent of the poultry farms had less than 500 laying birds each.

**Poultry Numbers and Egg Production, 1977-78, Tasmania  
Commercial Producers Only (a)**

Statistical division	Number of establishments with poultry	Poultry numbers at 30 June 1978			Eggs produced during year (b)
		Hens and laying pullets (c)	Other fowls	Ducks and drakes, turkeys and geese	
	no.	'000	'000	'000	'000 doz.
Hobart .....	13	66.5	68.4	-	1 019.4
Southern .....	18	55.0	271.8	-	1 015.4
Northern .....	23	66.3	52.3	n.p.	1 234.7
Mersey-Lyell .....	16	26.3	25.5	n.p.	487.5
Total Tasmania .....	70	214.2	418.0	3.5	3 757.0

(a) Relates to establishments that possessed 100 or more birds of all types at 30 June 1978.

(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), Tasmania**

Year	Number ('000)	Live weight		Dressed weight (b)	
		Total (tonnes)	Average per bird (kg)	Total (tonnes)	Average per bird (kg)
CHICKENS (c)					
1975-76 .....	1 911	3 257	1.7	2 329	1.2
1976-77 .....	2 453	4 157	1.7	3 060	1.2
1977-78 .....	2 902	4 995	1.7	3 658	1.3
OTHER FOWLS (d)					
1975-76 .....	159	368	2.3	226	1.4
1976-77 .....	73	165	2.3	112	1.5
1977-78 .....	79	165	2.1	108	1.4
DUCKS AND DRAKES, TURKEYS AND GEESE					
1975-76 .....	4	13	3.4	9	2.4
1976-77 .....	6	14	2.5	9	1.6
1977-78 .....	7	19	2.6	13	1.7

(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 1967-68 there were 75 establishments slaughtering 100 or more birds (of all types). Twelve establishments killing more than 5 000 birds each a year slaughtered a total of 1 006 000 birds.

By 1977-78, however, there were only 22 establishments killing 100 or more birds, five of which slaughtered over 20 000 birds each and a total of 2 953 000 birds. The dressed carcass weight of birds produced in those establishments slaughtering over 20 000 birds was 3 732 000 kg; for all establishments in the following table, the total was 3 779 000 kg. In 1967-68 the over 20 000 birds size group accounted for 89.5 per cent of the number of birds slaughtered and in 1977-78, 98.8 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, Tasmania, 1977-78

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	Propor- tion of total
		'000	'000	'000	'000	per cent
100- 500 .....	2	-	-	-	-	-
501- 5 000 .....	9	9	5	-	14	0.5
5 001-20 000 .....	2	-	21	-	21	0.7
Over 20 000 .....	5	2 893	53	7	2 953	98.8
Total .....	18	2 902	79	7	2 989	100.0

(a) Classified according to number of birds of all kinds slaughtered.

(b) Includes broilers, fryers and roasters.

(c) Hens, roosters, etc.

## TECHNICAL ASPECTS OF AGRICULTURAL INDUSTRY

### Area of Land Irrigated

#### Introduction

In 1977-78 there were only 29 993 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 1 481 farms reported the use of irrigation in 1977-78, an increase on the number during 1976-77 (1 247). 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, Tasmania  
(Hectares)

Year	Crops (a)				Pasture	Total
	Fruit	Potatoes	Other vegetables	Other crops		
1972-73 .....	3 301	2 313	4 841	2 641	14 551	27 647
1973-74 .....	3 014	2 167	3 702	1 704	12 789	23 376
1974-75 .....	2 605	3 105	4 271	1 582	12 123	23 686
1975-76 .....	2 158	2 720	4 627	1 729	11 071	22 305
1976-77 .....	1 944	2 938	4 955	1 963	10 463	22 263
1977-78 .....	2 002	2 985	5 918	4 940	14 148	29 993

(a) Excludes pasture crops which are included with 'Pasture'.

*Irrigation Methods and Sources of Water*

The main method of irrigation is by 'spray' which accounted for 76.3 per cent of the total area irrigated in 1977-78. The following table gives details of the areas of crops, etc. irrigated and the methods of irrigation used:

**Methods of Irrigation, Tasmania, 1977-78**  
(Hectares)

Crop or pasture irrigated	Method				Total
	Spray	Furrows	Flood	Other and multiple methods (a)	
Crop—					
Fruit .....	1 698	28	69	207	2 002
Potatoes .....	2 874	35	2	74	2 985
Other vegetables .....	5 812	39	—	67	5 918
Other crops (b) .....	4 626	143	130	41	4 940
Pasture (incl. lucerne) .....	7 863	527	5 413	345	14 148
Total .....	22 873	772	5 614	734	29 993

(a) Includes 194 hectares of fruit watered by the 'trickle' method of irrigation.

(b) Excludes pastures harvested.

Potatoes respond particularly well to irrigation. For the 1977-78 season the State average potato yield from irrigated areas was 32.9 tonnes per hectare while for non-irrigated potato crops the yield was only 14.7 tonnes per hectare. The next table highlights the importance of irrigation in the potato growing industry:

**Potatoes Irrigated, Tasmania**

Particulars	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78
Total area of potatoes planted (hectares) .....	3 330	3 127	4 143	3 354	3 705	3 592
Area irrigated—						
Total (hectares) .....	2 313	2 166	3 105	2 720	2 938	2 985
As proportion of area planted (per cent) .....	69.5	69.3	74.9	81.1	79.3	83.1

**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 94 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 72 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 1979 was approximately 7 143 megalitres or 98 megalitres per holding. The average size of holdings was 137 hectares. Water charges within the Irrigation District for the 1978-79 season were: \$4 per megalitre for Irrigation Rights plus



\$3.50 per megalitre for each megalitre of water used. The charge to irrigators outside the Irrigation District was \$10.50 per megalitre. The Hydro-Electric Commission charges the scheme \$1.30 per megalitre of water used by the irrigators.

Irrigation water used during the 1978-79 season amounted to 3 187 megalitres. The total area irrigated was 1 709 hectares, the main crops irrigated being: pasture, 1 251 ha; green peas, 262 ha; cereals, 133 ha; and oil poppies, 21 ha. Under full development 3 000-4 000 hectares could be irrigated annually.

### 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.

### Tasmanian Herd Improvement Organisation

In accordance with the *Herd Improvement Act, 1977*, the Artificial Breeding Board was replaced by the Tasmanian Herd Improvement Organisation in July 1977. This new Organisation took over the provision and promotion of herd improvement services, including both artificial breeding and herd recording.

In Tasmania most artificial breeding activities are undertaken by the Tasmanian Herd Improvement Organisation 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 organisations. Approximately 80 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 Tasmanian Herd Improvement Organisation 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.

Since July 1977, a young bull breeding program has been operating in Tasmania under the commercial name 'Gold Star Breeding Program'. This program involves the extensive use of semen from young bulls between 12-24 months of age and the subsequent selection of the top bulls utilized in these programs as 'Super Sires' for the breeding of future young bull teams. It is calculated that the new program has the potential to achieve annual genetic gain in the order of from two to three per cent.

Owing to different management practices, artificial breeding has not been used so extensively in beef herds.

The following table gives details of the total number of cows mated by artificial breeding in Tasmania and the number of inseminations carried out by the Tasmanian Herd Improvement Organisation (previously the Artificial Breeding Board) for recent years:

Artificial Breeding: Services and Inseminations, Tasmania

Year	Cows served (a)	Total inseminations (b)	Non-return rate for commercial service (c) (per cent)
1973-74	57 751	69 728	72.6
1974-75	52 058	56 763	74.5
1975-76	r 45 970	56 655	n.a.
1976-77	r 31 871	35 656	n.a.
1977-78	36 772	44 295	n.a.
1978-79	(d) 36 216	n.a.	n.a.

(a) Includes cows inseminated by all licensed operators—commercial organisations and owner-operators.

(b) Inseminations carried out by Tasmanian Herd Improvement Organisation staff, only.

(c) Percentage of cows not returning for further service within 90-120 days following first service.

(d) Includes 30 114 cows served by the Tasmanian Herd Improvement Organisation.

## 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*

The quantity of artificial fertilisers used in recent years on Tasmanian farms has dropped markedly. The removal of the government bounty on superphosphate in December 1974, a substantial increase in its price and the need to reduce costs because of low prices for many farm products all contributed to a sharp drop in usage. The reintroduction of the bounty in July 1977 has assisted recovery and resulted in increased usage but the quantity applied is still substantially below the pre 1974-75 level.

Changes in government policy on bounties 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 of artificial fertilisers (excluding straight nitrogenous types) according to the quantity used on establishments.

The table shows that establishments using over 50 tonnes accounted for 47.1 per cent of the quantity used in 1977-78 but represented only 9.7 per cent of the total number of establishments that used artificial fertiliser (other than straight nitrogenous types).

**Rural Establishments Classified According to the Quantity of Artificial Fertiliser (Other than Straight Nitrogenous Types) Used, Tasmania, 1977-78**

Particulars	Size category (tonnes used)			
	Up to 10	Over 10 and up to 50	Over 50	Total
Number of establishments .....	2 044	1 834	418	4 296
Percentage (a) .....	47.6	42.7	9.7	100.0
Quantity used (tonnes) (b) .....	10 438	42 683	47 235	100 356
Percentage (c) .....	10.4	42.5	47.1	100.0

(a) Of total establishments using fertilisers.

(b) Comprises 75 578 tonnes of superphosphate (including superphosphate with trace elements) and 24 778 tonnes of other types and mixtures.

(c) Of total fertiliser used.

The following table shows the amount of all types of artificial fertiliser used, by the type of crop, for recent years:

**Artificial Fertilisers Used, Tasmania**

Particulars	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78
<b>Vegetables (a)—</b>						
Area fertilised .....	ha	ha	ha	ha	ha	ha
Fertiliser used—Total .....	t	t	t	t	t	t
Per hectare .....	t	t	t	t	t	t
<b>Fruit—</b>						
Area fertilised .....	ha	ha	ha	ha	ha	ha
Fertiliser used—Total .....	t	t	t	t	t	t
Per hectare .....	t	t	t	t	t	t

Artificial Fertilisers Used, Tasmania—continued

Particulars	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78
Other crops (b)—						
Area fertilised . . . . . ha	47 916	42 158	35 521	32 213	35 589	40 679
Fertiliser used—Total . . . . . t	12 460	11 678	9 679	9 229	10 738	12 794
Per hectare . . . . . t	0.26	0.28	0.27	0.29	0.30	0.31
Pastures (b)—						
Area fertilised . . . . . ha	602 991	724 104	510 594	244 284	343 171	429 183
Fertiliser used—Total . . . . . t	131 323	156 293	102 390	44 386	60 571	75 249
Per hectare . . . . . t	0.22	0.22	0.20	0.18	0.18	0.18
Total usage—						
Area fertilised . . . . . ha	665 299	779 619	559 515	289 425	392 763	483 297
Fertiliser used . . . . . t	156 558	180 310	124 861	65 509	84 624	101 935

(a) Vegetables for human consumption only.

(b) 'Pastures' includes lucerne.

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, 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 1974-75 to 1977-78 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' (Cat. No. 7507.0).

Financial Statistics, Agricultural Enterprises (a)  
(\$ million)

Item (b)	1974-75	r 1975-76	r 1976-77	1977-78
Sales from crops . . . . .	33.0	30.2	35.1	39.2
Sales from livestock . . . . .	44.4	36.3	43.8	57.6
Sales from livestock products . . . . .	50.5	57.3	57.7	65.1
Turnover . . . . .	136.2	130.0	144.1	169.9
Purchases and selected expenses . . . . .	71.3	65.2	67.8	82.4
Value added . . . . .	67.9	66.6	77.9	87.2
Adjusted value added . . . . .	59.1	60.2	69.2	77.4
Gross operating surplus . . . . .	40.2	38.6	52.0	59.2
Cash operating surplus . . . . .	30.3	26.3	41.7	49.7
Total net capital expenditure . . . . .	16.8	15.5	18.2	19.4
Gross indebtedness . . . . .	105.8	115.9	100.8	101.8

(a) These figures are estimates based on a sample and are therefore subject to sampling errors. 'Standard errors' indicating the reliability of each item are included in the Canberra Office of the Bureau publication 'Agricultural Sector, Part IV, Financial Statistics' (Cat. No. 7507.0).

(b) See the section 'Economic Censuses and Surveys' in Chapter 18 for definitions.

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.

### TASMANIAN DEPARTMENT OF AGRICULTURE

The functions of the Department of Agriculture are broadly three fold: regulation, extension or advice, and research.

The regulatory function is the administration of laws relating to agricultural production and the protection of the health of livestock and crops. It includes the operation of port inspection and quarantine facilities and responsibility for the development of policy and continuing review of the Acts and Regulations. Specialist officers in the Department report on aspects of Tasmanian agriculture to parliamentary or other commissions and inquiries.

In the performance of its extension function the Department provides information and advice on all aspects of agricultural production, and encourages the adoption of proven agricultural practises to increase efficiency.

Research is undertaken at research centres in Hobart and Launceston and at five research stations in various parts of the State. This research provides the scientific basis for the extension and regulation functions.

The Department is headed by a Director, assisted by a Deputy Director. It has seven divisions each with its own chief—Animal Health, Animal Production, Plant Production, Plant Pathology, Entomology, Extension and Administration, and two resource sections—Economics and Information. The Head office is in Hobart, and there are subsidiary offices in each of 15 districts covering the whole State, including the Bass Strait islands.

Total expenditure by the Department of Agriculture from Consolidated Revenue in 1977-78 was \$10.9 million compared with \$9.4 million in 1976-77. These figures include expenditure by the Sea Fisheries Division and the Tasmanian Fisheries Development Authority. The Sea Fisheries Division was replaced by the Tasmanian Sea Fisheries Development Authority during 1977-78.

### 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; the purchase of livestock, plant and equipment; land development; structural improvements; and land irrigation. Loans are also made to professional fishermen. During the year ended 30 June 1978, loans totalling \$4.31m were approved for these purposes. Loans outstanding at 30 June 1978 totalled \$13.94m.

##### *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 downturns. 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 1978 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 \$0.87m.

#### *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*, and the *Rural Adjustment Act 1977*. 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. During the year ended 30 June 1978 four properties were purchased and allotted.

To encourage the settlement of young people on the land the *Closer Settlement Act 1957* was recently amended. This amendment extended the term of the development lease period from 5 to 10 years and in addition it was agreed to keep interest rates in the early years to a minimum. The two initiatives will enable the young settler to improve his equity in the purchased property.

#### **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 1978, 179 properties developed under this scheme were occupied by the original settlers, a further 81 settlers had exercised their option to purchase the freehold on their properties, and 219 properties had been re-allocated or were occupied by other than eligible ex-servicemen.

#### **Rural Reconstruction**

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 1971 the Tasmanian Parliament passed the *Rural Reconstruction Act 1971* which established the mechanism for administering the scheme in Tasmania.

As from 1 January, 1977 a further agreement between the Federal and State Governments provided for a Rural Adjustment Scheme.

The Agreement combines into one comprehensive scheme the various forms of rural adjustment which previously had been provided under separate legislation, namely the *Rural Reconstruction Act 1971*, *Dairy Adjustment Program Act 1975* and the *Beef Industry Assistance Act 1975*. The legislation also provided for the following new measures:

- (i) Household support for farmers on uneconomic properties while they consider whether or not to move out of farming.
- (ii) Advances for farm development to restore uneconomic properties to an economic level.
- (iii) Carry on loans to specified industries affected by market downturn. This assistance relates to the beef and dairy industries.

#### *Debt Reconstruction*

This applies to the farmer whose prospects are sound but who is unable to obtain finance to carry on and is thus in danger of losing his property or other assets. The assistance may provide for a re-arrangement of debts to allow more time for payment or for a composition of debts. Advances may be made for the repayment of all or part of the debts and for carry-on expenses, purchase of livestock and property development.

#### *Farm Build-up*

The purpose of farm build up is to encourage the amalgamation of properties which are too small to be economic under current conditions. Finance may be provided to the owner of an uneconomic property to buy adjoining land to build up his property or to a viable farmer to purchase an adjacent uneconomic farm. When an adjoining property is sold to a farmer a grant may be made at the Board's discretion to cover the value of acquired assets which are not useful to the enlarged property. Advances may be made for carry-on expenses, plant, livestock and development where not available through normal sources.

#### *Farm Improvement*

Unlike the assistance provided under the *Dairy Adjustment Program Act*, which was aimed at the restoration of a dairy farm to economic viability by improving the effective use of an existing farm without adding to its area, this assistance is extended to cover the whole farming sector. An applicant must be able to demonstrate that his property has been economic and that the proposed improvements will give sound prospects of economic viability in the long term. Farm improvement assistance may take the form of advances for plant, livestock, carry-on expenses and further property development, either for an expansion of existing production or for diversification to another form of production.

The following table summarises details of approvals under the *Rural Adjustment Act 1977* from 1 July 1977 to 30 June 1978:

**Rural Adjustment Assistance, Tasmania, 1977-78**

Type of assistance	Applications		Assistance approved
	Considered	Approved	
	no.	no.	\$'000
Farm build-up .....	19	15	471
Debt reconstruction .....	17	1	20
Farm improvements .....	7	4	36
Carry-on (beef and dairy) loans .....	11	7	29

#### **Fruitgrowing Reconstruction Scheme (Tree Removal)**

As the result of serious economic problems in the Australian fruit industry, the Federal Government, in 1972, established a scheme to assist the 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. 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. After a number of extensions the operations under the scheme have finally been terminated.

The following table summarises the operations of the scheme up to 30 June 1978:

**Fruitgrowing Reconstruction Assistance, Tasmania, to 30 June 1978**

Particulars	Assistance for—		Total
	Total removal of trees (a)	Partial removal of trees(a)	
Applications—			
Received .....	412	498	910
Rejected .....	31	17	48
Withdrawn .....	59	46	105
Approved .....	322	435	757
Approvals declined .....	39	48	87
Approvals accepted .....	283	387	670
Assistance approved .....	\$'000 1 032	1 346	2 378

(a) Apple and pear trees.

At 30 June 1978, a total of \$2 017 784 had been paid to fruitgrowers under the scheme for the removal of 3 269 hectares of orchard.

#### Further References

##### *ABS Publications Produced by the Tasmanian Office*

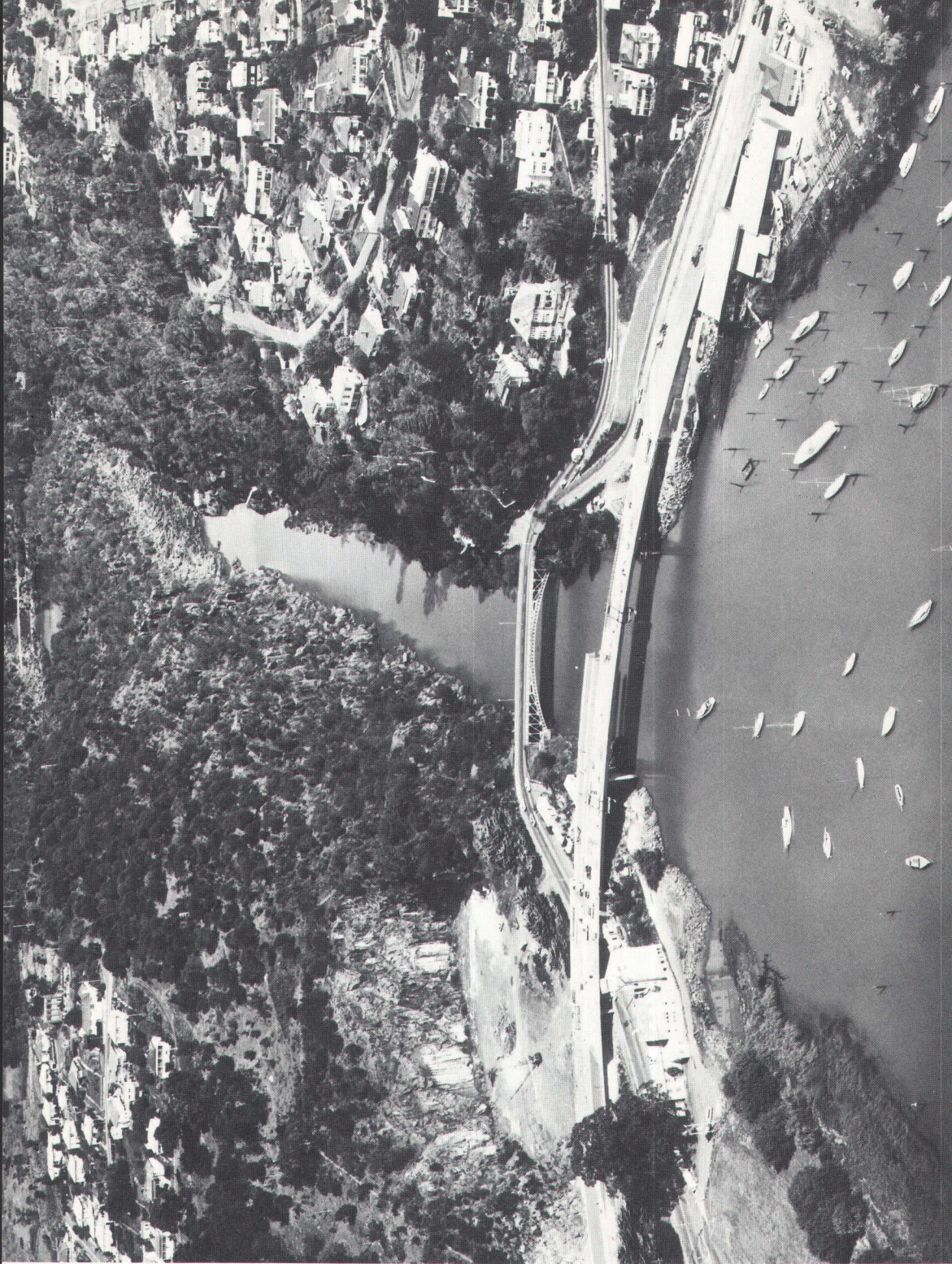
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- Agricultural Statistics, Principal Preliminary, Estimates Tasmania (7102.6) (annual; 1978-79 released 28-5-79, 3 pp.)
- Livestock Statistics (Preliminary) Tasmania (7201.6) (annual; 1977-78 released 26-5-78, 1 p.)
- Livestock Statistics (Final) Tasmania (7201.6) (annual; 1977-78 released 23-10-78, 10 pp.)
- Meat Production, Tasmania (7202.6) (annual; 1978-79 released 22-10-79, 2 pp.)
- Dairying and Dairy Products, Tasmania (7203.6) (annual; 1977-78 released 26-1-79, 6 pp.)
- Poultry Production, Tasmania (7204.6) (annual; 1977-78 released 7-11-78, 2 pp.)
- Wool Production and Disposal, Tasmania (7205.6) (annual; 1977-78 released 20-11-78, 7 pp.)
- Bee Farming, Tasmania (7206.6) (annual; 1978-79 released 1-11-79, 3 pp.)
- Crops and Pastures, Tasmania (7301.6) (annual; 1977-78 released 22-1-79, 10 pp.)
- Apples and Pears in Cool Stores, Tasmania (7302.6) (monthly, seasonal; September 1979 released 22-10-79, 2 pp.)
- Fruit Production, Tasmania (7303.6) (annual; 1977-78 released 14-3-79, 8 pp.)
- Potato Production, Tasmania (7304.6) (annual; 1977-78 released 6-3-79, 4 pp.)
- Hops, Tasmania (7305.6) (annual; 1978-79 released 25-7-79, 2 pp.)
- Number of Rural Establishments, Irrigation and Fertiliser Usage, Tasmania (7401.6) (annual; 1977-78 released 8-1-79, 7 pp.)
- Value of Agricultural Commodities Produced, Tasmania (7501.6) (annual; 1977-78 released 27-6-79, 5 pp.)

##### *ABS Publications Produced by the Canberra Office*

- Agricultural Sector, Part I—Structure of Operating Units (7102.0) (annual; 1977-78 issue released 6-6-79, 34 pp.)
- Rural Land Use, Improvements, Agricultural Machinery and Labour (7103.0) (annual; 1977-78 released 6-9-79, 18 pp.)
- Principal Agricultural Statistics: First estimates (7201.0) (annual; 1978-79 released 25-5-79, 4 pp.)
- Principal Agricultural Statistics: Second Estimates (7202.0) (annual; 1977-78 released 11-7-79, 4 pp.)
- Livestock Statistics (7203.0) (annual; March 1978 released 19-12-78, 24 pp.)
- Meat Statistics (7204.0) (monthly; August 1979 released 28-9-79, 4 pp.)
- Meat Statistics (7205.0) (quarterly; June quarter 1979 released 8-10-79, 21 pp.)
- Meat Statistics (7206.0) (annual; 1977-78 released 7-2-79, 43 pp.)
- Chicken Hatchings and Poultry Slaughterings (7207.0) (monthly; August 1979 released 26-10-79, 4 pp.)
- Milk Statistics (7208.0) (monthly; August 1979 released 30-10-79, 3 pp.)
- Dairying and Dairy Products (7209.0) (annual; 1977-78 released 5-1-79, 34 pp.)
- Wool Production and Shearing (Preliminary Estimates) (7210.0) (annual; 1979-80 released 18-7-79, 1 p.)

- Sheep Numbers, Shearing and Wool Production Forecast (7211.0) (annual; 1978-79 released 20-12-78, 2 pp.)  
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Cereal Grains: Estimates of Intended Sowings (7304.0) (annual; March 1980 released 1-6-79, 3 pp.)  
Cereal Grains: Estimates of Area Sown (7305.0) (annual; 1979-80 released 12-9-79, 2 pp.)  
Cereal Grains: Estimates of Wheat Production (7306.0) (annual; 1978-79 released 7-12-78, 2 pp.)  
Wheat Statistics (7307.0) (annual; 1977-78 released 5-7-79, 26 pp.)  
Mushroom Statistics (7308.0) (annual; 1977-78 released 19-12-78, 2 pp.)  
Nursery and Flower Statistics (7309.0) (annual; 1978-79 released 9-5-79, 2 pp.)  
Gross Value of Agricultural Commodities Produced First Estimates (7501.0) (annual; 1978-79 released 3-7-79, 1 p.)  
Value of Agricultural Commodities Produced (7503.0) (annual; 1977-78 released 19-7-79, 29 pp.)  
Agricultural Sector Part IV—Financial Statistics (7507.0) (annual; 1977-78 released 26-9-79, 34 pp.)  
Agricultural Sector Part IV—Financial Statistics (Preliminary) (7508.0) (annual; 1977-78 released 1-5-79, 4 pp.)





*The Gorge Bridge, Launceston, under construction*

*[Tasmanian Film Corporation]*





*Launceston: looking across the Tamar just downstream from the Gorge Bridge*

*[Tasmanian Film Corporation]*



## 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.

During the period since the first settlement in 1803, 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 2 136 000 hectares (or 31 per cent of the State's area). Of this area 859 000 hectares are privately owned and 1 277 000 hectares are Crown-owned commercial 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 1880s 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 in the Commission's policy. The gazetted area at 30 June 1978 was 1 493 800 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 1978 the area of timber reserves was 973 000 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 in the following table:

**Classification of State Forests and Timber Reserves, Tasmania at 30 June 1978**  
(\*000 Hectares)

Forest type	Area
Eucalypt forest with a mature or potential mature height over 41 m .....	373
Eucalypt forest with a mature or potential mature height of 15 m to 41 m .....	706
Temperate rain forest ( <i>N. cunninghamii</i> ) and associated species .....	167
Plantations (mainly <i>P. radiata</i> ) .....	33
<b>Total forest area</b> .....	<b>1 280</b>
Non-productive forests and other land included for protection purposes .....	311
<b>Total</b> .....	<b>(a) 1 591</b>

(a) Comprised: State forest, 1 494 000 hectares (gazetted State forest only); timber reserves, 97 000 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 1978 was 1 937 000 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 1978 the softwoods plantations (46 000 hectares) accounted for only 1.6 per cent of the State's total forested area. The Forestry Commission had established almost 32 000 hectares of softwood plantations in Tasmania by 30 June 1978.









The following table shows the area of softwood and hardwood plantations established by the Forestry Commission (but excludes privately owned areas):

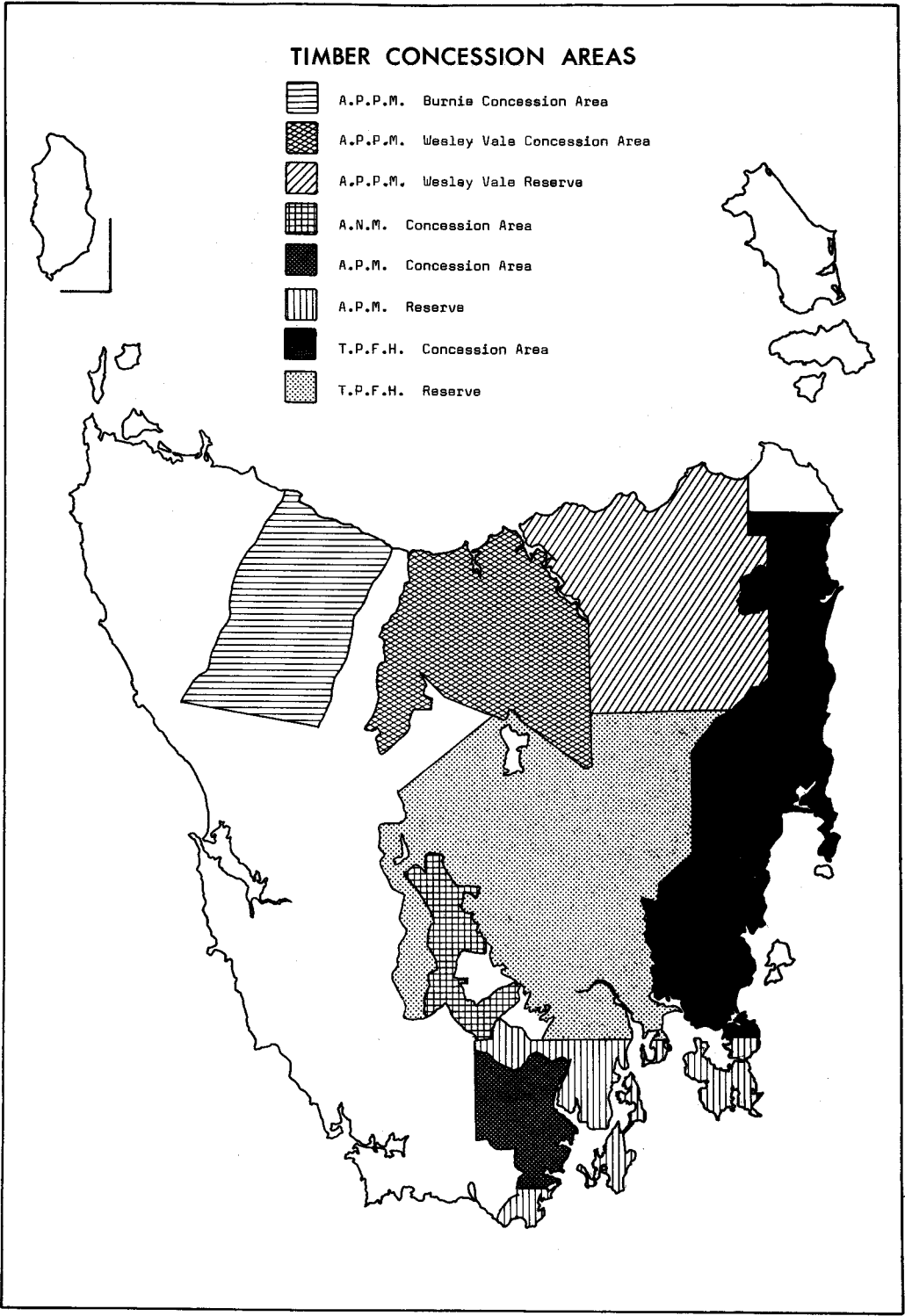
**Area of Forestry Commission Plantations, Tasmania at 30 June**  
(Hectares)

District	1977			1978		
	Softwood	Hardwood	Total	Softwood	Hardwood	Total
Circular Head .....	—	9	9	—	9	9
Burnie .....	2 720	3	2 723	3 087	311	3 398
Devonport .....	5 401	333	5 734	6 006	33	6 039
Queenstown .....	1 640	—	1 640	2 047	—	2 047
Launceston .....	769	1	770	849	27	876
Scottsdale .....	7 765	2	7 767	8 413	22	8 435
Fingal .....	10 358	2	10 360	11 559	—	11 559
Triabunna .....	—	92	92	—	92	92
Geeveston .....	86	16	102	86	136	222
<b>Total</b> .....	<b>28 739</b>	<b>458</b>	<b>29 197</b>	<b>32 047</b>	<b>630</b>	<b>32 677</b>

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 green mill was destroyed by fire in February 1978. This was rebuilt and operations resumed in March 1979. The production level reached the levels allowed for in the 1974 tender later in the year.

### TIMBER CONCESSION AREAS

-  A.P.P.M. Burnie Concession Area
-  A.P.P.M. Wesley Vale Concession Area
-  A.P.P.M. Wesley Vale Reserve
-  A.N.M. Concession Area
-  A.P.M. Concession Area
-  A.P.M. Reserve
-  T.P.F.H. Concession Area
-  T.P.F.H. Reserve



### 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 rain forest 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 rain forests can exclude eucalypts. However, even with rainfall well above 1 520 mm, a combination of poor soils and frequent burning often 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 rain forest 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')— | <i>E. amygdalina</i> (black peppermint)       |
|  | (a) (b)                                       |
|  | <i>E. linearis</i> (white peppermint)         |
|  | <i>E. tasmanica</i> (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-1978 there were 32 000 hectares of State owned pine plantations with another 14 000 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. This was originally an industry solely reliant on native forests for its raw material, although now (and in the future) plantations of exotic softwoods

play an important role in supplying the industry. For a number of years usage of logs for sawing, peeling and slicing remained at over 1 000 000 cubic metres per annum but usage has dropped since 1974-75 to a level of 906 000 cubic metres in 1977-78, when 339 000 cubic metres of sawn, peeled and 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 panel-boards 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 and woodchips (for export).

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 reafforestation schemes.

The problem of possible overtaxing of existing resources has been met partly by the implementation of fully integrated forest operations wherever possible. These operations ensure maximum use of the resource, with the best logs going to sawlogs and the remaining merchantable timber being processed as pulpwood. This also facilitates regeneration of the forest as most of the standing trees are removed, hence decreasing competition for available nutrients and light.

Pulpwood is also obtained from waste produced during sawmilling. During 1969-70, the year preceding the first export of woodchips, approximately 25 per cent of sawmill waste was chipped for re-use. As a direct consequence of the woodchip export trade the proportion rose to over 60 per cent in 1976-77 and had reached nearly 80 per cent in 1978-79.

Thinnings from Forestry Commission *Pinus radiata* plantations are used for sawlogs, treated fence posts, particle board manufacture at Wesley Vale and production of pulp for manufacture of paper at Burnie, Wesley Vale and Boyer.

Regeneration of areas harvested is carried out by the Forestry Commission and by the companies themselves. On Crown land reafforestation 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 reafforestation.

### Total Log Usage

The next table shows total log usage by the sawmilling, paper making, chipping and allied industries for recent years:

Hardwood and Softwood Log Usage, Tasmania  
(<sup>0</sup>000 m<sup>3</sup>)

Year	Sawmilling and plywood milling	Chipping, grinding and flaking	Total
1973-74 .....	1 074	2 962	4 035
1974-75 .....	1 071	2 866	3 938
1975-76 .....	985	2 396	3 381
1976-77 .....	986	2 913	3 900
1977-78 .....	906	2 751	3 658
1978-79 .....	863	2 941	3 803

### 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 at Burnie and particle board and paper at Wesley Vale. Their hardboard mill closed at the end of the 1977-78 financial year after 27 years production, largely due to a significant decrease in demand by the export market and the highly competitive nature of the reconstituted wood panelling industry in Australia. 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 \$25 million. The first paper machine installed has an annual capacity of 41 000 tonnes of magazine paper and provision has been made for the installation of three additional machines. However, expansion at Wesley Vale has been deferred due to economic conditions and the difficulty of financing the very high capital cost of the project at the present. An alternative expansion project at the Burnie mill costing \$25 million to produce bleached, softwood pulp from Company and Forestry Commission softwood plantations has been completed.

### 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 30 100 cubic metres of logs to other timber-using industries each year. The plant ran at almost full capacity during 1977-78 and produced 208 000 tonnes of newsprint. Machinery was installed in 1978 to manufacture a special type of thermo-mechanical pulp from *Pinus radiata* which will partly replace imported Kraft chemical pulp. The *Pinus radiata* pulpwood for this project is being drawn from thinnings from the Forestry Commission *Pinus radiata* plantations near Scottsdale.

### 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'Entrecasteux 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 Pty. Ltd, Tasmanian Pulp and Forest Holdings Ltd and Associated Pulp and Paper Mills Ltd have 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 over some 220 kilometres from Murdunna in the south to Eddystone Point in the north. 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; since then, the Company has exported approximately 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.

In September 1979, Associated Pulp and Paper Mills Ltd were successful in a take-over bid for Tasmanian Pulp and Forest Holdings Ltd. Tasmanian Pulp and Forest Holdings Ltd continued to trade as a separate company to Associated Pulp and Paper Mills Ltd's export operations in the north of the State.

In 1979, Northern Woodchips Pty Ltd signed a contract with the Forestry Commission of Tasmania to harvest a maximum of 220 000 tonnes of pulpwood per year from State forests in the far north-west of the State. This pulpwood was to be in the form of forest residues from the existing sawmill operations in this area, together with standing fire-killed trees. This wood was to be taken under Northern Woodchips' existing export licence and in lieu of standing green pulpwood from private property.

## 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 saw milling 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, Tasmania, 1977-78

Product	Obtained from—		Total
	Crown land	Private land	
Logs for processing (a)—			
Forest hardwoods . . . . . '000 m <sup>3</sup>	2 160	1 374	3 534
Indigenous softwoods . . . . . '000 m <sup>3</sup>	8	—	8
Plantation grown pines . . . . . '000 m <sup>3</sup>	94	22	116
Total logs—Quantity . . . . . '000 m <sup>3</sup>	2 262	1 396	3 658
Gross value . . . . . \$'000	n.a.	n.a.	54 939
Hewn and other timber (b)—			
Quantity . . . . . '000 m <sup>3</sup>	47	n.a.	n.a.
Value . . . . . \$'000	n.a.	n.a.	(c) 5 707
Total gross value of forest products . . . . . \$'000	n.a.	n.a.	60 645

(a) Logs for sawing, peeling, slicing, chipping and pulping. Includes any logs exported or stockpiled; excludes chain-sawn sleepers, etc. which are included below under 'Hewn and other timber'.

(b) 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 taken from private land.

The next table shows details of forest production for a five-year period on a basis comparable with the previous analysis:

Forest Production, Tasmania

Product	1973-74	1974-75	1975-76	1976-77	1977-78
Logs for processing (a)—					
Forest hardwood . . . . . '000 m <sup>3</sup>	3 974	3 916	3 347	3 763	3 534
Indigenous softwood . . . . . '000 m <sup>3</sup>	11	11	10	10	8
Plantation grown pines . . . . . '000 m <sup>3</sup>	73	70	73	122	116
Total logs—Quantity . . . . . '000 m <sup>3</sup>	4 059	3 997	3 430	3 894	3 658
Gross value . . . . . \$'000	39 802	46 234	42 496	50 129	54 939
Hewn and other timber—					
Value (b) . . . . . \$'000	3 471	3 788	4 495	5 300	5 707
Total gross value of forest products . . . . . \$'000	43 273	50 022	46 991	55 429	60 645

(a) Logs for sawing, peeling, slicing, chipping and pulping. Includes any logs exported or stockpiled; excludes chain-sawn sleepers, etc. which are included below under 'Hewn and other timber'.

(b) Includes the value of firewood, sleepers, transoms, girders, bridge timber, mining timber, poles, piles and other forest products taken from Crown land and estimates of the value of hewn and other timber, firewood and other forest products taken from private land.

#### 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, of the Australian states, Tasmania is the major

producer, the State's log production being over 29 per cent of the Australian total in 1977-78. The two next largest producers, N.S.W. and Victoria, produced 23 per cent and 20 per cent of the total Australian production, respectively, in 1977-78. Considering Tasmania's small relative size and population, it is apparent that forest production forms 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 value of forestry production for a five-year period:

Gross and Local Value of Forestry Production, Tasmania  
(\$'000)

Particulars	1973-74	1974-75	1975-76	1976-77	1977-78
Gross value (production valued at principal markets).....	43 273	50 022	46 991	55 429	60 645
Less marketing costs.....	7 393	7 160	6 317	7 528	7 152
Local value (production valued at place of production).....	35 880	42 862	40 674	47 901	53 494

#### Timber and Timber Products

##### Output and Exports

The following table shows timber production by mills, together with exports of sawn timber for recent years:

Production and Exports of Sawn Timber, Tasmania

Particulars	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
LOGS USED ('000 m <sup>3</sup> )						
Hardwood.....	1 038	1 023	930	895	816	789
Softwood.....	36	48	54	92	91	74
Total.....	1 074	1 071	985	986	906	863
SAWN, PEELED AND SLICED TIMBER PRODUCED (a) ('000 m <sup>3</sup> )						
Hardwood.....	398	388	350	331	299	289
Softwood.....	16	22	24	37	39	31
Total.....	414	410	373	368	339	321
EXPORTS OF SAWN TIMBER (b)						
Quantity..... '000 m <sup>3</sup>	270	213	248	313	245	n.y.a.
Value..... \$'000	26 156	22 690	26 079	37 083	28 213	n.y.a.

(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 overall decline in the number of mills over recent years. The areas with the heaviest incidence of closures have been the north-eastern and southern regions.

**Distribution of Operative Sawmill and Plywood Mill Locations  
by Statistical Divisions and Sub-divisions**

Statistical divisions and sub-divisions	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78
Hobart .....	12	14	12	13	12	12
Southern .....	70	73	64	56	43	48
Northern—						
Tamar .....	61	56	55	52	48	43
North Eastern .....	29	30	27	25	21	19
Total .....	90	86	82	77	69	62
Mersey-Lyell—						
North Western .....	37	38	36	34	30	36
Western .....	8	7	7	7	7	8
Total .....	45	45	43	41	37	44
Tasmania .....	217	218	201	187	161	166

### 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, for recent years is given in the next table:

**Number of Operative Sawmills (including Plywood Mills)  
by Volume of Annual Log Input, Tasmania**

Size classification (cubic metres)	Number of Sawmills and plywood mills					
	1972-73	1973-74	1974-75	1975-76 (a)	1976-77	1977-78
Up to 500 .....	42	50	53	7	4	2
501- 1 000 .....	24	28	19	7	3	3
1 001- 1 500 .....	14	11	10	8	8	3
1 501- 3 000 .....	38	33	28	19	23	13
3 001- 5 000 .....	29	30	26	26	19	19
5 001-10 000 .....	40	40	35	36	38	22
10 001-15 000 .....	14	14	14	10	7	8
15 001-30 000 .....	14	8	11	10	9	11
30 001-45 000 .....	1	2	4	4	4	2
45 001-60 000 .....	—	1	—	1	1	2
Over 60 000 .....	1	1	1	—	1	—
Total .....	217	218	201	128	117	85

(a) From 1975-76 includes only mills employing four persons or more; data has been extracted from manufacturing census results.

### Mill Production of Timber

As shown previously, logs treated in sawmills and plywood mills during 1978-79 for the production of sawn, peeled, and sliced timber totalled 863 000 m<sup>3</sup> while the resulting timber produced totalled only 321 000 m<sup>3</sup>. 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

Chipping, grinding and flaking of wood is the first process in the production of wood pulp, paper, etc. Up to 1969-70 all chipped, ground and flaked wood was used in local plants making wood pulp, paper, hardboard and particle board. However, from 1970-71 production of woodchips for overseas exports has also been undertaken.

The importance of woodchipping for export is indicated by the following table:

**Chipping, Grinding and Flaking of Wood, Tasmania**

Particulars	1974-75	1975-76	1976-77	1977-78	1978-79	
Producing locations at 30 June	number	31	31	32	31	32
Materials used—						
Logs (a) .....	'000 m <sup>3</sup>	2 866	2 396	2 913	2 751	2 941
Sawmill offcuts .....	'000 m <sup>3</sup>	246	216	248	261	264
Total .....	'000 m <sup>3</sup>	3 113	2 612	3 161	3 012	3 204
Chipped, ground and flaked wood produced (green weight)—						
For local processing ..	'000 tonnes	786	744	832	797	781
For export .....	'000 tonnes	2 161	1 693	2 135	2 041	2 197
Total .....	'000 tonnes	2 947	2 436	2 967	2 838	2 978

(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 three assistant commissioners. At 30 June 1978 the Commission employed a work force of 745 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) road construction, providing access to State forests; (ii) maintaining an annual program of softwood planting; (iii) protection of the forest estate from damage by fire, insects and disease; (iv) research, which aims to improve forest health and growth while developing more effective techniques of forest regeneration and fire protection; and (v) the management of State forests for recreation and wildlife conservation.

The Forestry Commission's responsibility for State forests was widened by the *Forestry Act 1977*, which empowered the Commission to promote the development and proper management of private forests. This Act is one of the first formulations resulting from the findings of a Board of Inquiry into Private Forestry Development, and provided for the creation of a new Private Forestry Division within the Forestry Commission. This led to the appointment of a new Assistant Commissioner (Private Forests) in March 1978 and later in the year eight officers were appointed to form this Division. Its primary task is to review the current situation and to formulate policy for the private forests of the State. (The Board's Report is summarised in the 1978 edition of the *Year Book*.)

Some concept of the scope of Forestry Commission activities can be obtained from the following table:

**Activities of the Forestry Commission, Tasmania: Summary**  
(Source: Forestry Commission)

Particulars	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78	
Regeneration assistance, area of native forests treated .....	ha	3 146	4 492	7 296	3 848	5 316	5 484
Seedlings produced .....	'000	3 266	2 901	3 707	3 966	3 849	2 810
Plantations—							
Established during year .....	ha	1 902	1 903	1 776	2 198	1 965	1 966
Pruned .....	ha	495	454	368	330	561	813
Thinned .....	ha	273	409	455	367	351	360
Firebreaks—							
Constructed .....	km	49	73	54	90	68	62
Roads—							
Constructed .....	km	130	103	129	205	168	137
Improved .....	km	5	12	25	86	24	34

The Commission has a responsibility for controlling forest fires on or near State forests; losses through bush fires fought by the Commission in recent years are reported in the following table:

**Bush Fires Fought by the Forestry Commission, Tasmania**  
(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	\$
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
1976-77 .....	59	2 701	141	669	3 511	40 191
1977-78 .....	199	17 580	6 369	n.a.	23 949	209 553

(a) Includes only those fires on private property fought to protect adjoining State forest or timbered Crown land.

Total expenditure by the Commission during 1977-78 was \$16.6m. 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 six years; expenditure exceeds revenue since money from State loan funds devoted to forestry purposes is included in expenditure.

**Forestry Commission: Revenue and Expenditure, Tasmania**  
((\$'000)

Particulars	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78
REVENUE						
Royalties .....	2 369	3 141	3 724	4 001	5 088	5 317
Sale of forest products .....	96	66	86	103	150	165
Other .....	52	52	55	55	75	133
Total .....	2 517	3 259	3 865	4 159	5 313	5 615
EXPENDITURE (a)						
Administration—						
Revenue collection .....	295	422	584	603	752	854
Forest management .....	700	850	1 193	1 362	1 510	1 804
General .....	605	725	1 057	1 261	1 543	1 680
Forest works—						
Road construction .....	926	1 157	1 348	2 006	2 589	3 034
Building and other .....	102	199	168	497	643	769
Afforestation and reforestation .....	1 657	1 917	2 633	3 582	4 409	5 106
Forest protection (n.e.i.) .....	274	198	230	357	374	499
Mapping and surveys .....	154	220	377	549	639	731
Land purchases .....	4	8	2	17	104	92
Purchases, plant and equipment .....	43	37	83	368	811	810
Interest on advances .....	500	550	654	828	1 016	1 178
Total .....	5 260	6 283	8 329	11 430	14 389	16 557

(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. In 1978, the financial agreement was renewed for five years from 1 July 1977. The Commonwealth was to contribute to the tending of those plantations which had been established under the agreement during the 11-year period from 1966-67 to 1976-77.

## 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 produced 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 concentrates, but only the value of the local concentrates produced at Rosebery is included as contributing to the total value of the Tasmanian mining industry. Prior to the 1977-78 Census of Mining Establishments, the 1969 preliminary edition of ASIC was used to provide a definition of the mining industry. As from 1977-78, the definition of the mining industry has been changed to that specified in the 1978 edition of the ASIC (Cat. No. 1201.0) which treats iron ore pelletising as part of the mining industry and not as part of manufacturing industry.

### 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 elsewhere. 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 1977-78 and the assayed content of Tasmanian ores mined as a percentage of total Australian production.

**Major Mineral Products: Tasmania-Australia Comparison, 1977-78**

Mineral product	Location of main mine(s)	Unit	Assayed content of ores mined		Per cent (a)
			Tasmania	Australia	
Coal (black) . . . . .	Fingal Valley	tonnes	(b) 195 291	(b) 79 338 000	0.2
Copper . . . . .	Mt Lyell	tonnes	23 024	217 083	10.6
Gold . . . . .	Mt Lyell, Rosebery	kg	1 934	21 047	9.2
Iron . . . . .	Savage River	tonnes	1 291 899	54 739 000	2.4
Lead . . . . .	Rosebery, Williamsford	tonnes	23 587	418 801	5.6
Silver . . . . .	Rosebery, Williamsford	kg	87 397	837 315	10.4
Sulphur . . . . .	Mt Lyell, Rosebery	tonnes	171 520	445 137	38.5
Tin . . . . .	Renison Bell	tonnes	6 992	11 771	59.4
Tungstic oxide . . . . .	Grassy (King Island)	tonnes	2 589	n.p.	n.p.
Zinc (c) . . . . .	Rosebery	tonnes	79 935	484 376	16.5

(a) Tasmanian production as a proportion of Australian production. (At 30 June 1978, Tasmania's population was 2.9 per cent of the total population of Australia.)

(b) Actual production.

(c) Tasmania accounted for approximately 61 per cent of Australia's total refined zinc production in 1977-78. Both local and interstate concentrates are refined in the State.

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 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 Mines 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.)

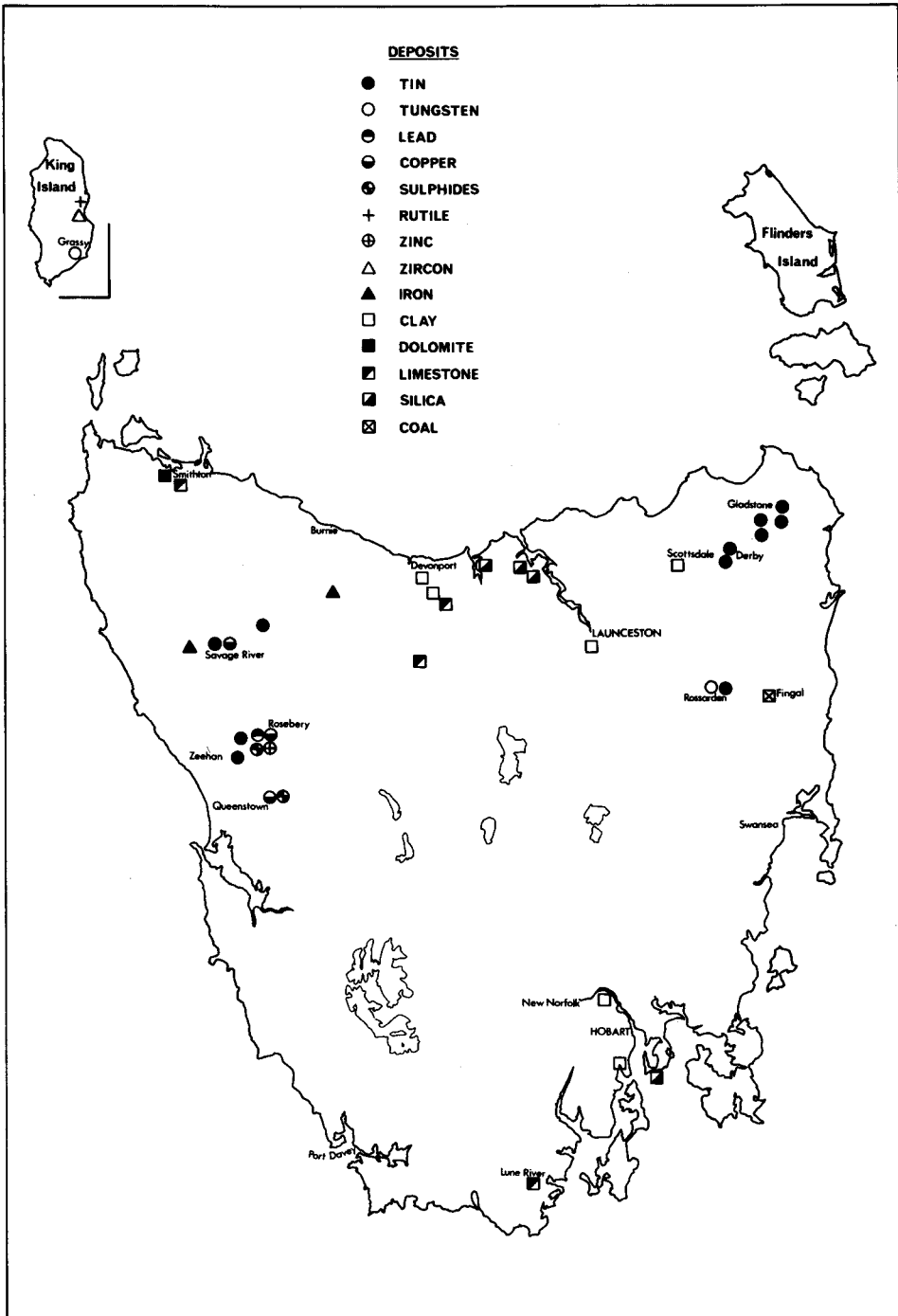
**King Island Scheelite (King Island):** A member of the Peko-Wallsend Limited group of companies, this Company mines and processes scheelite ore to the concentrate stage from its two underground mines, Bold Head and Dolphin. Completion of a recent \$4 million development project has enabled the Company to produce an artificial scheelite. (A special article on this Company is included later in this chapter.)

**Mt Lyell Mining and Railway Co. Ltd (Queenstown):** This Company, which commenced operations in 1897, is producing copper in the form of concentrates at the rate of about 18 000 tonnes of contained copper per year from 1 600 000 tonnes of ore. The ore is won by underground methods. Due to depressed copper prices, the Company has incurred substantial losses on its mining operations in recent years. Government financial assistance has been available to the Company since 15 August 1977 with a view to enabling it to continue operations until copper prices improve. On 23 August 1978, the Federal and Tasmanian Governments announced that they would jointly share the Company's losses on its mining operations until mid-1980, up to a maximum of \$7.6 million. However, thanks to improved copper prices, tighter operating controls and the success of the Company's modified mining plan, no subsidy payment has been required since August 1978. (The 1978 Year Book includes a special article titled 'Problems for the Mt Lyell Mining and Railway Co. Ltd', pp. 247-249.)

**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

Location of Principal Mineral Deposits Tasmania

Metallic, Non-Metallic and Fuel Minerals



smelter in Tasmania to treat tin concentrates from the leach plant. Current production rates are of the order of 11 000 tonnes of tin concentrate, containing 5 500 tonnes of tin, from 600 000 tonnes of ore. A two stage development program now under way will increase capacity for ore treatment to 850 000 tonnes per annum. (The 1979 Year Book includes a special article on the Company, pp. 216-223.)

*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 1971 to more than 2.5m tonnes of high-grade iron ore pellets. The entire production is sold to Japanese steel mills. In future it is hoped to develop a new open cut mine which will be operated concurrently with the present mine.

### 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 Federal 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 six-year period:

Metallic Minerals: Production, Tasmania

Mineral	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78
TONNES						
Chromite concentrate	—	—	—	—	—	301
Copper concentrate	91 514	96 015	101 672	83 255	70 237	70 668
Copper-tin concentrate	4 586	3 124	2 506	2 896	2 610	1 806
Iron—Concentrate	2 450 932	2 304 575	2 051 783	2 109 363	2 315 196	1 869 607
Oxide	9 590	12 879	10 989	9 831	14 700	13 793
Lead concentrate	9 590	16 937	12 457	13 341	13 785	17 710
Lead-copper concentrate	16 605	19 919	19 952	19 480	25 709	27 760
Pyrite concentrate	197 813	238 850	218 474	212 931	227 242	252 469
Rutile concentrate	—	3 237	4 844	6 994	3 886	—
Tin concentrate	13 895	12 496	12 597	12 889	15 035	14 677
Tungsten concentrates—						
Scheelite concentrate	1 788	1 630	1 672	2 360	3 180	3 391
Wolfram concentrate	642	180	310	274	215	174
Zinc concentrate	125 087	127 352	108 793	123 944	126 271	142 568
Zircon concentrate	—	3 072	7 560	7 953	3 722	—
KILOGRAMS						
Gold (not in concentrates)	—	2	2	1	1	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, Tasmania**

Mineral	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78
<b>CHROMIC OXIDE (Cr<sub>2</sub>O<sub>3</sub>) (TONNES)</b>						
Chromite concentrate .....	—	—	—	—	—	168
<b>COPPER (TONNES)</b>						
Copper concentrate .....	23 449	24 292	25 824	21 298	18 444	18 548
Copper-tin concentrate .....	878	652	522	628	535	390
Lead concentrate .....	78	67	31	63	60	89
Lead-copper concentrate .....	1 828	2 350	2 652	2 656	3 328	3 599
Zinc concentrate .....	518	465	351	416	443	398
<b>Total .....</b>	<b>26 751</b>	<b>27 826</b>	<b>29 380</b>	<b>25 061</b>	<b>22 809</b>	<b>23 024</b>
<b>GOLD (KILOGRAMS)</b>						
Copper concentrate .....	475	470	508	434	367	400
Lead concentrate .....	91	82	30	30	27	39
Lead-copper concentrate .....	1 038	972	913	986	1 133	1 327
Zinc concentrate .....	165	166	116	148	164	167
Other sources .....	—	2	2	1	1	1
<b>Total .....</b>	<b>1 769</b>	<b>1 692</b>	<b>1 569</b>	<b>1 598</b>	<b>1 691</b>	<b>1 934</b>
<b>IRON (TONNES)</b>						
Iron concentrate .....	1 695 961	1 599 592	1 426 352	1 463 044	1 601 011	1 291 899
<b>LEAD (TONNES)</b>						
Lead concentrate .....	13 414	10 920	8 648	8 919	9 079	11 942
Lead-copper concentrate .....	5 034	5 138	4 207	4 823	6 215	6 882
Zinc concentrate .....	4 616	5 568	5 207	5 800	5 118	4 763
<b>Total .....</b>	<b>23 064</b>	<b>21 626</b>	<b>18 062</b>	<b>19 542</b>	<b>20 412</b>	<b>23 587</b>
<b>SILVER (KILOGRAMS)</b>						
Copper concentrate .....	3 965	4 418	5 373	3 983	2 973	2 636
Lead concentrate .....	16 785	13 272	9 383	11 005	11 874	15 401
Lead-copper concentrate .....	49 357	53 034	45 211	42 780	49 533	56 430
Zinc concentrate .....	16 642	17 194	13 320	17 745	14 667	12 929
<b>Total .....</b>	<b>86 749</b>	<b>87 918</b>	<b>73 287</b>	<b>75 515</b>	<b>79 047</b>	<b>87 397</b>
<b>SULPHUR (TONNES)</b>						
Lead concentrate .....	4 565	3 118	2 138	2 370	2 507	3 153
Lead-copper concentrate .....	4 427	5 673	6 055	5 527	7 674	8 172
Pyrite concentrate .....	93 709	114 141	103 848	101 156	109 671	114 690
Zinc concentrate .....	41 064	41 820	35 191	40 284	41 125	45 505
<b>Total .....</b>	<b>143 765</b>	<b>164 752</b>	<b>147 232</b>	<b>149 337</b>	<b>160 977</b>	<b>171 520</b>

## Forestry, Mining and Fisheries

## Assayed Contents of Metallic Minerals Produced, Tasmania—continued

Mineral	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78
ZINC (TONNES)						
Lead concentrate .....	3 776	2 247	1 301	1 348	1 560	1 885
Lead-copper concentrate .....	2 333	2 657	2 409	1 942	2 490	2 865
Zinc concentrate .....	66 544	67 057	57 747	64 028	65 917	75 185
Total .....	72 653	71 961	61 457	67 318	69 967	79 935
TIN (TONNES)						
Copper-tin concentrate .....	129	81	73	76	72	45
Tin concentrate .....	6 289	5 957	5 863	5 794	6 760	6 947
Total .....	6 418	6 038	5 936	5 870	6 832	6 992
TUNGSTIC OXIDE (WO <sub>3</sub> ) (TONNES)						
Scheelite concentrate .....	1 319	1 171	1 207	1 670	2 398	2 465
Wolfram concentrate .....	475	134	230	206	159	124
Total .....	1 794	1 305	1 437	1 876	2 557	2 589
CADMIUM (TONNES)						
Zinc concentrate .....	165	177	135	172	177	200
MANGANESE (TONNES)						
Zinc concentrate .....	367	423	262	316	342	613
TITANIUM OXIDE (TONNES)						
Rutile concentrate .....	—	3 140	4 643	6 710	3 692	—
Zircon concentrate .....	—	9	23	23	11	—
Total .....	—	3 149	4 666	6 733	3 703	—
ZIRCON (TONNES)						
Rutile concentrate .....	—	26	38	56	30	—
Zircon concentrate .....	—	2 009	4 973	5 259	2 456	—
Total .....	—	2 035	5 011	5 315	2 486	—

*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. The Fingal Valley deposits were discovered 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 fuel oil, 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 its fuel for operations. Production details for recent years (in tonnes) are as follows: 1973-74, 122 788; 1974-75, 137 868; 1975-76, 176 352; 1976-77, 193 927; and 1977-78, 195 291 (all production is 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, Tasmania  
(Tonnes)**

Mineral	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78
Clays and shales—						
Brick .....	128 080	138 770	139 679	156 254	153 306	137 593
Other .....	90 892	99 492	74 496	64 447	49 704	41 684
Dolomite .....	3 852	5 450	6 199	9 259	7 734	11 232
Limestone (a) .....	558 948	658 210	579 812	548 969	667 090	713 589
Peat moss .....	241	318	390	535	330	372
Ochre .....	74	62	—	—	—	—
Pebbles .....	1 134	1 264	976	1 771	1 189	1 566
Silica (b) .....	25 596	31 644	32 178	34 708	47 418	56 640

(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. Definitions of concepts and terms used are also included in that section.

### Mining Establishments—Summary of Operations

The tables that follow give results for the mining censuses from 1972-73 to 1977-78:

**Census of Mining Establishments  
Summary of Operations by Industry Sub-division, Tasmania**

Particulars	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78 (a)
METALLIC MINERALS						
Establishments (b) .....	no.	16	16	16	18	19
Persons employed (c)—						
Males .....	no.	3 913	3 852	3 924	3 723	3 596
Females .....	no.	174	172	211	199	184
Total .....	no.	4 087	4 024	4 135	3 922	3 780
Wages and salaries .....	\$'000	26 955	29 179	40 993	44 430	48 309
Turnover .....	\$'000	90 605	138 417	128 489	124 725	174 523
Stocks—						
Opening .....	\$'000	13 941	12 541	15 108	17 174	22 760
Closing .....	\$'000	12 511	15 122	17 172	22 762	19 416
Purchases, etc. (d) .....	\$'000	29 622	59 099	53 984	54 545	61 341
Value added .....	\$'000	59 553	81 899	76 569	75 768	109 838
Rent, leasing expenses .....	\$'000	86	151	491	997	1 071
Fixed capital expenditure (e) ..	\$'000	12 107	12 383	18 129	16 937	12 100

**Census of Mining Establishments**  
**Summary of Operations by Industry Sub-division, Tasmania—continued**

COAL							
Establishments (f) .....	no.	1	1	1	1	1	1
CONSTRUCTION MATERIALS							
Establishments .....	no.	21	29	26	26	28	33
Persons employed (c)—							
Males .....	no.	142	181	163	171	180	191
Females .....	no.	2	4	4	7	5	6
Total .....	no.	144	185	167	178	185	197
Wages and salaries .....	\$'000	647	892	1 041	1 392	1 607	2 150
Turnover .....	\$'000	3 407	4 972	4 871	6 851	7 813	10 173
Stocks—							
Opening .....	\$'000	342	360	347	419	610	609
Closing .....	\$'000	355	378	419	519	524	745
Purchases, etc. (d) .....	\$'000	1 681	2 566	2 553	3 771	3 175	3 849
Value added .....	\$'000	1 740	2 424	2 389	3 181	4 552	6 459
Rent, leasing expenses .....	\$'000	39	47	68	246	218	227
Fixed capital expenditure (e) ..	\$'000	170	666	737	953	793	3 896
OTHER NON-METALLIC MINERALS							
Establishments (f) .....	no.	10	10	13	12	15	14
TOTAL MINING							
Establishments (b) .....	no.	48	56	56	57	63	64
Persons employed (c)—							
Males .....	no.	4 150	4 139	4 232	4 039	3 939	4 056
Females .....	no.	176	178	218	209	194	185
Total .....	no.	4 326	4 317	4 450	4 248	4 133	4 241
Wages and salaries .....	\$'000	28 091	30 623	43 026	47 197	51 538	57 136
Turnover .....	\$'000	95 350	144 917	135 688	134 446	187 581	251 117
Stocks—							
Opening .....	\$'000	14 332	12 966	15 526	18 020	23 483	24 671
Closing .....	\$'000	12 933	15 570	18 017	23 394	20 086	25 397
Purchases, etc. (d) .....	\$'000	31 765	62 200	57 276	59 213	65 565	89 338
Value added .....	\$'000	62 186	85 321	80 903	80 607	118 619	162 505
Rent, leasing expenses .....	\$'000	151	235	643	1 351	1 452	1 762
Fixed capital expenditure (e) ..	\$'000	12 482	13 159	19 430	17 972	13 102	20 437

(a) Based on the 1978 edition of ASIC. Data for earlier years are based on the 1969 ASIC (preliminary). The main change from the 1969 to the 1978 ASIC was the transfer of iron-ore pelletising plants from the "manufacturing" industry division to "mining".

(b) Excludes small tin producing establishments with a value of sales of less than \$20 000.

(c) At last pay-period in June; includes working proprietors.

(d) Purchases, transfers in and selected expenses.

(e) Outlay on fixed tangible assets less disposals.

(f) 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.

## Non-Mining Activity: Extracting and Refining Metals, Tasmania

Particulars	1974-75	1975-76	1976-77	1977-78
Establishments .....	no. 4	4	4	4
Persons employed (a) .....	no. 3 263	2 872	3 208	3 422
Turnover .....	\$'000 200 556	212 637	264 535	271 321
Value added .....	\$'000 81 112	83 766	89 690	74 145

(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 Australian Standard Industrial Classification (ASIC) classes of establishments included in the table are: 2 911; 2 912; 2 922; and 2 924. The value added in this 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 by refinery processes:

Non-Mining Activity: Production of Refined Zinc, Tasmania  
(Tonnes)

Year	Production	Year	Production	Year	Production
1969-70 .....	170 931	1972-73 .....	193 782	1975-76 .....	137 637
1970-71 .....	162 271	1973-74 .....	182 749	1976-77 .....	170 685
1971-72 .....	175 798	1974-75 .....	152 749	1977-78 .....	161 173

*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.

## 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 (included those being worked) by geological, geophysical, geochemical and other methods (included drilling). Exploration for water is excluded. The construction of shafts and adits primarily for exploration purposes is included.

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.



The following table shows expenditure details relating to mineral exploration (other than for petroleum) in Tasmania for recent years:

Mineral Exploration Other Than for Petroleum: Expenditure, Tasmania  
(\$'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						
1972-73 .....	404	116	408	n.p.	n.p.	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
1976-77 .....	338	131	712	274	22	1 477
1977-78 .....	303	187	965	218	57	1 730
OTHER PRIVATE EXPLORATION						
1972-73 .....	556	101	1 105	n.p.	n.p.	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
1976-77 .....	811	325	1 024	598	79	2 838
1977-78 .....	1 345	566	2 387	1 073	311	5 681
TOTAL PRIVATE EXPLORATION						
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
1976-77 .....	1 149	456	1 736	872	102	4 315
1977-78 .....	1 648	753	3 352	1 291	367	7 411
TOTAL GOVERNMENT EXPLORATION (d)						
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
1976-77 ...	455	50	—	50	21	576
1977-78 ...	502	52	—	58	14	626
TOTAL PRIVATE AND GOVERNMENT EXPLORATION						
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
1976-77 ...	1 604	506	1 736	922	123	4 891
1977-78 ...	2 150	805	3 352	1 349	381	8 037

- (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, Tasmania

Year	Drilling		
	Core (a)	Non-core (b)	Total
<b>PRIVATE EXPLORATION ON PRODUCTION LEASES</b>			
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
1976-77 .....	19 441	198	19 639
1977-78 .....	25 868	197	26 065
<b>OTHER PRIVATE EXPLORATION</b>			
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
1976-77 .....	19 005	2 123	21 128
1977-78 .....	25 779	3 645	29 424
<b>TOTAL PRIVATE EXPLORATION</b>			
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
1976-77 .....	38 446	2 321	40 767
1977-78 .....	51 647	3 842	55 489
<b>TOTAL GOVERNMENT EXPLORATION (c)</b>			
1972-73 .....	1 456	—	1 456
1973-74 .....	1 519	—	1 519
1974-75 .....	1 627	—	1 627
1975-76 .....	2 572	—	2 572
1976-77 .....	3 835	—	3 835
1977-78 .....	5 134	—	5 134
<b>TOTAL PRIVATE AND GOVERNMENT EXPLORATION</b>			
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
1976-77 .....	42 281	2 321	44 602
1977-78 .....	56 781	3 842	60 623

(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.

## KING ISLAND SCHEELITE (A DIVISION OF PEKO-WALLSEND OPERATIONS LTD.)

(This article was contributed by the Company)

### Introduction

King Island Scheelite is one of the Peko-Wallsend Group of Companies and is mainly involved in the mining of scheelite deposits and in the production of scheelite concentrate (containing over 70 per cent tungstic oxide), most of which is exported to Japan and Europe for use in the production of specialised steels. The Company, centred at Grassy, employs a work force of 480.

### Historical

The original discovery of scheelite on the Island was made in 1911 by a Tasmanian prospector, Mr. Tom Farrell, who discovered a tungsten-bearing specimen on the beach near the site of the open cut mine which operated between 1917 and 1974. Further investigation revealed a significant tungsten deposit beneath a sand cover of approximately 15 metres.

The King Island Scheelite Development Company N.L. was incorporated in 1917 and a plant capable of treating 200 tonnes of ore per week was erected. Mining operations continued until mid-1920 when the mine was forced to close because the price of tungsten had fallen to an uneconomic level.

The mine was revived in 1937 when King Island Scheelite N.L. was formed. A treatment plant with a capacity of 500 tonnes of ore per week was installed and production commenced in 1938. Prior to 1943 ore was won by hand from the faces but with Commonwealth Government financing (due to World War II) power shovels and six-ton trucks became available. In 1944 a new mill was established which enabled an increase in annual ore production from 30 481 tonnes in 1943 to 129 038 tonnes in 1946.

In 1947 the Company was voluntarily wound up and reconstructed as King Island Scheelite (1947) Limited. The Company prospered in the early 1950s due to the Korean War which created a huge industrial demand and precipitated the creation of the United States Strategic Stockpile. As the United States Government contracts lapsed, the market price of tungsten declined and the King Island mine was placed on a care and maintenance basis in August 1958. The mine re-opened on limited production in early 1960 and production has continued to the present.

During 1969 King Island Scheelite became one of the Peko-Wallsend Group of Companies and mill throughput has since been increased to 420 000 tonnes per year.

### Location

The Company and mine are centred on the township of Grassy which has a population of approximately 700 people. Grassy is almost entirely Company owned and is situated in the south-east of King Island overlooking Little Grassy Bay.

The Company provides houses for married personnel, single accommodation and messing. Power, water, sewerage and roads are maintained by the Company. There are numerous entertainment facilities and schooling is available to the primary school level.

The main port for King Island is at Grassy and was constructed for the Tasmanian Government by Peko-Wallsend Ltd., with King Island Scheelite managing the construction. The port was opened for shipping in 1971.

### General Mining Operations

Until October 1972 all mining was by open cut methods from the No. 1 orebody. When the open cut mine closed in October 1974 production from it had totalled 6 459 700 tonnes of ore (averaging 0.53 per cent tungstic oxide) and 21 169 000 tonnes of overburden had been moved.

All production at present comes from two underground mines. Of these, the Bold Head mine was the first to commence operation in September 1972. Development of the Dolphin mine at Grassy began in June 1973. The entrance to the Dolphin mine is at the bottom of the open cut mine. The current total production level is 420 000 tonnes of ore per annum of which the Dolphin mine contributes 64 per cent.

Present ore reserves are estimated at 6 400 000 tonnes giving an anticipated life of operations of more than 15 years.

### Dolphin Mine

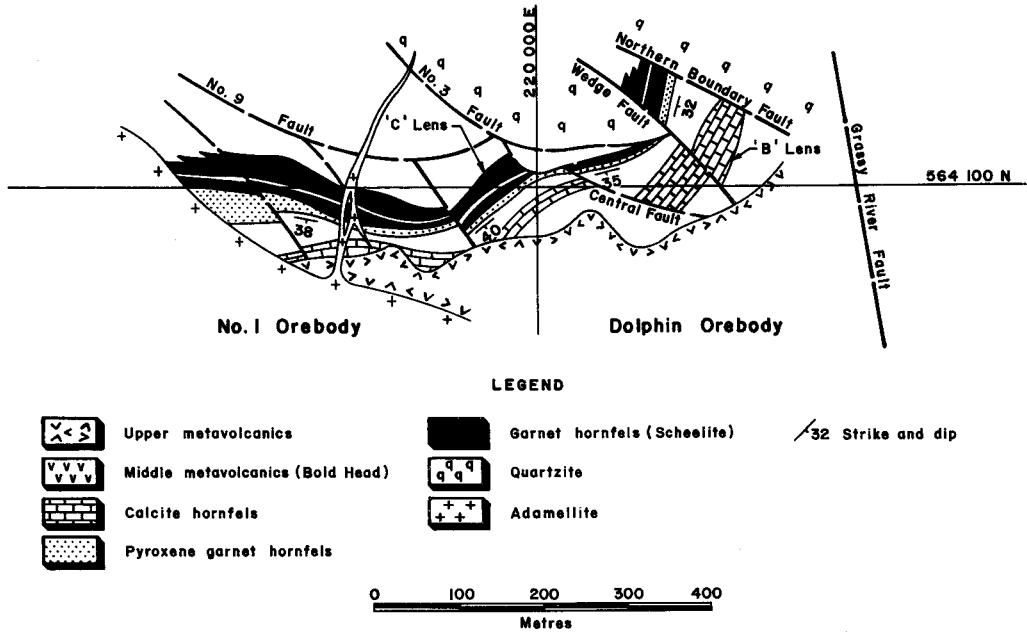
#### *Orebody*

The Dolphin orebody consists of two major moderately dipping lenses (strata) which are divided by major faults into three stopping areas. The orebody dips seaward and a major

portion of the working lies beneath the sea bed. The deepest area of production is 178 m below the portal entrance (230 m below sea level).

**Access**

Access is provided by one hanging wall decline and one footwall decline. A system of raises provides an alternative means of egress. This system will be extended to the eventual bottom of the mine.



No. 1 and Dolphin Orebodies, - 75m. R.L. Geological Level Plan

**Ventilation**

Intake air travels down the declines and the egress raises and circulates through the workings before being expelled via two 1.8 m diameter bored raises. Centrifugal fans are located over each. Total air handled is 140 m<sup>3</sup> per second.

**Mining**

Stoping is by the room and pillar method. Drilling is carried out by multi-boom jumbos. The ore is blasted and then loaded by front-end loaders into modified Caterpillar 769B trucks which haul it to the surface.

**Development**

The main footwall decline is scheduled to reach the bottom of the orebody by the end of 1979. Stopping from the lowest level and proceeding upwards without intermediate working levels is desirable from the points of view of both safety and maximum ore recovery.

**Emergency Pumping Scheme**

Although mine development and stoping have not as yet disclosed any areas of significant water inflow, the risk of heavy inflows at some time in the future cannot be ignored. An

emergency pumping scheme is therefore being provided in order to cope with such a situation should it arise.

#### Hydraulic Fill

Deslimed mill tailings provide fill material for use underground. The fill material is gravitated underground through lined bore-holes and then piped to the stoping areas via rubber-lined steel pipe.

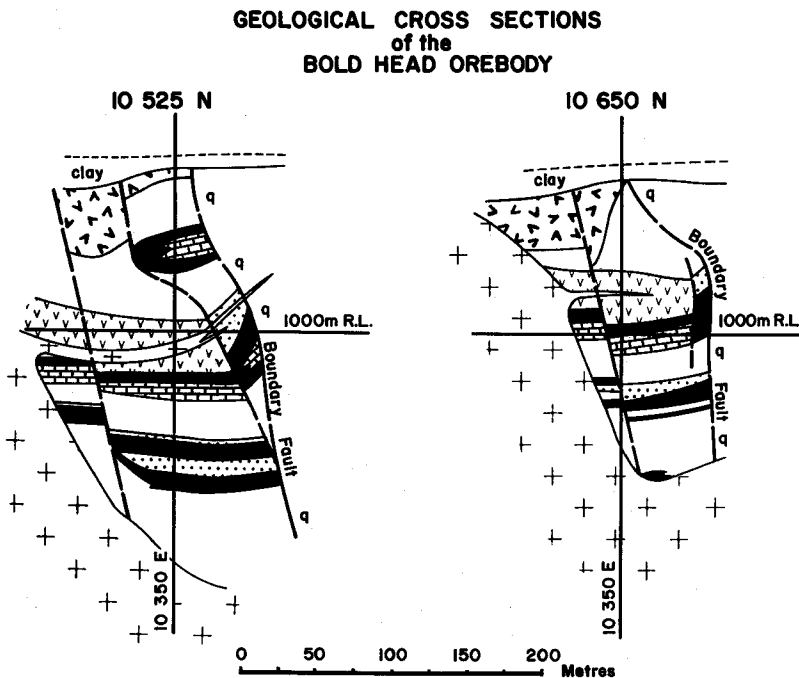
#### Drainage

For the drainage of filled stopes, hessian covered drainage towers are built up through the fill. Holes drilled from the bottom of these towers allow stope drain water to leave the stopes and flow to convenient openings further below.

### Bold Head Mine

#### Orebody

The Bold Head deposit consists of several lenses contained in the 'mine series' rocks which are approximately 300 m thick.



#### Access

Access is by a decline driven at a one in seven gradient parallel to the main fault with strike crosscuts providing access to the orebodies at various horizons. A system of centrally located raises provides an alternative means of egress from the mine for use in case of an emergency.

#### Ventilation

Intake air enters the mine via the decline and secondary egress raise. Circulation of air occurs with minimal necessity for auxiliary fans and is finally expelled via two 1.8 m diameter bored raises. Total air handled is 70 m<sup>3</sup> per second.

### *Mining*

Several mining methods are currently employed at Bold Head. Cut and fill stopes are worked either by jumbo drill and diesel front-end loaders, or by an airleg/rockdrill combination with a Cavo auto loader.

The main orebody is worked chiefly by the room and pillar method using multi-boom jumbos and diesel front-end loaders. In some areas, where insufficient thickness of the orebody prevents the entry of large equipment, slot stoping with an airleg/rockdrill combination and a scraper winch is used. Ore is hauled to the surface by diesel trucks.

### *Development*

Scheduled development is from the present decline length of 1 260 m to a final decline length of 1 580 m. Present depth below the portal is 145 m and the final depth will be 192 m.

### *Hydraulic Fill*

A surface plant supplies hydraulic fill to the stoping areas. The deslimed tailings used are carted by truck from a stockpile adjacent to the Dolphin fill plant.

## **Metallurgical Operations**

### *General Milling Operations*

The existing concentrator commenced operation in 1944 and much of the original building and equipment is still in use. However, many modifications have been made to increase the treatment rate and to improve recovery levels. Recently completed programs have increased the treatment rate to over 400 000 tonnes per annum using material with an average head grade of 0.8 per cent tungstic oxide.

A new complex has been completed to convert the product from the flotation section to a molybdenum-free high purity calcium tungstate or 'artificial scheelite'.

The plant, which operates on a continuous three shift basis, is designed to produce a coarse gravity concentrate of 72 per cent tungstic oxide and a fine, chemically precipitated artificial scheelite of 76 per cent tungstic oxide.

*Crushing:* Ore is delivered from the two underground mines in 35-tonne trucks and crushed in primary jaw and two stage gyratory crushers. Ore then passes through a five-deck vibrating screen. Screen undersize is delivered to a fine ore storage bin.

*Grinding:* Fine ore is drawn from the storage bins over a load cell weightometer and fed to two wet ball mills in parallel. Both mills operate in closed circuit with a five-deck vibrating screen, screen undersize passing to the concentrating sections where it is cycloned into plus and minus 74 micron (above and below 74 millionths of a metre) fractions for treatment in gravity and flotation sections, respectively.

*Gravity Concentration:* Plus 74 micron cyclone underflow is sorted into six size fractions in five spigot hydrosizers. Spigot products are fed to either spirals or tables for recovery of scheelite values, rougher concentrates being re-tabled for upgrading. Hydrosizer overflow is thickened by cycloning, solids passing to the flotation section feed while cyclone overflow is used as circuit water.

Gravity section middling and coarse tailing fractions are re-treated in a separate circuit where they are cyclone dewatered and reground. Regrind mill discharge is classified by two stage cycloning to remove minus 74 micron materials which join flotation feed; plus 74 micron material passes on to spirals. Spiral concentrate is upgraded on tables, spiral tails being discarded as a final gravity tailing.

*Flotation:* All pulp streams containing minus 74 micron material are fed to two thickeners of 18.5 and 24.5 metre diameter. Thickener underflows, at 30 to 35 per cent solids, are pumped to flotation feed conditioners where reagents are added to increase alkalinity, disperse silicious gangue, depress calcite, collect scheelite and form a stable froth. Conditioned pulp is then passed to rougher-scavenger flotation cells, the froth concentrate products being directed to cleaner cells when necessary to give a low grade (15 per cent tungstic oxide) concentrate suitable for feed to the artificial scheelite plant. Scavenger cell tailings are a final reject material and join gravity section tailings for disposal.

*Concentrate Cleaning:* Gravity table concentrate is passed through a small conditioner and two-cell flotation unit where some of the sulphide impurities in the concentrate are

removed. Sulphide concentrate is returned to the regrind circuit as it still contains some scheelite. Scheelite concentrate is dewatered in a spiral classifier and dried in an oil-fired rotary drier.

Drier product is passed over first stage cross-belt magnetic separators where magnetic impurities (garnets) are removed. Non-magnetic product is conveyed to an oil-fired rotary tube roaster where the remaining sulphide impurities are converted from non-magnetic to magnetic form, after which they are removed by treatment on second stage magnetic separators. Non-magnetics are conveyed to a final product bin where they are automatically sampled prior to bagging and weighing. All magnetic rejects are recycled to the main concentrator circuit for recovery of included scheelite.

#### *Production of Artificial Scheelite*

*Autoclave Leaching:* Low grade flotation concentrate is dewatered to a density of approximately 50 per cent solids using a small cyclone and lamella thickener. Thickened pulp is then dosed with sodium carbonate and fed into a series of four autoclaves where tungsten and molybdenum values are leached from the concentrate into the liquor phase. Leached pulp then passes over three vacuum wash filters, where the now barren solids are separated and rejected, leaving the tungsten and molybdenum in the filtrate.

*Molybdenum Precipitation:* Molybdenum is precipitated as a fine tri-sulphide by acidifying the leach filtrate with sulphuric acid and adding sodium hydrosulphide. Excess hydrogen disulphide gas generated in this reaction is recovered in absorption towers. Residual gas is scrubbed in a packed tower prior to discharge to the atmosphere.

The liquor now containing the fine molybdenum precipitate is pumped to one of three plate press filters. Filter cake is discharged and stockpiled in plastic-lined metal drums because of problems in reducing the moisture level to obtain a saleable product. Filtrate, now containing tungsten in solution with only a trace of molybdenum, passes to the final section of the plant.

*Tungsten Precipitation:* The filtrate is made alkaline using sodium hydroxide and calcium chloride is added to precipitate tungsten as calcium tungstate. To prevent precipitation of unwanted sulphate, a two-stage system is used, with incomplete precipitation in the first stage. Primary tungsten precipitate is fed to a centrifuge for de-watering. Centrifuge cake is re-pulped and fed to a vacuum filter, the filter cake passing to a thermal disc dryer. The dried product is conveyed to sales bins, from which it is sampled and packed into 250 kg drums for shipment.

Centrifuge liquor passes to a secondary precipitation tank, where residual tungsten is precipitated. This is then filtered in a pressure leaf filter, barren filtrate being rejected as a tailing and filter cake being washed to reduce sulphur content prior to rejoining the primary precipitate.

*Tailings Disposal and Water Reclamation:* All reject streams from the mill are brought to a tailings disposal pumping station. Here they can be either pumped approximately 1 400 metres to a settling dam or diverted to cyclone systems for separation of sand fractions for use as underground fill.

In the latter case, the sand fractions are pumped to the settling dam. After settling, water from the discarded tailings gravitates back to the mill circuit water dam for re-use. A fresh water dam supplies make-up water to compensate for losses in evaporation, seepage, etc.

#### *Assay Research*

Well equipped laboratories are maintained to provide services to the metallurgical and other departments.

Assays are carried out daily on various mill samples as a means of controlling plant performance and in checking on final product quality. Samples from the mining and geological departments are also processed through this section.

The research laboratory conducts investigations into plant performance, process development and a variety of other projects as required.

### Agricultural Operations

King Island Scheelite owns a number of grazing properties around Grassy, purchased mainly during 1970 and 1971, for exploration and mining purposes and to ensure mineral reserves.

The Company presently owns 3 280 hectares of land. Beef cattle are run on 1 580 hectares suitable for grazing purposes. The area grazed will be maintained and extended as a programme of clearing, ploughing and sowing to pasture is completed over a number of years.

Up to 2 500 head of commercial cattle are carried on the area suitable for grazing. The breeding herd numbers over 1 000 cows and surplus stock are sold through the local export-licensed abattoir or shipped to Tasmania and Victorian outlets.

During 1973 an Angus Stud was established and registered with the Angus Society of Australia. The stud prefix is 'Scheelite' and the aim of the stud is to provide bulls for use in the commercial breeding herd. At present there are 81 head in the stud herd.

### FISHERIES

#### General

The Tasmanian saltwater fishing industry involves about 1 680 licensed fishermen and crew who operate over 720 licensed fishing vessels from the State. 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 1977-78 the catch of fish, molluscs and crustaceans totalled 7 365 tonnes which was an increase of 16 per cent on the 1976-77 figure of 6 351 tonnes but still well 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 ceased operations in mid-1974.

The Fisheries Development Authority 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 catch was recorded in 1977-78 and only 342 kilograms were caught in 1976-77.

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. The catch in 1977-78 was 11 942 kilograms which was 3 per cent above the catch of 11 560 kilograms in 1976-77.

#### 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, Tasmania

Variety	Species	Code number	Variety	Species	Code number
Eel	<i>Anguilla australis</i>	035	Tuna	<i>Thunnus</i>	
Whitebait	<i>Lovettia sealii</i>	076		<i>maccoyii</i>	301
Rainbow trout	<i>Salmo gairdnerii</i>	101		<i>T.alalunga</i>	303
Flounder	Fam. <i>Bothidae</i>	151		<i>Katsuwonus</i>	
Cod	<i>Physiculus</i>			<i>pelamis</i>	315
	<i>barbatus</i>	201	Mackerel	<i>Auxis thazard</i>	334
			Snoek (barracouta)	<i>Leionura atun</i>	335



## Main Commercial Fish Varieties, Species and Code Numbers, Tasmania—continued

Variety	Species	Code number	Variety	Species	Code number
Mullet	<i>Mugil cephalus</i>	351	Garfish	<i>Hyporhamphus melanochir</i>	712
	<i>Aldrichetta forsteri</i>	370	Southern rock lobster	<i>Jasus novaehollandiae</i>	780
Trevalla, deep sea	<i>Hyperoglyphe porosa</i>	451	Oyster	<i>Ostrea angasi</i>	831
Warehou	<i>Seriolella brama</i>	453		<i>Crassostrea gigas</i>	832
Salmon	<i>Arripis trutta</i>	490	Scallop	<i>Pecten meridionalis</i>	835
Morwong	<i>Nemadactylus spp.</i>	501		<i>Equichlamys bifrons</i>	836
Trumpeter	<i>Latris lineatus</i>	535		<i>Mimachlamys asperimus</i>	837
	<i>Latridopsis forsteri</i>		Abalone	<i>Notohaliotis ruber</i>	845
Flathead	<i>Neoplatycephalus fuscus</i>	615		<i>Schismotis laevigata</i>	846
	<i>N.richardsoni</i>	616			
	<i>N.speculator</i>	617			
	<i>Trudis bassensis</i>	621			
	<i>Leviprora laevigata</i>	625			
Shark	<i>Mustelus antarcticus</i>	651			
	<i>Galeorhinus australis</i>	655			

## Fisheries Statistics

## Source of Data and Method of Presentation

Statistics presented in this section have been supplied principally by the Tasmanian Fisheries Development Authority. 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 live weight 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 Tasmanian Fisheries Development Authority. 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., Tasmania**

Particulars	1974 (a)	1975 (b)	1976 (b)	1977 (b)	1978 (b)
Number of boats engaged (c) . . . . .	616	607	640	655	727
Value of boats engaged (c) . . . . . \$'000	12 546	13 060	14 918	15 464	18 034
Average value per boat . . . . . \$	20 367	21 516	23 309	23 610	24 806
Number of tender boats . . . . .	400	395	405	402	417
Total value of fishing gear . . . . . \$'000	1 261	1 255	1 379	1 438	1 678
Value of fishing gear per boat . . . . . \$	2 095	2 068	2 155	2 195	2 308
Number of crew . . . . .	1 343	1 347	1 439	1 466	1 620
Number of boats according to size (d)—					
Under 6 metres . . . . .	147	149	170	181	228
6 and under 9 metres . . . . .	88	81	83	89	104
9 and under 12 metres . . . . .	116	117	118	116	121
12 and under 15 metres . . . . .	157	150	148	142	141
15 and under 18 metres . . . . .	77	78	83	86	92
18 and under 21 metres . . . . .	15	15	17	19	18
21 and under 26 metres . . . . .	8	10	13	14	15
26 and under 30 metres . . . . .	4	4	5	5	5
30 metres and over . . . . .	4	3	3	3	3

(a) Complete details collected.

(b) Based on figures collected in 1974 adjusted for new registrations and de-registrations.

(c) Excludes tender boats.

(d) 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: Production by Type, Tasmania  
(Estimated Live Weight, Tonnes) (a)**

Type	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78
Australian salmon . . . . .	461	371	631	473	r 573	611
Barracouta (snoek) . . . . .	915	598	760	143	37	194
Cod . . . . .	4	2	2	1	2	2
Flathead . . . . .	39	73	23	32	29	112
Flounder . . . . .	14	10	18	5	3	1
Garfish . . . . .	36	50	40	35	28	20
Morwong . . . . .	7	8	14	35	59	20
Mullet . . . . .	7	7	5	4	6	3
Shark . . . . .	497	1 187	651	1 238	1 130	1 710
Trevalla, deep-sea . . . . .	70	100	75	59	56	64
Warehou . . . . .	7	7	4	2	1	3
Trumpeter . . . . .	40	n.a.	135	13	25	45
Tuna . . . . .	168	(b) 7 471	512	189	203	320
Other . . . . .						
Total . . . . .	2 265	(b) 9 884	2 870	2 229	r 2 153	3 105

(a) Estimated live weights are calculated from landed weights by conversion factors since quantities of fish are frequently reported 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.

The above 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. The figures, derived from fish buyers' transactions, do not reflect the actual production from Tasmanian waters due to: (i) landing at Tasmanian ports of fish caught in interstate waters; (ii) landing at interstate ports of fish caught in Tasmanian waters; and (iii) direct sales by fishermen.

### Crustaceans and Molluscs

In terms of value, the principal items in the Tasmanian catch are abalone and southern rock lobster (crayfish). The next table shows details of production of crustaceans and molluscs:

Crustaceans and Molluscs: Production by Type, Tasmania

Type	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78
CRUSTACEANS (Whole weight, tonnes)						
Southern rock lobster .....	1 583	1 514	1 525	1 229	1 177	1 192
MOLLUSCS (In-shell weight, tonnes)						
Abalone .....	2 172	2 060	2 108	2 429	2 368	2 525
Scallops .....	515	1 158	1 261	690	498	400
Oysters .....	147	207	105	94	149	138
Squid .....	154	5	6	1	6	2
Other .....	—	—	—	—	—	2
Total .....	2 988	3 430	3 480	3 213	3 021	3 068

Development of the Tasmanian abalone fishery dates from 1964 when divers commenced taking abalone for export. The 1963-64 catch was only 33 tonnes. In 1977-78 the catch was 2 525 tonnes which is 963 tonnes below the record 1970-71 abalone harvest of 3 488 tonnes.

### Comparison with Other States

**Rock Lobster:** Total production of rock lobster in Australia during 1977-78 was 14 588 tonnes of which Tasmania produced eight per cent. The main producing states were Western Australia with 10 875 tonnes (74 per cent) and South Australia with 1 912 tonnes (13 per cent).

**Abalone:** In 1977-78 Tasmania was the leading producer of abalone in Australia contributing 50 per cent of the total Australian production of 5 057 tonnes. The Tasmanian catch has remained fairly consistent over recent years. Victoria was the next major producer in 1977-78 with 1 143 tonnes, a decrease of 56 per cent over the previous year's figure of 2 575 tonnes.

**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. However, in 1963 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 tonnes in 1971-72, but following the discovery of new beds in Bass Strait the Tasmanian catch increased to 1 261 tonnes in 1974-75. Production in Tasmania fell to 400 tonnes in 1977-78, while the Victorian catch increased to 5 107 tonnes which was 55 per cent of the Australian total of 9 307 tonnes. The Queensland catch in 1977-78 was 2 737 tonnes which was more than five times the previous year's figure of 494 tonnes.

### 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, Tasmania  
(Per Cent)**

Port	1976-77	1977-78	Port	1976-77	1977-78
Derwent & Channel—			Bass Strait & Islands—		
Dover .....	0.4	2.3	Bridport .....	2.6	3.5
Hobart .....	2.8	5.6	Currie .....	0.3	1.0
Kettering .....	4.2	2.3	Lady Barron .....	5.6	5.3
Margate .....	1.4	3.5	Port Sorell .....	31.0	29.9
Woodbridge .....	—	0.4	Smithton .....	1.9	1.1
			Stanley .....	12.5	14.5
			'Tamar' (a) .....	2.3	1.2
			Wynyard .....	1.3	0.8
Total .....	8.7	14.0	Total .....	57.4	57.3
East Coast and Peninsula—			West Coast—		
Bicheno .....	10.1	7.1	Strahan .....	3.8	4.0
Coles Bay .....	0.8	0.9			
St Helens .....	2.1	6.6			
Triabunna .....	10.6	3.7			
Dunalley .....	1.8	1.0			
Port Arthur .....	4.7	5.3			
Total .....	29.9	24.6	Total Tasmania .....	100.0	100.0

(a) Launceston, Beauty Point and other Tamar ports.

**Proportion of Fish (Live Weight) Landed in Each Month, Tasmania  
(Per Cent)**

Month	1976-77	1977-78	Month	1976-77	1977-78
July .....	5.3	8.0	January .....	10.7	10.4
August .....	3.0	4.2	February .....	14.0	16.4
September .....	2.9	5.2	March .....	14.1	9.7
October .....	1.7	5.1	April .....	12.7	11.8
November .....	5.8	6.5	May .....	15.9	8.7
December .....	3.9	6.4	June .....	9.9	7.7

**Value of Production—Fishing**

The table that follows gives details of gross values of fishery products. (For definition see later section 'Value of Production'.)

**Fisheries: Gross Value of Production, Tasmania  
(\$'000)**

Particulars	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78
Fish (a) .....	546	1 235	768	1 108	r 1 621	2 438
Crustaceans (b) .....	3 203	3 338	3 476	3 670	4 702	5 019
Molluscs .....	1 989	2 440	2 683	3 733	5 339	5 152
Total .....	5 739	7 014	6 928	8 511	r 11 662	12 609

(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 the Tasmanian Fisheries Development Authority (see the next section) 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, Tasmania  
(\$'000)

Particulars	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78
EXPORTS						
Fish (a)—Overseas . . . . .	27	64	4	21	46	50
Interstate . . . . .	482	660	573	422	583	607
Southern rock lobster—						
Overseas . . . . .	439	863	802	339	373	676
Interstate . . . . .	1 923	2 988	2 371	1 440	2 127	1 780
Molluscs—Overseas . . . . .	1 117	1 780	2 030	2 391	2 640	4 385
Interstate . . . . .	349	849	551	325	853	136
All types—Overseas . . . . .	1 583	2 707	2 836	2 751	3 058	5 111
Interstate . . . . .	2 753	4 497	3 495	2 187	3 563	2 523
Total . . . . .	4 336	7 204	6 333	4 939	6 621	7 634
IMPORTS						
Fish—						
Fresh and frozen—						
Overseas . . . . .	60	65	66	14	116	401
Interstate . . . . .	172	130	107	94	112	111
Preserved in tins—						
Overseas . . . . .	99	247	265	101	210	242
Interstate . . . . .	142	225	227	302	335	448
Other (b)—Overseas . . . . .	—	1	1	1	1	2
Interstate . . . . .	28	31	21	16	34	37
All types—Overseas . . . . .	160	313	332	116	328	645
Interstate . . . . .	342	386	355	412	481	596
Total . . . . .	502	699	686	528	809	1 241

(a) Includes fresh and frozen fish and fish preserved in tins.

(b) Includes smoked, salted and potted fish, extracts and caviar.

## Tasmanian Fisheries Development Authority

## General

The management of Tasmanian fisheries in tidal waters is the responsibility of the Minister for Primary Industry under the *Fisheries Act 1959*. Prior to December 1977 that Act

was administered by the Fisheries Division of the Department of Agriculture. Administrative responsibility is now vested in the Tasmanian Fisheries Development Authority.

The Tasmanian Fisheries Development Authority was established on 1 December 1977 under provisions of the *Fisheries Development Act 1977*. The Authority has the following objectives:

- (i) The promotion and development of the fishing industry that is carried on in or from Tasmania.
- (ii) The maintenance of proper standards with respect to fish and fish products intended for consumption in, or for export from, Tasmania both as to quality and as to the methods of handling, processing, storage, packaging and transport.
- (iii) The undertaking of research, exploratory and experimental work related to the management of the living resources in the waters around Tasmania and to the fishing industry of Tasmania.

#### *Fisheries Promotion and Development*

The Authority has begun implementing a formal development plan covering resource assessment, marketing and training.

The main stimulus to development has been through financial incentives made available to those engaged in the fishing industry. This has been effected in association with the Agricultural Bank by the introduction of the Fisheries Finance Plan. In support of this Plan, the Authority is developing advisory services to the fishing industry to assist in expansion and diversification of the catch. This involves programs of practical training, extension, communication and advice.

In conjunction with fishing industry organisations, the Authority produces the magazine *Fintas* which is distributed bi-monthly to all fishermen and processors engaged in the Tasmanian fishing industry, as well as to State and Federal Government departments, fishery authorities and industry organisations.

The traditional marketing structure in Tasmania has been geared primarily towards rock lobster, abalone and scallops. In order to stimulate demand for the undeveloped and lesser known species with a view to finding new markets, the Authority is engaged in programs of market research, industry training, product development and promotion.

#### *Research*

Research and development work of the Authority centres on demersal (bottom living) and pelagic fish, shellfish and aquaculture.

In the demersal fish program elucidation of the extent of trawl ground and the potential yields of fish from these grounds is the main research aim. Species such as morwong, flathead, dories and blue grenadier are under investigation.

Pelagic fish and shellfish work is centring on jack mackerel and squid. Determination of resource size and catching methods are under investigation. Other shellfish work concerns exploratory fishing for crabs and clams; this investigation is supported by a grant from the Fishing Industry Research Trust Account.

In aquaculture oysters and mussels are emphasised species. The Authority's laboratory at Taroona has been producing oyster spat in a pilot scale hatchery operation and dispatching them to oyster growers for trial on-growing. Mussel condition and settlement is being monitored at three sites in the south east to determine seasonal effects.

#### *Fisheries Control*

The management and conservation of existing fisheries, both commercial and recreational, is an integral part of the Authority's responsibilities. Patrol and inspection duties are carried out by Authority officers throughout the State. As well as Tasmanian fisheries, certain Australian waters and the Tasmanian section of the continental shelf are patrolled. In addition, the provisions of the Australia-Japan Fishing Agreement are enforced and regular inspections of Japanese fishing vessels are made when these enter the port of Hobart. For fisheries control and patrol purposes, the Authority has two long-range vessels, one measuring 16 metres and the other 14.5 metres, plus five high-speed runabout type vessels. In addition, frequent use of light aircraft is made to assist in patrol duties.

A special aquaculture inspector has been appointed to liaise with oyster farmers and other persons engaged in sea fish farming. This officer assists and facilitates applicants in obtaining the necessary leases or permits to operate sea farms.

The Authority has district offices at Hobart, St. Helens, Launceston, Burnie, Smithton and Sorell.

The Authority is responsible for issuing licences to Tasmanian-based saltwater fishermen. The types and numbers of licences in force during 1978-79 were as follows: fishing boat licences, 685; commercial crayfish pot licences, 324; commercial scallop licences, 88; fisherman's licences, 751; non-commercial crayfish pot licences, 6 059; commercial abalone licences, 125; non-commercial diving licences, 2 065; non-commercial scallop licences, 68; and purse seining licences, 6.

## 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 but exclude details relating to mining.

#### *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 direct comparisons can not be made with the mining, manufacturing, etc. industry sectors.

#### *Agriculture*

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 agricultural 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 1977-78 and are also included in this publication (see Chapter 7). From 1977-78, these surveys will be conducted on a triennial basis with the next survey due in 1980-81. The 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 has been scaled down so that as from 1975-76, only estimates of *gross* and *local* value of production of farm products have been produced, i.e. *net* values of production have not been calculated. For estimates of net value of production for 1974-75 and earlier years see the 1976 (pp. 341-343) and earlier editions of the *Year Book*.

#### Definitions

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 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 slaughtering and other disposals; and (iii) livestock products.

#### Crops

The following table shows gross values for the crops sector:

Crops: Gross Value, Tasmania (a)  
(\$'000)

Crop	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78
Cereals for grain . . . . .	1 896	2 916	3 164	2 261	3 999	3 008
Legumes mainly for grain . . . . .	147	376	525	163	182	162
Crops for hay (a) . . . . .	426	394	530	146	478	161
Orchard tree fruit . . . . .	17 312	14 473	14 910	13 138	12 137	13 393
Berry and small fruit . . . . .	960	949	1 406	794	944	1 249
Vegetables for sale for human consumption . . . . .	10 863	13 374	15 071	17 447	23 390	22 605
Other crops (b) . . . . .	3 953	4 765	3 064	4 450	7 975	11 390
Pasture harvested for hay . . . . .	4 405	8 839	10 470	5 628	8 478	4 141
Pasture harvested for seed . . . . .	79	562	269	74	151	456
Total . . . . .	40 041	46 649	49 409	44 101	57 734	56 565

(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, Tasmania 1977-78

Crop	Unit of quantity	Production	Gross value	
			Per unit	Total
			\$	\$'000
Crops (excluding pasture harvested)—				
Cereals for grain—				
Barley .....	tonne	19 403	120.54	2 339
Oats .....	tonne	4 279	119.94	513
Wheat .....	tonne	1 545	100.90	156
Total cereals for grain .....	..	..	..	(a) 3 008
Legumes mainly for grain—				
Peas, field .....	tonne	761	204.49	156
Total legumes mainly for grain .....	..	..	..	(a) 162
Crops for hay (b) .....	tonne	5 853	27.47	161
Fruit—				
Orchard tree fruit—				
Apples .....	tonne	63 444	202.00	(d) 12 815
Pears .....	tonne	1 913	223.20	(c) 427
Total orchard tree fruit .....	..	..	..	(a) 13 393
Berry and small fruit—				
Currants .....	kg	681 000	0.70	474
Loganberries .....	kg	142 000	0.81	115
Raspberries .....	kg	552 000	0.74	410
Strawberries .....	kg	84 000	1.65	139
Total berry and small fruit .....	..	..	..	(a) 1 249
Vegetables for sale for human consumption—				
Beans, French and runner .....	tonne	8 296	177.55	1 473
Peas, green (ex-shell) (processing only) .....	tonne	27 223	214.70	5 845
Potatoes .....	tonne	107 240	82.80	8 879
Total vegetables for sale for human consumption .....	..	..	..	(a) 22 605
Other crops—				
Hops (dry weight) .....	tonne	1 201	1 957.40	2 351
Other .....	..	..	..	9 039
Total other crops .....	..	..	..	11 390
Total (excluding crops from pasture) .....	..	..	..	51 968
Pasture (e) harvested—				
Pasture harvested for—Hay .....	tonne	166 495	24.87	4 141
Seed .....	kg	624 698	0.73	456
Total crops from pasture .....	..	..	..	4 597
Total all crops .....	..	..	..	56 565

(a) Includes other crops not specified in the table.

(b) Excludes pasture for hay.

(c) Adjusted for Government Stabilisation Subsidy: plus \$258 000 for apples and minus \$2 000 for pears.

(d) Includes payments of \$169 000 under the *Apple Industry (Assistance) Act*.

(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, Tasmania  
(\$)

Crop	Unit of quantity	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78
<b>Cereals for grain—</b>							
Barley .....	t	52.53	77.00	91.78	98.83	111.07	120.54
Oats .....	t	71.52	87.11	77.53	78.80	107.61	119.94
Wheat .....	t	52.20	103.97	103.51	97.31	82.00	100.90
<b>Legumes mainly for grain—</b>							
Peas, field .....	t	104.11	184.46	165.12	155.33	180.15	204.49
<b>Crops for hay .....</b>							
	t	24.38	30.11	63.95	29.17	49.81	27.47
<b>Vegetables for sale for human consumption—</b>							
Beans, French and runner .....	t	111.03	97.03	118.64	144.39	r 162.63	177.55
Peas, green (ex-shell) .....	t	106.14	115.72	163.27	183.22	r 212.41	214.70
Potatoes .....	t	57.23	86.92	59.43	76.76	83.33	82.80
Turnips .....	t	105.22	93.98	115.24	193.66	148.27	148.27
<b>Orchard tree fruit—</b>							
Apples .....	t	120.87	120.46	148.65	172.99	r 164.64	202.00
Apricots .....	t	223.13	177.49	342.89	223.87	217.08	310.20
Pears .....	t	173.95	117.11	180.70	171.42	r 195.11	223.20
<b>Berry and small fruit—</b>							
Blackberries .....	kg	0.24	0.27	0.41	0.40	0.50	0.76
Currants .....	kg	0.35	0.39	0.47	0.50	0.55	0.70
Gooseberries .....	kg	0.22	0.24	0.31	0.32	0.44	0.77
Loganberries .....	kg	0.34	0.38	0.46	0.47	0.57	0.81
Raspberries .....	kg	0.35	0.41	0.53	0.50	0.58	0.74
Strawberries .....	kg	0.95	1.02	1.73	1.60	1.55	1.65
Hops .....	kg	1.96	1.65	0.86	1.40	1.69	1.96
<b>Pasture (a) for hay .....</b>							
	t	20.43	19.72	27.85	17.47	25.31	24.87
<b>Pasture (a) for seed—</b>							
Clover .....	kg	1.23	1.02	1.34	1.14	1.30	1.24
Other .....	kg	0.45	0.49	0.45	0.21	0.36	0.36

(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 the gross value of production (including an adjustment for net exports), and the second table the average prices paid:

Livestock Slaughterings and Other Disposals (a): Gross Value, Tasmania  
(\$'000)

Particulars	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78
Cattle and calves .....	28 799	41 314	17 753	20 740	27 686	34 133
Sheep and lambs .....	8 622	10 209	6 359	5 710	r 9 565	14 544
Pigs .....	4 821	4 992	5 625	5 481	6 028	5 889
Poultry .....	1 320	1 505	1 970	2 121	2 824	3 416
Total .....	43 562	58 019	31 707	34 052	r 46 103	57 982

(a) Includes an adjustment for net export of live animals.

## Forestry, Mining and Fisheries

Average Livestock Prices, Tasmania (a)  
(\$)

Livestock	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78
Cattle (other than calves) . . . . .	108.64	145.21	71.13	71.24	90.10	103.55
Sheep . . . . .	5.84	9.58	3.54	2.75	5.76	7.67
Lambs . . . . .	8.33	14.20	7.92	8.10	11.49	12.05
Pigs . . . . .	31.36	43.13	54.86	58.27	60.11	62.37

(a) Estimated average prices, on the hoof, of livestock sold for slaughter.

## 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 accounted for 46 and 43 per cent of the total, respectively, in 1977-78.

Details of gross values for livestock products for the years 1972-73 to 1977-78 are shown below:

Livestock products: Gross Value, Tasmania  
(\$'000)

Particulars	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78
<b>Wool—</b>						
Shorn (including crutchings) . . . . .	35 291	30 226	22 930	27 139	33 000	34 559
Fellmongered and exported on skins . . . . .	2 191	1 747	960	1 281	1 993	2 349
Total . . . . .	37 481	31 973	23 890	28 420	34 993	36 908
<b>Dairy products, whole milk used for—</b>						
Processing . . . . .	17 297	17 369	22 407	21 085	24 462	26 102
Human consumption and other purposes . . . . .	5 252	5 775	6 951	7 669	8 601	8 693
Total dairy products . . . . .	22 549	23 144	29 358	28 754	33 063	34 795
Eggs . . . . .	4 502	4 548	4 903	6 239	7 249	8 339
Honey . . . . .	213	322	423	446	410	623
Beeswax . . . . .	7	8	14	21	14	31
Total livestock products . . . . .	64 750	59 995	58 588	63 880	75 729	80 696

## All Primary Industries (Excluding Mining)

In the table that follows *gross* and *local* values of production for all primary industries (excluding mining) are shown for the last five years:

Tasmanian Primary Production: Gross and Local Value  
(\$'000)

Particulars	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78
<b>CROPS (a)</b>						
Gross value of production . . . . .	40 041	46 649	49 409	44 101	57 734	56 565
Less Marketing costs . . . . .	11 780	9 680	9 739	7 864	7 104	6 113
Local value of production . . . . .	28 261	36 969	39 670	36 237	50 630	50 452
<b>LIVESTOCK SLAUGHTERINGS AND OTHER DISPOSALS</b>						
Gross value of production . . . . .	43 562	58 019	31 707	34 052	r 46 103	57 982
Less Marketing costs . . . . .	3 199	4 019	2 624	3 010	r 3 904	6 924
Local value of production . . . . .	40 363	54 000	29 083	31 042	r 42 199	51 058

**Value of Production**

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**Tasmanian Primary Production: Gross and Local Value—continued**  
(**\$'000**)

Particulars	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78
<b>LIVESTOCK PRODUCTS</b>						
Gross value of production .....	64 750	59 995	58 588	63 880	75 729	80 696
Less Marketing costs .....	3 098	2 733	4 461	2 847	3 891	4 990
Local value of production .....	61 652	57 262	54 127	61 033	71 838	75 706
<b>TOTAL AGRICULTURE (a)</b>						
Gross value of production .....	148 353	164 663	139 704	142 033	r 179 566	195 243
Less Marketing costs .....	18 077	16 432	16 825	13 721	r 14 899	18 027
Local value of production .....	130 276	148 231	122 879	128 312	r 164 667	177 216
<b>FORESTRY</b>						
Gross value of production .....	30 922	43 273	50 022	46 991	55 429	60 645
Less Marketing costs .....	5 562	7 393	7 160	6 317	7 528	7 152
Local value of production .....	25 360	35 880	42 862	40 674	47 901	53 494
<b>FISHING</b>						
Gross value of production .....	5 739	7 014	6 928	8 511	r 11 662	12 609
Less Marketing costs .....	—	—	—	—	—	—
Local value of production .....	5 739	7 014	6 928	8 511	r 11 662	12 609
<b>HUNTING</b>						
Gross value of production .....	415	470	428	531	445	649
Less Marketing costs .....	28	31	29	31	40	54
Local value of production .....	387	439	399	500	405	595
<b>TOTAL PRIMARY (EXCLUDING MINING) (a)</b>						
Gross value of production .....	185 429	215 420	197 082	198 066	r 247 102	269 012
Less Marketing costs .....	23 667	23 856	24 014	20 069	r 22 467	25 233
Local value of production .....	161 762	191 564	173 068	177 997	r 224 635	243 780

(a) Excludes crops and pastures harvested for green feed and silage.

**Further References**

*ABS Publications Produced by the Tasmanian Office*

Sawmilling, Woodchipping, etc. Statistics, Tasmania (8203.6) (monthly, June 1979 issue released 17-9-79, 4 pp.)

Mining Industry, Tasmania (8401.6) (annual, 1977-78 released 7-9-79, 14 pp.)

Agricultural Industry, Tasmania (7101.6) (annual, 1977-78 released 21-6-79, 64 pp.)

Value of Agricultural Commodities Produced, Tasmania (7501.6) (annual, 1977-78 released 27-6-79, 5 pp.)

*ABS Publications Produced by the Canberra Office*

ASIC, Australian Standard Industrial Classification (irregular, 1978 edition released June 1978)—

Vol. 1: The Classification (1201.0) (479 pp.)

Vol. 2: Alphabetic Index of Primary Activities (1202.0) (199 pp.)

Mineral Production (8405.0) (annual, 1977-78 issue released 28-6-79, 15 pp.)

Fisheries (7603.0) (annual, 1977-78 released 29-3-79, 31 pp.)

Gross Value of Primary Commodities Produced (excluding Mining), First Estimates (7501.0) (annual, 1978-79 released 3-7-79, 1 pp.)

Value of Agricultural Commodities Produced, Australia, Second Estimates (7502.0) (annual, 1977-78 released 2-2-79, 12 pp.)

Value of Agricultural Commodities Produced and Indexes of Quantum and Unit Gross Value of Agricultural Production (7503.0) (annual, 1977-78 released 19-7-79, 29 pp.)

*Other Publications*

*Australian Mineral Industry* (published annually by the Bureau of Mineral Resources, Canberra)

*Australian Fisheries* (published monthly by the Federal Department of Primary Industry)

## Chapter 9

### MANUFACTURING AND ENERGY

#### 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

###### *Advantages*

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 fewer industrial disputes and, almost always, 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 Department of Planning and Development*

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-General of the Department of Planning and Development under the Minister for Economic 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, small businesses 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 (however, the United Kingdom's importance as a trading partner for Tasmania has declined markedly in recent years, Japan now being far more important—see Chapter 10 for details).

**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-electic system has expanded to a capacity of 1.5m 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 mentioning 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 of the 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 125 000 tonnes. (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 about 45 000 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 is about 2.0m square metres. (iii) *Long Reach*—A.P.P.M. completed its woodchip plant and made its first export shipment in 1972. The Company has a long-term contract for the export of woodchips to Japan.

*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 208 000 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 completed in September 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. (In 1979 the Company commenced construction of a \$160 million newsprint mill at Albury in New South Wales. The new mill is expected to come into production early in 1981.)

*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 chocolate production capacity increased when a new chocolate refining layout was commissioned. In 1978 shipment of dairy milk chocolate to the Company's Ringwood factory in Victoria commenced and total production was increased as a result.

*Cascade Group of Companies (Statewide)*: The Company is the oldest manufacturing company in Australia and is firmly established in the beverage industry at manufacturing, wholesale and retail levels. The Company manufactures alcoholic beverages through the only two breweries in the State: at Esk Brewery, Launceston (Boags Beer) and Cascade Brewery, Hobart (Cascade Beer). Alcoholic cider (manufacturer, Huoncry), is produced at its South Hobart factory. Non-alcoholic cider, soft drinks, pure fruit juices, fruit juice syrups, berry fruit pulps and concentrates for local and export distribution are manufactured at Cascades, Hobart. The operating capacity for its malt works, conducted by Tasmanian Breweries Pty. Ltd. to supply its two breweries, has recently been increased to 500 000 bushels per annum to allow surplus production for export.

*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 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)*: This Company is Tasmania's leading processor of frozen and canned vegetables. The annual volume of raw materials required by the Ulverstone and Devonport factories is approximately 116 000 tonnes, the main crops processed being potatoes, green peas and green beans.

*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 more than 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 an independent Company. During 1978 Henry Jones (IXL) purchased the interest of Cottee's General Foods in General Jones thus making General Jones Pty Ltd a wholly owned subsidiary of Henry Jones (IXL). Major expansion of the facilities and diversification of its production has continued throughout the three years of the Company's existence.

*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. Production capacity has since increased rapidly. Plant expansion in 1970 lifted annual production capacity to over 500 000 tonnes and plant kiln capacity will be further increased to one million tonnes in 1980. In 1972 the Group acquired Besser Holdings Limited. In 1977 the Company launched its own 4 000-tonne ship, the *M.V. Goliath*, to transport bulk cement to the mainland markets. The Company also produces approximately 1 000 000 square metres of asbestos cement sheeting each year.



*Humes Ltd (Statewide)*: Produces pre-cast concrete stormwater, sewerage and water supply pipes, with associated fittings and pre-cast concrete products of a wide and varied range. Rigid U.P.V.C. (unplasticised poly vinyl chloride) pipe is extruded in Launceston for use in stormwater, sewerage, water supply and irrigation, together with an appropriate range of U.P.V.C. fittings. Vitrified clay pipes and products are produced at Granton. Reinforcing mesh and rod is pre-fabricated at the Company's Steel Division plant at Burnie. 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.

*Repeco Bearing Company (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 automotive bearing manufacturing company in Australia. The Company also undertakes general contract machining and precision work, precision tool making, the manufacture of copper, tin and alloy powders, and the manufacture of sintered products using powder metallurgy techniques.

*Sheridan Domestic Textiles (Derwent Park)*: Formerly known as U.T.A. Hobart Mill, Sheridan Domestic Textiles is part of the Clothing, Footwear and Textile Group of Dunlop Australia Ltd. The Derwent Park mill commenced operations as Silk & Textile Printers Pty. Ltd. in 1948. Production now involves the printing of natural and synthetic furnishing fabrics, nylon shower curtain fabrics and mattress ticking, and printing and dyeing of polyester/cotton sheeting. The mill also manufactures and distributes finished domestic articles in the form of printed and plain dyed sheets and continental quilt covers, packed singly and in sets, shower curtains, and the Y.S.L. range of top quality percale sheets and quilt covers.

*Stanley Tools (Moonah)*: A Division of *The Stanley Works Pty Ltd*: The Company is Tasmania's only manufacturer of hand tools. During 1978-79, extensive capital investment in productive equipment has increased plant capacity for existing products and allowed the introduction of new products for manufacture. During 1980 Stanley Tools is planning further expansion in respect of a major new process plus local manufacture of a complete new product. In addition, screwdriver manufacture will be relocated from Stanley's Hardware Division (Melbourne) to the Moonah plant. Export of locally produced tools will be further expanded during 1980.

*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 \$42 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 and the production of manganese ore cinter on an 18 metre square cinter machine at the rate of 600 tonnes of cinter per day.

*Tioxide Australia Pty Ltd (Burnie)*: This Company is a manufacturer of titanium pigments which are used as the base white pigment in paints, enamels, plastics, printing inks, rubber, paper, man-made fibres and a number of other products. At the present time, ten different grades of pigment are made to meet the varying requirements of user industries. The Company was formed in 1937 as Australian Titan Products Pty. Ltd. Plans for construction of the Heybridge plant were delayed by the Second World War and the factory was commissioned in December 1948. The initial annual output was 1 500 tonnes. Successive expansions have raised annual production capacity to 32 000 tonnes. The Company commenced a \$3.5m expansion programme during 1979-80 to further improve the technical characteristics of pigments. Tioxide is the predominant supplier of titanium pigments to the Australian market and an increasingly significant supplier to South-East Asian countries. A staff of 400 was employed in mid-1979.

*Tootal Australia Limited (Devonport)*: Was established in 1952 as a vertical textile company manufacturing woven and knitted man-made fibre fabrics. The Company produces workwear fabrics in polyester/cotton, fashion dress goods, both dyed and printed, and a wide range of garments for industrial and casual end use. The Company has Australia wide distribution through its own selling offices in all capital cities. Employment is in excess of 400 persons.

*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), 2 000 tonnes; cheese (cheddar), 7 500 tonnes; milk powders (skim, full cream and buttermilk), 3 000 tonnes; and casein (acid), 200 tonnes per annum. The Company also operates an abattoir exporting 90 per cent of its output overseas.

## 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) for recent years:

Principal Articles Manufactured: Quantities, Tasmania

Article	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
Acid, sulphuric . . . . . t	570 156	517 052	466 817	506 338	522 154	414 644
Aerated waters . . . . . '000 l	15 751	14 845	16 219	18 786	20 082	19 834
Apples, preserved (solid pack) . . . . . t	7 669	5 824	6 255	4 203	5 215	4 740
Bacon and ham . . . . . t	1 931	2 169	2 356	2 434	2 505	2 457
Bricks, blocks, etc. . . . . '000	58 505	56 378	66 682	65 893	64 116	59 665
Butter (a) . . . . . t	12 398	12 196	10 762	9 707	7 910	7 075
Cheese . . . . . t	8 475	12 387	13 332	13 156	13 903	17 494
Concrete, ready mixed . . . . . m <sup>3</sup>	236 407	247 343	277 082	284 555	288 466	n.a.
Electricity, total generated . . . . . m kW.h	6 010	6 095	6 008	6 842	7 179	7 748
Fertilisers—						
Sulphate of ammonia . . . . . t	33 191	54 701	23 040	12 291	5 292	6 045
Superphosphate . . . . . t	180 458	103 253	57 896	101 281	97 012	151 489
Flour . . . . . t	34 643	34 938	30 691	32 427	32 780	34 901
Paper, newsprint . . . . . t	200 852	196 240	206 228	206 590	207 621	208 143
Timber—						
Sawn, peeled or sliced (b)—						
Hardwood . . . . . '000 m <sup>3</sup>	398.2	388.3	349.7	330.9	299.3	n.y.a.
Softwood . . . . . '000 m <sup>3</sup>	16.1	21.8	23.8	37.3	39.3	n.y.a.
Dressed—						
Floorboards . . . . . '000 m <sup>3</sup>	76.7	58.6	49.7	45.4	37.2	n.y.a.
Weatherboards . . . . . '000 m <sup>3</sup>	4.8	2.6	2.2	0.4	0.3	n.y.a.
Other . . . . . '000 m <sup>3</sup>	62.5	59.7	60.4	90.0	69.3	n.y.a.
Woodchips, etc. (green weight) (c) . '000 tonnes	3 043	2 947	2 436	2 967	2 838	n.y.a.
Zinc, refined . . . . . t	182 749	152 749	137 637	170 685	161 173	204 623

(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 1976-77 are given.

Definitions and data concepts applying to the integrated economic censuses will be found in the section 'Integrated Economic Censuses' in Chapter 18 of this edition. Also, results from manufacturing censuses are compared with those from integrated economic censuses covering other industry sectors in that section.

### 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 1977 are excluded from this table:

**Manufacturing Establishments: Operations by Industry Sub-division, Tasmania 1976-77**

ASIC code (a)	Industry sub-division Description	Estab-lish-ments 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 .....	113	4 047	1 722	5 769	46 745	284 315
23	Textiles .....	13	1 155	1 111	2 266	17 529	68 365
24	Clothing and footwear .....	11	77	162	239	1 306	3 848
25	Wood, wood products and furniture .....	199	4 158	313	4 471	34 041	160 725
26	Paper, paper products and printing .....	42	4 798	709	5 507	54 317	198 564
27	Chemical, petroleum and coal products .....	20	1 239	95	1 334	14 375	62 173
28	Non-metallic mineral products .....	51	889	53	942	9 070	45 786
29	Basic metal products .....	12	3 402	117	3 519	38 093	276 567
31	Fabricated metal products .....	75	1 330	197	1 527	11 667	42 894
32	Transport equipment .....	25	938	142	1 080	9 385	26 506
33	Other industrial machinery and equipment and household appliances .....	39	739	64	803	6 751	17 486
34	Miscellaneous manufacturing .....	17	270	39	309	2 635	12 080
	Total manufacturing .....	617	23 042	4 724	27 766	246 014	1 199 311

**Manufacturing Establishments: Operations by Industry Sub-division, 1976-77—continued**

ASIC code (a)	Industry sub-division Description	Stocks		Purchases, transfers in and selected expenses	Value added	Fixed capital expenditure (b)
		Opening	Closing			
		\$'000	\$'000	\$'000	\$'000	\$'000
21,22	Food, beverages and tobacco .....	34 177	39 256	179 083	110 310	6 675
23	Textiles .....	14 063	13 636	32 506	35 432	477
24	Clothing and footwear .....	206	209	1 929	1 923	222
25	Wood, wood products and furniture .....	26 551	30 247	79 998	84 423	5 710
26	Paper, paper products and printing .....	24 335	32 199	99 618	106 810	2 258
27	Chemical, petroleum and coal products .....	12 892	13 839	36 885	26 235	2 217
28	Non-metallic mineral products .....	4 651	5 456	26 042	20 549	2 899
29	Basic metal products .....	70 468	78 244	189 784	94 559	10 780
31	Fabricated metal products .....	6 673	7 758	23 633	20 346	1 968
32	Transport equipment .....	6 048	5 611	9 860	16 210	450
33	Other industrial machinery and equipment and household appliances .....	2 468	2 952	8 043	9 926	417
34	Miscellaneous manufacturing .....	1 264	2 812	7 062	6 567	399
	Total manufacturing .....	203 795	232 218	694 445	533 288	34 472

(a) Australian Standard Industrial Classification code.

(b) Outlay on fixed tangible assets less disposals.

### 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)

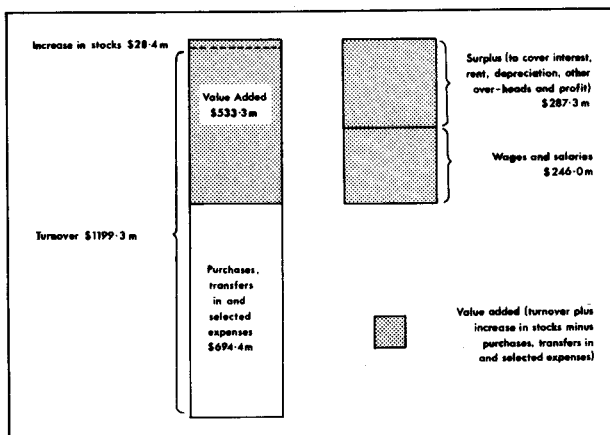
Main items	Unit	Year ended June	Statistical divisions			Tasmania
			Hobart and Southern	Northern	Mersey-Lyell	
Number of establishments . . . . .	no.	1975	255	223	150	628
		1976	257	247	163	667
		1977	241	228	148	617
Employment—(b) Males . . . . .	no.	1975	9 712	7 224	6 763	23 699
		1976	9 103	7 022	6 702	22 827
		1977	9 068	7 324	6 650	23 042
Females . . . . .	no.	1975	2 181	1 609	1 363	5 153
		1976	2 051	1 554	1 321	4 926
		1977	2 008	1 457	1 259	4 724
Persons . . . . .	no.	1975	11 893	8 833	8 126	28 852
		1976	11 154	8 576	8 023	27 753
		1977	11 076	8 781	7 909	27 766

Manufacturing Establishments: 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	1975	76 828	59 142	58 916	194 883
		1976	82 690	64 363	64 274	211 327
		1977	93 696	76 539	75 779	246 014
Value added . . . . .	\$'000	1975	151 862	128 525	121 871	402 255
		1976	166 525	147 477	142 027	456 029
		1977	207 731	156 999	168 558	533 288
Fixed capital expenditure . . . . .	\$'000	1975	15 091	28 998	9 058	53 146
		1976	11 669	21 877	10 390	43 936
		1977	8 601	16 935	8 936	34 472

(a) Excludes details for single establishment enterprises employing less than four persons at 30 June.  
 (b) Includes working proprietors; figures are average over whole year.

Manufacturing Establishments, Value Added, Tasmania, 1976-77



## Manufacturing and Energy

### 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 the basis of the resulting values, 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, 1975-76**

State or territory	Popula- tion relativity (a)	Estab- lish- ments	Wages and salaries	Turn- over (b)	Stocks at 30 June		Pur- chases, etc. (c)	Value added
					1975	1976		
<b>ACTUAL VALUES</b>								
		no.	\$m	\$m	\$m	\$m	\$m	\$m
N.S.W. ....	12.1	10 329	3 670	14 555	2 532	2 680	8 331	6 371
Vic. ....	9.2	8 873	3 287	13 220	2 364	2 472	7 564	5 765
Qld. ....	5.2	r 3 122	r 874	r 4 564	504	591	r 2 851	r 1 800
S.A. ....	3.1	2 287	872	3 461	638	676	2 012	1 486
W.A. ....	2.9	2 054	509	2 433	298	354	1 544	944
<b>Tasmania</b> .....	<b>1.0</b>	<b>667</b>	<b>211</b>	<b>1 030</b>	<b>201</b>	<b>205</b>	<b>577</b>	<b>456</b>
N.T. ....	0.2	69	21	127	34	36	83	46
A.C.T. ....	0.5	106	29	96	9	10	44	53
<b>Total Australia</b> ..	<b>34.1</b>	<b>r 27 507</b>	<b>9 472</b>	<b>r 39 485</b>	<b>r 6 581</b>	<b>r 7 023</b>	<b>r 23 007</b>	<b>r 16 921</b>
<b>VALUES RELATIVE TO POPULATION (d)</b>								
N.S.W. ....	..	854	303	1 203	209	221	689	527
Vic. ....	..	964	357	1 437	257	269	822	627
Qld. ....	..	600	168	r 878	97	114	r 548	r 346
S.A. ....	..	738	281	1 116	206	218	649	479
W.A. ....	..	708	176	839	103	122	532	326
<b>Tasmania</b> .....	..	<b>667</b>	<b>211</b>	<b>1 030</b>	<b>201</b>	<b>205</b>	<b>577</b>	<b>456</b>
N.T. ....	..	345	105	635	170	180	415	230
A.C.T. ....	..	212	58	192	18	20	83	106
<b>Total Australia</b> .....	..	<b>807</b>	<b>278</b>	<b>1 158</b>	<b>193</b>	<b>206</b>	<b>r 675</b>	<b>496</b>

(a) Tasmania's total mean population for 1975-76 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 degree of manufacturing activity in each state relative to population.

In 1976-77 the Tasmanian share of Australian employment in manufacturing was 2.36 per cent; and of Australian 'value added' in manufacturing 2.77 per cent. (Tasmania's mean population as a proportion of Australia's for 1976-77 was 2.92 per cent.)

### 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 restrictions.

## THE TASMANIAN ELECTRICITY GENERATING SYSTEM

### Introduction

Until 1971 Tasmania was unique among Australian states in that its electric power system was based almost entirely 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, its essential function being 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 generator capacity, produces more power than the Snowy Scheme. The total installed generator capacity of the Tasmanian electricity generating system at the end of 1979 was almost 1.8 million kW. Of this, 86 per cent (over 1.5 million kW) was contributed by an integrated hydro-electric network. The 240 000 kW oil-fired station at Bell Bay is available for use as required.

### 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 1964, 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 first generator commission	Static head (metres)	Generator capacity (kW)
COMPLETED STATIONS AS AT 30 JUNE 1979			
Tarraleah .....	1938	299	90 000
Waddamana 'B' (a) .....	1944	344	48 000
Butlers Gorge .....	1951	56	12 200
King Island .....	1951	(b)	1 690
Tungatinah .....	1953	306	125 000
Trevallyn .....	1955	126	80 000
Lake Echo .....	1956	173	32 400
Wayatinah .....	1957	62	38 250
Liapootah .....	1960	110	83 700
Catagunya .....	1962	43	48 000
Poatina .....	1964	829	300 000

## Tasmanian Power Generating System—continued

Station	Year of first generator commission	Static head (metres)	Generator capacity (kW)
COMPLETED STATIONS AS AT 30 JUNE 1979—continued			
Tods Corner .....	1966	41	1 600
Meadowbank .....	1967	29	40 000
Cluny .....	1968	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	68	60 000
Wilmot .....	1971	251	30 600
Bell Bay .....	1971	(c)	240 000
Cethana .....	1971	99	85 000
Paloona .....	1972	31	28 000
Fisher .....	1973	649	43 200
Gordon (Stage 1) (d) .....	1978	200	288 000
Total .....	..	..	1 782 390
STATIONS UNDER CONSTRUCTION			
Gordon (Stage 1, additional capacity) .....	(d)	186	(d) 432 000
Mackintosh .....	1981	68	72 000
Rosebery .....	1983	63	76 500
Pieman .....	1986	93	270 000
Total .....	..	..	850 500

(a) Reserve plant only.

(b) Diesel generators.

(c) Thermal oil-fired station; the second generator was installed in 1974.

(d) 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 were installed, the first being commissioned in January 1978 and the second later in that year. The remaining generators will be installed as peak loads demand greater installed capacity, giving a final total capacity of 720 000 kW.

## 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 in 1951 when the station was completed with the installation of a sixth generator; *Butlers Gorge* station (12 200 kW) commenced generation on the completion of the Clark Dam in 1951.

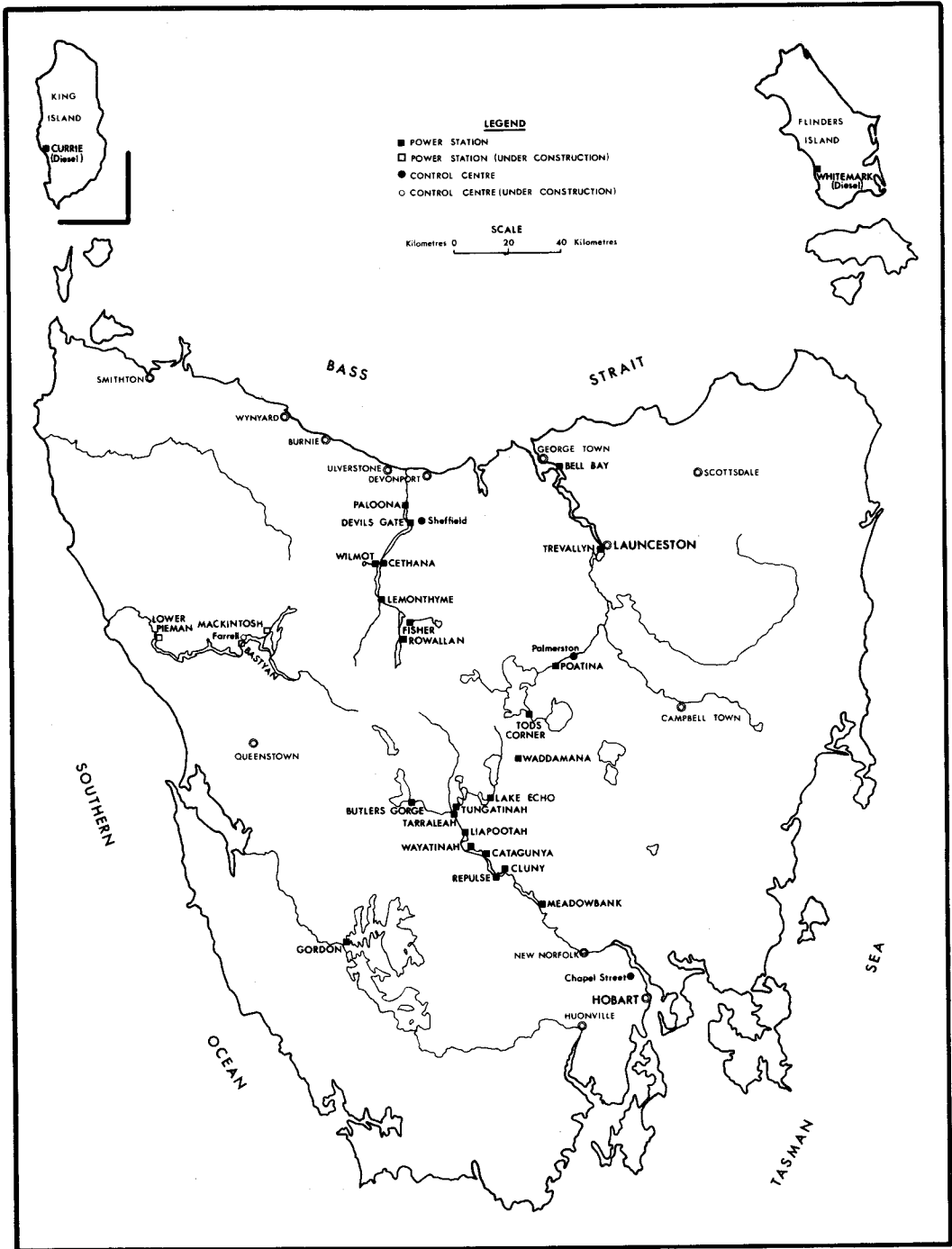
*Tungatinah-Lake Echo*

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 1953 and 1956, respectively.

*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.

The Tasmanian Generating System





*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 Mersey-Forth Scheme*

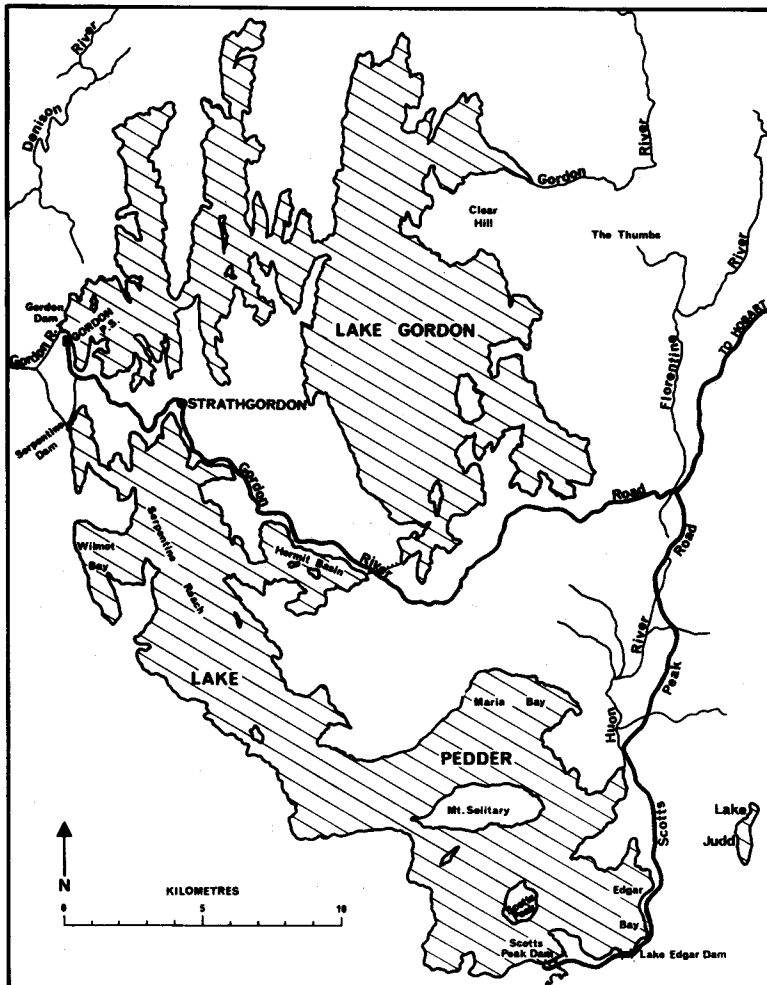
Construction of the Mersey-Forth development in north-western Tasmania was completed in 1973. Four rivers, the Fisher, Mersey, Wilmot and Forth, have been utilised by a combination of seven power stations and seven large dams. The power stations are *Rowallan* (10 450 kW), *Lemonthyme* (51 000 kW), *Devils Gate* (60 000 kW), *Wilmot* (30 600 kW), *Cethana* (85 000 kW) and *Paloona* (28 000 kW) and *Fisher* (43 200 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 accommodates two oil-fired steam driven generators with a total capacity of 240 000 kW. Installation of the second turbo-generator was completed in 1974.

Gordon River Development—Stage 1



### Present Developments

#### *Gordon River Power Development—Stage 1*

Initial development, completed in 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 with a total surface area of about 510 sq km, joined by the McPartlan Pass Canal, Lake Gordon (1974) was created by a 140-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 which has now become an important tourist attraction.

From Lake Gordon water is carried by a vertical shaft to the power station, 186 metres underground. Access to the Gordon Power Station is via the busbar and lift shaft or by road tunnel. The station is operated by remote control from Hobart, 161 kilometres away.

Initially, only two generators have been installed in the Gordon Power Station, each with a generating capacity of 144 000 kW. Three additional generators of 144 000 kW each are to be installed progressively as peak load demands increase, giving a final, total generating capacity of 720 000 kW for this station. The sustained generating capacity of the Gordon River Power Development, Stage 1 will be only a fraction of its total (peak load) capacity. It is estimated that the scheme should be able to sustain an average loading of about 168 000 kW during years of normal rainfall to produce an average output of 1 472 million kW.h of electricity per annum (i.e. the sustainable average load will be only about 23 per cent of the final installed generator capacity of 720 000 kW).

An accompanying map shows Stage 1 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 area on the West Coast. The total capital cost was estimated at \$134 million (1970), the total installed capacity at 418 500 kW, and the eventual average output at 1 770 million kilowatt hours per annum. Construction work commenced in 1973 and completion of the scheme is expected by 1986. The estimated final capital cost had risen to \$440 million by mid-1978, largely due to the high rates of inflation and wage increases experienced since 1970.

*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 2 per cent (62 square kilometres) of the catchment area will be inundated.

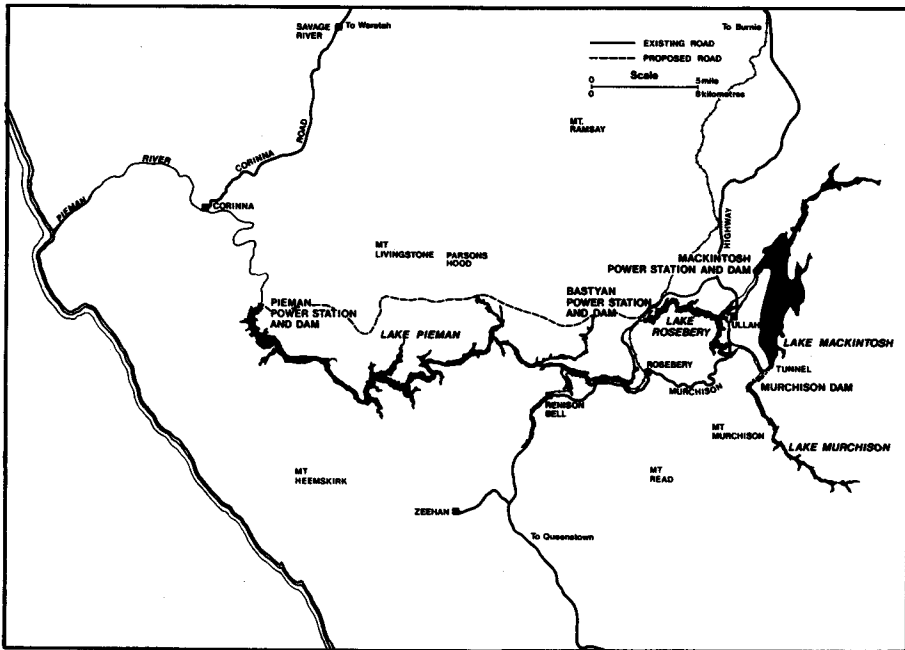
*Power Stations:* The development will comprise three elements each including a power station:

(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.

(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 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.

Pieman River Development



Proposed Future Developments

In October 1979, the Hydro-Electric Commission presented its *Report on the Gordon River Power Development, Stage Two* to the Premier. The Report, which recommended an integrated development of the Lower Gordon, Franklin and King Rivers as being the best method for meeting the State's future increased electricity demand, is summarised later in this Chapter.

Growth of the Electricity Generating System

The following table shows the growth of the integrated system (i.e. excluding King and Flinders Islands) in recent years:

Hydro-Electric Commission, Tasmania, Integrated System: Operating Statistics (a)

Year	Installed generating capacity (d) r	Units generated	Peak loading	Average loading	Annual load factor (c)
	kW	million kW.h	kW	kW	per cent
1973.....	1 318 400	5 850	891 100	667 822	74.9
1974.....	1 318 400	5 994	917 300	684 236	74.6
1975.....	1 462 400	5 773	891 500	659 020	73.9
1976.....	1 462 400	6 373	r 992 100	725 543	r 73.1
1977.....	1 636 400	r 6 931	r 1 050 800	r 791 205	r 75.3
1978.....	1 780 400	7 357	1 159 200	839 880	72.5

(a) Excludes King and Flinders Islands.

(b) At 31 December.

(c) Average annual loading as a percentage of annual peak loading.

### Load Factor

The installed generating 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.

The sustainable average annual loading bears little relation to the total installed generating capacity. Prior to the commissioning of the first 144 000 kW generator in the Gordon Power Station in January 1978, hydro-electric power generation in Tasmania was running well in excess of that sustainable by long-term water yields, despite an installed generating capacity well above peak loads. As mentioned earlier, the total generating capacity of the Gordon River Development, Stage 1 is eventually to be increased to 720 000 kW to cope with peak loads. However, this Scheme's estimated sustainable average loading during years of normal rainfall is only 168 000 kW, 23 per cent of planned total generating capacity.

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 largely for the conduct of its own affairs. The 'Minister Administering the Hydro-Electric Commission' 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) *Distribution 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, public relations, personnel, transport, stores and purchasing, medical services, central records and other services.

## Technical Details

## Generation

The total installed generator capacity of the Commission's 25 power stations was 1 782 390 kW in mid-1979. 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 lower than for any other state.

## Finances of the Hydro-Electric Commission

The table that follows shows the Commission's income and expenditure for recent years:

Hydro-Electric Commission, Tasmania: Income and Expenditure  
(\$'000)

Particulars	1974-75	1975-76	1976-77	1977-78
INCOME				
Sales—Bulk .....	23 382	24 380	28 814	31 899
Retail .....	36 208	45 443	50 079	59 216
Other income .....	2 705	2 876	1 479	4 404
<b>Total .....</b>	<b>62 295</b>	<b>72 699</b>	<b>80 372</b>	<b>95 519</b>
EXPENDITURE				
Operation, distribution, administration ..	24 646	27 871	30 593	33 484
Interest on loans and reserves .....	32 008	37 552	44 239	50 387
Less interest capitalised .....	-7 782	-10 040	-14 378	-9 763
Depreciation provision .....	5 984	6 184	6 297	7 454
Superannuation contribution and retirement benefits .....	4 530	5 784	7 572	9 548
Contribution to consolidated revenue ...	1 430	1 712	1 604	585
Fuel cost equalisation provision .....	-	2 000	3 000	2 000
Other expenditure .....	1 054	1 249	1 364	1 574
Net profit or loss .....	425	387	81	250
<b>Total .....</b>	<b>62 295</b>	<b>72 699</b>	<b>80 372</b>	<b>95 519</b>

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 electric power in Australia:

Average Price of Electric Power: Tasmania and Other States, 1977-78 (a)  
(Cents per Kilowatt Hour)

State or territory	Residential sales	Commercial sales	Industrial sales	Average all sales (b)
New South Wales .....	3.11	(c)	(c)	3.19
Victoria .....	3.21	5.06	2.74	3.42
Queensland .....	3.78	5.53	3.22	3.97
South Australia .....	2.82	4.23	2.43	3.02
Western Australia .....	4.63	(c)	(c)	4.64
<b>Tasmania</b> .....	<b>2.56</b>	<b>4.27</b>	<b>1.00</b>	<b>1.41</b>
A.C.T. ....	2.29	(c)	(c)	2.70
Average .....	3.20	n.a.	n.a.	3.19

(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.

The Tasmanian average is the *lowest* and the householder pays less per unit (kW.h) on the average than his counterparts in other states. In 1977-78, the average rate charged to residential users of electricity in Tasmania was significantly less than that for any other state and 20 per cent below the average for Australia. The average rate charged for all sales of electricity in Tasmania in 1977-78 was 66 per cent lower than that for Australia. 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 electric power sold in Australia during 1977-78:

Sales of Electric Power: Tasmania and Other States, 1977-78 (a)  
(Million Kilowatt Hours)

State or territory	Residential sales	Commercial sales	Industrial sales	Total sales (b)
New South Wales .....	10 317	(c) 13 658		24 584
Victoria .....	6 941	3 076	5 773	16 212
Queensland .....	3 529	1 705	3 059	8 349
South Australia .....	2 288	1 035	2 163	5 527
Western Australia .....	1 583	(c) 2 259		3 878
<b>Tasmania</b> .....	<b>1 347</b>	<b>171</b>	<b>4 901</b>	<b>6 487</b>
A.C.T. ....	625	(c) 499		1 151
Total .....	26 630	(c) 38 299		66 188

(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.

## TASMANIA'S ENERGY FUTURE

### Introduction

Recently, Tasmania, in common with the rest of Australia and other countries, has been made acutely aware of the need to develop alternatives to replace as much of the current usage of petroleum-based products as possible. This has been brought about by rapidly

escalating oil prices as consumption of this dwindling, non-renewable resource has grown, coupled with growing doubts as to the reliability of future supplies. For example, the initial contract rate negotiated by the Hydro-Electric Commission for the supply of fuel oil to the Bell Bay thermal power station in 1970 was less than \$12 per tonne, but the 'spot' market price of fuel oil had reached \$175 per tonne by mid-1979 and seemed certain to continue to rise still further.

Statistics in the section on 'Petroleum Products' show that the consumption of heating oil, industrial diesel fuel and lighting kerosene have already started to decline in Tasmania following recent price increases well in excess of the rate of inflation. This trend will undoubtedly continue and will also include fuel oil as domestic, commercial and industrial users of these fuels turn to cheaper alternatives such as electricity and coal. One result will be an increasing demand placed upon the State's limited coal reserves and the electricity generating system.

In 1979 the State Government recognised the growing importance of energy policy by establishing the Directorate of Energy and the Energy Advisory Council. The Premier also foreshadowed moves to widen the Hydro-Electric Commission's area of responsibility in the energy field.

The following sections outline the functions of the Directorate of Energy and the Energy Advisory Council; give an assessment of Tasmania's coal and oil shale reserves (contributed by the Department of Mines); and provide statistics relating to the consumption of petroleum products within the State for recent years. They are supplemented by a summary of the Hydro-Electric Commission's *Report on the Gordon River Power Development, Stage Two*. This Report, apart from assessing and recommending the development of a hydro-electric scheme on the Lower Gordon, Franklin and King Rivers, made a detailed assessment of the cost and viability of various alternative sources of energy that could be used for electricity generation to meet Tasmania's requirements up to the end of this century.

#### **The Directorate of Energy and Energy Advisory Council**

During 1979, the Tasmanian Government introduced new organisational arrangements with a view to streamlining procedures in the energy area and facilitating the provision of professional policy advice across the whole range of energy issues.

The Government established a Directorate of Energy, responsible directly to a Minister (currently the Premier), which commenced operations in March 1979. The Directorate was to remain a small policy unit but its resources were to be supplemented as required by secondment from other relevant authorities and by the engagement of outside consultants.

An Energy Advisory Council was established at the same time as the Directorate of Energy. The Council is chaired by the Director of Energy and, in addition, includes four Government appointees and four members from outside Government service. The Government appointees are the Commissioner, Hydro-Electric Commission; the Director of Mines; the Director of Environmental Control; and the Director-General of Planning and Development. The appointees from outside Government service are a trade unionist, a prominent industrialist, a coal expert of international repute and an academic with expertise and interests in the fields of electrical engineering, solar energy research and conservation.

The function of the Council is to work in tandem with the Directorate of Energy in the provision of policy advice on energy matters to the Government. The council is also seen as a principal vehicle for the evolution of energy policy that is broadly integrated with the Government's other socio-economic programs.

The Government also indicated a concern to ensure optimum public participation in the development of energy policy and, to this end, the Energy Advisory Council sets aside a major portion of each meeting for discussion with a particular interest group.

The principal activities of the Energy Advisory Council and the Directorate of Energy include consideration of matters relating to future power development, the preparation of energy policy guidelines, energy research (including consideration of alternative energy sources) and energy conservation in various contexts (including both conservation of liquid fuels and thermal insulation).

## Coal and Oil Shale Reserves

## Coal

The major black coal resources of the State are in the Triassic System. These are fairly widely distributed throughout southern and eastern Tasmania. The major reserves are considered to be in the country to the south of the Fingal Valley where inferred resources for portion of the area have been estimated at 242 million tonnes.

Black coal of Permian age occurs at Preolenna and in the Mersey district. This coal has been exploited on a small scale in the past but no production occurs at present. The seams are thin and broken and would not be easily worked by modern methods. No reserves have been calculated for the whole resource but the Permian coals at Preolenna have been estimated to total about five million tonnes.

Although some young brown coals have been recorded from various parts of the State none of these have so far proved to be economically extractable.

## Oil Shale

An oil shale, locally called 'Tasmanite' occurs fairly widely in north-west Tasmania, the main deposits being in the Latrobe district. The Tasmanite beds are not oil bearing but contain an oil producing substance which requires heat for the generation of oil. The resources are estimated to contain about 31 million tonnes of shale which would yield, on average, 122 litres of oil per tonne.

## Petroleum Products

Responding to anticipated world fossil fuel shortages, the Federal Government announced, in August 1977, that Australia would progressively move towards import parity pricing for petroleum products. On 15 August 1978, the occasion of the 1978-79 Budget Speech, that program was accelerated with the immediate application of import prices to locally produced crude oil. These and subsequent world price rises are reflected in the petrol price index shown in the table below:

Comparison of the 'Petrol' Expenditure C.P.I. Component with the All Groups Consumer Price Index for the Six State Capitals  
(Base: weighted average of the six state capitals = 100.0 for 1966-67)

Expenditure class	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
'Petrol' (incl. super and standard) . . .	117.9	132.0	152.4	175.0	182.9	199.2	(a)244.9
All groups . . . . .	129.8	146.6	171.1	193.3	220.0	241.0	260.7
Percentage increases (b)—							
'Petrol' (incl. super and standard)	n.a.	12.0	15.5	14.8	4.5	8.9	22.9
All groups . . . . .	6.0	12.9	16.7	13.0	13.8	9.5	8.2

(a) Quarterly index numbers were: Sept. 1978, 203.0; Dec. 1978, 245.6; March 1979, 252.8; and June 1979, 278.0.

(b) Over previous year.

The 'Petrol' expenditure class accounted for 3.5 per cent of the all groups Consumer Price Index number for March 1978.

The next table shows the 'Electricity, gas and fuels' group of the Price Index of Materials Used in Manufacturing Industry, Australia for recent years:

Price Index of Materials Used in Manufacturing Industry, Australia: Electricity, Gas and Fuels Group  
(Base: 1968-69 = 100.0)

Particulars	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
Index number . . . . .	99.1	126.2	179.5	229.0	254.8	291.0	362.4
Percentage increase (a) . . . . .	—	27.3	42.2	27.6	11.3	14.2	24.5

(a) Over previous year.



The following table shows that the overall consumption of petroleum products in Tasmania has been increasing in recent years. It will be of interest to gauge the extent to which demand in the future responds to higher prices following implementation of Australia's import parity policy. Should predictions by some economists of continuing inelastic demand prove correct, governments may have to resort to other policy measures, like rationing, to achieve the absolute reductions in total consumption from 1 March 1979 to which Australia is committed as a member country of the International Energy Agency. It is significant that the consumption of heating oil has fallen since 1976-77 following previous rapid growth, indicating that some consumers are switching to alternative energy sources for heating in response to rapidly increasing oil prices.

Consumption of Petroleum Products, Tasmania  
(Source: Department of National Development)

Product	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79 (a)
	million litres						
Aviation gasoline .....	3	4	4	4	4	4	4
Motor spirit—							
Super .....	266	289	306	319	346	358	370
Standard .....	79	78	70	66	60	56	58
Total .....	345	367	376	385	406	414	428
Aviation turbine fuel .....	17	23	19	23	24	28	35
Lighting kerosine .....	8	9	11	10	10	9	8
Heating oil .....	44	54	64	68	79	73	67
Power kerosine .....	1	1	1	1	1	—	—
Automotive distillate—							
Inland .....	101	127	133	148	162	168	189
Bunkers .....	5	6	5	7	5	1	5
Total .....	106	133	138	155	167	169	193
Industrial diesel fuel—							
Inland .....	51	59	52	98	68	80	45
Bunkers .....	64	44	33	41	47	36	24
Total .....	115	103	85	139	114	116	69
Fuel oil—							
Inland .....	335	328	306	(b)235	233	226	254
Bunkers .....	18	15	14	11	8	5	7
Total .....	354	343	320	246	242	231	621
Total volume of main products .....	993	1 036	1 018	1 031	1 047	1 044	1 066

CONSUMPTION OF MOTOR SPIRIT PER HEAD OF MEAN POPULATION  
(litres)

	876	924	935	948	992	1 005	1 030
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(a) Before January 1979 volumes were measured at 60°F. From that month a temperature of 15°C was used.

(b) Goliath Portland Cement Co. Ltd of Railton converted from fuel oil to coal on 11 February 1976.

## REPORT ON THE GORDON RIVER POWER DEVELOPMENT, STAGE TWO

### Introduction

The Tasmanian Hydro-Electric Commission's 91-page *Report on the Gordon River Power Development, Stage Two*, together with eight separate appendices and 28 source documents, (totalling over 2 000 pages) was tabled in State Parliament on 16 October 1979. The Report was the result of the Commission's research project into alternative sources of energy that could be used to meet increases in Tasmania's electricity demand to the year 2 000. The project involved hundreds of Commission employees and thousands of man-hours spread over several years and is the most comprehensive developmental study ever undertaken in

Tasmania. Valuable contributions were obtained from local, interstate and overseas consultants, scientists and researchers.

When the report was tabled, the Premier, Mr. Lowe, announced that a comprehensive program of public debate on it would start immediately. A co-ordination committee, under the chairmanship of the Director of Energy, had been established to receive public comment and advice from Government departments and authorities until 25 January 1980. This committee was to make a report summarising the comments it received by 15 March 1980. By the same date, the Director of Environmental Control was to present his final advice on the environmental impact statement and related matters on the Hydro-Electric Commission. The Commission would then prepare and present its final report, incorporating any refinements made desirable in light of Government advice and public comment. This was to be completed in April 1980 after which a Joint Parliamentary Committee would be established to give formal consideration to the proposal and make a final recommendation to Parliament.

The Commission's main Report is summarised below.

### **The Demand for Electricity**

#### *Background*

While Tasmania's per capita consumption of electricity is the highest of any state in Australia, its per capital consumption of total energy is among the lowest. The underlying reason for the relatively high per capita use of electricity in Tasmania has been the lack of economic alternatives apart from oil. This is in contrast to the mainland States which have major gas and coal resources available. However, the major source of primary energy at present utilised in Tasmania is oil which, in 1979, represented about 55 per cent of the State's total energy usage. The H.E.C. estimated that, at the time of producing the Report, the annual rate of oil usage in Tasmania was about 850 000 tonnes per annum which, at an average cost of \$130 per tonne accounted for over \$100 million being expended outside the State each year. (By early November 1979, the price of oil on the Rotterdam 'spot' market had exceeded \$A38 per barrel. Densities of crude oils vary but 7.7 barrels to the tonne is a typical average for Australian crudes; one barrel of oil has a volume of 159 litres.)

In many fields other than transport, primary energy sources are readily interchangeable. As oil continues to rise in real price compared with other energy sources and as its availability becomes less assured, there is no doubt that alternative energy sources will replace oil in many domestic, commercial and industrial applications. The result in Tasmania will be an increasing demand for coal and electricity. There is some scope for solar heating to reduce the consumption of electricity for water heating but the extent to which this will take place is not expected to be great. This is due to the relatively high capital cost involved. Also, significant savings in home heating energy use are possible by adopting appropriate standards of house insulation. Between 1965 and 1977 there was a marked increase in the use of oil for home heating to the extent that by 1978 the main living area was oil heated in over 38 per cent of homes in Tasmania. There is today a significant transfer of this type of heating load away from oil towards electricity. In the commercial sector, the demand for energy is very closely tied to the levels of business activity and employment and is, therefore, expected to continue to increase. Industrial demand is also certain to continue to grow.

#### *Forecast Growth in Demand*

From 1920 until 1978 the total demand made on the Commission's generating system has increased at an average rate of seven per cent each year. The population of Tasmania continues to grow but the growth rate fell to 0.67 per cent during 1975-76, rising slightly to 0.97 per cent for 1978-79. However, the number of customers supplied by the Commission has increased at a much higher rate—recently at about 2.5 per cent per year.

The 'general load' on the system (which includes domestic, commercial and small industrial consumers but excludes major industrial consumers) has shown an average per capita growth rate of 3.95 per cent a year from 1952 to 1972 with little variation in the rate from year to year. However, since 1972, the per capita growth rate of the general load has been much higher at 5.85 per cent per year and there is no sign that this will slow down in the immediate future.

The 'major industrial load' (the demand due to major industrial users) at present accounts for the largest proportion of the total demand for electricity in the State. The industries which fall within this category represent some of the most stable sources of employment in the State and their load has historically increased at a rate of seven per cent per annum.

In common with other electricity supply authorities in Australia, the Commission continues to receive inquiries for substantial blocks of power for new industries. However, it is unable to provide adequate generating capacity to cover all major loads which may be requested within the time span being considered. Nevertheless, it is generally accepted policy that additional processing within the State of the present products from established industries should be encouraged. The cost of energy to a major industry can be in itself a factor which determines the establishment or continuation of that industry. Thus the price at which electricity is available has a considerable bearing on the level of demand.

It is reasonable for established industries to expect that relatively small increments of energy will be made available without undue delay and at moderate prices. Therefore, all established industries were approached by the Commission to ascertain the extent of possible future increases in their electricity requirements. It was found that if energy is available at a competitive price, 10 of the 18 established major industries expect to require additional increments in supply during the period under consideration. The aggregate of their additional expected requirements was 477 MW average load (this figure makes no allowance for any new major industries which may wish to become established in Tasmania before the year 2 000). The aggregate of the foreshadowed increments is much larger than can be supplied from hydro sources and this factor in itself will result in some moderation of future demand because of the significantly higher costs associated with thermal generation in this State. The following table summarises the additional loads foreshadowed by major established industries:

**Foreshadowed Progressive Additional Loads on the Electricity Generating System, Tasmania, by Established Major Industries (MW)**

Year	Progressive additional contract demands						Total progressive additional demands	
	Temco, Bell Bay	E.Z. Co., Risdon	Comalco, Bell Bay	A.N.M., Boyer	A.P.P.M., Wesley Vale	Other (a)	Contract demand	Average load (inc. losses)
1979	..	..	..	..	1	2	3	3
1980	..	13	..	1	1	12	27	13
1981	..	13	..	1	1	16	31	16
1982	26	22	10	2	1	16	77	60
1983	26	22	10	2	46	18	124	104
1984	52	22	10	3	46	18	151	131
1985	52	22	10	3	46	25	158	136
1986	78	32	10	4	46	25	195	172
1987	78	32	10	4	46	25	195	172
1988	78	32	60	5	46	25	246	223
1989	78	32	60	5	46	25	246	223
1990	102	32	60	5	46	25	270	248
1991	102	42	60	5	46	25	280	258
1992	128	42	60	5	46	25	306	283
1993	128	42	60	5	46	25	306	283
1994	152	52	60	5	46	25	340	318
1995	152	52	60	65	46	25	410	382
1996	178	52	60	65	46	35	436	407
1997	178	62	60	65	46	35	446	417
1998	202	62	60	65	46	35	470	442
1999	202	62	60	65	46	35	470	442
2000	228	72	60	65	46	35	506	477

(a) Includes: Goliath Portland Cement Co. Ltd., Railton; Renison Ltd., Renison; Tasmanian Pulp and Forest Holdings Ltd., Triabunna; Associated Pulp and Paper Mills Ltd., Burnie; and Electrolytic Zinc Company of Australasia, Rosebery.





*King Island Scheelite's open cut mine which closed in 1974. The Dolphin Mine portal is at the bottom of the pit; the works and part of the township of Grassy can also be seen. (see Ch. 8)*

*[Tasmanian Film Corporation]*





Table Cape and Wynyard

[Tasmanian Film Corporation]



The Commission decided that it was reasonable to plan for a linear increase of an average 10 MW per annum in the average major industrial load. It was emphasised that this linear rate of growth is far lower than the 7 per cent per annum rate of increase experienced in the past. The allowance made in the forecast was for an increase in load of 1.8 per cent per annum in 1980, reducing to 1.3 per cent per annum in 2000.

#### Forecast Demand to the Year 2000

The Commission reached the conclusion that there would be a significant and continuing increase in the level of demand for electricity at least for the next 20 years. The next table shows the projected average load forecast together with estimated limits to the future load:

Load Forecast, Tasmanian Electricity Generating System

Year	Average load (MW)			Output (million kW h)		
	Lower limit	Projection	Upper limit	Lower limit	Projection	Upper limit
1990.....	1 191	1 216	1 262	10 433	10 652	11 055
1995.....	1 342	1 388	1 443	11 756	12 159	12 641
2000.....	1 506	1 582	1 648	13 229	13 896	14 476

The rate of increase in load which is envisaged for the future is only about half of that which has occurred in past years. If there is to be any hope of containing the increase to the lower levels indicated, every effort must be made to increase the efficiency of use of all sources of energy which are available to the State. In addition it is important that, wherever appropriate, the substitution of wood wastes, coal or gas for oil should be encouraged rather than allow transfer to occur solely into electricity.

#### The Existing System and Current Developments

The existing generating system, although it includes a significant thermal component at Bell Bay power station, is based primarily on water power. Once harnessed, water power is unaffected by escalating fuel prices, and it is this characteristic that has resulted in the relative stability of the cost (in real terms) of electricity generation in Tasmania in the past.

#### Generating Capacity

The existing hydro power stations are of two basic types; run-of-river stations and major storage stations. In a typical run-of-river station the amount of generating plant installed is usually considerably in excess of that required to match the average flow in the river. With some help from river storage, this large machine installation enables the power station to utilise most of the potential energy available from the water supply. Examples of major storage stations are Poatina and Gordon Stage 1. Here, a large water storage is provided that can be drawn on at high rates during dry periods when only small amounts of energy are available from the run-of-river stations. In these storage stations it is also necessary to provide generating plant of a total capacity very much larger than that required to generate the total energy output at a constant rate. Thus, because of the amount of generating plant which has already been provided for river regulation and storage release purposes, the installed capacity of the Commission's generating system is not usually a factor which determines the date when new generating facilities must be provided. Rather, it is the ability of the system to generate energy which is critical.

#### Energy Output

The average annual energy output which can be expected over the life of the hydro part of the system is called the *assessed long term average hydro energy output*. It is a measure of the annual energy which can be supplied on average over several decades and is based on simulating the operation of the system using river flow information recorded over the past 50 years. However, it may not be possible to supply this energy at all times because of inadequate supply of water to the power stations during dry periods. The maximum annual energy output which can be maintained by the hydro part of the system at all times under the full range of

catchment yields is referred to as the *hydro system average capacity (with no thermal generation)*. Use of the thermal generating station allows load commitments to be made to levels in excess of those which can be supplied by the hydro part of the system and the maximum annual energy output which can be maintained by the total system is referred to as the *total system average capacity (with maximum thermal generation)*. Total loads in excess of this figure cannot be supplied by the system except over the short term and then only providing that there is adequate energy held in storage initially.

#### Modifications

Planned modifications to the existing system to increase capacity are:

- (i) The installation of a third generator of 144 000 kilowatts at the Gordon, Stage 1 power station. This will increase the total system average capacity by 18 MW.
- (ii) Raising of the Miena Dam to increase the storage capacity of the Great lake. This will increase the total system average capacity by 24 MW.

The Pieman River Power Development, currently under construction is scheduled to be completed in mid-1986 (details relating to this scheme are given earlier in this Chapter). The average annual outputs of the Tasmanian generating system as operating in mid-1979 and after completion of the Pieman Development are shown in the following table:

**The Tasmanian Electricity Generating System: Average Annual Energy Output**

Particulars	Existing system (mid-1979)		System after completion of Pieman scheme	
	Output (million kW h per annum)	Average load (megawatts)	Output (million kW h per annum)	Average load (megawatts)
Hydro system average capacity (with no thermal generation) .....	7 481	854	8 813	1 006
Assessed long term average hydro energy output .....	7 866	898	9 522	1 087
Total system average capacity (with maximum thermal generation) .....	9 049	1 033	10 232	1 168

Comparison of the figures in the above table with the earlier table 'Load Forecast' show that an additional power development must be brought into operation by 1990.

#### Alternative Sources of Power

The provisions of the *Hydro-Electric Commission Act 1944* allow the Commission to generate electricity from any primary resource in any manner which is technically feasible. Therefore the Commission has in the past, whenever recommending a further power development, always given careful consideration to all means by which the required electrical energy could be generated. This same process was followed on this occasion (detailed comment on the possible alternatives is contained in Appendix 111 to the Report, 'Alternatives to Hydro-Electric Developments'). Investigations into the available alternative means of electricity generation showed that there were only four alternative development programs possible which had the apparent potential to meet the load forecast from 1990 to 2000 at a reasonable cost. These were:

- (i) An integrated hydro development of the Lower Gordon, Franklin and King Rivers;
- (ii) A separate hydro development of the lower Gordon, King and Franklin Rivers;
- (iii) Construction of a coal-fired thermal station comprising two 200 megawatt turbo-generators; and
- (iv) Connecting Tasmania with Victoria by means of underwater cable to allow importation of electricity.

The findings on other power sources are briefly summarised below.

*Oil-Fired Thermal Generation:* This could not be regarded as a sensible alternative for future developments because of cost.

A large gas-fired generating plant was also ruled out as a realistic source due to cost unless a major source of gas ever became available within Tasmania.

*Wood and Wood Wastes:* The Commission estimated that if all forest, sawmill and woodchipping wastes, and woodchips currently produced in Tasmania were used as fuel, there would be sufficient to power generating stations with a total installed generating capacity of 360 megawatts. However, the cost of electricity generated from wastes would approach twice that obtained from coal-fired thermal generation and the electricity generated from woodchips would be twice the cost of that from a coal-fired station (with the associated loss of an important export industry).

*Other Wastes:* Insufficient quantities of other wastes are available within the State to allow their use for economic electricity generation.

*Nuclear Power:* The Report pointed out that over 180 nuclear reactors were operating in 19 countries while a further 300 were either under construction or had been ordered. However, nuclear reactors generally have generating capacity in excess of 600 megawatts to achieve reasonable economies of scale. The maximum sized generating unit that can be accommodated in the Tasmanian system is one of 200 megawatts. Furthermore, the estimated time required before completion of a nuclear station was 14 years which would mean serious power shortages from 1990 until its completion.

*Wind Energy:* Although wind generating plants with a rating substantially in excess of 100 kilowatts are only so far available as experimental prototypes, the Commission had invited and received world-wide tenders for the supply of larger plants. To provide the same average energy output as the Lower Gordon, Franklin and King Rivers development, 740 windmills rated at 2 000 kilowatts each would be required. Alternatively, if the windmill rating were limited to 140 kilowatts the equivalent number would rise to over 6 300 windmills. The cost of such wind-generated energy would be at least five times the cost of that available from hydro sources.

*Solar Energy:* There are a number of processes by which radiation from the sun may be converted into electrical energy. None of these processes has been developed to the stage where it can be used commercially to produce large quantities of electricity at a reasonable cost. Where only small amounts of energy are required photo-voltaic cells are frequently used but the associated cost of energy is high.

*Wave Energy:* Although there are many different forms of experimental equipment for converting wave energy to electricity, no commercially available process exists. It is difficult to suggest even a notional cost of conversion.

*Tidal Energy:* The technology for conversion of tidal energy to electricity is very similar to hydro power conversion and is well known. However, the economics of the conversion process requires that the tidal range must be in excess of eight metres. No such tidal range exists at any place in Tasmania.

*Geothermal Energy:* Geothermal energy is present in the immense amount of heat in the earth's interior. It is readily available for use in a few particular places around the world, notably Wairakei in New Zealand and The Geysers in California. There is no such readily available resource in Tasmania.

*Ocean and Lake Thermal:* Ocean and lake thermal energy conversion systems utilise warm water at the surface to vaporise the working fluid, which drives a turbo-generator to produce electricity. A small demonstration plant has been successfully constructed and demonstrated. It would require considerable advances in technology before this could be regarded as a sensible alternative for production of large amounts of electricity.

### *Cost Comparisons*

The next table shows indicative capital and energy costs for the various alternative sources of power investigated. The figures presented are not the actual cost of energy from these schemes but are included for use only for comparative purposes. The relative effects of inflation have been removed by adopting a (real) interest rate of 5 per cent per annum on capital (after completion) and zero inflation for fuel and operation charges during construction. The 'indicative capital cost' excludes financing costs such as interest during construction. It should be borne in mind that, while the cost of energy from hydro sources will not increase with inflation but will remain constant (and therefore fall in real terms) once a



scheme has been completed, the cost of electrical energy from a coal-fired station will increase as the cost of fuel increases. (The cost of coal can be expected to rise faster than the general rate of inflation in future years due to increased demand as current users of oil turn to alternatives. It is noted that the cost of coal used for electricity generation in the eastern Australian states is significantly below the prices charged for coal exported from Australia. The effects of inflation are demonstrated by tables in the section 'Price Indexes and Inflation' in Chapter 17.)

Alternative Methods of Electricity Generation, Tasmania—Indicative costs

Development	Indicative capital cost (excluding interest during construction)			Indicative comparative cost of energy (a)	
	Actual (1)	Per kilo- watt of long term average output (2)	Equivalent to produce 171.6 MW average (b) (3)	Per kilowatt hour (4)	Annual cost for 171.6 MW average load (c) (5)
	\$ million	\$	\$ million	c	\$ million
Hydro—					
Gordon below Franklin Scheme .....	237	1 381	237	1.09	16.4
Franklin Scheme with King Diversion .....	221	1 320	226	1.00	15.0
<b>Total Integrated Development</b> .....	<b>458</b>	<b>1 351</b>	<b>232</b>	<b>1.05</b>	<b>15.8</b>
Gordon above Olga Scheme .....	183	1 542	265	1.22	18.3
Huxley and Sailor Jack Scheme with Franklin Diversion .....	355	1 690	289	1.37	20.6
<b>Total Separate Development</b> .....	<b>537</b>	<b>1 636</b>	<b>280</b>	<b>1.32</b>	<b>19.8</b>
Conventional thermal—					
Imported coal No. 1— 200 MW .....	173	1 437	247	2.69	40.4
Imported coal No. 2— 200 MW .....	93	777	133	2.09	31.4
<b>Imported coal 2 x 200 MW</b> .....	<b>266</b>	<b>1 107</b>	<b>190</b>	<b>2.39</b>	<b>35.9</b>
Local coal No. 1—200 MW .....	(d) 172 (e) 214	(d) 1 437 (e) 1 787	(d) 247 (e) 307	2.72 n.a.	40.9 n.a.
Local coal No. 2—200 MW .....	(d) 93 (e) 114	(d) 777 (e) 952	(d) 133 (e) 163	2.12 n.a.	31.9 n.a.
<b>Local coal 2 x 200 MW</b> .....	<b>(d) 266</b> <b>(e) 329</b>	<b>(d) 1 107</b> <b>(e) 1 370</b>	<b>(d) 190</b> <b>(e) 235</b>	<b>2.42</b> <b>n.a.</b>	<b>36.4</b> <b>n.a.</b>
Gas Turbine .....	n.a.	2 016	346	6.93	103.7
Woodchip—Triabunna .....	n.a.	1 875	322	5.4	81.2
Woodchip—Long Reach .....	n.a.	1 587	272	4.9	73.6
Wood—process wastes .....	n.a.	2 172	373	4.2	63.1
Wood—forest wastes .....	n.a.	1 869	321	5.2	78.2
Nuclear .....	n.a.	2 297	394	3.2	48.1
Unconventional—					
Wind—140 kW units .....	n.a.	8 538	1 465	8.4	126
Wind—2 000 kW units .....	n.a.	6 012	1 032	5.8	87
Solar .....	n.a.	11 954	2 050	11.6	174
Wave .....	n.a.	n.a.	(f) 1 200	8.0	120
Ocean thermal .....	n.a.	n.a.	2 880	17.0	255
<b>Imported electricity</b> .....	n.a.	n.a.	n.a.	<b>2.7</b>	<b>41</b>

(a) Including interest charges during construction and interest on capital.

(b) The 'Indicative capital cost' has been derived by multiplying the cost per kilowatt in column 2 by 171 600 to give the same average output as the Gordon below Franklin Scheme to allow comparison.

(c) The Indicative Annual Cost has been derived by multiplying the cost per kilowatt hour in column 4 by 171 600 to give the same average output as the Gordon below Franklin Scheme.

(d) Excludes coal mine development costs.

(e) Includes coal mine development costs.

(f) Substantial additional costs could be incurred in providing for storage and regulation.

### The Viable Alternatives

On the basis of comparative energy costs, the Commission considered that it was clear that the only viable alternatives to meet the projected demand were hydro power, coal-fired thermal generation and imported electricity. The alternative future development programs investigated are summarised below.

#### Hydro Power

On completion of the Pieman River Power Development, well over half of the State's remaining usable, undeveloped hydro-electric resource will be located in the area of the Lower Gordon, Franklin and King Rivers. Furthermore, estimated indicative costs have shown that these rivers could produce energy at a very low real unit cost considerably below that obtainable from developments on other rivers. Detailed investigations showed that there were two main alternatives for efficiently developing the three rivers. These are summarised below.

#### The Integrated Development

The Integrated Development can be constructed within all constraints to give the following commissioning dates and energy outputs:

Integrated Development

Scheme	Commissioning date	Average energy output (MW)
Gordon below Franklin Scheme .....	1990	171.6
Franklin Scheme .....	1995	83.0
King River Diversion .....	1995	84.7
Total .....		339.3

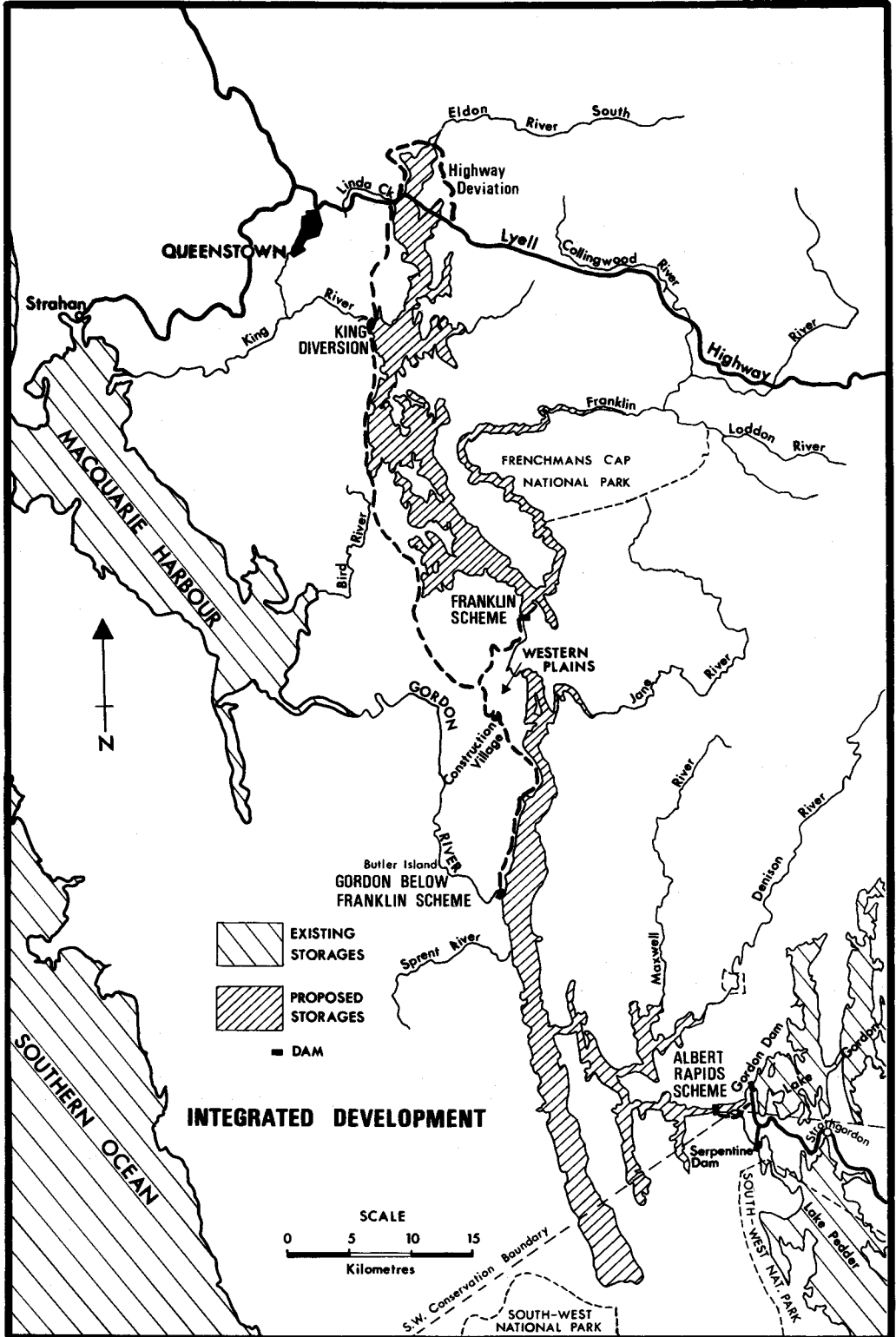
This program would allow the Integrated Development to meet the full range of forecast loads up to the year 1999.

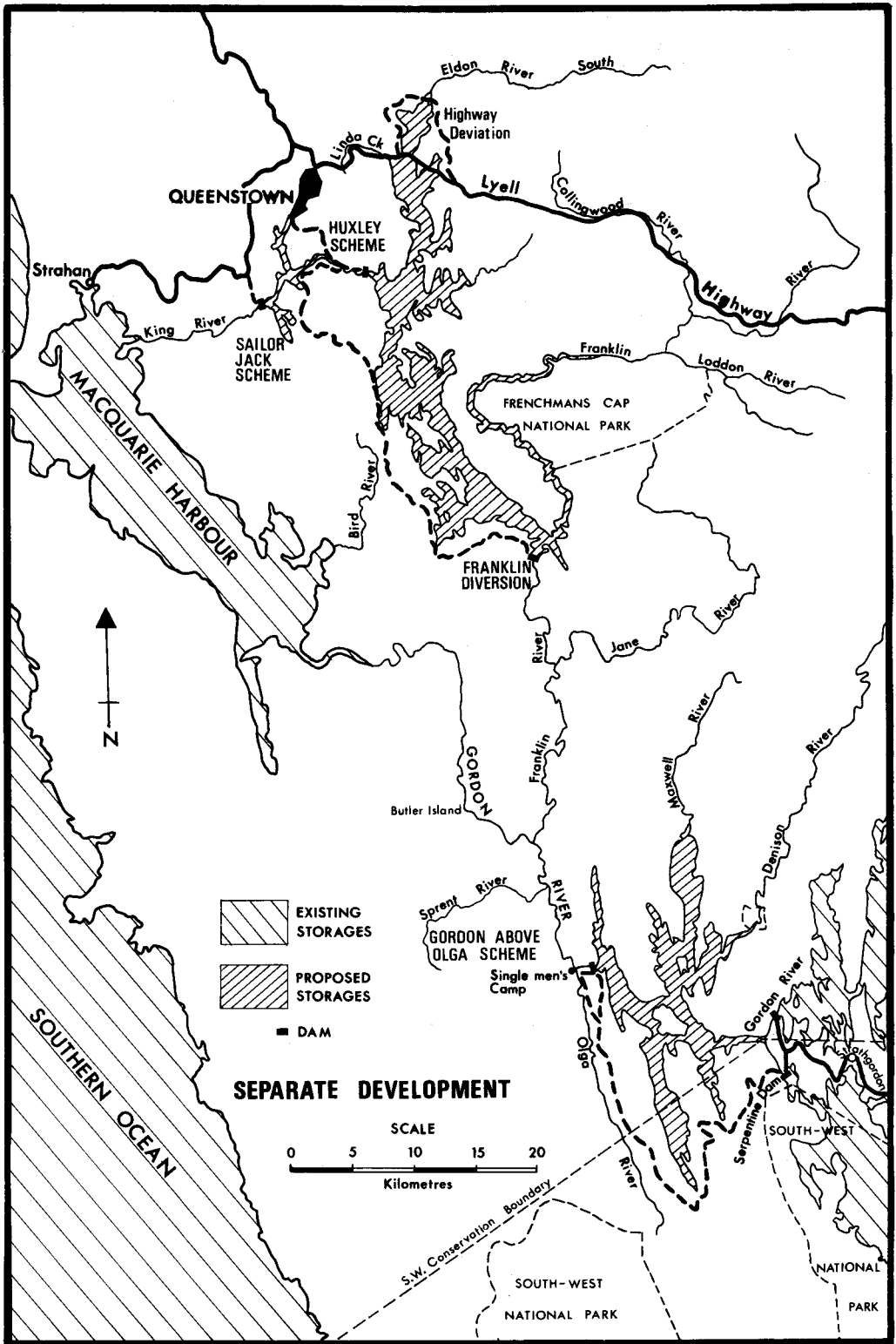
The first scheme to be constructed, the 'Gordon River Power Development, Stage Two' or 'Gordon below Franklin Scheme' (see accompanying map), would comprise a single 105-metre high, concrete-faced rockfill dam, a 296 MW power station and ancillary structures just downstream from the junction between the Franklin and Gordon Rivers. It would harness most of the water power potential of the Lower Gordon River below the existing Gordon River Power Development, Stage 1 as well as developing the potential of the lower parts of the Franklin River.

The remainder of the potential of the Lower Gordon could be developed at some later stage through construction of a small dam at Albert Rapids. The total potential of the Gordon below Franklin Scheme is substantial, being 172 MW average and capable of being increased to 198 MW average with the inclusion of the possible scheme at Albert Rapids.

All access to the site would be from the north by means of an upgraded existing track from the Lyell Highway to the vicinity of Mt. McCutcheon. From this point, 33 kilometres of new road would be constructed to the damsite. Although the construction activities would no doubt attract labour from the Queenstown area, it would be necessary to establish a construction village and main works located at Western Plains (which is about 56 kilometres from Queenstown and 24 kilometres from the damsite). This village would provide temporary accommodation and amenities for the 1 000-man workforce, in addition to permanent housing and facilities for operations personnel.

The subsequent Franklin Scheme with King River Diversion would be built using the same Western Plains construction village. This development (see map) would involve construction of a dam and power station on the Franklin River and a diversion dam on the King River.





The area has considerable tourist potential. The Commission has already had approaches from private hoteliers wishing to establish a combined motel and staff house facility during the initial stages of construction.

#### *The Separate Development*

The Separate Development (see map) could not be constructed within the environmental and manpower constraints to a time-table which would meet the upper bounds of the load forecast. Nevertheless, it was considered in detail as one of the main alternatives.

The first stage of the development that could be brought into commercial operation is the Gordon above Olga Scheme. This consists of a single 107-metre high rockfill dam, power station and ancillary structures just upstream from the junction between the Olga and Gordon Rivers.

Access to the site would be by a 47-kilometre road leading from the Serpentine dam in a south westerly direction before striking almost due north along the Olga River valley. The route which the road must follow takes it close to the boundaries of the South West National Park. The topography and environmental constraints which are now accepted practice for road construction combine to severely limit the achievable rate of progress.

The construction schedule would be based on re-establishment of married quarters, base workshops and facilities at Strathgordon. However, the travel distance of 60 kilometres between the main construction site and Strathgordon is such that a major singlemen's camp for over 700 people would need to be established at the damsite. The difficulties of gaining access to the site, together with possible staffing problems, combine to produce a construction period of at least 13 years for the Gordon above Olga Scheme.

The commissioning dates and respective energy outputs are as follows:

#### Separate Development

Scheme	Commissioning date	Average energy output (MW)
Gordon above Olga Scheme .....	1992	118.5
Huxley Scheme with Franklin Diversion .....	1995	128.0
Sailor Jack Scheme .....	1998	82.0
Total .....		328.5

These programmed commissioning dates are not early enough to preclude the risk of system failure or power rationing throughout the period 1990 to 1998.

#### *Thermal Development*

A thermal development program based on coal-fired generation could meet the forecast load. However, towards the end of the period under consideration, additional peaking plant would be required and this could most conveniently be provided by installation of additional generating plants at the Gordon Power Station.

The commissioning dates required to meet the load forecast are: No. 1 200 MW coal fired unit, 1990; No. 2 200 MW coal fired unit, 1994; additional 144 MW machines at Gordon, 1996 and 1998.

*Imported Coal:* Until such time as an adequate source of local coal has been proved, forward planning must be on the basis of using imported coal. However, the cost of electricity from a local coal-fired station would be almost the same as that from a station using imported coal. Therefore, preliminary studies were done covering the construction of a 2 x 200 MW coal-fired station at Bell Bay on the River Tamar. Here, a suitable site for the station is immediately south of the existing oil-fired power station. This site is conveniently located close to suitable coal handling and storage areas constructed at Big Bay and an ash disposal area constructed at East Arm. At this site it seems possible that estuarine water could be used for cooling in the power station condensers. However, the capacity of the Tamar Estuary to accept additional thermal discharges has not yet been assessed. Thus it has been assumed that cooling towers will be required.

*Local Coal:* Obviously the expenditure of money on mining coal within the State is preferable to importing coal and for this reason consideration was also given to a coal-fired station near Avoca and fuelled by Fingal Valley coal. Construction of the first 200 MW unit would not be required to start before 1985, leaving just enough time to prove if adequate local coal reserves exist and could be economically exploited. The coal-fired power station itself, which would be constructed at Avoca, would be very similar to that for Bell Bay and the same commissioning dates would apply. However, it would in this case be necessary to allow for proving coal reserves and developing the mines to supply the fuel.

To ensure that mine development and coal production costs were properly assessed the Commission sought expert opinion on these aspects from Robertson Research (Australia) Pty. Ltd., Geological and Mining Consultants.

The coal requirements for a 2 x 200 megawatt station throughout its 30-year life total about 33 million tonnes. After allowance is made for losses in washing and for coal which must remain in the ground it is necessary to prove the existence of at least 65 million tonnes of in situ measured reserves.

The Consultants advised that to demonstrate the existence of this quantity of coal an exploration program taking two years and costing \$2 300 000 would be required. Following this investigation, detailed planning and environmental studies costing \$600 000 and taking one year would be necessary. There would then follow two years of mine development before the mine could be developed sufficiently to confidently provide sufficient fuel for a power station.

#### *Power Exchange by Bass Strait Cable*

The possibility of connecting the Tasmanian electricity supply system with Mainland systems has been examined over many years. A suitable 258 km connection could be made, with the underwater cable jointing on King Island.

A link of 300 MW capacity would consist of two fully insulated cables with converter stations at both ends and appropriate connections to the two transmission systems. It would cost about \$150 million to build (current values).

There are a number of different modes for operating such a link. It could be used for the interchange of energy between the two States, with Victoria receiving energy at periods of peak demand while Tasmania received energy at other times. Alternatively, it could be used solely for supplying energy to Tasmania either at a constant rate or only during the off-peak periods in Victoria.

As far as Tasmania is concerned the importation-only mode appears to be marginally preferable on a cost basis. Used in this mode the theoretical cost of electricity delivered to Tasmania is somewhat higher than could be generated from a local coal-fired thermal station and about two and a half times the cost of energy from the hydro alternatives.

However, it is understood that the State Electricity Commission of Victoria's planned developmental program is fully committed for their own requirements until 1995. On the assumption that this program is limited by capital availability, it might be possible for energy to be supplied at an earlier date if the capital requirements were made available to the State Electricity Commission of Victoria by this State. Present indications are that even this prospect is remote in view of the current interest by major industries in Australian mainland electrical energy resources.

#### *Cost Comparisons*

The Integrated Hydro Development proposed would generate electricity at a much lower unit cost than any alternative. It has a significant cost benefit over the Separate Hydro Development.

It is quite impossible to predict either future rates of inflation or the related interest rates on capital, but it seems likely that because of demand pressures the cost of fuels will tend to escalate at a slightly higher rate than the general level of inflation. In view of past experience it is reasonable to assume that future general inflation will average six per cent per year and escalation of fuel will average eight per cent per year. If those rates of increase in costs do in fact occur then a corresponding rate of interest charged on capital would be about 10 per cent per year. The following comparisons assume these rates and are on the basis of the annual

revenue required from the Commission's customers to finance the alternative schemes (covering interest on funds borrowed and fuel and maintenance costs):

- (i) The cost benefit of the Integrated Hydro Development over a scaled up 2 x 200 MW coal-fired thermal station giving the same energy output is \$60 million a year in 1991 increasing to \$200 million a year in 2000.
- (ii) The benefit of the Gordon below Franklin scheme over a scaled up No. 1 200 MW coal-fired thermal development is \$60 million a year in 1991 increasing to \$118 million a year in 2000.
- (iii) The benefit of the Integrated Hydro Development over the scaled up Separate Hydro Development is \$15 million in 1993 increasing to \$52 million in 2000.

(It is noted that the value of the dollar is constantly falling due to inflation. For example, if average weekly earnings per employed male unit for Tasmania—\$217.80 in June 1979—increased at a constant rate of six per cent a year, they would reach \$438.26 in mid-1991, \$492.42 in mid-1993 and \$740.42 in mid-2000. However, if general inflation had also been a constant six per cent a year, the real value of average weekly earnings would remain unchanged.)

The annual charges which would be incurred due to importation of electricity by means of interconnection with the Mainland have not been assessed in detail as the base information available does not warrant such a rigorous analysis nor is there any assurance of the availability of energy from that source. However, the annual costs would be very similar to, but somewhat higher than, those of the Coal-fired Thermal Development and all the money would be spent outside the State. Obviously it is desirable for employment within the State to benefit as much as possible from any expenditure on energy production.

#### **Environmental Considerations**

The Commission's detailed environmental investigations are only summarised briefly here. In particular, the environmental impact of the alternative Gordon below Franklin stage of the Integrated Development and the Gordon above Olga stage of the Separate Development were examined in depth. Overall, the Integrated Development was assessed as more desirable from an environmental point of view.

#### *General*

The primary resource for a hydro development is rainfall which is inexhaustible and will remain available throughout the life of the development. The technology for hydro developments is well understood and the skilled personnel for its implementation in this State are as expert as any in the world. With modern standards of construction and maintenance, the life of hydro developments must be regarded as indefinite. They produce no waste products for subsequent disposal.

In the case of thermal power the efficiency of conversion from the primary energy source to secondary energy in the form of electricity is in general less than 40 per cent. Thus, not only are there substantial quantities of waste heat to be disposed of, but conversion to electricity often means an inherently less efficient use of the primary energy source than if it were used directly. However, the technology of conversion is well known and with the modern methods of dealing with the wastes that are available, the process is generally regarded as being socially acceptable.

The Commission decided that, at this stage, a detailed environmental study for a thermal scheme was not justified. Matters of particular importance that would require investigation if this alternative was adopted would be the control of chimney and cooling tower or cooling water emissions, ash disposal, and noise from the power station. However, it was considered to be clear that the overall environmental effects of a coal-fired power station of the size being considered could be controlled to lie within acceptable limits. In the case of the site considered at Bell Bay, the only unavoidable effect of major significance would be the inundation of East Arm by ash with the resulting loss of a productive nearshore area of local ecological importance.

#### *Impact of the Gordon Below Franklin Scheme*

As far as the Gordon below Franklin Scheme is concerned the area which would be flooded represents only 4.6 per cent of the Lower Gordon basin and one per cent of the area defined by the Cartland Committee as South West Tasmania. None of the six State Reserves

in the region—South West National Park, Frenchmans Cap National Park, Gordon River State Reserve, Lyell Highway State Reserve, Truchanas Huon Pine Reserve and Sarah Island Historic Site—would be affected.

Tourism is the only commercial activity in the region. The Gordon River cruises from Strahan operate well downstream from the proposed dam, but a small canoe-touring enterprise on the Franklin River would be partly affected. Of the wide range of recreational pursuits supported by the South-West as a whole, very few are pursued in the Lower Gordon area. The main recreational activity is canoeing on the Franklin River and this totalled about 50 participants in 1978.

There are no known archaeological sites or other evidence of Aboriginal occupancy in the area. The only visible remains of European operations are several old pinner's camps and a lime kiln.

The Draft Environmental Statement closely examines the impact of the Scheme on the flora and fauna of the area. The most serious effect would be some loss of habitat. When viewed within the totality of habitats in Tasmania the loss could not be considered serious.

The Scheme would involve the loss of some stands of Huon pine but this is not a rare species of tree and cannot be considered threatened by this project. There is currently no logging in the area and the timber resources to be flooded are not suitable for commercial extraction. Timber salvage operations would require substantial subsidy.

No metallic minerals have been found in the area and none are expected to be found. Non-metallic minerals, including limestone, are of little commercial significance.

Present direct wilderness use in the area to be affected is negligible, particularly when compared with other more scenic areas of wilderness elsewhere in the State. There is virtually no bushwalking or climbing in the area nor are there any walking tracks or shelter huts. Though large wilderness areas would remain completely unaffected the Scheme does reduce the total wilderness area in the Lower Gordon Basin.

The Gordon Below Franklin Scheme would flood some 28 per cent of the Franklin River and affects the Gordon and Denison Rivers. This is probably the major single adverse effect of the proposal.

The Scheme would further increase the flow regulation provided by the Gordon River Power Development, Stage 1. High flood peaks would be virtually eliminated and periods of low flows substantially reduced. The normal intrusion of salt water from Macquarie Harbour beneath the overflowing fresh water has already been substantially reduced by the regulated discharge from the existing Gordon Power Station. In the Lower Gordon River the proposed Scheme would extend this effect such that during its operation the estuary would remain fresh almost all the time over most of its length. There is no possibility of any increase in salinity of the river downstream from the dam such as would damage the existing vegetation along the banks of the lower reaches of the Gordon River.

The proposed Scheme offers a new dimension to tourist opportunities on the West Coast. Permanent tourist accommodation would become available at the Western Plains construction village—probably a few years after the start of Scheme construction.

The Scheme also offers the opportunity of co-ordinating tourist round trips, part by water and part by road, via Strahan, Macquarie Harbour, Lower Gordon River, the new access road and Queenstown. Such a project would require a minor extension of the road downstream of the damsite. Walking, with Western Plains as a base, could also prove popular and the new lake should also support good fishing.

### **Social and Economic Considerations**

#### *Employment*

Continuing development of hydro power resources has important employment and capital investment implications for Tasmania. To a very significant extent the level of employment generated by the Commission's construction activities is a reflection of the related capital spent within the State.

With the present sanctioned program, construction activity on the Pieman River Power Development will start to decline after 1980. The Pieman workforce will reduce from a peak level of 1 100 in 1980 at an average rate of almost 200 a year until 1984, followed by an overall



loss of 140 jobs to 1988 when all construction work will be completed. The build-up in manpower for the Integrated Development would almost match the rundown on the Pieman Scheme so that the level of manpower would stay above 1 000 until 1995. With the construction of subsequent smaller schemes it would continue at that level into the twenty-first century.

By contrast, the rundown on the Pieman would not be arrested by construction of a thermal scheme until 1986. By then the field labour force would have fallen by almost 1 000. Importation of electricity by Bass Strait cable would restrict even more severely employment opportunities in Tasmania.

A future coal-fired thermal development program or the importation of electricity would also bring about a significant reduction in professional and administrative staff requirements, as well as the run-down of back up services such as plant workshops, stores and motor transport in Hobart. The number of jobs in these categories may exceed 500 and the loss of this expertise would severely restrict the Commission's capability to resume hydro development at some future time.

In addition, a decision to change to a coal-fired development program would result in a large reduction in direct expenditure within the State on salaries, wages and materials. The reduction would amount to an average of \$15 million a year and produce indirect and induced effects on employment and business activity within the State. An end to hydro construction would also result in the loss of indirect employment opportunities in the State, and these are estimated to approach 700 jobs by 1988.

Thus, if hydro construction were to be discontinued after the Pieman River Power Development the result would be a drop in employment of at least 1 600 between 1980 and 1988 excluding professional, administrative and back-up staff losses in the Commission. When these losses, together with the indirect losses and reduced expenditure effects, are taken into account the total loss of jobs in the State could be expected to be well in excess of 2 500.

Construction of a thermal scheme between 1985 and 1992 would bring a small but temporary recovery due to the construction manpower requirements. There would be a further small but continuing benefit provided by the additional jobs in the operation and maintenance fields. Operating and maintenance staff requirements are estimated to total 70 for a 200 MW coal-fired station compared with 29 for the Gordon below Franklin Scheme. Against this continuing benefit must be weighed the employment opportunities which are provided in the tourist and recreational fields by the construction of hydro developments. (In the Strathgordon area over 30 people are now employed in these categories.)

A mining operation in the Fingal area to supply coal would have a significant regional effect. The direct manpower requirement could rise to 430 to supply coal to a 2 x 200 MW thermal station and there could be a further 600 indirect and induced employment opportunities. However, these jobs do not start to be generated until 1988 and, indeed, are probably not dependent on the use of coal in a new thermal power station, as alternative uses for the coal are most likely.

Importation of coal from the Mainland would export the mining operation jobs and capital expenditure required for mine development to the Mainland. The loss of employment opportunities in the State would be even more serious in the case of importation of electricity by means of cables laid across Bass Strait. Either of these alternatives would amount to moving part of one of the State's largest industries—electricity production—to the Mainland with a consequent serious loss of jobs and capital expenditure to the State.

#### *Alternative Uses for Local Coal*

If an adequate supply of local coal can be proved it would probably be used to fuel the existing Bell Bay thermal station. Furthermore, significant quantities of oil now used by the State's industries must be replaced by coal in the future. Thus, if satisfactory deposits of economically winnable coal are found they will be fully exploited without any demand from new thermal power stations.

#### *Availability of Capital*

In theory there may be some opportunity to mitigate the losses in employment opportunities if the Treasury Loan Funds portion of the capital funds that would go to a power development is re-allocated to alternative projects. However, this is unlikely to be

realised in practice. The major portion of the Commission's capital funds are now derived from Semi-Government loans and from Infrastructure Borrowings, specifically authorised for power development purposes. The raising of this money is only possible because the Commission can convince investors of its ability to provide from its revenues for the payments of interest and the repayment of the capital of the loans. It is very unlikely that the present level of funding under this heading could be substantiated in the absence of hydro construction.

The Commission meets all interest and redemption charges relating to loans for power developments out of earnings. If these charges were not to become a burden on the general taxpayer, then any alternative project in which they are invested must be just as financially viable as electricity production.

### Electricity Prices

A further important consideration for the Tasmanian community is the much greater cost of electrical energy from the coal-fired thermal or imported electricity alternatives and the effect it would have on household electricity accounts and the price of goods and services. The unit cost of electrical energy from alternatives other than hydro is initially more than twice that from the Integrated Development. On the basis of June 1978 currency values, the difference is equivalent to about \$180 per annum in the year 2000 for each of the Commission's existing number of customers. The actual difference increases with time due to inflationary effects on the cost of coal and the fact that there are no parallel increases in the cost of hydro power. Obviously, the cost of electricity will continue to be an important factor when decisions are made to expand the activity of existing industries or to establish new ones.

### Finance

The Commission expressed concern that there has been growing but unfounded comment from some groups and individuals that hydro power is becoming less cost competitive and that the State cannot afford the large capital sums required. In fact, the recommended alternative offers by far the lowest burden of total annual payments to finance its construction and operation—all such payments are, of course, borne by the Commission's customers.

The Commission's total annual capital expenditure requirements if the Integrated Development is approved would remain fairly constant over the construction period (in terms of constant value dollars). The annual rate of capital expenditure (in real terms) would be similar to that which occurred during the years 1969 to 1972. Since 1969-70, the Commission's loan borrowings for capital purposes have dropped markedly in real terms as shown in the following table:

Loan Funds for Capital Purposes: Hydro Electric Commission, Tasmania

Year	External borrowing	Conversion factor (a)	External borrowing at constant prices (b)	Year	External borrowing	Conversion factor (a)	External borrowing at constant prices (b)
	\$ m		\$ m		\$ m		\$ m
1968-69	29.6	2.983	88.2	1974-75	31.9	1.355	43.3
1969-70	37.0	2.865	106.2	1975-76	40.7	1.237	50.3
1970-71	32.0	2.705	86.6	1976-77	45.1	1.114	50.2
1971-72	33.3	2.433	80.9	1977-78	45.8	1.027	47.1
1972-73	28.0	2.256	63.1	1978-79	56.6	0.968	54.7
1973-74	28.0	1.853	51.9	1979-80	(c) 58.2	(d) 0.913	53.1

(a) Derived from the H.E.C's Construction Cost Index to convert to June 1978 values.

(b) Actual borrowings converted to June 1978 values.

(c) Comprising: Treasury loans, \$14.5m; semi-government loans, \$27.2m; and Infrastructure Borrowing, \$16.5m.

(d) Based on an assumed 1979-80 increase in construction costs of six per cent.

The above table shows that, during the last decade, the level of capital funds made available to the Commission has not kept pace with inflation. This has been possible largely due to the low capital cost increase in the system capacity provided in the form of the Bell Bay oil-fired thermal station. The next table shows the estimated capital expenditure requirements of the Commission at constant June 1978 price levels, including interest at 9.1 per cent per annum, up to 1990 if the Integrated Development is approved:

**Hydro-Electric Commission, Capital Expenditure Forecast at Constant Prices (a)**

Year	Approved power developments	Great Lake raising	Third machine, Gordon Stage 1	Proposed Gordon below Franklin Scheme	Franklin Scheme	Other capital works and system extensions	Total
1980-81 . . . . .	58.5	3.5	-	5.5	-	16.0	83.5
1981-82 . . . . .	61.3	5.1	-	10.3	-	16.0	92.7
1982-83 . . . . .	46.7	1.9	-	17.1	-	17.0	82.7
1983-84 . . . . .	40.3	-	-	23.6	-	14.0	77.9
1984-85 . . . . .	44.8	-	0.9	34.1	-	16.0	95.8
1985-86 . . . . .	32.6	-	2.4	36.9	6.1	16.0	94.0
1986-87 . . . . .	4.1	-	11.1	40.9	11.6	16.0	83.7
1987-88 . . . . .	0.6	-	5.8	51.4	16.5	16.0	90.3
1988-89 . . . . .	-	-	0.4	64.6	17.0	16.0	98.0
1989-90 . . . . .	-	-	0.3	49.8	25.0	16.0	91.1

(a) At constant June 1978 cost levels; includes interest on borrowings at 9.1 per cent a year.

Obviously, the Commission's actual capital requirements will be affected by inflation. However, as future cost increases are unpredictable and as escalating capital costs simply reflect the loss of purchasing power of the currency due to inflation, estimates at constant prices are more useful than estimated actual costs. (See the section "Price Indexes and Inflation" in Ch. 17 for a table showing the effect of various rates of price increase).

The 'real' cost to the State of hydro power developments can, to some extent, be judged by the number of people required to work on their construction. The field construction force required for the Integrated Development is about 1 100 or 0.6 per cent of the State's total work force. By comparison the Commission's field construction force was 1 700 in 1964, 2 000 in 1970, 850 in 1975 and about 1 100 in 1979. The continuing employment of 1 100 people in the field construction force must be regarded as a reasonable commitment in present times if it ensures an adequate supply of electricity in the future (particularly when alternative schemes would lead to lower levels of employment in the State and much dearer electricity).

### Recommendations

The Report concludes with, ' . . . the Commission recommends:

- (i) that the future increase in demand for electricity at least up to the year 2000 be met by the continuing development of the State's water power resources in the form of the Integrated Development of the Lower Gordon, Franklin and King Rivers.
- (ii) the approval by Parliament of the construction of the first stage of the Integrated Development—the Gordon River Power Development Stage Two.
- (iii) that an investigation be carried out as soon as possible to define the exact end uses of petroleum based fuels in the State, with a view to establishing the best means if any by which they can be replaced by other primary energy sources.
- (iv) a comprehensive educational and regulatory program be initiated such that will lead to appropriate increases in the efficiency of utilization of all sources of energy.'

**LACTOS PTY LTD**

*(This article was contributed by the Company)*

**Introduction**

Lactos Pty Ltd was established mainly through the efforts of one man, Mr Milan Vyhnaelek who has been Managing Director throughout the development of Lactos from its humble beginnings to its present position as one of Australia's leading cheese manufacturers.

The Lactos factory now has a capital investment of more than \$7 million, buys about 70 million litres of milk a year from about 300 dairy farmers from Deloraine to Circular Head, produces about 7 000 tonnes in 47 varieties of fancy (continental) and cheddar cheese per annum and employs about 250 people during the peak of the dairying season. Lactos sells its produce to about 20 different export markets, Japan and the United States being the most important, in addition to sales on its expanding domestic markets. In 1975 Lactos became Tasmania's first company to win an Australian award for export achievement. In that year the Company's export earnings amounted to \$4.5 million.

**Historical**

Mr Vyhnaelek arrived in Tasmania in 1949. He began work with the Hydro-Electric Commission at Tarraleah and, after two years there, moved to the North-West Coast to work as a butter packer for a local dairy company.

By 1953 Mr Vyhnaelek, who was a graduate of Kromeriz, the national dairy college of Czechoslovakia, had acquired sufficient capital to consider the establishment of a cheese-making factory on the North-West Coast. After a false start at Marrawah, he made a modest beginning on the present Lactos site in Old Surrey Road, Burnie. He designed the factory himself, helped dig the foundations and erect the buildings. In 1955 a partnership was formed between Mr Max Wade of Betta Milk Pty Ltd and Mr Vyhnaelek. Production of cheese began with surplus milk from Betta Milk. Initially Mr Vyhnaelek made cheese three days a week and then spent four days selling his production to delicatessens, milk bars and individual customers. Mr Wade withdrew from the partnership in 1956. Later that year Lactos Pty Ltd was formally registered. Initial production of cheese was 50 tonnes for the year and the factory specialized in continental or fancy type cheeses.

In the late 1950s, Lactos began collecting milk from six local farmers who welcomed the alternative outlet for their milk and became regular suppliers. By 1960 Lactos was producing about 21 varieties of continental cheeses, an increasing amount of milk was being made into cheddar cheese and the first export of cheese had been made.

Lactos continued to expand steadily despite a fire in 1964 which necessitated complete rebuilding of the production rooms. In 1966 the first cool store was built. This was extended in 1969 increasing cool storage capacity to 3 000 tonnes. Between 1970 and 1973 a new tanker milk receiving area, a new maintenance and boiler room block and major rebuilding of the manufacturing plant were completed. This expansion was undertaken to meet huge orders for special gouda cheese from Snow Brand Ltd of Japan. In 1977 factory extensions were undertaken to enable production of a Swiss-type cheese.

In August 1977 an electrical fault caused a major fire at Lactos which destroyed the complex housing the packaging department and the cool store together with a large quantity of cheese. Losses totalled \$2.6 m and initial fears were that the factory might be forced to close down, temporarily at least, causing the loss of valuable export markets and hardships among employees and suppliers. However, Lactos continued to operate without a major decrease in production and without any standing down of employees. Not one market was lost. Processes were crowded into the available space and employees continued their tasks under difficult conditions. Cool stores were hired—some in places as far away as Spreyton and Beaconsfield.

Reconstruction began immediately. The aim was to increase production capacity to 15 000 tonnes per annum (12 000 tonnes before the fire) and to install the best equipment available. Reconstruction took only 180 days to complete and the new Lactos factory included

the most modern and sophisticated cheesemaking, maturing, cutting and packaging machines from 10 countries.

The fire had caused a short-term setback for Lactos but eventually proved to be of long-term benefit to the Company.

### **Lact-o-matic Invention**

Inventions of cheesemaking equipment at Lactos have gained worldwide recognition in the industry. The most important of these inventions is the Lact-o-matic cheesemaker which itself became an export when built jointly by Lactos and Tieman Brothers of Melbourne.

The Lact-o-matic system was installed at Lactos during 1968-69 following six years of experimentation by Lactos employees. It was the first method to achieve fully mechanised and electronically controlled cheddar cheese production. The product is not touched by human hands from the time the milk enters the vat until it emerges as cheese. Human error is eliminated by inbuilt electronic sensors which analyse the curd ensuring the exact salt and acidity levels. The Lact-o-matic eliminated the back-breaking labour associated with cheddar cheese production and enabled substantially increased production without increased labour costs.

### **Production Processes**

In the Lact-o-matic process, conventional cheese vats are used for cutting and cooking the curd until the desired acidity is reached. The curd and whey are then pumped onto a vibrating screen for separation. The curd drops into a vertical fusing section where it is drained and matts together. From that point the curd flows onto a belt where it is automatically milled and salted. After salting the curd is stirred and elevated by means of a long spiral inside a revolving tube to the hoop-filling station before continuing on to the press. After pressing, the hoops are removed for washing and the cheese is transferred to the wrapping and packaging department and then placed in the cool store where it is held at a controlled temperature.

Gouda and other non-cheddar cheeses are manufactured in automatic, enclosed vats, the curd being transferred to strainer and presser vats, cut to various sizes and placed in cheese moulds. After immersion in brine the cheeses are placed in a drying tunnel and then a maturing tunnel for final curing. The maturing tunnel is automatically controlled for temperature and humidity. After curing, cheeses are then waxed and transferred to the cool store.

### **Assistance Schemes**

Lactos receive all their milk supplies from local farmers and as the Company has expanded the number of suppliers has risen from six to about 300 at present. Their importance to Lactos has resulted in the development of several assistance schemes.

Among these are a relief milking service which provides a skilled milker for up to two weeks to assist suppliers to get away for a holiday or to help out in the event of sickness or accident. The cost of this service is shared equally by Lactos and the farmer concerned. Lactos provides a complete design, construction and equipment service to its suppliers for rebuilding and renovating farm dairies. The Company made possible a complete changeover by farms to refrigerated bulk milk by purchasing all the necessary vats and renting them to farmers at reduced rates. An incentive scheme rewarding farmers on the basis of protein plus butterfat content instead of butterfat alone has been used at certain times by Lactos, in recognition of the increased value of the protein portion of the milk.

### **Domestic Market**

Lactos has traditionally depended on an export market for distribution of the bulk of its produce. However, in 1976 it was decided that the Company should expand its previously limited domestic market. Since then Lactos has won a substantial and expanding market for its gouda, edam and cheddar varieties as well as for its unusual smoked, curried, onion and garlic flavoured cheeses.





*The Lactos Plant at Burnie*

[Lactos Pty Ltd]

*The 1977 Lactos fire—a short-term set-back only*







*Lake Gordon, created by the 140-metre high Gordon Dam*

*[Tasmanian Film Corporation]*

*Sunset on the River Derwent (from Springfield)*

*[O.P. Bachinger Snr]*





Rather than specializing in cheddar cheese, Lactos is diversifying further into continental cheeses on the understanding that, while cheddar cheese is still the most popular variety in Australia, markets for other types of cheeses will increase and stabilise in the near future. Because of its expanding mainland market, Lactos have established marketing offices in Sydney and Melbourne.

#### Further References

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Manufacturing Commodities, Selected Principal Articles Produced, Australia (Preliminary) (8365-0) (annual, 1976-77 released 2-2-79, 21 pp.).

##### *Other Publications:*

DEPARTMENT OF PLANNING AND DEVELOPMENT. *Tasmanian Manufacturers Directory* (biennial, Tasmanian Government Printer, Hobart).

HYDRO-ELECTRIC COMMISSION. *Report on the Gordon River Power Development, Stage Two*. (Hydro-Electric Commission, Hobart, 1979).



## 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 independently by the State Office of the Australian Bureau of Statistics, depends primarily on documents made available by Tasmanian port authorities and Australian Customs. 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 £ 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, Tasmania  
(\$'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.....	n.a.	n.a.		124	n.a.	n.a.		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)	n.a.	n.a.	1 040	(a)	n.a.	n.a.
1919-20.....	1 626	(a)		n.a.	4 022	(a)		n.a.
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.....	46 998	257 441	20 551	324 989	143 470	286 083	26 287	455 840
1977-78.....	115 778	594 793	39 388	749 960	381 942	594 441	38 206	1 014 589

(a) Collection discontinued for period 1910 to 1921-22.

(b) First collected in 1949-50.

**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 following table shows details for recent years:

**Motor Cars and Commercial Vehicles (a): Value of Imports and Exports, Tasmania  
(\$'000)**

Particulars	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78
Imports.....	64 943	75 231	98 110	104 305	112 172	125 017
Exports.....	28 537	28 997	32 524	34 854	36 654	41 427

(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 1977-78 are both inflated by approximately \$41 m 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 1976* 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:

*Overseas Exports:* Goods sold to overseas buyers before export are valued at the 'free-on-board' (f.o.b.) port of shipment equivalent of the actual price paid to the exporter. Goods shipped on consignment are valued at the f.o.b. port of shipment equivalent of the current price offering for similar goods of Tasmanian origin in the principal markets of the country to which they are despatched for sale.

*Overseas Imports:* The recorded value for overseas imports is the 'value for duty' as required for Customs purposes. On 1 July 1976 Australia adopted the internationally recognised Brussels Definition of Value on a f.o.b. basis (i.e. charges and expenses involved in delivering the goods from the place of exportation to the place of introduction in Tasmania, are excluded). The value for duty is based on the normal price (i.e. the price the goods would fetch at the time when duty becomes payable on a sale in the open market between a buyer and a seller independent of each other). In practice, the basis for valuation is generally taken to be the invoice price subject to certain safeguards and adjustments where necessary. This new basis of valuation differs from that used prior to July 1976 which, broadly, was based on the higher of actual selling price or current domestic value (in the country of export) plus charges involved in placing the goods free-on-board the vessel at the port of export. Because of the change in the basis of valuation the recorded overseas import figures from 1 July 1976 are not comparable with those for previous years. It is estimated that if the previous basis of valuation had continued, the value of total overseas imports would have been about 2 per cent higher than the recorded values on the new basis.

*Interstate Imports and Exports:* These are valued at the f.o.b. port of shipment equivalent of the actual price at which the goods were sold.

### 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 cities or 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, Tasmania  
(\$'000)**

Year	Imports				Exports			
	By sea		By air	Total Imports	By sea		By air	Total exports
	Overseas	Interstate	Interstate		Overseas	Interstate	Interstate	
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
1976-77 .....	94 622	564 231	30 909	689 762	338 657	485 850	35 160	859 667
1977-78 .....	115 778	594 793	39 388	749 960	381 942	594 441	38 206	1 014 589

The next table shows the balance of trade (excess of exports over imports):

**Balance of Trade (Sea and Air), Tasmania**

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 (\$)
1972-73 .....	214 102	543	1975-76 .....	120 610	297
1973-74 .....	246 850	621	1976-77 .....	169 905	415
1974-75 .....	108 239	269	1977-78 .....	264 629	642

**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, Tasmania  
(\$'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	Malaysia	Other Overseas Countries
1972-73 .....	7 003	7 732	5 986	24 324	75 231	35 434	5 403	102 644
1973-74 .....	12 462	8 252	8 930	39 633	104 880	46 819	4 738	103 308
1974-75 .....	12 931	10 865	14 718	62 102	99 549	33 257	8 115	93 348
1975-76 .....	11 836	10 182	10 039	44 205	110 670	34 339	5 340	100 231
1976-77 .....	15 721	9 497	13 631	55 774	148 191	43 593	14 389	132 484
1977-78 .....	17 627	12 802	18 103	67 246	155 385	48 488	30 595	147 474

In 1977-78 the United States of America was Tasmania's major overseas supplier of imports, followed by Japan and New Zealand.

*Trade with Selected Countries*

The principal countries of origin, together with values (in \$m) for overseas imports shipped direct to Tasmania in 1977-78 were: United States of America, 18.1; Japan, 17.6; New Zealand, 12.8; United Kingdom, 12.7; Canada, 12.2; and the Federal Republic of

Germany, 6.4. The principal countries of destination for overseas exports shipped direct from Tasmania (value in \$m) were: Japan, 155.4; United States of America, 48.5; Malaysia, 30.6; Indonesia, 18.4; Singapore, 16.4; and Thailand, 10.1.

The following table shows the trade of Tasmania with selected overseas countries; countries selected are those for which imports or exports exceeded \$1m 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.

Trade With Overseas Countries, Tasmania  
(\$'000)

Country of Origin or Destination	Imports			Exports		
	1975-76	1976-77	1977-78	1975-76	1976-77	1977-78
Belgium-Luxembourg	119	231	341	5 012	6 964	4 047
Canada	8 131	9 229	12 225	185	993	1 746
China—Excl. Taiwan Province	98	145	235	3 507	2 093	7 367
Taiwan Province only	1 503	2 888	3 635	5 370	7 799	9 337
Egypt, Arab Republic of	—	—	—	140	164	2 224
Finland	97	12	122	479	582	1 176
France	823	1 549	1 221	3 692	4 439	5 362
German Dem. Republic	2	1	1	1 436	3 949	19
Germany, Federal Republic of	5 218	2 829	6 363	3 281	3 685	6 445
Greece	1	8	—	116	1 413	126
Hong Kong	2 444	2 723	1 518	5 550	6 472	6 315
India	22	110	308	3 326	12 421	6 139
Indonesia	5	11	13	12 112	15 414	18 395
Iran	—	906	—	701	1 284	5 524
Italy	1 048	3 859	2 534	3 261	4 035	2 560
Japan	11 836	15 721	17 627	110 670	148 191	155 385
Korea, Republic of	90	2	17	716	741	2 263
Malaysia	60	82	1 363	5 340	14 389	30 594
Netherlands	548	804	1 431	4 522	4 046	2 423
New Zealand	10 182	9 497	12 802	3 497	4 827	4 819
Nigeria	—	n.p.	—	—	—	1 200
Norway	642	1 270	1 301	378	420	1 106
Papua New Guinea	1	196	1 987	637	929	1 848
Philippines	13	82	97	3 329	4 019	4 708
Poland	27	61	75	1 971	4 978	4 103
Singapore	109	1617	1 076	3 184	3 329	16 381
South Africa, Republic of	563	2 487	598	833	506	43
Sweden	3 206	1 512	3 844	1 163	1 682	1 862
Thailand	34	189	416	8 852	11 983	10 053
United Kingdom	8 612	9 253	12 671	11 026	12 144	8 840
U.S.A.	10 039	13 631	18 103	34 339	43 593	48 488
U.S.S.R.	—	17	42	4 049	3 494	4 296
Venezuela	—	3 295	—	—	15	8
Yugoslavia	16	37	5	579	1 503	969
Other countries	10 690	10 339	13 219	6 583	6 157	5 771
'For orders'(a)	—	—	—	23	—	—
Unknown	—	—	—	721	4	—
Australia (re-imported)	83	29	588	—	—	—
Total	76 262	94 622	115 778	250 580	338 657	381 942

(a) Country of consignment not determined at time of export.

### 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 states correspondingly inflated) in respect of transshipments not recorded as *overseas* trade for Tasmania.

## Value of Overseas Trade: Tasmania and Australia

Particulars		1972-73	1973-74	1974-75	1975-76	1976-77	1977-78
IMPORTS							
Australia—Total .....	\$'000	4 120 727	6 085 004	r 8 079 853	r 8 240 593	r 10 410 644	11 166 553
Per head .....	\$	r 314.5	r 451.1	r 590.0	r 595.2	744.1	788.5
Tasmania—Total .....	\$'000	45 045	69 277	100 616	76 262	94 622	115 778
Per head .....	\$	r 114.3	r 174.4	r 250.2	187.7	231.3	280.9
EXPORTS							
Australia—Total .....	\$'000	6 213 704	6 914 395	r 8 725 774	r 9 639 584	r 11 651 591	12 269 530
Per head .....	\$	r 474.4	r 512.6	r 637.1	r 696.2	r 832.7	866.4
Tasmania—Total .....	\$'000	218 712	259 745	226 154	250 580	338 657	381 942
Per head .....	\$	r 555.1	r 653.8	r 562.4	r 616.9	827.8	926.8

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, Tasmania  
(\$'000)

Particulars	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78
Imports .....	21 238	24 760	26 850	27 882	30 909	39 388
Exports .....	30 626	34 566	31 699	36 280	35 160	38 206
Total .....	51 864	59 327	58 550	64 162	66 069	77 594

## 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 transshipment overseas.

Value of Interstate Sea Trade, Tasmania  
(\$'000)

Australian state or territory of origin or destination	Imports			Exports		
	1975-76	1976-77	1977-78	1975-76	1976-77	1977-78
New South Wales .....	80 158	71 526	74 795	150 890	161 279	181 332
Victoria .....	331 290	386 466	407 754	247 707	282 374	358 466
Queensland .....	(a) 35 118	(a) 42 193	(a) 39 870	14 076	13 960	18 443
South Australia .....	55 922	62 402	70 672	24 625	22 603	25 529
Western Australia .....	1 009	1 644	1 701	4 057	5 595	10 575
Northern Territory .....	n.p.	n.p.	n.p.	36	39	97
Total .....	503 497	564 231	594 793	441 391	485 850	594 441

(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, Tasmania  
(\$'000)

Port	Imports		Exports		Total sea trade	
	1976-77	1977-78	1976-77	1977-78	1976-77	1977-78
Burnie .....	83 989	91 135	206 735	252 254	290 724	343 389
Devonport .....	118 702	108 732	107 529	170 928	226 230	279 660
Hobart .....	240 175	281 732	250 528	253 326	490 702	535 058
Currie .....	5 565	5 802	26 970	35 488	32 535	41 290
Launceston .....	206 327	220 441	181 636	211 903	387 963	432 344
Stanley .....	4 010	2 638	50 026	51 033	54 036	53 671
Lady Barron .....	86	91	1 082	1 451	1 168	1 542
Total .....	658 853	710 572	824 506	976 383	1 483 360	1 686 953

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 refitting 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. This vessel was withdrawn from the Hobart-Darwin service in October 1975. 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*) 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 vessels *Wambiri*, *Boogalla* and *Nyanda* have also been used on this Tasmania-Western Australia service.

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, Tasmania  
(Per Cent)**

Port	1958-59	1973-74	1974-75	1975-76	1976-77	1977-78
Burnie .....	15.3	21.2	20.5	20.1	19.6	20.4
Devonport .....	6.8	18.3	17.2	16.5	15.3	16.6
Hobart .....	50.8	(a) 32.5	35.3	33.2	33.1	31.7
Currie .....	0.5	0.9	1.1	1.3	2.2	2.4
Launceston .....	23.5	24.0	23.1	25.4	26.2	25.6
Stanley .....	0.6	2.9	2.6	3.4	3.6	3.2
Strahan .....	2.4	(b) -	-	-	-	-
Lady Barron .....	-	0.2	0.1	0.1	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 1977-78. Launceston's airport accounted for 56 per cent of the total value of air trade in 1977-78 while Hobart's airport accounted for a further 31 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, Tasmania  
(\$'000)**

Airport	Imports		Exports		Total air trade	
	1976-77	1977-78	1976-77	1977-78	1976-77	1977-78
Hobart .....	15 422	17 492	6 237	6 879	21 659	24 371
Launceston .....	9 130	14 813	26 877	28 898	36 008	43 711
Devonport .....	2 426	2 814	402	472	2 828	3 286
Wynyard (a) .....	2 566	2 694	381	446	2 947	3 141
King Island .....	1 009	1 214	1 019	1 243	2 028	2 457
Flinders Island .....	356	361	244	267	600	628
Total .....	30 909	39 388	35 160	38 206	66 069	77 594

(a) Includes Smithton.

*Commodities Carried by Air*

It will be observed that the value of trade by air is about 4 per cent of the value of total overseas and interstate trade by sea and air combined. In 1977-78 the total value of air trade to and from Tasmania was \$77.6m compared to the total value of sea and air trade of \$1 764.5m. With regard to exports by air (valued at \$38.2m in 1977-78), the major group was 'textiles and yarns' valued at \$32.6m; exports of all foodstuffs (meat, rock lobster, fruit, etc.) accounted for a further \$2.2m. For imports there is a much greater range of commodities involved, the chief group being 'clothing and footwear' valued at \$23.8m in 1977-78.

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 probably 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 recent years:



**Air Trade: Value of Interstate Imports and Exports, Tasmania**  
(\$'000)

Year	Imports	Exports	Year	Imports	Exports
1972-73 .....	21 238	30 626	1975-76 .....	27 882	36 280
1973-74 .....	24 760	34 566	1976-77 .....	30 909	35 160
1974-75 .....	26 850	31 699	1977-78 .....	39 388	38 206

**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, Tasmania**  
(\$'000)

Commodity	1975-76	1976-77	1977-78
Beer, wine and spirits .....	5 724	6 825	7 369
Aluminium oxide and hydroxide .....	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>
Clothing and accessories .....	30 998	32 209	35 533
Cocoa beans and cocoa butter .....	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>
Confectionery .....	4 814	4 924	5 009
Footwear .....	6 324	6 558	7 659
Machinery—Electrical .....	27 098	27 595	28 325
Other .....	39 370	47 325	49 852
Metal manufactures .....	12 854	14 736	14 050
Metals .....	22 939	22 177	23 368
Motor vehicles—New .....	69 735	76 597	85 708
Other (a) .....	35 439	36 492	40 112
Ores and concentrates .....	43 326	51 174	44 387
Paper and paper manufactures .....	12 713	12 417	13 785
Petroleum products—Motor spirit .....	20 804	34 803	39 671
Fuel oils .....	25 939	37 337	39 360
Other .....	17 917	26 202	31 388
Pulp for paper-making .....	16 429	15 855	18 918
Rubber manufactures .....	7 686	8 931	9 772
Sugar, refined .....	5 100	5 267	6 243
Textile yarn and fabrics .....	20 683	22 176	19 281
Tobacco and cigarettes .....	15 679	16 182	17 689
Wheat .....	6 938	8 193	8 918
Other (b) .....	159 132	175 787	203 563
<b>Total imports .....</b>	<b>607 641</b>	<b>689 762</b>	<b>749 960</b>

(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 is practicable, to match the preceding table of values.

**Imports of Principal Commodities by Sea and Air: Quantities, Tasmania**

Commodity	Unit of quantity	1975-76	1976-77	1977-78
Alcoholic beverages—				
Ale, beer, stout and cider .....	'000 l	1 529	1 239	1 370
Wine .....	'000 l	3 352	3 451	3 424
Spirits and liqueurs—Overseas (a) .....	'000 l	86	48	32
Interstate .....	'000 l	879	902	888
Aluminium oxide and hydroxide .....	kg	<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>

## Imports of Principal Commodities by Sea and Air: Quantities, Tasmania—continued

Commodity	Unit of quantity	1975-76	1976-77	1977-78
Confectionery .....	t	2 713	2 695	2 571
Iron and steel .....	t	116 458	85 093	69 752
Motor vehicles—New .....	no.	19 223	21 744	19 865
Other (b) .....	no.	18 919	18 224	18 753
Ores and concentrates .....	t	416 217	508 960	455 855
Petroleum products—				
Motor spirit .....	'000 l	378 127	392 919	407 081
Fuel oils .....	'000 l	505 949	453 585	437 743
Pulp for paper-making .....	t	74 134	78 855	85 285
Sugar, refined .....	t	23 484	22 888	23 122
Tobacco and cigarettes .....	t	r1 050	1 049	1 028
Wheat .....	t	74 748	78 456	80 096

(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 main commodities, from principal overseas countries. In 1977-78 the United States of America was Tasmania's principal source of overseas imports. In this year the value of imports from the United States of America accounted for 16 per cent of the total value of \$115.8m of imports from overseas countries; Japan accounted for 15 per cent and New Zealand, the United Kingdom and Canada for 11 per cent each.

Value of Imports from Principal Overseas Countries, Tasmania  
(\$'000)

Commodity	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78
JAPAN						
Chemicals .....	558	879	1 368	1 160	2 469	3 362
Commercial vehicles .....	809	775	1 392	2 456	3 454	3 877
Machinery .....	1 172	2 266	2 916	2 095	2 048	2 438
Passenger motor vehicles .....	1 081	2 141	3 129	2 397	3 129	3 645
Textiles .....	2 566	3 579	1 902	2 319	2 617	2 104
Motor cycles .....	242	500	853	583	753	760
Other (a) .....	575	2 322	1 371	826	1 251	1 441
Total .....	7 003	12 462	12 931	11 836	15 721	17 627
UNITED STATES OF AMERICA						
Chemicals .....	333	556	1 090	729	1 147	862
Clays .....	422	r576	1 023	685	1 165	341
Coke of coal .....	45	87	315	148	596	546
Machinery .....	2 362	2 329	4 182	2 503	2 781	5 998
Petroleum coke .....	1 073	946	2 535	2 858	3 833	6 836
Transport equipment .....	54	626	1 339	258	428	277
Woodpulp .....	1 070	2 094	2 463	1 372	1 474	595
Other (a) .....	627	r1 716	1 771	1 486	2 207	2 648
Total .....	5 986	8 930	14 718	10 039	13 631	18 103

## Trade and Distribution

Value of Imports from Principal Overseas Countries, Tasmania—continued  
(\$'000)

Commodity	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78
NEW ZEALAND						
Food and beverages .....	186	86	281	235	432	813
Machinery .....	99	253	428	385	375	629
Paper and paper board .....	273	1 765	1 883	1 958	1 811	2 574
Textiles .....	538	468	336	422	285	189
Woodpulp .....	4 055	3 801	6 561	6 150	5 349	6 531
Other (a) .....	2 581	1 879	1 376	1 032	1 245	2 066
Total .....	7 732	8 252	10 865	10 182	9 497	12 802
UNITED KINGDOM						
Chemicals .....	687	725	735	510	727	1 090
Food, beverages and tobacco .....	178	149	441	358	579	688
Machinery .....	1 406	4 004	2 561	3 130	2 371	2 991
Metal manufactures .....	503	521	646	611	933	946
Printed matter .....	288	275	547	789	466	657
Textiles .....	827	1 006	1 101	934	1 327	1 917
Tyres and tubes .....	187	196	463	249	456	391
Other (a) .....	1 924	3 361	2 220	2 031	2 394	3 991
Total .....	6 000	10 237	8 714	8 612	9 253	12 671
CANADA						
Machinery .....	100	176	120	725	377	1 320
Textiles .....	97	118	150	107	140	201
Woodpulp .....	3 666	4 729	5 599	6 993	7 964	9 628
Other .....	478	3 843	2 034	306	748	1 076
Total .....	4 341	8 866	7 903	8 131	9 229	12 225

(a) Includes value of items not available for separate publication.

## Exports of Principal Commodities

The following table shows the value of principal commodities exported (interstate and overseas) from Tasmania by sea and air:

Exports of Principal Commodities by Sea and Air: Values, Tasmania  
(\$'000)

Commodity	1975-76	1976-77	1977-78
Butter (including butter oil) .....	7 527	3 851	5 941
Cheese .....	7 633	12 317	14 409
Fertilisers, manufactured .....	2 155	59	287
Fish, crustaceans and molluscs .....	4 939	6 622	7 634
Fruit—Apples (fresh) .....	8 440	5 593	10 880
Juices and syrups .....	1 065	672	735
Other .....	2 689	3 012	2 701
Hides and skins (cattle, calf, horse and sheep) .....	4 871	6 658	8 290
Hops .....	1 447	1 625	2 298
Live animals .....	1 402	4 034	7 225
Machinery .....	4 983	4 666	5 427
Meat—Beef and veal .....	13 648	15 679	16 670
Lamb and mutton .....	2 504	3 718	4 033
Other .....	1 238	943	956
Metal manufactures .....	4 599	1 840	1 738
Metals, refined—Cadmium .....	2 815	2 233	1 691
Zinc .....	74 926	98 318	87 129

Exports of Principal Commodities by Sea and Air: Values, Tasmania—continued  
(\$'000)

Commodity	1975-76	1976-77	1977-78
Motor cars and commercial vehicles (a)	34 854	36 651	41 427
Ores and concentrates—Copper	22 021	26 371	20 766
Iron	32 531	45 025	45 630
Lead	12 169	16 208	12 904
Tin	17 428	35 010	50 443
Tungsten	8 439	22 333	33 653
Sulphuric acid	7 083	7 730	8 679
Tallow	2 065	2 206	4 931
Textile yarn, fabrics and made-up articles	41 656	35 811	33 285
Timber—Dressed	12 511	15 287	15 486
Undressed	13 568	21 796	22 796
Vegetables, fresh and preserved	23 872	31 128	34 118
Woodchips	35 524	<i>n.p.</i>	<i>n.p.</i>
Wool, greasy	31 232	33 685	24 048
Commodities not available for publication (b)	244 863	334 950	435 484
All other exports	41 554	23 636	52 895
Total	728 251	859 667	1 014 589

(a) Mainly tourist and other motor vehicles exported as personal effects.

(b) Commodities comprising this item are: aluminium, alumina, beadings and mouldings, paper, 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, asbestos-cement articles, ferro-silicon and from 1976-77, woodchips.

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:

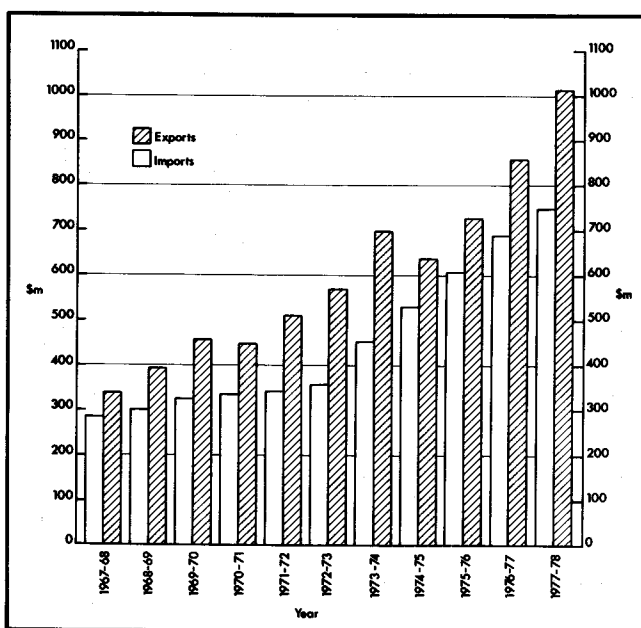
## Exports of Principal Commodities by Sea and Air: Quantities, Tasmania

Commodity (a)	Unit of quantity	1975-76	1976-77	1977-78
Butter (including butter oil)	t	9 720	4 363	6 248
Cheese	t	9 026	14 552	15 222
Fertilisers, manufactured	t	35 694	657	2 810
Fish—Abalone	t	978	872	1 013
Rock lobster	t	524	711	608
Other	t	715	885	680
Fruit—Apples (fresh)	t	45 705	24 284	41 550
Juices and syrups	'000 t	1 496	989	698
Other	t	8 838	8 413	7 165
Hides and skins (cattle, calf and sheep)	t	8 306	7 729	9 132
Hops	t	918	1 625	1 287
Live animals—Cattle	no.	8 612	16 401	30 007
Sheep	no.	93 467	188 753	241 748
Meat—Beef and veal	t	15 324	16 463	15 424
Lamb and mutton	t	3 969	5 116	4 267
Pork	t	301	293	121
Other	t	1 289	1 119	1 244
Metals, refined—Cadmium	t	626	447	369
Zinc	t	138 243	162 001	167 870
Motor cars and commercial vehicles (b)	no.	18 553	18 133	19 478
Ores and concentrates—Copper	t	85 530	87 539	78 540
Iron	'000 t	2 025	2 242	2 054
Lead	t	37 311	44 937	32 324
Tin	t	9 340	14 506	16 824
Tungsten	t	2 708	3 057	3 462
Timber—Dressed	m <sup>3</sup>	88 880	102 987	86 753
Undressed	m <sup>3</sup>	149 560	210 240	173 985
Vegetables—Fresh	t	15 305	12 464	6 573
Preserved	t	57 736	75 234	72 807
Woodchips	'000 t	1 734	<i>n.p.</i>	<i>n.p.</i>
Wool, greasy	t	17 435	16 204	10 805

(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, asbestos-cement articles, ferro-silicon and, from 1976-77, woodchips.

(b) Mainly tourist and other motor vehicles exported as personal effects.

## Total Imports and Exports, Tasmania 1967-68—1977-78



## 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, Tasmania

Commodity	Unit of quantity	1939-40	1949-50	1959-60	1969-70	1977-78
QUANTITY						
Apples and pears, fresh ...	t	74 373	56 911	80 683	109 384	42 257
Butter (including butter oil).....	t	2 816	2 179	7 864	12 611	6 248
Hops .....	t	719	802	1 340	1 368	1 287
Meat, fresh, chilled or frozen .....	t	2 534	957	9 225	17 048	20 984
Ores and concentrates .....	'000 t	137	6	28	2 175	2 196
Timber, dressed and undressed .....	'000 m <sup>3</sup>	120	148	178	207	261
Wool, greasy .....	t	5 110	5 228	12 690	16 513	10 805
Zinc, refined .....	t	72 047	81 998	115 680	163 847	167 870
VALUE (\$'000)						
Apples and pears, fresh .....		2 270	4 348	9 490	14 905	11 092
Butter (including butter oil) .....		742	1 277	5 390	6 950	5 941
Meat, fresh, chilled or frozen .....		310	312	3 801	11 774	21 557
Ores and concentrates—Copper .....		—	2	40	8 369	20 766
Iron .....		—	—	—	25 286	45 630
Lead .....		595	386	2 956	7 358	12 904
Tin .....		688	723	1 507	16 207	50 443
Textile yarn and fabrics .....		2 674	5 540	17 524	27 784	33 285
Timber, dressed and undressed .....		1 238	2 930	8 952	16 238	38 282
Wool, greasy .....		1 376	6 202	15 254	17 821	24 048
Zinc, refined .....		2 856	9 964	22 922	42 625	87 129

## Exports to Principal Overseas Countries

Details for commodities exported to principal overseas countries are given in the next table:

## Exports to Principal Overseas Countries, Tasmania

Commodity	Unit of Quantity	Quantity			Value (\$'000)		
		1975-76	1976-77	1977-78	1975-76	1976-77	1977-78
JAPAN							
Abalone .....	t	707	313	741	1 832	1 351	3 335
Cheese .....	t	4 257	7 207	7 743	3 904	6 144	7 150
Copper ores and concentrates .....	t	71 576	65 772	59 791	16 791	18 120	14 784
Feeding-stuff for animals—							
Meat and bone meal .....	t	3 466	2 788	653	310	509	133
Milk powder .....	t	—	3 780	995	—	672	179
Ferro-alloys .....	t	—	2 500	5 375	—	1 030	1 771
Food beverages .....	t	—	—	328	—	—	385
Hides and skins (cattle and calf) .....	t	3 053	2 189	2 563	1 561	1 723	1 997
Iron ores and concentrates .....	'000 t	1 980	2 146	2 050	31 810	42 872	45 496
Malt and malt extract .....	t	406	775	171	143	227	95
Meat, fresh, chilled or frozen .....	t	4 962	4 525	3 650	4 446	3 573	3 703
Milk, dried .....	t	903	883	345	287	240	111
Onions, brown .....	t	916	131	1 104	134	20	190
Tallow .....	t	3 501	301	886	647	77	298
Wool, greasy .....	t	2 067	2 489	902	3 505	5 042	1 943
Other (a) .....		..	..	..	45 298	66 591	73 816
Total .....		..	..	..	110 670	148 191	155 385
UNITED STATES OF AMERICA							
Beef and veal .....	t	9 403	7 509	9 187	8 320	8 034	10 141
Cadmium .....	kg	92 200	48 000	57 000	112	377	283
Casein .....	t	59	501	737	56	512	804
Cheese .....	t	1 539	1 392	1 911	1 477	1 425	2 235
Ferro-alloys .....	t	—	—	25 921	—	—	5 167
Hops .....	t	—	14	103	—	17	243
Lead concentrates .....	t	33 125	36 013	32 324	10 950	12 360	12 904
Oil seeds .....	t	592	690	727	579	760	480
Rock lobster .....	kg	33 739	33 589	68 655	339	373	676
Wheat gluten .....	t	892	1 448	1 522	411	988	862
Wool, greasy .....	t	204	208	131	426	461	288
Zinc, refined .....	t	15 162	22 355	22 636	9 493	15 055	13 403
Other .....	..	—	—	—	2 177	3 230	1 004
Total .....	..	—	—	—	34 339	43 593	48 488
MALAYSIA							
Chemicals .....	..	—	—	—	—	—	218
Colouring materials .....	t	180	458	627	119	337	432
Ferro-alloys .....	t	—	—	2 193	—	—	505
Meat, fresh or frozen .....	t	22	106	334	12	95	238
Paper .....	t	1 880	3 050	3 685	1 270	870	1 413
Tin concentrates .....	t	774	2 052	7 133	2 003	10 741	25 883
Zinc .....	t	1 955	2 177	2 848	1 182	1 411	1 410
Other .....	..	—	—	—	753	934	494
Total .....	..	—	—	—	5 340	14 389	30 594

(a) Includes item(s) for which details are not available for separate publication.

## Exports to Principal Overseas Countries, Tasmania—continued

Commodity	Unit of Quantity	Quantity			Value (\$'000)		
		1975-76	1976-77	1977-78	1975-76	1976-77	1977-78
INDONESIA							
Butter .....	t	—	—	969	—	—	1 082
Colouring materials .....	t	251	30	393	167	22	247
Zinc .....	t	17 152	20 760	30 907	10 143	13 683	15 708
Other (a) .....	..	—	—	—	1 802	1 709	1 358
Total .....	..	—	—	—	12 112	15 414	18 395
THAILAND							
Colouring materials .....	t	17	327	591	10	227	384
Food beverages .....	t	—	—	212	—	—	317
Milk, dried .....	t	1 421	3 598	1 059	539	1 347	601
Zinc .....	t	12 874	15 153	14 480	7 787	10 039	7 284
Other (a) .....	..	—	—	—	516	370	1 466
Total .....	..	—	—	—	8 852	11 983	10 053

(a) Includes item(s) for which details are not available for separate publication.

## RETAIL TRADE IN TASMANIA

## Censuses of Retail Establishments

*Historical*

Before the Integrated Economic Censuses of 1968-69, retail censuses were undertaken for years ended 30 June 1948, 1949, 1953, 1957 and 1962. Census information collected was extensive. Details are available for statistical divisions, local government areas and special statistical retail areas.

In 1968-69 simultaneous economic censuses for five sectors were undertaken: retailing; manufacturing; mining; wholesaling; and electricity and gas. Results of economic censuses for recent years appear in the section 'Integrated Economic Censuses' in Chapter 18 together with definitions of concepts and terms used.

*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). Certain types of establishment were excluded: bread and milk vendors; footwear repairers; motion picture theatres; and laundries and dry cleaners. The aim 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 this rather narrow purpose. Results from the 1973-74 census are summarised in the 1979 *Year Book*.

## Quarterly Estimates of Value of Retail Sales

Each quarter, returns of retail sales are collected from a sample of all retail businesses recorded in the most recent census of retail establishments. The sample selected represents 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 relate principally to sales to the final consumer of new and used goods for personal and household purposes. The survey is intended primarily as an indicator of such sales.

*Retail Sales of Goods, Tasmania*

The following table sets out details of estimated value of retail sales, by commodity groups, for recent periods:

Estimated Value of Retail Sales of Goods by Commodity Groups, Tasmania (a)

Commodity group	1977-78		Six months ended December 1978	
	Value \$m	Proportion of total	Value \$m	Proportion of total
Groceries . . . . .	120.7	17.6	66.3	17.5
Butchers' meat . . . . .	37.7	5.5	23.0	6.1
Other foods . . . . .	63.8	9.3	36.2	9.6
Beer, wine and spirits . . . . .	91.7	13.4	49.4	13.0
Clothing and drapery . . . . .	116.1	16.9	61.7	16.3
Footwear . . . . .	17.2	2.5	9.0	2.4
Domestic hardware, china and glassware . . . . .	29.0	4.2	16.3	4.3
Electrical goods . . . . .	53.0	7.7	27.6	7.3
Furniture . . . . .	37.7	5.5	20.1	5.3
Chemists' goods . . . . .	34.1	5.0	20.3	5.4
Newspapers, books, stationery, etc. . . . .	29.4	4.3	17.5	4.6
Other goods (b) . . . . .	54.7	8.0	31.6	8.3
Total (b) . . . . .	685.1	100.0	379.0	100.0

(a) Based on sample from the 1973-74 Retail 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 the various commodity groups. This eliminates 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)
1976-77r . . . . .	9 923.4	7 932.8	11 510.3	9 195.6	21 433.7	17 128.4
1977-78 . . . . .	11 165.3	8 198.0	12 391.1	9 124.1	23 556.4	17 322.1
1977-78—						
September r . . . . .	2 611.0	1 967.3	2 899.5	2 193.7	5 510.5	4 161.0
December r . . . . .	2 967.8	2 190.5	3 615.6	2 680.0	6 583.4	4 870.5
March . . . . .	2 760.1	2 014.6	2 719.0	1 988.5	5 479.1	4 003.1
June . . . . .	2 826.4	2 025.6	3 157.0	2 261.9	5 983.4	4 287.5
1978-79—						
September . . . . .	2 943.8	2 050.8	3 111.3	2 203.4	6 055.1	4 254.2
December . . . . .	3 330.5	2 191.4	3 875.3	2 677.2	7 205.8	4 868.6

(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 includes details relating to household expenditure in Tasmania (dissected by type of payment and weekly household income group) for 1975-76.

**Further References***ABS publications produced by the Tasmanian office*

Overseas Trade, Tasmania (5402.6) (annual, 1978-79 released 22-10-79, 4 pp.).

Census of Retail and Selected Services Establishments, Tasmania (8601.6) (irregular, 1973-74 released 2-10-75, 22 pp.).

*ABS publications produced by the Canberra office*

Overseas Trade, Australia-Exports (Preliminary) (5407.0) (annual, 1977-78 issue released in March 1979, 95 pp.).

Overseas Trade, Australia-Imports (Preliminary) (5408.0) (annual, 1977-78 issue released in March 1979, 235 pp.).

Exports, Australia (5404.0) (monthly, July and August 1979 issue released 26-10-79, 17 pp.).

Imports, Australia (5406.0) (monthly, September 1979 issue released 4-12-79, 21 pp.).

Retail Sales of Goods: Australia (8501.0) (monthly, May 1979 released 2-7-79, 2 pp.).

Retail Sales of Goods: (8503.0) (quarterly, December quarter 1978 released 9-5-79, 10 pp.).

(Census of Retail Establishments and Selected Service Establishments Final Bulletin Australia (8614.0) (irregular, 1973-74 released 17-10-75, 22 pp.).

# 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 River Tamar in the north (Inspection Head, Long Reach and Bell Bay); on the Mersey River (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 of 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 is situated in the Sullivan's Cove and Macquarie Point area. Sullivan's Cove is U-shaped with 610 metres separating the southern and northern arms. The southern area is devoted to Princes Wharf with berths numbered one to four. Between Numbers 1 and 2 is Princes Intermediate, the bulk grain berth. The centre of the cove contains Elizabeth Street Pier and Kings Pier, while the northern area is made up of Macquarie Berths No. 1, 2 and 3. Turning up river from the outer end of Macquarie Berth No. 3, the area known as Macquarie Point has been developed to provide the port with two additional roll-on roll-off berths and one container/general cargo berth. This area has now become the major centre of port activity, and has been provided with modern cargo handling equipment, including a 254-tonne fully mobile crane, suitable for handling containers. The two roll-on roll-off berths are operated by the Union Steamship Company's 'Seaway' interstate service, connecting Hobart with Melbourne and Sydney. The third new berth is 224 metres long and is capable of accommodating the largest general cargo carriers in service. Adjacent to these new berths is 8.4 hectares of sealed cargo area, two large all weather cargo sheds, a dual rail spur connecting into the State's main rail system and adequate holding points for refrigerated containers.

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 Selfs 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 Selfs Point.

The Selfs 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 Selfs 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 41½° south latitude and Cape Portland.

**Port of Launceston***Location*

The Port of Launceston is situated on the River Tamar, which originates at the confluence of the North Esk 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. Large modern cold store facilities are also provided. 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 are situated 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 interstate 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. 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 were 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 *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 is pumped to the land along a submarine pipe, and the sulphuric acid is 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 25-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 traversed 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
Port of Launceston Authority .....	5	Electors of Launceston, Beaconsfield and George Town as for local government elections
Burnie Marine Board .....	9	} Municipal electors within proclaimed areas
Devonport Marine Board .....	11	
Circular Head Marine Board .....	7	
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 1977-78:

**Port Authorities**  
**Receipts and Expenditure: All Funds, 1977-78**  
**(\$'000)**

Particulars	Authority							Total
	Hobart	Launceston	Devonport	Burnie	Circular Head	King Island	Flinders Island	
<b>REVENUE FUNDS</b>								
Receipts—								
Wharfage charges . . . .	2 049	2 243	1 305	1 647	73	113	36	7 466
Other service charges . . .	1 164	4 350	512	688	70	12	6	6 802
Plant hire . . . . .	668	898	179	440	19	9	—	2 213
Government grants . . . .	—	—	—	—	15	12	5	32
Other (a) . . . . .	713	431	166	236	3	9	1	1 559
Total . . . . .	4 594	7 922	2 162	3 011	180	155	48	18 072
Payments (b)—								
Administration . . . . .	583	650	270	382	18	34	2	1 939
Debt charges—								
Interest . . . . .	919	684	594	840	76	5	11	3 129
Redemption and sinking fund contributions . . . . .	686	898	338	478	43	5	4	2 452
Works and services . . . . .	1 735	4 224	926	897	40	43	26	7 891
Other . . . . .	425	685	94	94	9	43	4	1 354
Total . . . . .	4 348	7 141	2 222	2 691	186	130	47	16 765
<b>LOAN FUNDS</b>								
Receipts, loan raisings, etc.	1 250	738	800	1 385	10	—	—	4 183
Payments (c) . . . . .	1 396	1 098	425	1 673	5	—	—	4 597

(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, Tasmania**  
**Receipts and Expenditure: Summary**  
**(\$'000)**

Particulars	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78
<b>REVENUE FUNDS</b>						
<b>Receipts—</b>						
Wharfage charges .....	4 419	4 830	5 455	5 865	7 162	7 466
Other service charges .....	2 380	2 602	4 580	4 771	4 587	6 802
Plant hire .....	1 481	1 562	1 686	1 903	2 301	2 213
Government grants .....	107	48	87	27	—	32
Other (a) .....	620	1 117	627	588	989	1 559
<b>Total .....</b>	<b>9 007</b>	<b>10 159</b>	<b>12 435</b>	<b>13 154</b>	<b>15 039</b>	<b>18 072</b>
<b>Payments (b)—</b>						
Administration .....	911	1 146	1 664	1 800	2 000	1 939
<b>Debt charges—</b>						
Interest .....	2 021	1 961	2 194	2 712	2 792	3 129
Redemption and sinking fund contributions .....	1 202	1 401	1 515	1 717	1 939	2 452
Works and services .....	2 761	3 785	5 031	6 162	6 022	7 891
Other .....	472	1 017	910	1 217	1 623	1 354
<b>Total .....</b>	<b>7 367</b>	<b>9 310</b>	<b>11 314</b>	<b>13 608</b>	<b>14 376</b>	<b>16 765</b>
<b>LOAN FUNDS</b>						
<b>Receipts—</b>						
Loan raisings .....	3 455	3 061	2 930	3 835	3 875	3 880
Other .....	2	6	285	199	293	303
<b>Total .....</b>	<b>3 457</b>	<b>3 067</b>	<b>3 215</b>	<b>4 034</b>	<b>4 168</b>	<b>4 183</b>
<b>Payments (c) .....</b>	<b>4 805</b>	<b>3 150</b>	<b>4 693</b>	<b>5 700</b>	<b>3 862</b>	<b>4 597</b>

(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	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78
Hobart .....	6 627	8 399	9 721	11 256	12 819	13 333
Launceston .....	9 196	9 219	9 412	9 487	9 803	9 936
Devonport .....	7 160	7 374	7 589	8 290	8 262	8 737
Burnie .....	12 722	12 377	12 083	11 974	12 205	13 280
Other .....	1 268	1 287	1 328	1 368	1 339	(a) 1 296
<b>Total .....</b>	<b>36 973</b>	<b>38 656</b>	<b>40 133</b>	<b>42 375</b>	<b>44 428</b>	<b>46 582</b>

(a) Comprised: Circular Head, \$1 045 000; Flinders Island, \$171 000; King Island, \$80 000.

The next table summarises annual borrowings, aggregate debt and the provision for loan redemption for recent years:

**Port Authorities, Tasmania**  
**Loan Raisings, Loan Debt and Provisions for Redemption**  
**(\$'000)**

Particulars	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78
Loan raisings during year (a).....	3 455	3 061	2 930	3 835	3 875	3 880
Loan debt at 30 June.....	36 973	38 656	40 133	42 375	44 428	46 582
Provisions for loan redemption at 30 June (b).....	1 151	1 315	1 507	1 622	1 733	1 943

(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 was 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 (2.8 cubic metres) (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

### Vessels Entered Tasmanian Ports

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), 1977-78

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 .....	62	694	135	476	189	473	386	1 644
Burnie .....	8	39	64	636	178	526	250	1 202
Grassy .....	—	—	—	—	22	5	22	5
Devonport .....	8	29	13	43	335	993	356	1 066
Lady Barron .....	—	—	—	—	—	—	—	—
Launceston .....	53	1 137	66	273	281	992	400	2 402
Stanley .....	28	606	1	8	85	61	114	674
Total .....	159	2 506	279	1 437	1 090	3 050	1 528	6 992

(a) Excludes intrastate shipping.

The next table gives a six-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)				
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
1976-77 .....	157	2 506	351	1 535	1 084	3 218	1 592	7 258
1977-78 .....	159	2 506	279	1 437	1 090	3 050	1 528	6 992

(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					
	1975-76		1976-77		1977-78	
	Number	Net tons	Number	Net tons	Number	Net tons
Algeria	—	—	1	11 862	—	—
Argentina	1	6 151	—	—	—	—
Australia	1 209	3 607 816	1 274	3 858 878	1 245	3 682 214
Belgium-Luxembourg	2	5 282	—	—	1	2 963
Bermuda	—	—	1	24 041	2	22 948
Brazil	1	2 705	2	12 175	—	—
Canada	—	—	1	12 205	—	—
China—People's Republic of	—	—	—	—	1	5 445
China—Taiwan Prov. only	—	—	1	12 091	—	—
Cyprus	—	—	1	1 939	—	—
Denmark	6	25 412	7	24 837	10	69 661
Finland	—	—	1	10 468	—	—
Germany, Fed. Repub. of	9	23 432	8	59 305	3	11 233
Greece	13	191 014	20	172 170	13	112 023
Hong Kong	1	13 977	2	14 610	13	126 593
India	4	22 641	9	69 447	6	28 016
Indonesia	1	2 441	—	—	—	—
Israel	2	7 915	—	—	—	—
Italy	2	25 178	—	—	—	—
Japan	66	990 283	76	1 211 083	68	1 019 396
Korea, Republic of	—	—	—	—	1	1 315
Kuwait	—	—	—	—	2	6 314
Liberia	49	820 733	42	647 512	56	895 715
Maldives, Republic of	3	3 251	—	—	—	—
Morocco	—	—	—	—	1	1 240
Netherlands	17	79 576	16	70 506	3	15 288
New Zealand	13	24 882	14	25 565	16	35 452
Norway	17	205 680	14	157 257	9	103 459
Panama	35	401 133	45	612 876	47	623 522
Papua New Guinea	—	—	1	360	—	—
Poland	11	47 653	8	37 317	8	38 339
Sabah	—	—	—	—	9	61 742
Singapore	24	63 855	14	47 223	12	46 485
Sweden	9	52 453	9	83 268	4	23 691
Tonga	19	7 733	20	8 696	31	13 173
United Kingdom	224	616 481	157	518 099	144	497 757
United States of America	24	426 472	19	332 942	11	194 556
U.S.S.R.	15	55 908	9	21 559	15	29 164
Yugoslavia	4	23 172	4	22 590	5	22 653
Other	—	—	—	—	1	6 205

The next table shows the number and net tonnage of vessels which entered individual Tasmanian ports during 1977-78. 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) 'Grassy' includes Naracoopa and Currie; 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, 1977-78

Port (a) of entry and type of service (b)	Vessels entered					
	With cargo		In ballast		Total	
	Number	Net tons	Number	Net tons	Number	Net tons
<b>Hobart—</b>						
Overseas direct .....	23	129 818	39	564 579	62	694 397
Overseas via other state .....	111	353 440	24	122 612	135	476 052
Overseas via other Tasmanian port ..	8	10 103	1	2 432	9	12 535
Interstate direct .....	161	384 220	28	89 155	189	473 375
Intrastate .....	16	83 355	3	10 605	19	93 960
<b>Total Hobart .....</b>	<b>319</b>	<b>960 936</b>	<b>95</b>	<b>789 383</b>	<b>414</b>	<b>1 750 319</b>
<b>Burnie—</b>						
Overseas direct .....	3	22 257	5	17 009	8	39 266
Overseas via other state .....	59	588 997	5	47 370	64	636 367
Overseas via other Tasmanian port ..	6	40 403	—	—	6	40 403
Interstate direct .....	137	434 556	41	91 562	178	526 118
Interstate via other Tasmanian port ..	54	192 584	—	—	54	192 584
Intrastate .....	7	29 491	18	69 719	25	99 210
<b>Total Burnie .....</b>	<b>266</b>	<b>1 308 288</b>	<b>69</b>	<b>225 660</b>	<b>335</b>	<b>1 533 948</b>
<b>Devonport—</b>						
Overseas direct .....	1	4 118	7	25 010	8	29 128
Overseas via other state .....	9	25 608	4	17 597	13	43 205
Interstate direct .....	270	903 257	65	90 041	335	993 298
Interstate via other Tasmanian port ..	16	137 264	—	—	16	137 264
Intrastate .....	6	9 647	—	—	6	9 647
<b>Total Devonport .....</b>	<b>302</b>	<b>1 079 894</b>	<b>76</b>	<b>132 648</b>	<b>378</b>	<b>1 212 542</b>
<b>Launceston—</b>						
Overseas direct .....	9	85 008	44	1 052 216	53	1 137 224
Overseas via other state .....	58	223 217	8	49 907	66	273 124
Overseas via other Tasmanian port ..	5	5 144	4	4 318	9	9 462
Interstate direct .....	280	991 563	1	286	281	991 849
Interstate via other Tasmanian port ..	9	49 632	—	—	9	49 632
Intrastate .....	11	6 679	6	2 211	17	8 890
<b>Total Launceston .....</b>	<b>372</b>	<b>1 361 243</b>	<b>63</b>	<b>1 108 938</b>	<b>435</b>	<b>2 470 181</b>
<b>Stanley—</b>						
Overseas direct .....	1	10 051	27	595 465	28	605 516
Overseas via other state .....	1	7 842	—	—	1	7 842
Interstate direct .....	82	60 148	3	621	85	60 769
Interstate via other Tasmanian port ..	7	12 420	—	—	7	12 420
Intrastate .....	3	621	—	—	3	621
<b>Total Stanley .....</b>	<b>94</b>	<b>91 082</b>	<b>30</b>	<b>596 086</b>	<b>124</b>	<b>687 168</b>
<b>Grassy—</b>						
Interstate direct .....	22	4 554	—	—	22	4 554
Interstate via other Tasmanian port ..	9	1 863	—	—	9	1 863
Intrastate .....	6	12 213	6	21 486	12	33 699
<b>Total Grassy .....</b>	<b>37</b>	<b>18 630</b>	<b>6</b>	<b>21 486</b>	<b>43</b>	<b>40 116</b>
<b>Lady Barron—</b>						
Intrastate .....	7	2 002	1	286	8	2 288
<b>Total Lady Barron .....</b>	<b>7</b>	<b>2 002</b>	<b>1</b>	<b>286</b>	<b>8</b>	<b>2 288</b>

(a) See introduction to this table.

(b) Type of service is defined under 'Movements of Vessels' at the beginning of this section.

The following table shows, in summary form, the number and net tonnage of vessels which entered Tasmanian ports during the last three years, by port:

## Shipping: Overseas, Interstate and Intrastate Vessels Entered Tasmanian Ports

Port (a) of entry	1975-76		1976-77		1977-78	
	Number	Net tons	Number	Net tons	Number	Net tons
Hobart .....	463	2 051 107	396	1 640 814	414	1 750 319
Burnie .....	366	1 568 520	366	1 687 919	335	1 533 948
Devonport .....	361	1 143 540	405	1 311 830	378	1 212 542
Launceston .....	386	2 210 714	421	2 650 692	435	2 470 181
Stanley .....	141	739 755	139	767 642	124	687 168
Grassy .....	57	37 535	43	19 872	43	40 116
Lady Barron .....	7	2 058	6	2 112	8	2 288

(a) See explanation in introduction to previous table.

## Cargo Handled at Tasmanian Ports

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 either in terms of units of weight or units of volume, depending on the basis on which freight is charged. In the following tables 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, 1977-78)

Port	Overseas		Interstate		Total	
	Tonnes	Cubic metres	Tonnes	Cubic metres	Tonnes	Cubic metres
<b>CARGO DISCHARGED</b>						
Hobart .....	114 757	21 769	621 138	270 114	735 895	291 883
Burnie .....	45 501	8 744	281 021	281 440	326 522	290 184
Grassy .....	—	—	4	9 147	4	9 147
Devonport .....	3 896	161	158 866	570 505	162 762	570 666
Lady Barron .....	—	—	—	—	—	—
Launceston .....	80 850	6 705	772 119	535 023	852 969	541 728
Stanley .....	19 038	—	32 567	27 516	51 605	27 516
Total .....	264 042	37 379	1 865 715	1 693 745	2 129 757	1 731 124
<b>CARGO SHIPPED</b>						
Hobart .....	647 645	—	430 505	229 354	1 078 150	229 354
Burnie .....	188 924	1 346	388 629	253 062	577 553	254 408
Grassy .....	—	—	1 531	6 756	1 531	6 756
Devonport .....	18 284	23 936	207 970	574 904	226 254	598 840
Lady Barron .....	—	—	—	—	—	—
Launceston .....	1 407 227	3 583	148 341	383 470	1 555 568	387 053
Stanley .....	1 887 295	—	1 630	36 735	1 888 925	36 735
Total .....	4 149 375	28 865	1 178 606	1 484 281	5 327 981	1 513 146

(a) Cargo statistics are compiled in terms of either weight or volume units of measurement depending upon the details 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 for recent years:

## Transport and Communication

## 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						
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
1976-77 .....	338 739	22 656	1 777 302	1 743 229	2 116 041	1 765 885
1977-78 .....	264 042	37 379	1 865 715	1 693 745	2 129 757	1 731 124
SHIPPED						
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
1976-77 .....	4 363 483	18 338	1 191 644	1 524 774	5 555 127	1 543 112
1977-78 .....	4 149 375	28 865	1 178 606	1 484 281	5 327 981	1 513 146

(a) Statistics for total cargo using a single unit of measurement are not available.

## TRANSPORT COMMISSION

## Functions of the Commission

The main functions of the Transport Commission are as follows:

- (i) administration of the *Traffic Act* and regulations concerning traffic control and facilities;
- (ii) traffic engineering associated with the control of traffic;
- (iii) registration and taxation of motor vehicles;
- (iv) regulation and licensing of commercial goods vehicles;
- (v) regulation and licensing of taxi and hire cars;
- (vi) regulation and licensing of privately operated coach and omnibus services;
- (vii) testing and licensing of drivers of motor vehicles;
- (viii) operation of a State-owned shipping service between Stanley/King Island/Melbourne;
- (ix) operation of the Bruny Island ferry service;
- (x) administration of aerodromes under the control of the State Government; and
- (xi) operation of an engineering workshop at Launceston (known as the 'Precision Tool Annexe'; new machines for this workshop have recently been obtained from Japan).

In brief, the Transport Commission emerges as a business undertaking, an administrative body and a taxing authority.

## Control of the 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.

## Financial Operations

The revenue of the Commission comes from two main sources: (i) its 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, Tasmania: Trading and Profit and Loss Account**  
(\$'000)

Particulars	1973-74	1974-75	1975-76	1976-77	1977-78
<b>REVENUE</b>					
Railways (a).....	7 896	8 698	—	—	—
Coastal shipping .....	1 262	1 271	1 415	2 068	2 056
Bruny Island ferry .....	73	72	81	102	92
Trans-Derwent ferry .....	—	236	501	594	220
Tool annexe .....	360	554	720	841	1 137
Other revenue .....	240	295	399	513	542
Net loss (b) .....	12 129	18 187	4 537	3 919	3 107
<b>Total .....</b>	<b>21 960</b>	<b>29 313</b>	<b>7 654</b>	<b>8 037</b>	<b>7 154</b>
<b>EXPENDITURE</b>					
Railways (a).....	18 484	23 652	—	—	—
Coastal shipping .....	2 119	3 661	4 293	3 889	3 364
Bruny Island ferry .....	169	200	346	403	514
Trans-Derwent ferry .....	—	218	1 030	1 102	330
Tool annexe .....	409	558	742	842	1 164
General expenditure .....	778	1 025	1 243	1 801	1 782
<b>Total .....</b>	<b>21 960</b>	<b>29 313</b>	<b>7 654</b>	<b>8 037</b>	<b>7 154</b>

(a) State railway system controlled by the 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, Tasmania: Motor Taxation Collection, Licensing, etc.**  
(\$'000)

Particulars	1973-74	1974-75	1975-76	1976-77	1977-78
<b>REVENUE</b>					
Motor tax .....	5 941	6 379	8 371	10 324	12 687
Public vehicle licensing, fees, etc. ....	459	452	623	917	1 122
Registration, licences, etc. ....	2 234	2 346	3 358	4 158	4 345
Refunds of stamp duty .....	—1	—3	—4	—4	—4
Stamp duty on vehicle registrations .....	613	1 873	2 797	3 429	3 683
Transfers from Consolidated Revenue—					
Road transport administration .....	990	1 170	1 491	1 741	2 024
Traffic engineering section .....	529	595	692	879	1 173
<b>Total .....</b>	<b>10 766</b>	<b>12 812</b>	<b>17 328</b>	<b>21 444</b>	<b>25 030</b>

**Transport Commission, Tasmania: Motor Taxation Collection, Licensing, etc.—continued**  
(\$'000)

Particulars	1974-75	1975-76	1976-77	1977-78
EXPENDITURE—continued				
Profit and loss account (transfers) (a) .....	95	104	101	96
Paid to Consolidated Revenue .....	10 952	15 041	18 723	21 737
Administration, traffic control, etc. ....	1 766	2 176	2 623	3 197
<b>Total</b> .....	<b>12 813</b>	<b>17 321</b>	<b>21 447</b>	<b>25 030</b>

(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 (\$3 106 697, the loss for 1977-78 reimbursed during 1978-79). The accounts reveal that the Commission's net loss has occurred principally in respect of the Coastal Shipping Services from 1975-76.

#### 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 1977-78 the coastal service was operated by the *Straitsman*. In that year the shipping services carried 19 754 sheep, 20 911 cattle, 742 pigs and 124 424 tonnes of general cargo. A total of 308 voyages provided essential services to and from King Island and between Stanley and Melbourne.

On the Bruny Island service the *Harry O'May* has become the primary vessel after re-engining and re-conversion to a vehicular ferry. The *Harry O'May* joined the service in March 1978 when the *Melba* was withdrawn and placed for sale. The ferry *Mangana* is now the back-up vessel for this service. The ramps at Kettering and Barnes Bay have been upgraded to accommodate the *Harry O'May*. Modifications have also been carried out on the *Mangana* to make her better suited to the ramps. The construction of new terminals at Kettering and Roberts Point (on Bruny Island) is planned. When these are completed the crossing will be considerably shortened and the frequency of service improved.

### 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.)

#### *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*

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.

Under the agreement the State retained 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.

*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 Chapter 11 in the 1978 *Year Book*.

**Operating and Financial Statistics**

The following table shows the principal operating statistics for the Tasmanian system up to 1976-77:

**Government Railways, Tasmania (a)  
Operating Statistics**

Year	Route-kilometres open (b)	Train revenue- kilometres	Passenger- journeys	Goods and livestock carried
	kilometres	'000 kilometres	'000	'000 tonnes
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 .....	849	1 983	(c) 429	1 731
1975-76 .....	849	1 748	151	1 610
1976-77 .....	849	n.y.a.	140	1 644

(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.

Tables giving details of gross earnings and working expenses and of the number of employees, and wages and salaries paid for recent years up to 1975-76 are included in the 1978 and 1979 editions of the *Year Book*. However, later statistics were not available from the Australian National Railways Commission for inclusion in this edition. (In 1975-76 the Commission's Tasmanian railways made gross earnings of \$8.05m and incurred working expenses of \$22.09m, leaving a deficit of \$14.04m.)

**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 motor buses 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. Increasing motor vehicle ownership provides formidable competition to attracting passengers to urban public transport. Despite a slight increase in the number of passenger journeys in 1974-75, a trend of diminishing patronage has been evident during the years 1975-76 to 1977-78.



## Financial Operations of Trust

The following table shows the income and expenditure of the Metropolitan Transport Trust for recent years:

**Metropolitan Transport Trust, Tasmania**  
**Income and Expenditure**  
**(\$'000)**

Particulars	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78
INCOME						
Traffic operations .....	2 612	2 698	2 844	2 865	2 731	3 395
Other earnings .....	46	52	72	135	131	151
Subsidy, State Government	1 692	2 520	3 957	5 156	6 030	6 615
<b>Total .....</b>	<b>4 350</b>	<b>5 270</b>	<b>6 873</b>	<b>8 156</b>	<b>8 892</b>	<b>10 161</b>
EXPENDITURE						
Traffic operations .....	2 407	3 025	3 961	4 390	4 659	5 013
Maintenance .....	664	800	1 066	1 261	1 393	1 532
Power and fuel .....	265	310	370	451	443	532
Workshop and stores .....	67	71	90	119	146	184
Administration and general	594	764	1 080	1 358	1 562	2 080
Debt charges .....	143	143	148	205	282	308
Depreciation charges .....	194	169	183	301	461	504
<b>Total .....</b>	<b>4 333</b>	<b>5 283</b>	<b>6 897</b>	<b>8 084</b>	<b>8 945</b>	<b>10 153</b>

A break-down of income earned from traffic operations in the three centres for 1977-78 (in \$'000) is as follows: Hobart, 2 596; Launceston, 606, and Burnie, 194.

## Loan Debt of Trust

Net advances to the Trust from the State Loan Fund at 30 June 1978 stood at \$4 225 382.

## Operating Statistics

The next table shows the principal operating statistics for the Metropolitan Transport Trust:

**Metropolitan Transport Trust, Tasmania**  
**Operating Statistics**

Particulars	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78
Route-kilometres (a) .....	402	407	459	453	454	461
Vehicle-kilometres ... '000	8 381	8 618	9 091	9 487	9 617	9 979
Passenger journeys ... '000	18 728	19 515	20 589	20 512	19 773	19 517
Fare income per passenger journey (b) .....	0.14	0.14	0.14	0.14	0.14	0.17
Working expenses per passenger journey (c) ..	0.21	0.25	0.32	0.37	0.41	0.48

(a) At end of period.

(b) Income from fares only—excludes other revenue.

(c) Excludes debt charges and depreciation.

At 30 June 1978 the Metropolitan Transport Trust had a fleet of 321 vehicles comprising 300 passenger buses and 21 maintenance vehicles. Disposition of the fleet was: Hobart, 217 passenger buses and 15 maintenance vehicles; Launceston, 62 passenger buses and five maintenance vehicles; and Burnie, 21 passenger buses and one maintenance vehicle.

## ROADS AND BRIDGES

## Scope

The details relating to roads 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 1978 was 3 695 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 1978 totalled 12 814 kilometres.

(iii) *Roads of Other Government Authorities*: Roads which were the responsibility of these authorities at 30 June 1978 comprised: roads of the Hydro-Electric Commission, 528 kilometres; Forestry Commission, 5 190 kilometres; total 5 718 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 their construction and maintenance. The proportion of classified (State) roads with sealed surfaces has increased from 72.2 per cent at 30 June 1967 to 88.1 per cent in June 1978.

Length of Roads According to Nature of Surface, Tasmania at 30 June

Type of surface	1973	1974	1975	1976	1977	1978
CLASSIFIED STATE ROADS						
Sealed (a) . . . . . km	2 973	3 013	3 120	3 159	3 188	3 256
Unsealed (b) . . . . . km	548	503	487	452	457	439
Total . . . . . km	3 521	3 516	3 606	3 611	3 645	3 695
Sealed ratio (c) . . . . . %	84.4	85.7	86.5	87.5	87.5	88.1
ROADS OF LOCAL GOVERNMENT AUTHORITIES						
Sealed (a) . . . . . km	3 363	3 552	3 697	3 849	3 998	4 013
Unsealed (b) . . . . . km	9 447	9 311	9 126	9 003	8 816	8 801
Total . . . . . km	12 810	12 862	(d) 12 823	12 852	12 814	12 814
Sealed ratio (c) . . . . . %	26.3	27.6	28.8	29.9	31.2	31.3

## Length of Roads According to Nature of Surface, Tasmania at 30 June—continued

Type of surface	1973	1974	1975	1976	1977	1978
ROADS OF OTHER GOVERNMENT AUTHORITIES						
Sealed (a) . . . . . km	151	151	121	121	122	113
Unsealed (b) . . . . . km	4 148	4 239	4 442	4 744	5 255	5 604
Total . . . . . km	4 299	4 390	4 564	4 865	5 377	5 717
Sealed ratio (c) . . . . . %	3.5	3.4	2.7	2.5	2.3	2.0
ALL ROADS						
Sealed (a) . . . . . km	6 487	6 716	6 937	7 129	7 308	7 382
Unsealed (b) . . . . . km	14 143	14 052	14 055	14 199	14 528	14 844
Total . . . . . km	20 630	20 767	20 993	21 328	21 835	22 226
Sealed ratio (c) . . . . . %	31.4	32.3	33.0	33.4	33.5	33.2

(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 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* (282 kilometres), from Launceston to Marrawah in the far north-west; (iii) *Channel* (95 kilometres), from Hobart to Huonville, via D'Entrecasteaux area and Cygnet; (iv) *Huon* (99 kilometres), from Hobart to Hythe via Longley and Huonville; (v) *Lake* (150 kilometres), from Deloraine via Great Lake to Melton Mowbray; (vi) *Lyell* (284 kilometres), from Granton, near Hobart, to Strahan; (vii) *Midland* (184 kilometres), from Glenorchy to Launceston; (viii) *Murchison* (78 kilometres), linking the Zeehan and Waratah Highways; (ix) *Tasman* (422 kilometres), from Hobart to Launceston, via east coast and St Helens; (x) *Waratah* (72 kilometres), from Somerset to Waratah.

Classified (or State) Roads, Tasmania  
Description and Length of Roads at 30 June 1978  
(Kilometres)

Description	Nature of surface		Total
	Sealed (a)	Unsealed (b)	
Highways . . . . .	1 862	98	1 960
Main roads . . . . .	1 003	136	1 139
Secondary roads . . . . .	193	97	290
Tourist roads . . . . .	71	79	150
Developmental roads . . . . .	128	30	157
Total . . . . .	3 256	439	3 695

(a) Bitumen or concrete.

(b) Gravel or stone.

## Expenditure on Roads and Bridges

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, Tasmania: Receipts and Payments (a)**  
(\$'000)

Particulars	1976-77	1977-78
<b>RECEIPTS</b>		
State Government source—		
Motor vehicle and drivers taxation . . . . .	11 030	13 379
Road maintenance contributions, taxes and charges . . . . .	210	183
Loans (b) . . . . .	10 836	9 722
Other . . . . .	3 465	4 072
Federal Government grants (c) . . . . .	25 374	23 973
Contributions by local government authorities . . . . .	17	17
<b>Total . . . . .</b>	<b>r 50 932</b>	<b>51 346</b>
<b>PAYMENTS</b>		
Construction and reconstruction of roads and bridges . . . . .	38 770	37 352
Maintenance of roads and bridges . . . . .	9 380	11 616
Planning and research . . . . .	527	658
<b>Total . . . . .</b>	<b>48 677</b>	<b>49 626</b>

- (a) Includes receipts and payments in respect of Forestry Commission and Hydro-Electric Commission roads.  
 (b) Includes amounts made available from the Loan Fund to the Department of Main Roads, \$5 466 000 in 1976-77 and \$3 850 000 in 1977-78, together with amounts made available to the Forestry Commission and the Hydro-Electric Commission for roadworks.  
 (c) Includes amounts from the Tasman Bridge Disaster Fund, \$2 526 000 in 1976-77 and \$602 000 in 1977-78.

Federal Government Road 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. Chapter 4, 'Local Government', contains details 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.

## 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. campervans, tow trucks, ambulances and hearses) 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. Up to June 1976 all rear-door sedans were classified as cars. From July 1976 they have been classified according to the vehicle type recorded by the registration authority.

### 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, Tasmania**

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.....	<u>2.4</u>	(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
1978.....	171.9	41.2	5.0	218.1	(c) 7.7	527

(a) For decade ending in year shown.

(b) Included with cars and station wagons.

(c) For eight years ended 30 June 1978.

The next table gives details of motor vehicles on the register during the past six years; 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, Tasmania**

At 31 December	Cars and station wagons	Commercial vehicles	Motor cycles	All vehicles		
				Total	Annual increase	Per 1 000 of population
	'000	'000	'000	'000	'000	no.
1973.....	138.7	35.0	5.1	178.8	7.7	450
1974.....	144.8	35.9	7.1	187.8	9.0	467
1975.....	155.3	37.0	7.4	199.7	11.9	491
1976.....	160.2	40.1	6.3	206.6	6.9	505
1977.....	166.5	40.7	6.0	213.2	6.6	517
1978.....	174.8	41.5	4.7	221.0	7.8	532

### 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 1978. The figures are based on the final results of the census of motor vehicles conducted in respect of 30 September 1976 and data supplied by the various registration authorities. Diplomatic and consular vehicles and all Federal Government-owned vehicles other than those belonging to the defence services are included.

Motor Vehicles on Register, 30 June 1978

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 .....	1 811.8	426.9	91.8	2 330.6	465
Victoria .....	1 544.9	318.3	52.3	1 915.4	502
Queensland .....	794.7	257.9	77.0	1 129.6	521
South Australia .....	533.9	116.9	30.5	681.3	529
Western Australia .....	500.4	167.1	28.1	695.5	569
Tasmania .....	171.9	41.2	5.0	218.1	527
Northern Territory .....	24.7	17.5	4.7	46.9	417
Australian Capital Territory .....	79.9	14.1	3.0	97.0	450
Total .....	5 462.2	1 359.9	292.4	7 114.5	499

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 replaced 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').

Registrations of New Motor Vehicles, Tasmania

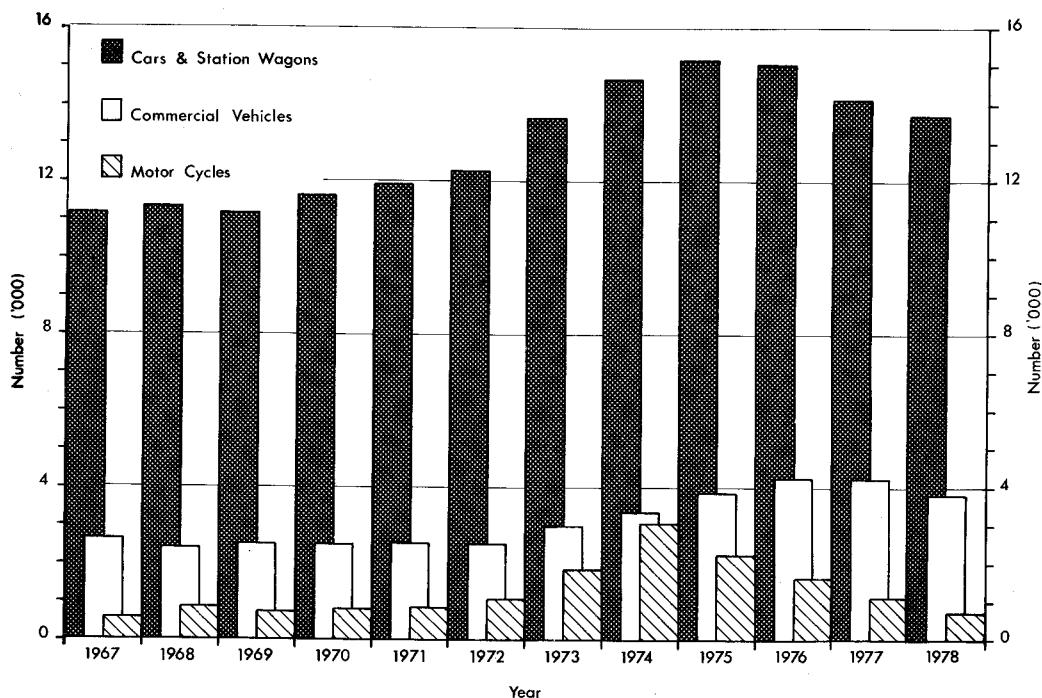
Type of vehicle	1973	1974	1975	1976	1977	1978
Motor cars .....	12 269	13 074	13 130	12 614	11 878	11 439
Station wagons .....	1 396	1 591	2 051	2 438	2 283	2 322
Commercial-type vehicles—						
Utilities .....	1 117	1 148	1 228	(a) 1 403	1 365	1 269
Panel vans .....	706	899	1 249	(a) 1 243	1 319	1 018
Trucks—						
Rigid .....	876	974	1 004	(a) 1 146	1 109	1 088
Articulated .....	171	165	133	(a) 159	134	152
Other (b) .....	12	15	16	(a) 132	219	178
Buses .....	114	138	215	169	94	131
Motor cycles .....	1 863	3 051	2 254	1 636	1 118	789
Total .....	18 524	21 055	21 280	20 940	19 519	18 386

(a) Revised classification introduced from 1 July 1976—see explanation preceding this table.

(b) Comprises non-freight carrying vehicles (e.g. tow trucks, fire engines and from 1 July 1976, campervans, ambulances and hearses).

In the above 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'.

Registration of New Motor Vehicles, Tasmania



### 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, Tasmania ('000)

Particulars	1973	1974	1975	1976	1977	1978
New motor vehicles registered (a) . . . . .	18.5	21.1	21.3	20.9	19.5	18.4
Annual increase, motor vehicles on register (b)	7.7	9.0	11.9	6.9	6.6	7.8

(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 about 23 000 motor vehicles have been scrapped during the last two years.

*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 84 per cent of all new motor vehicles of this type registered during 1978. 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, Tasmania, 1978**  
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 .....	34	0.3	—	—
Audi .....	28	0.2	—	—
B.M.W. ....	44	0.4	—	—
Chrysler .....	1 118	9.8	250	10.8
Datsun .....	1 404	12.3	181	7.8
Fiat .....	119	1.0	26	1.1
Ford .....	2 633	23.0	597	25.7
Holden .....	3 221	28.2	536	23.1
Honda .....	246	2.2	14	0.6
Jaguar .....	14	0.1	—	—
Lancia .....	36	0.3	1	—
Leyland .....	318	2.8	20	0.9
Mazda .....	539	4.7	99	4.3
Mercedes-Benz .....	52	0.5	—	—
Peugeot .....	56	0.5	5	0.2
Renault .....	41	0.4	24	1.0
Statesman .....	22	0.2	—	—
Subaru .....	42	0.4	124	5.3
Toyota .....	1 219	10.7	393	16.9
Triumph .....	28	0.2	—	—
Volkswagen .....	100	0.9	3	0.1
Volvo .....	98	0.9	26	1.1
Other .....	27	0.2	23	1.0
Total .....	11 439	100.0	2 322	100.0

**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 Tasmanian 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

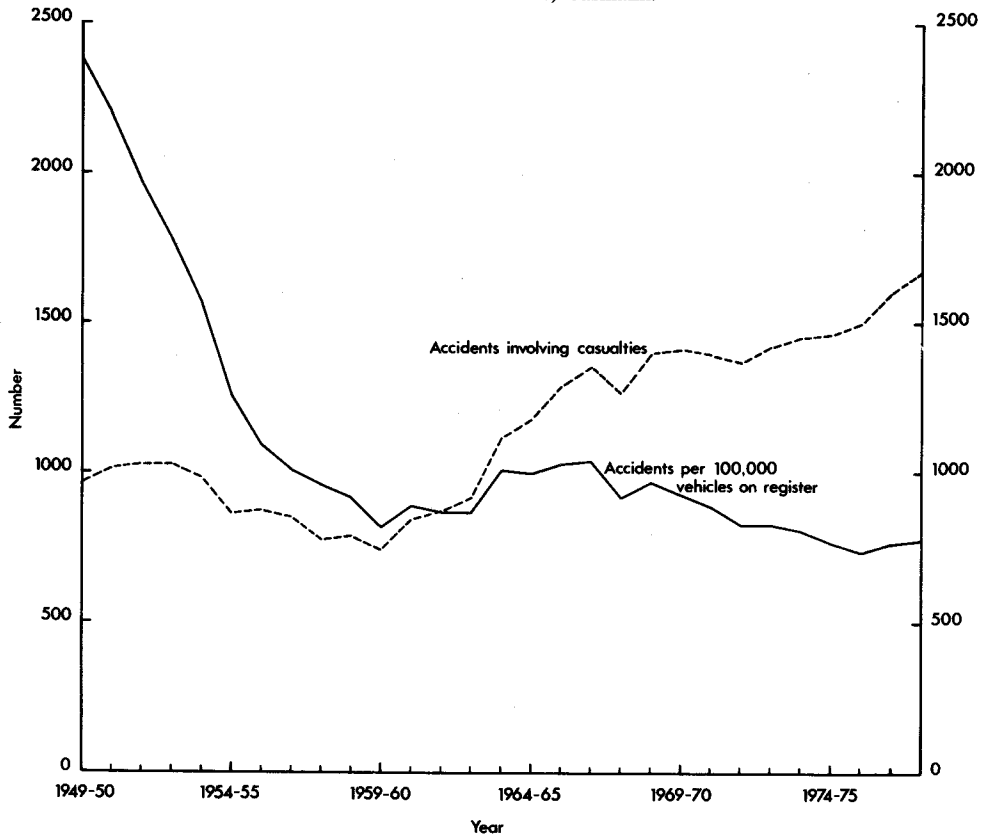
For the purpose of the statistics in this section, the police officer reporting the accident determines, on the basis of the evidence available, the road user or agency responsible, and also the prime cause of the accident. The fact that civil or criminal courts may later make different decisions on 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

Road Traffic Accidents, Tasmania



## Summary

Generally there has been an increase in both the number of road traffic accidents and in the number of persons killed and injured in road traffic accidents in recent years, although the number of persons killed showed a decline in 1975-76 and 1976-77. The following table summarises the principal statistics of road traffic accidents involving casualties for recent years:

Road Traffic Accidents Involving Casualties, Tasmania

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)
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
1976-77 .....	1 606	77	103	4.9	2 314	110
1977-78 .....	1 674	78	118	5.5	2 402	112
1978-79 .....	1 537	69	98	4.4	2 113	95

(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'.

## 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, Tasmania, 1978-79  
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 .....	262	40	379
Driver refused test .....	4	—	4
Other cases (b) .....	28	5	47
Other accidents—			
Excessive speed having regard to conditions .....	106	3	171
Not keeping to the left .....	72	12	154
Not giving right of way .....	125	—	166
Failing to make right-hand turn with due care .....	78	2	109
Inexperience .....	36	3	53
Inattentive driving .....	173	—	237
Reversing without care .....	6	—	8
Overtaking without sufficient clearance .....	22	3	26
Infirmity of driver .....	9	1	12
Driver asleep or drowsy .....	28	—	37
Pulling out from kerb without warning .....	7	—	9
Failing to observe traffic sign or signal .....	90	—	140
Hit-run (n.e.i.) .....	11	1	11
Other causes (including not stated or not known) .....	32	2	42
Total .....	1 089	72	1 605

(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, Tasmania

Accidents involving casualties	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
Drivers of motor vehicles responsible—						
Number of accidents .....	1 053	1 010	1 019	1 106	1 214	1 089
Proportion of total accidents . . . %	72.4	68.9	67.8	68.9	72.5	70.9

(a) Excludes riders of motor cycles.

## Location of Accidents

The next table shows the location of accidents in the State:

## Road Traffic Accidents and Casualties by Local Government Area, 1978-79

Local government area	Accidents involving casualties	Persons killed	Persons injured
Hobart .....	259	11	337
Launceston .....	176	2	230
Glenorchy .....	128	2	173
Clarence .....	110	6	144
Burnie .....	49	3	56
Devonport .....	91	4	124
Other .....	724	70	1 049
Tasmania .....	1 537	98	2 113

## Responsibility for Road Accidents

The next table shows the type of road user or agency believed responsible:

## Responsibility for Road Traffic Accidents, Tasmania, 1978-79

Responsibility attributed to—	Accidents involving casualties	Persons killed	Persons injured
Drivers of motor vehicles .....	1 089	72	1 605
Riders of motor cycles .....	86	7	94
Pedal cyclists .....	23	1	22
Pedestrians .....	157	12	150
Passengers .....	1	—	2
Motor vehicle defects .....	31	—	38
Motor cycle defects .....			
Animals .....	6	—	6
Road conditions .....	100	4	131
Weather .....	19	—	32
Parties not involved (a) .....	20	—	30
Not stated or not known .....	5	2	3
Total .....	1 537	98	2 113

(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, Tasmania, 1978-79**  
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 .....	6	5	—	1	1	—	1	—	14
0.05 .....	5	—	—	1	2	—	—	—	8
0.06 .....	4	5	—	2	—	1	—	—	12
0.07 .....	8	3	2	3	—	—	—	1	17
0.08 .....	7	4	3	4	—	—	—	—	18
0.09 .....	3	3	4	—	—	—	1	—	11
0.10 .....	9	6	1	2	—	—	—	—	18
0.11 or 0.12 .....	11	13	2	5	1	3	1	—	36
0.13 or 0.14 .....	12	11	5	2	5	1	—	—	36
0.15 or 0.16 .....	12	8	6	6	4	1	—	—	37
0.17 or 0.18 .....	7	13	6	3	4	1	—	—	34
0.19 or 0.20 .....	3	3	5	2	1	1	—	—	15
0.21 or 0.22 .....	3	4	2	—	1	—	1	—	11
0.23 or 0.24 .....	1	1	—	3	—	—	1	—	6
0.25 or above .....	1	—	1	1	—	—	—	—	3
Refused test .....	—	—	1	2	—	1	—	—	4
Test facilities not available.....	4	4	2	2	—	1	1	—	14
<b>Total .....</b>	<b>96</b>	<b>83</b>	<b>40</b>	<b>39</b>	<b>19</b>	<b>10</b>	<b>6</b>	<b>1</b>	<b>294</b>

(a) Grams of alcohol per 100 millilitres of blood.

Of the 294 'driver responsible' casualty accidents in which alcohol was considered to be the possible prime or antecedent cause, 179 accidents (i.e. 60.9 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, Tasmania, 1978-79**  
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 .....	3	1	3
Other cases (b) .....	5	—	5
Other accidents—			
Walking across roadway without due care .....	86	7	81
Passing behind or in front of moving or stationary vehicle or object	16	—	16
Children (under seven years of age) not under, or breaking away			
from, the supervision of an older person .....	33	3	30
Other causes (including not stated or not known) .....	14	1	15
<b>Total .....</b>	<b>157</b>	<b>12</b>	<b>150</b>

(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 1978-79 a total of 2 148 drivers of motor vehicles (excluding motor cycles) were involved in casualty accidents which were reported to the police. Of these, 25 per cent (544) were under 21 years of age and a further 30 per cent (637) 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, Tasmania, 1978-79**  
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 .....	16	1	1	—	—	—	—	—	18
Provisional .....	155	6	4	4	—	3	—	—	172
Ordinary .....	338	312	260	347	229	152	157	3	1 798
Interstate or international .....	8	17	12	15	6	6	4	1	69
No licence .....	27	15	7	11	4	2	—	—	66
Not known .....	—	1	1	1	—	4	1	17	25
<b>Total .....</b>	<b>544</b>	<b>352</b>	<b>285</b>	<b>378</b>	<b>239</b>	<b>167</b>	<b>162</b>	<b>21</b>	<b>2 148</b>

### Road Features and Accidents

The following table analyses all accidents involving casualties according to road features at the site and shows that, in 1978-79, 36 per cent of accidents occurred on a straight section of road.

**Features of Roadways on Which Accidents Occurred, Tasmania, 1978-79**

Feature of roadway	Accidents involving casualties		Persons killed	Persons injured
	Number	Per cent of total		
<b>At intersections—</b>				
Controlled .....	103	6.7	1	133
Uncontrolled .....	391	25.4	8	553
<b>Other than at intersections—</b>				
Straight road .....	549	35.7	35	702
Bend or curve .....	468	30.4	54	688
Bridge, culvert or causeway .....	22	1.4	—	32
Other locations .....	4	0.3	—	5
<b>Total .....</b>	<b>1 537</b>	<b>100.0</b>	<b>98</b>	<b>2 113</b>

### Road Users Killed or Injured

The next table analyses the type of road user killed or injured:

**Type of Road User Killed or Injured, Tasmania, 1978-79**

Type of road user involved	Killed			Injured		
	Males	Females	Persons	Males	Females	Persons
Drivers of motor vehicles .....	36	5	41	677	315	992
Motor cyclists .....	8	—	8	143	9	152
Pedal cyclists .....	1	—	1	39	6	45
<b>Passengers—</b>						
Motor vehicle .....	14	19	33	356	367	723
Motor cycle .....	—	—	—	13	10	23
Other .....	—	—	—	1	—	1
<b>Pedestrians .....</b>	<b>10</b>	<b>5</b>	<b>15</b>	<b>109</b>	<b>68</b>	<b>177</b>
<b>Total .....</b>	<b>69</b>	<b>29</b>	<b>98</b>	<b>1 338</b>	<b>775</b>	<b>2 113</b>

*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, Tasmania, 1978-79**

Types of accidents	Accidents involving casualties	Persons killed	Persons injured
Collisions between vehicles—			
Angle .....	383	10	563
Head on .....	132	14	258
Rear end .....	120	—	174
Side swipe—Same direction .....	55	7	80
Opposite direction .....	57	10	82
Vehicle—			
Overturning or leaving road .....	537	39	711
Colliding with—Fixed object (incl. parked vehicle) .....	57	3	58
Pedestrian .....	190	15	181
Animal .....	5	—	5
Other types of accidents .....	1	—	1
Total .....	1 537	98	2 113

*Age and Responsibility*

Drivers of motor vehicles (excluding motor cycles) were believed responsible for 1 089 out of the 1 537 accidents involving casualties which were reported to the police during 1978-79.

Drivers under 25 accounted for 527 or 48.4 per cent of these accidents (male drivers under 25, 434; female drivers under 25, 93).

Casualties associated with accidents attributed to drivers under 25 were: killed, 38; injured, 780.

The following table analyses the age and sex of the drivers responsible:

**Road Traffic Accidents, Tasmania, 1978-79**  
**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 .....	11	1	19	5	—	6
17-20 .....	262	12	411	51	2	66
21-24 .....	161	23	225	37	—	53
25-29 .....	98	6	141	27	2	43
30-39 .....	117	5	187	39	3	49
40-49 .....	69	9	98	24	—	32
50-59 .....	58	1	83	26	1	43
60 and over .....	61	4	92	29	1	41
Not stated (b) .....	13	2	13	1	—	3
Total .....	850	63	1 269	239	9	336

(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:

*Transport and Communication*

**Road Traffic Accidents, Tasmania, 1978-79**

**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	2
7-16 .....	—	2	1	—	—	3
17-20 .....	7	5	—	5	2	19
21-29 .....	16	1	—	6	1	24
30-39 .....	4	—	—	—	—	4
40-49 .....	4	—	—	1	—	5
50-59 .....	2	—	—	—	—	2
60 and over .....	3	—	—	1	6	10
Total .....	36	8	1	14	10	69

**Road Traffic Accidents, Tasmania, 1978-79**  
**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 .....	—	—	—	—	2	2
7-16 .....	—	—	—	5	—	5
17-20 .....	—	—	—	3	—	3
21-29 .....	—	—	—	3	—	3
30-39 .....	2	—	—	1	—	3
40-49 .....	—	—	—	1	2	3
50-59 .....	1	—	—	2	—	3
60 and over .....	2	—	—	4	1	7
Total .....	5	—	—	19	5	29

*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, Tasmania, 1978-79**  
**Days of the Week on Which Accidents Occurred**

Day of the week	Accidents involving casualties	Persons killed	Persons injured
Monday .....	194	15	248
Tuesday .....	146	7	188
Wednesday .....	161	4	219
Thursday .....	200	5	257
Friday .....	249	16	334
Saturday .....	327	39	468
Sunday .....	260	12	399
Total .....	1 537	98	2 113





*Tool making at Stanley Tools, Hobart*

*[Tasmanian Film Corporation]*

*Fish processing at Safcol (Tas.) Pty Ltd's Margate plant*







*The Australian Newsprint Mills Ltd plant at Boyer on the Derwent*

*[Tasmanian Film Corporation]*

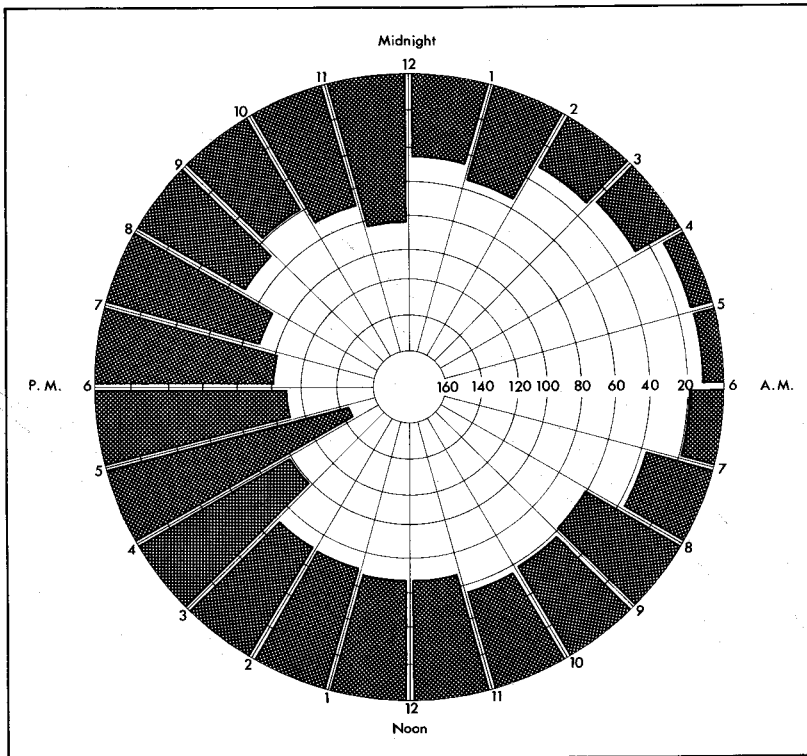
*The Electrolytic Zinc Company of Australasia Ltd's Risdon works*





*Time of Day When Accidents Occurred*

The following diagram shows the time of day when accidents involving casualties occurred during 1978-79:

**Time of Day when Accidents Occurred, Tasmania, 1978-79****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 1978, the annual premium for most private passenger-type motor vehicles was reduced to \$39.00 from \$44.00, while premiums for motor cycles were increased substantially. Premiums are subject to review annually by the Premiums Board of Tasmania which was 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) Disability allowances for employed persons, self-employed persons or housekeeping.
- (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 each of the following organisations appoints one member: (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).

## AIR TRANSPORT IN TASMANIA

**Introduction**

During 1979, Ansett Airlines of Australia and Trans-Australia Airlines were operating the greater percentage of passenger traffic to and from the Tasmanian mainland with 164 jet aircraft and 88 prop-jet aircraft flights per week. Executive Airlines Pty Ltd operate a commuter service between Essendon and Flinders Island on four days per week. Bizjets operated a daily service between Essendon and Devonport.

Supplementary intrastate services began during 1964 and in 1979 there were two intrastate services: Air Tasmania Pty Ltd and Executive Airlines Pty Ltd.

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-Australia Airlines, to the Argosy, DC3 and Bristol Freighters of the major charter operators. Smaller aircraft also carry a large amount of freight across Bass Strait and to the Tasmanian islands.

**Administration****Administration of the Air Navigation Act and Regulations in Tasmania**

The Federal *Air Navigation Act* 1920 and associated regulations are administered for Tasmania by the Director, Department of Transport, Victoria-Tasmania Region. Regulation of aircraft and commercial operations within Tasmania is administered through the Transport Commission under authority of the *Traffic Act* 1925. The Federal Department's more important functions include the provision and maintenance of government aerodromes and associated facilities, the licensing of aircraft operators 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*: Being operations in which an aircraft is used for personal transportation—private or business, carriage of persons or goods for other than hire or reward, or other activities of a non-commercial nature.

- (ii) *Aerial Work Operations*: These operations refer to the aircraft being used for aerial survey; spotting; photography; agriculture; advertising; flying training; and the cartage of goods being the property of the pilot, owner or hirer of the aircraft for purposes of trade. Within Tasmania there are five licensed flying training organisations and two aerial agricultural organisations carrying out most of the aerial work activities. Other types of aerial work are carried out by a further 10 operators.
- (iii) *Charter Operations*: These refer to aircraft hired for passenger or cargo movement, usually not between fixed terminals or to fixed schedules. There are 12 licensed charter operators based in Tasmania.
- (iv) *Commuter Operations*: These are regular public transport operations, conducted in accordance with fixed schedules between fixed terminals. Operators are authorised to operate without holding airline licences by exemptions granted under Air Navigation Regulation 203. Tasmania has two approved operators.
- (v) *Regular Public Transport*: This refers to aircraft operating under an airline licence to carry passengers and cargo according to fixed schedules and on specified routes. All services of this kind are provided to Tasmania by Ansett Airlines, East-West Airlines and Trans-Australia Airlines.

### Tasmanian Aerodromes

The major aerodromes in Tasmania are owned and operated by the Federal Government through the Department of Transport. The following sections describe 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 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 Mount Wellington and north on Mount Barrow. The airport is also used for flying training, light aircraft charter and aerial work operations.

*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. It has been upgraded to handle F27 aircraft.

*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.

*King Island Airport*: Is located six kilometres north-east of Currie. It has three gravel runways, night lighting and radio navigational equipment. It caters for Ansett Airlines F27s and the smaller aircraft of Air Tasmania Pty Ltd and Executives Airlines.

*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, services 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	Launceston	Devonport	Wynyard	King Island	Flinders Island
1973.....	7 061	11 297	4 982	4 769	1 279	604
1974.....	7 599	10 982	5 409	5 148	1 079	(a) 349
1975.....	7 365	9 856	4 775	4 334	732	—
1976.....	7 543	9 532	4 224	3 899	693	—
1977.....	8 073	10 265	3 944	4 006	707	—
1978.....	8 832	11 313	4 190	4 645	737	—

(a) 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)						
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	—
1977.....	411	326	83	83	13	—
1978.....	448	367	81	86	15	—
FREIGHT (Tonnes)						
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	—
1977.....	8 575	14 964	355	331	118	—
1978.....	9 588	16 794	399	380	117	—

(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 1978 over 1977 was 8.8 per cent. The total freight carried showed an increase of 11.8 per cent over the same period.

#### 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).

**Passengers, Freight and Aircraft Movements  
Principal Airports, Australia, 1978**

Airport	Passengers	Freight (tonnes)	Aircraft movements
Sydney .....	5 399 722	53 434	88 160
Melbourne .....	4 628 254	66 217	71 527
Brisbane .....	2 250 540	26 641	35 525
Adelaide .....	1 757 635	20 552	25 618
Canberra .....	961 963	3 808	17 801
Perth .....	812 436	13 970	13 044
Hobart .....	447 790	9 588	8 832
Launceston .....	367 451	16 794	11 313

#### 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, released details of a scheme to be administered by the Tasmanian Branch of his Department for equalising the trans Bass Strait freight costs of Tasmanian manufacturers and producers who shipped goods for sale or use on the mainland. The scheme provided assistance to Tasmanian manufacturers and producers broadly equal to the difference between the actual door to door freight cost associated with moving goods by sea from Tasmania and the door to door cost of moving similar goods over comparable routes on the mainland.

The following measures were associated with the introduction of freight equalisation assistance:

- (i) Sea freight rates were to be restored to economic levels. This involved increases to north-bound freight rates which had been frozen since 1974, a lesser increase in south-bound rates and an increase of about 15 per cent in the Devonport-Melbourne passenger fares.
- (ii) The Australian National Line passenger service between Sydney and Tasmania was discontinued.
- (iii) The railway rates were to be increased to bring these nearer to economic levels.
- (iv) The annual subsidy on the *Empress of Australia* passenger service was increased from \$1 million to \$2 million.

The Minister said that the equalisation scheme and associated measures were based largely on the Nimmo Report and that other aspects of the Report would be considered later. The rates of assistance would be reviewed in 18 months and the scheme reassessed not later than 1980. In introducing assistance for north-bound goods, the Minister said that assistance for south-bound manufacturers' and producers' goods would be announced as soon as practicable.

Assistance for south-bound manufacturers' and producers' goods and equipment was announced in November 1977 and made retrospective to 1 July 1976. The goods eligible for

south-bound assistance must be of Australian origin and suffer an actual freight disability. Eligible producers are: (i) primary producers in respect of equipment and packing materials; and (ii) manufacturers and mining undertakings in respect of equipment used in the production process and raw material inputs (providing these total more than 5 per cent of the factory door cost of the finished product).

At the direction of the Federal Minister for Transport, the Bureau of Transport Economics reassessed the freight disability for north-bound goods in late 1977. The Minister released the Bureau's report and announced new rates of assistance on 15 July 1978 with retrospectivity to 1 July 1978. The Bureau was reviewing south-bound rates of assistance in mid-1979 and was expected to report to the Minister by the end of 1979.

Freight equalisation payments in 1978-79 totalled \$24 700 666, comprising \$23 138 500 paid to north-bound freight claimants and \$1 562 166 paid to south-bound claimants.

## 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; telegrams; 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 \$1.50 for orders of up to \$30, and five cents for each dollar, or part of a dollar, for amounts over \$30.

#### 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 1977-78 amounted to 56.7 million compared to 51.5 million in 1976-77. Australia Post handled 2 513 million articles throughout Australia in 1977-78 compared to 2 358 million in the previous year.

Postal Services (a), Tasmania

Particulars	Unit	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78
Post offices—							
Official .....	no.	46	46	46	46	42	42
Non-official .....	no.	284	251	234	222	220	215
Postal traffic (b)—							
Standard letters .....	'000	63 187	63 272	59 644	44 829	45 406	48 690
Non-standard articles .....	'000				5 528	5 627	7 569
Parcels .....	'000	358	289	308	220	310	342
Registered articles ...	'000	228	203	193	132	126	124
Total .....	'000	63 773	63 764	60 145	50 709	51 469	56 725

(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 1979 Australia Post had a full-time staff in Tasmania of 786, 90 persons were employed part-time, 236 were employed at non-official post offices (and paid on the basis of the volume of business transacted) and 108 had mail service contracts with Australia Post. There were 542 street posting boxes in the State and 182 street delivery rounds were in operation.

### 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 840 were connected by 30 June 1979. 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 table analyses telephone and telegraph services in Tasmania:

Telecommunications Services, Tasmania (a)

Particulars	Unit	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
Telephone—							
Services in operation (b)—							
Business .....	'000	38	37	35	36	36	36
Non-business .....	'000	51	57	64	69	75	81
Total .....	'000	89	95	99	104	111	117
Public telephones .....	'000	1	1	1	1	1	1
Instruments in operation (b) .....	'000	127	133	140	146	155	164
Automatic exchanges (b) .....	no.	189	191	195	198	197	196
Manual exchanges (b) .....	no.	35	21	11	—	—	—



## Telecommunications Services, Tasmania (a)—continued

Particulars	Unit	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
Value of calls made—							
Metered (local and S.T.D.) . . . . .	\$'000	10 354	12 666	17 150	19 313	24 748	28 207
Trunk . . . . .	\$'000	2 585	2 297	2 062	2 099	2 175	2 519
Public telephone (local and trunk) . . . . .	\$'000	601	721	974	1 146	1 271	1 466
Telegraph—							
Phonograms lodged . . . . .	'000	256	221	194	173	143	104
All telegrams lodged (c) . . . . .	'000	472	424	356	298	242	178

(a) Telecommunications services were controlled by the Postmaster-General's Department prior to 1 July 1975.

(b) At 30 June.

(c) 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.

International Subscriber Dialling (I.S.D.) to more than 140 countries is now available upon request to 54 804 telephone subscribers throughout the State. At the end of June 1979, 2 940 subscribers had availed themselves of this facility.

There is an increasing demand for facilities to transmit digital data over telephone and telegraph lines. The data can be sent over three alternative links: (i) through the telephone network; (ii) by direct point to point private telephone or telegraph lines provided exclusively for the customer; and (iii) through the telex network.

Lines suitable for high speed transmission can be provided using alternatives (i) and (ii). Originally known as 'Data Transmission', this service has been renamed 'Datel'. Digital data information must be converted into a form suitable for transmission over the lines provided by the Commission. The conversion is performed by a modulator/demodulator unit known as a 'Modem'. At 30 June 1979, 584 Modems were in service in Tasmania.

The 'Telefinder Radio Paging Service', which commenced in Hobart on 14 November 1977 and in Launceston on 19 February 1979 provides a point to point contact facility whereby a Telefinder subscriber carries a lightweight pocket receiver which emits an audible 'Beep' when it receives a signal broadcast from a paging radio transmitter. The alerted customer then takes some pre-arranged course of action such as contacting his office to receive information. At 30 June 1979, 383 paging units were in operation in the State.

## 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) inspectoral 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 but 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.

A new category of licence, the Citizens Band Radio Service became available from 1 July 1977. The Service is defined as: 'A private, two-way short distance voice communication (radiotelephony) service of fixed, land mobile and portable stations for personal and business activities'. There were 18 high frequency channels allocated within the frequency range 27.015 to 27.225 megahertz and 40 ultra-high frequency channels were allocated from 476.425 to 477.400 megahertz. The C.B.R.S. has shown a rapid growth in popularity from persons engaged in all walks of life. The number of sets allowable for each licence has been increased to five and the average number of sets per licence was two at 30 June 1979.

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, Tasmania at 30 June  
(Two-way Services)**

Particulars	1974	1975	1976	1977	1978	1979
<b>Fixed stations—</b>						
Outpost (a) .....	14	11	10	9	5	4
Other (b) .....	110	108	118	113	136	158
<b>Total</b> .....	<b>124</b>	<b>119</b>	<b>128</b>	<b>122</b>	<b>141</b>	<b>162</b>
<b>Land stations—</b>						
Aeronautical (c) .....	7	7	7	8	8	8
<b>Base stations for—</b>						
Land mobile services (c) .....	627	684	726	798	860	884
Harbour mobile services (c) .....	8	12	14	30	34	40
Coast (d) .....	37	38	37	38	44	45
Experimental .....	16	17	17	27	44	44
<b>Total</b> .....	<b>695</b>	<b>758</b>	<b>801</b>	<b>901</b>	<b>990</b>	<b>1 021</b>
<b>Mobile stations—</b>						
Aircraft .....	52	54	57	57	71	71
Land mobile services .....	4 562	5 223	5 674	6 039	6 539	6 878
Harbour mobile services .....	82	116	162	464	731	993
Outpost .....	45	48	45	46	45	55
Ships .....	781	789	805	802	859	854
C.B. radio service (licences) .....	—	—	—	—	5 050	(e) 3 526
<b>Total</b> .....	<b>5 522</b>	<b>6 230</b>	<b>6 743</b>	<b>7 408</b>	<b>13 295</b>	<b>12 377</b>
<b>Amateur stations</b> .....	<b>229</b>	<b>240</b>	<b>243</b>	<b>256</b>	<b>321</b>	<b>376</b>
<b>Grand total</b> .....	<b>6 570</b>	<b>7 347</b>	<b>7 915</b>	<b>8 687</b>	<b>14 747</b>	<b>13 936</b>

(a) Stations established in remote localities for communication with control stations, e.g. the lighthouse service.

(b) For exchange of radio messages with other similar stations.

(c) For exchange of radio messages with mobile stations.

(d) Land stations for communication with ocean-going vessels.

(e) Up to five sets may be included on the one licence from 30 June 1978.

### 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 the Special Broadcasting Service.

### 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 Minister for Post and Telecommunications. 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 6.0 per cent on amounts exceeding \$5.0m.

### 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.

### Public Broadcasting

On 5 April 1978 the Minister for Post and Telecommunications outlined the Government's policy objectives for public broadcasting. He stated that the system as a whole should '... cater for and reflect the widest possible spectrum of information, opinions, values and interests in Australian society ...' He said that the aim of public broadcasting was to

ensure this diversity by serving specialised audiences and providing programming choices which the national and commercial sectors were not able to provide. The new public sector, therefore, must be complementary and supplementary to the national and private sectors.

### 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, 1978  
(Source: Australian Broadcasting Tribunal)

Program category	Commercial programs	National programs
	per cent	per cent
Cinema movies .....	12.9	2.6
Other drama .....	36.7	17.1
Light entertainment .....	11.0	8.6
Sport .....	9.4	14.4
News .....	3.8	6.3
Children .....	5.0	17.0
Family activities .....	2.3	0.8
Information .....	2.0	9.7
Current affairs .....	5.0	7.5
Political matter .....	—	—
Religious matter .....	2.2	1.3
The Arts .....	—	2.9
Education .....	0.3	11.8
Advertising .....	9.4	—
<b>Total .....</b>	<b>100.0</b>	<b>100.0</b>

### Television Stations in Operation

The next table gives details of the television stations in operation:

Television Stations in Operation, 30 June 1979

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 microwave 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. A similar 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 1979

Area served	Parent station		Local channel	
	National	Commercial	National	Commercial
Burnie .....	ABNT 3	TNT 9	4	10
Derby .....	..	TNT 9	..	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	4	11
South Launceston .....	ABNT 3	TNT 9	1	11
St Helens .....	ABNT 3	TNT 9	0	7
St Marys-Fingal Valley .....	ABNT 3	TNT 9	1	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	11
Wynyard .....	ABNT 3	TNT 9	1	5A

### Radio Stations in Operation

The following table gives details of the radio stations in operation in Tasmania:

Radio Stations in Operation at 30 June 1979

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	148-00
7LA .....	Commercial	Launceston	139-00
7QT .....	Commercial	Queenstown	77-00
7SD .....	Commercial	Scottsdale	116-30
7CAE (b) .....	Public	Hobart	72-50

(a) Transmits, in the main, programs originating from 7NT.

(b) F.M. station operated by the Tasmanian Council of Advanced Education.

Tasmania's first F.M. (frequency modulated) station, 7CAE-FM Hobart, began regular broadcasting in February 1977 on a frequency of 92.1 MHz. A second FM station (7HFC-FM)

operated by the Hope Foundation Ltd, was expected to commence regular broadcasting during 1979-80. The ABC's FM service was expected to be extended to Tasmania during 1980.

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.

## GREAT CIRCLE ROUTES AND THE SOUTHERN OCEAN

### Great Circle Routes

A great circle is any circle that divides the globe's surface into equal halves. On the earth's surface each meridian of longitude is one half of a great circle but the equator is the only parallel of latitude which is a great circle. On most flat maps a straight line appears to be the shortest distance between two points. However, as the earth is a sphere, the shortest distance between any two points on its surface lies along the great circle route passing through the points (which often appears as a curved line on a flat map).

### Historical

Mariners of the sixteenth century knew the attraction of sailing along a great circle route. It was not, however, until the 1840s that John Towson, an English watchmaker, perfected an inexpensive chronometer which enabled mariners to make the frequent changes of course necessary to follow the curve of a great circle route (other than one along a meridian of longitude).

The first news of Australia's goldrush reached London in 1851. With hundreds of ships plying between England and Australia the use of great circle routes became popular. From the south Atlantic to the Southern coast of Australia was a vast stretch of ocean with no protruding necks of land to prevent ships from trying a shorter route. Between the Cape of Good Hope and Melbourne a ship that forsook the traditional track along a parallel of latitude at about 40° south and instead curved far to the south toward the Antarctic could save over 870 nautical miles.<sup>1</sup> On the new sea route far to the south the speeding ships found large islands not marked on any chart. The continued work of Virginian Matthew Maury in drawing and correcting 'Wind and Current Charts' probably had much to do with the greatly increased reliance of mariners on the great circle tracks.

Some ships made astonishingly fast return passages to England in the 1850s. Selecting a circle route around Cape Horn, they sailed through Banks Strait on the north-east tip of Tasmania and then sailed south of New Zealand to take advantage of the fierce winds of the forties and fifties latitudes. Cape Horn with its huge seas and gliding icebergs was feared by sailors. However, the greatest hazard, in the 1860s at least, was the Auckland Islands in latitude 51°S, south of New Zealand. In 1866 the *General Grant* left Melbourne, taking this great circle route from Australia to London carrying wool, produce and gold.<sup>2</sup> At 11.30 p.m. on 13 May 1866, the ship, under full sail, ran into a cave on the windward coast of the main island of the Auckland Island group. As an immediate result of the wreck 68 persons died. The remaining 14 men and one woman stayed on the harsh islands until some were rescued over a year later. Subsequent efforts to salvage the gold have proved fruitless.

Great circle routes were valuable at that time in our history to speed the movement by sea of people and cargoes. Today aircraft also use the advantages of the shortest distance between two points on the globe. In the north Atlantic, flights following great circle routes fly over the North Pole. Advances in the technology of air navigational aids have meant that navigation can now be entirely automated. Use of an inertial navigation system allows an aircraft to follow a great circle closely. Within the constraints imposed by the increasing volume of air traffic—'stopovers' and the necessity for air traffic 'lanes'—great circle routes are still important, particularly with their concomitant energy savings in an energy-conscious world.

### Air Transport

On 16 December 1919, Lt Arthur Long of the Army Flying Corps crossed Bass Strait from Stanley to Melbourne in a Boulton Paul aircraft, taking six hours for the trip. Shortly

afterwards he started an aerial newspaper-carrying business between Hobart and Launceston. It was not until 1946 that Trans-Australia Airlines and Ansett Airways entered the Tasmanian air service, offering flights from Melbourne to Launceston and Hobart. Recently direct flights to Sydney were resumed for the 1977-78 Christmas holiday season. Hobart to Coolangatta flights (927 n miles) began in May 1978 for 15 weeks and operated for a similar period in 1979. On 3 November 1979 regular direct flights between Hobart and Adelaide via Launceston commenced.

A proposed air link between Tasmania and New Zealand is presently under negotiation. Plans for flights between Hobart and Christchurch appeal because of Hobart's proximity to the New Zealand city (954 n miles). In comparison, the distance from Hobart to Perth is 1 626 n miles and that to Macquarie Island, part of Tasmania's Esperance Municipality, 974 n miles. Both major domestic airlines, Trans-Australia Airlines and Ansett, could utilise both their DC9 and 727 Series 200 aircraft on flights to and from New Zealand. The DC9 has a range of approximately 1 620 n miles and the 727 Series 200 about 3 132 n miles. The opening of this trans-Tasman route should encourage more overseas visitors to both tourist islands. Previously, many visitors to Australia or New Zealand 'missed' Tasmania because they did not want to retrace their steps—a direct route will place Tasmania on a tourist circuit of the Tasman Sea.

### **The 200-mile Exclusive Economic Zone**

The traditional international law of the sea which has prevailed from the early seventeenth century to the middle of this century rests on the distinction between territorial seas and high seas. Territorial seas consist of the belt of water immediately adjacent to each coastal country. Within this belt of sea the country has the same fullness of sovereignty as on land except that the 'innocent passage' of vessels of all nations to and from foreign ports is allowed. High seas are outside the sovereignty of any country. In recent years the absoluteness of this distinction between territorial seas and high seas has been challenged by the emergence of the concepts of the continental shelf and the Exclusive Economic Zone (EEZ).

The physical continental shelf will often stretch beyond the outer limit of the territorial sea, where the edge of the continental shelf or 'continental margin' is represented by the 2 000-metre isobath. In Australia there has been little controversy about the continental margin except where Timor, West Irian and Papua New Guinea were concerned.

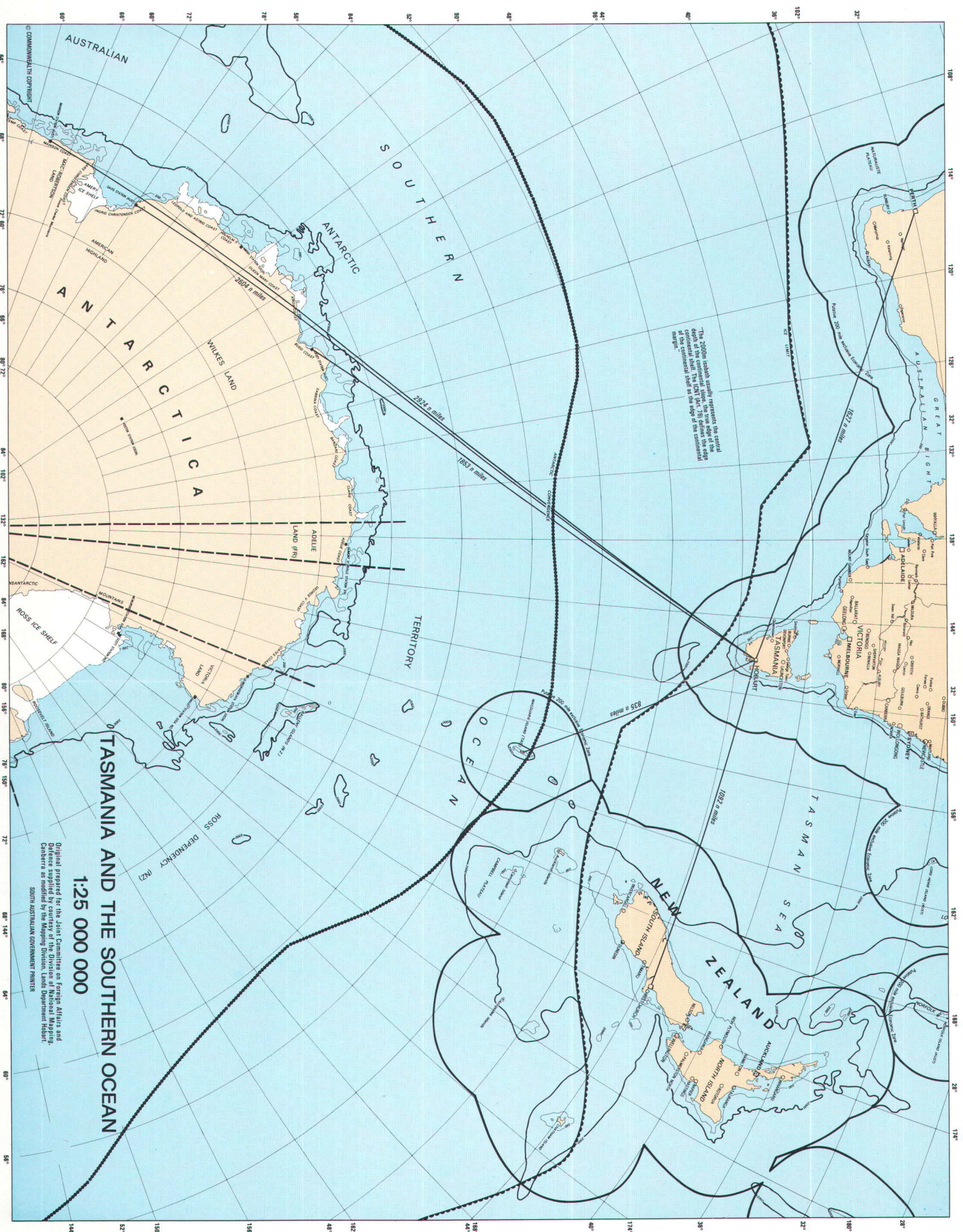
The 200 n mile Exclusive Economic Zone (EEZ) concept evolved recently with coastal countries wanting to extend the breadth of their territorial seas for economic reasons. Although the full sovereignty of a country still ends at the outer limit of the territorial sea (12 n miles), coastal states are to enjoy sovereign rights for certain specified economic purposes for a further 188 n miles beyond that limit (namely the exploitation and exploration of non-living resources and the conservation and management of living resources).

All State Premiers have agreed to the transfer of jurisdiction over the three n mile limit from the Commonwealth to the states as decided in October 1977. This gives the states legislative power over the zone from the low water mark to the three n mile limit over offshore mining, marine parks, historic shipwrecks, shipping and navigation, and environmental matters.

Australia has subscribed to a communiqué as a member of the South Pacific Forum recommending the establishment of the EEZ. Proclamation of exclusive fishing rights in the new Australian Fishing Zone were provided for in an amendment to the *Federal Fisheries Act* 1952 passed in 1978 and proclaimed on 1 November 1979.

Under the main principles relating to the EEZ, Australia must determine the maximum sustainable yield of living resources from the zone and then decide what part of that yield will be surplus to the catching capacity of Australian fishermen. Because of a growing shortage of the more popular fish species, there has been increased interest both from within Australia and overseas in the fish resources which might be available in the 200 n mile zone. Oceanographic and exploratory research conducted to date suggests an absence of the conditions which attract large quantities of fish. Tentative estimates put the increase in yield from the zone between two to four times the current catch.





The 200m depth contour represents the edge of the continental shelf. The 1000m depth contour is shown as a dashed line. The 1000m depth contour is shown as a dashed line. The 1000m depth contour is shown as a dashed line.

**ANTARCTICA AND THE SOUTHERN OCEAN**  
1:25 000 000

Original prepared for the Joint Committee on Foreign Affairs and International Development of the United States House of Representatives and the United States Senate by the Mapping Division, Lands Department Hobart, SOUTH AUSTRALIAN GOVERNMENT PRINTERS



The 200 n mile EEZ applies to all Australian territory including Macquarie Island. With the proclamation of this increment in territory will come the added responsibility of surveillance of the EEZ. The 1977 report, *Inquiry into the Structure of Industry and The Employment Situation in Tasmania*, by Sir Bede Callaghan recommended the upgrading of naval facilities in Hobart and the location of a battalion of regular soldiers in the State. Surveillance of foreign fishing activity in Australian waters could alternatively necessitate the location of an RAAF base in Tasmania. As well as the problems involved in management of the 200 n mile zone, there are commercial possibilities for ports like Hobart. It may be necessary for licensed foreign fishing vessels to call at ports for inspection purposes and determination of licence fees within the new zone. Benefits from the sale of services to shipping would result.

The exploitation of non-living resources will also be possible within the 200 n mile EEZ. Manganese nodules which are found on the deep sea floor are a rich source of manganese and iron, with significant contents of nickel, copper and cobalt. Individual nodules vary between two and five centimetres across. Even though they grow only slowly, some six million tonnes of nodule material is estimated to be added annually in the Pacific Ocean alone. It will probably be the late 1980s or 1990s before manganese nodules begin to be recovered in quantity from Australian waters.

The world-wide energy crisis emphasises the importance of the new zone. The best prospects for large discoveries of petroleum for Australia are offshore.<sup>3</sup> Oil industry technology today enables exploration wells to be drilled below water 900 metres deep and to develop reserves in areas where the sea is up to 370 metres deep. In Australia the deepest offshore development up to 1979 had been in Bass Strait on the Mackerel Field in 90-metre depths. Problems which have been encountered in Bass Strait will be common to most offshore development in Australian waters. The lack of accurate information on factors such as tide range, wave height and foundation conditions as well as the high cost of development are two such problems. It is probable that in Australia for water depths between 90 and 180 metres, there will be considerable incentive to modify conventional bottom-founded structures to minimise structural requirements and the use of expensive offshore construction equipment. At depths greater than 180 metres there is room for new concepts to exploit Australia's so far unexplored offshore petroleum resources.

#### Antarctica

Antarctica is the fifth largest continent. The Australian Antarctic Territory (AAT) was proclaimed in 1933 and has a coastline of approximately 3 000 n miles. Australia has three permanent stations in the Antarctic—Mawson, Davis and Casey—co-ordinated by the Antarctic Division, Department of Science and the Environment. It is the existence of these stations and the scientific programs carried out there which provide evidence of and support for Australia's sovereignty over the AAT. Some countries question Australia's claims to control a 200 n mile EEZ around her Antarctic Territory, especially those who wish to fish nearby. Certain provisions of the Antarctic Treaty preclude the extension of our existing claims to territorial sovereignty in the area.

At present, two ships supply the requirements of the Antarctic stations—the *Nella Dan* and the *Thala Dan*. These are nearing the end of their useful lives and proposals are soon to be placed before the Federal Government concerning an Australian Antarctic ship. Air transport to Antarctica in 1978 was limited to RAAF flights from Christchurch, New Zealand to the US station at McMurdo, in exchange for ski-equipped United States Hercules flights from McMurdo to Casey. Funds have been made available to study the possibility of a permanent runway on rock near Davis.

Tasmania's strategic importance to the Antarctic has been emphasised by plans to transfer the headquarters of the Antarctic Division to Hobart. The construction of the complex at Kingston, near Hobart, is progressing rapidly with the transfer date set at April 1981. The Tasmanian State Government has lobbied with federal support to have the proposed International Antarctic Commission headquarters established in Hobart. Not only would the establishment of the Commission headquarters in Hobart provide considerable benefits for the Tasmanian economy, it could also induce other countries to use Hobart as the base port for their Antarctic operations in fishing, scientific research and resource exploration. In the future, Tasmania's proximity to the Antarctic stations could mean its use not only as the main shipping port but also as the link in Australian-Antarctic air transport.



### Macquarie Island

Macquarie Island, discovered in 1810, is situated 835 n miles south-east of Tasmania. It has been included as Tasmanian territory since the State was proclaimed Van Diemen's Land in 1825. Sealers were the first visitors to the Island, exploiting the abundance of fur seals and then later King and Royal penguins for oil. The Island is now classified as a State Reserve, with the flora and fauna fully protected as in other national parks managed by the Tasmanian National Parks and Wildlife Service. Occupation of the island has been continuous since March 1948 when the Australian National Antarctic Research Expedition (ANARE) established a manned station there. There is no airstrip and the Antarctic supply ships service the requirements of the ANARE station as well as the Antarctic stations.

Before man came to Macquarie Island there were no land mammals. When sealers stayed on the island in the early nineteen hundreds, however, they introduced rabbits and wekas (a New Zealand bird) for food. Cats, ship rats and mice were accidentally introduced. The marine animals and birds breed on the island but depend upon the ocean for food. Although the effect of early exploitation is still evident in the small fur seal population, an estimated 100 000 elephant seals use the island. Royal penguins number over two million and are endemic to Macquarie Island. Many other species of birds breed on the Island. The Antarctic Convergence, where mixing between warm northern water and cold Antarctic water occurs, passes close to the Island. The economic significance of this ecological divide has yet to be fully explored. If Australia is to maximise the benefits stemming from jurisdiction over the 200 n mile zone around Macquarie Island, further research into the fishing resources in the region of the Convergence will need to be carried out.

Simultaneous interest in the wealth under the surface of the Southern Ocean and in Tasmanian great circle links with New Zealand and Antarctica brings new life to an aspect of the Island's history and situation dormant in recent years.

#### FOOTNOTES

- 1 Under Australia's *Metric Conversion Act 1970* the nautical mile (n mile) is a non SI declared unit having restricted application to navigation and meteorology. The n mile is equivalent to 1.852 kilometres.
- 2 *The Mercury* (24 January 1868, Hobart).
- 3 *Australia's Offshore Resources*, Australian Academy of Science Report II (1978).

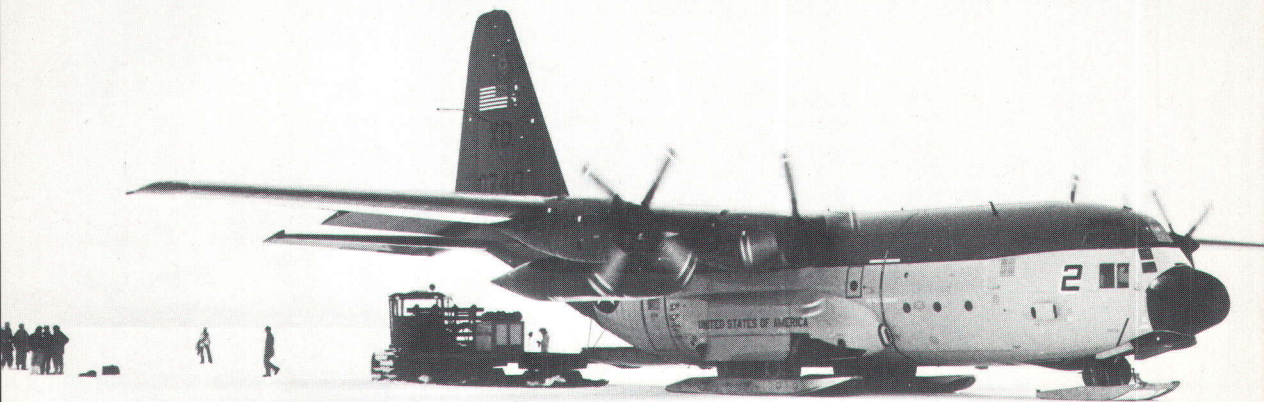
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*A ski-equipped U.S. Hercules aircraft used for flights between the McMurdo and Casey Antarctic stations*

*[A. Argent, Antarctic Division, Dept of Science and the Environment]*



*Seals on Macquarie Island*  
*[G. R. C. Copson]*





*Macquarie Island*

[G. R. C. Copson]



## 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 of 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 Lloyd's 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 Board transacts a limited form of life insurance only (in respect of home mortgage repayments of purchasers of Housing Department dwellings) and 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'.

## Life Insurance Transactions (Excluding Annuities), Tasmania (a)

Particulars	1973	1974	1975	1976	1977	1978
ORDINARY AND INDUSTRIAL BUSINESS (b)						
New policies issued—						
Number .....	21 300	19 210	17 381	15 377	14 898	13 984
Sum insured .....	\$m 156.9	180.6	200.7	223.2	253.5	273.9
Annual premiums .....	\$m 3.6	3.1	3.2	3.0	3.4	3.3
Policies discontinued or reduced—						
Number .....	15 096	19 522	20 414	21 803	21 953	22 044
Sum insured .....	\$m 60.5	71.5	87.8	106.5	123.1	128.0
Annual premiums .....	\$m 1.4	1.7	1.9	2.3	2.5	2.6
SUPERANNUATION BUSINESS						
New policies issued—						
Number .....	1 970	2 635	3 032	3 118	2 933	2 403
Sum insured .....	\$m 73.1	88.3	123.6	125.8	175.8	124.2
Annual premiums .....	\$m 1.8	2.7	3.8	3.6	5.9	3.8
Policies discontinued or reduced—						
Number .....	1 498	1 629	1 843	1 995	1 979	4 307
Sum insured .....	\$m 28.2	32.2	38.3	47.4	61.2	62.3
Annual premiums .....	\$m 0.7	0.9	1.1	1.3	1.7	1.9
TOTAL BUSINESS						
New policies issued—						
Number .....	23 270	21 845	20 413	18 495	17 831	16 387
Sum insured .....	\$m 230.1	268.8	324.3	349.0	429.2	398.1
Annual premiums .....	\$m 4.8	5.8	7.0	6.6	9.1	7.1
Policies discontinued or reduced—						
Number .....	16 594	21 151	22 257	23 798	23 932	26 351
Sum insured .....	\$m 88.7	103.7	125.9	153.9	184.3	190.3
Annual premiums .....	\$m 2.1	2.6	3.0	3.7	4.2	4.5
NEW LOANS PAID OVER (EXCLUDING ADVANCES OF PREMIUMS)						
On mortgage of real estate . . . \$'000	2 984	3 509	2 983	4 120	3 861	5 668
On companies' policies . . . . . \$'000	1 533	2 432	1 863	1 949	2 363	2 126
On other securities . . . . . \$'000	41	365	178	212	196	252
Total .....	\$'000 4 560	6 307	5 027	6 282	6 420	8 046

(a) These figures are annual aggregates of those published monthly in *Life Insurance, Australia* (Catalogue no. 5021.0). They are not comparable with figures published annually in *Life Insurance* (Catalogue no. 5622.0) which contains information not related to uniform accounting periods but to the companies' balance dates between 1 January and 31 December of the year shown.

(b) Industrial business refers, in the main, to policies on which the premiums are collected as regular instalments by agents on commission. As the significance of industrial insurance has been declining, and as more businesses have been transferring it to their ordinary registers, only a few businesses now maintain registers of industrial business. In order to preserve the confidentiality of these businesses' operations it has become necessary to combine the details of ordinary and industrial business.

## 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* the estimated amount of outstanding claims at the end of year, *less* the estimated amount of outstanding claims at the 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.

#### Selected Revenue and Expenditure Items

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, Tasmania**  
(*'000*)

Particulars	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78
Premiums (less returns, rebates and bonuses) .....	30 825	34 958	44 762	51 199	72 152	74 502
Interest, dividends, rents .....	660	771	(a)	(a)	(a)	(a)
Total (selected revenue items) .....	31 485	35 729	44 762	51 199	72 152	74 502
Claims (less amounts recoverable) .....	18 249	23 507	29 979	29 552	42 010	50 279
Contributions to fire brigades .....	979	1 069	1 371	1 529	2 483	127
Commission and agents' charges .....	2 999	3 330	4 002	4 509	4 472	5 774
Expenses of management .....	6 364	6 875	8 102	8 100	11 844	12 898
Taxation .....	780	1 041	(b) 376	336	627	312
Total (selected expenditure items) .....	29 371	35 822	44 217	44 238	61 420	69 665
			(b) (c)	(c)	(c)	(c)

(a) From 1974-75 figures for this item are available only for Australia as a whole due to a change in collection methods.

(b) Refer to definition of Taxation above. Figures from 1974-75 are not comparable with those for previous years.

(c) Includes other underwriting expenses of \$386 000 in 1974-75, \$212 000 in 1975-76, \$16 000 in 1976-77 and \$275 000 in 1977-78.

#### Types of Insurance

The next table shows premiums and claims according to the class of insurance business transacted in 1977-78. ('Premiums' and 'Claims' have been compiled in accordance with the definitions introducing the section.)

**Fire, Marine and General Insurance, Tasmania**  
**Premiums and Claims for Each Type of Insurance, 1977-78**  
(*'000*)

Class of business	Premiums	Claims	Class of business	Premiums	Claims
Motor vehicle comprehensive .....			All risks/baggage .....	555	367
(a) .....	20 173	14 594	Plate glass .....	268	192
Employers' liability .....	18 067	11 122	Professional indemnity .....	217	55
Compulsory third party (b) .....	10 565	9 486	Livestock .....	125	94
Fire and sprinkler leakage .....	5 929	4 500	Contractors' all risks .....	369	175
Houseowners' and house-			Guarantee .....	39	6
holders' comprehensive .....	7 832	4 965	Product liability .....	38	5
Marine (hull and cargo) .....	2 844	1 193	Fruit crop and hailstone .....	n.p.	n.p.
Personal accident .....	2 176	928	Aviation .....	n.p.	n.p.
Loss of profits .....	1 149	966	Other .....	1 373	534
Public liability .....	1 446	525			
Burglary .....	642	213			
Boiler, engineering and machine					
breakdown .....	662	353			
			Total .....	74 502	50 279

(a) Includes motor cycles.

(b) 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.

(c) 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, Tasmania**  
**Ratio of Claims to Premiums (a)**  
**(Per Cent)**

Class of business	1975-76	1976-77	1977-78
Motor vehicle comprehensive (including motor cycles) . . .	62.0	60.4	72.3
Employers' liability . . . . .	58.6	65.3	61.6
Compulsory third party (b) . . . . .	81.0	67.5	89.8
Fire and sprinkler leakage . . . . .	27.7	36.4	75.9
Houseowners' and householders' comprehensive . . . . .	51.0	58.3	63.4
Marine (hull and cargo) . . . . .	72.1	32.6	42.0
Personal accident . . . . .	41.1	44.3	84.0
Loss of profits . . . . .	20.9	44.0	36.3
Public liability . . . . .	20.3	32.0	33.2
Burglary . . . . .	23.3	25.3	53.3
Boiler, engineering and machine breakdown . . . . .	51.7	36.3	
All classes . . . . .	57.7	58.2	67.5

(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 1950s, 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: Australian 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 shows average deposits, advances and debits to customers' accounts by month for 1977-78 and 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	1973-74	1974-75	1975-76	1976-77	1977-78
NUMBER					
Branches open at 30 June . . . . .	103	101	104	105	106
DEPOSITS, ADVANCES AND DEBITS TO CUSTOMERS' ACCOUNTS: WEEKLY AVERAGES (\$'000)					
Deposits (a)—					
Federal and State Governments . . . . .	3 573	6 499	12 919	33 442	25 920
Other—					
Fixed . . . . .	93 961	112 543	133 357	168 637	193 883
Current—Bearing interest . . . . .	10 162	11 031	14 617	16 723	18 519
Not bearing interest . . . . .	99 343	99 781	116 486	129 811	137 451
Total . . . . .	207 040	229 851	277 377	348 613	375 773
Loans, advances and bills discounted (a)					
(b) . . . . .	121 077	137 189	157 951	207 635	250 144
Debits to customers' accounts (c) . . . . .	103 041	119 447	150 536	179 932	193 310

(a) The average, for the month or year, of *balances* read at weekly intervals.

(b) Loans, advances and bills discounted, etc.; 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, and in total for non-residents of Australia.

**Trading Banks: Classification of Advances Outstanding within Tasmania  
(\$'000)**

Type of advance	At second Wednesday in July			
	1975	1976	1977	1978 (a)
<b>BORROWERS RESIDENT WITHIN AUSTRALIA</b>				
Business advances—				
Agriculture, grazing and dairying—				
Sheep grazing .....	6 700	7 589	8 708	8 400
Dairying and pig raising .....	6 723	7 185	7 203	7 300
Other .....	13 189	14 738	16 346	20 000
Total .....	26 612	29 512	32 257	35 700
Manufacturing .....	24 728	29 207	28 208	33 200
Transport, storage and communication .....	3 420	4 289	4 316	5 500
Finance—				
Building and housing societies .....	425	624	390	400
Pastoral and finance companies .....	728	472	728	300
Hire purchase and other finance companies .....	1 117	916	1 293	1 500
Other .....	801	886	1 199	2 400
Total .....	3 071	2 898	3 610	4 600
Retail and wholesale trade .....	21 541	33 337	38 200	43 600
Building and construction .....	4 407	6 916	10 282	11 000
Other business .....	25 703	27 387	40 364	47 500
Unclassified .....	739	539	1 771	2 800
Total business advances .....	110 221	134 085	159 008	183 800
Advances to public authorities (excl. Federal and state governments) .....	1 159	1 372	983	600
Personal advances—				
Building or purchasing own home (individuals) .....	9 420	12 337	15 445	19 700
All other .....	25 223	39 933	57 223	75 900
Total personal advances .....	34 643	52 270	72 668	95 600
Advances to non-profit organisations .....	1 498	1 816	1 891	2 000
Total advances to resident borrowers .....	147 521	189 543	234 550	282 100
<b>BORROWERS NON-RESIDENT WITHIN AUSTRALIA</b>				
Total non-resident borrowers .....	23	6	25	—
<b>TOTAL ADVANCES TO RESIDENT AND NON-RESIDENT BORROWERS</b>				
Grand total .....	147 544	183 549	234 575	282 100

(a) Figures rounded to the nearest one hundred thousand.

### 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, Tasmania**  
(Per Cent Per Annum)

Particulars	Rate			
	June 1975	June 1976	June 1977	June 1978
Trading banks—				
Fixed deposits (less than \$50 000)—				
3 months and less than 6 months . . . . .	8-00-9-00	7-00-8-25	7-75-8-25	7-50-7-75
6 months and less than 12 months . . . . .	8-25-9-50	7-25-8-75	8-25-9-00	8-00-9-00
12 months and less than 18 months . . . . .	8-25-9-50	7-25-8-75	8-25-9-00	8-00-9-00
18 months and less than 2 years . . . . .	8-25-9-50	7-25-8-75		
2 years to 4 years . . . . .	8-00-9-50	8-25-9-50	8-00-9-50	8-00-9-50
Fixed deposits (\$50 000 and over)—				
30 days to 4 years (a) . . . . .	10-00	10-00	10-00	10-00
Federal Government securities yield—				
Non-rebateable bonds (b)—				
2 years . . . . .	8-49	8-47	9-88	8-83
10 years . . . . .	9-50	9-99	10-41	9-10
20 years . . . . .	9-50	10-20	10-48	9-10
Treasury notes (issue yield)—				
13 week notes . . . . .	7-81	6-98	8-60	8-35
26 week notes . . . . .	8-01	7-25	9-12	8-75

(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, Tasmania

Particulars	1973-74	1974-75	1975-76	1976-77	1977-78
Branches open (a) . . . . . no.	155	153	159	162	165
Operative accounts (a) . . . . . '000	561	591	606	618	632
Deposits lodged . . . . . \$'000	542 651	707 421	797 315	921 919	1 030 820
Interest added . . . . . \$'000	13 371	17 085	20 878	23 662	27 222
Excess of deposits over withdrawals . . . . . \$'000	25 677	37 213	27 412	22 853	26 101
Depositors' balances (a) . . . . . \$'000	328 029	382 326	430 618	477 134	530 457
Per head of population—					
Depositors' balances (a) . . . . . \$	820	944	1 057	1 164	1 282

(a) At end of year.

At 30 June 1978, the balances outstanding on housing loans made by savings banks to individuals and to building societies were \$196 791 000 and \$1 476 000, respectively.

The next table gives details of housing finance transactions by savings banks in Tasmania:

## Savings Banks: Housing Finance Transactions, Tasmania (a)

Period	Loans approved to individuals for—						Cancellation of loans previously approved to individuals for housing	
	Construction or purchases of new dwellings		Purchases of established dwellings		Alterations and additions	Total		
	Number (b)	Amount (c)	Number (b)	Amount (c)	Amount	Amount	Number	Amount
1972-73 .....	776	\$'000 7 953	2 037	\$'000 18 108	\$'000 569	\$'000 26 630	135	\$'000 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>	<i>n.a.</i>	<i>n.a.</i>	187	2 637
1976-77 .....	768	13 258	2 131	36 974	2 213	52 445	162	2 385
1977-78 .....	779	14 767	2 113	39 617	2 752	57 136	185	2 826

(a) The statistics prior to 1975-76 are not strictly comparable with those for later years. The former categories 'Dwellings not previously occupied' and 'Dwellings previously occupied' have been defined more precisely and are replaced by the categories 'Construction or purchases of new dwellings' and 'Purchases of established dwellings', respectively. Also, loans approved for alterations and additions estimated to cost \$10 000 or more are included in the category 'Alterations and additions', whereas previously such loans were included in the categories 'Previously occupied' and 'Not previously occupied'. Total figures for 1975-76 are unavailable as the changes were implemented in October of that year.

(b) Number of loans for dwelling units approved for first mortgage finance only.

(c) Includes second mortgage finance to complete original purchase or construction.

## 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
October 1973 .....	(c) 4.00	(d) 8.00	February 1976 .....	(e) 4.00	(g) 10.50
August 1974 .....	(c) 4.00	(d) 10.00	August 1977 .....	(e) 4.00	(g) 10.00
April 1975 .....	(e) 4.00	(f) 9.50	January 1978 .....	(e) 4.00	(g) 9.50

(a) Operative from first day of month shown.

(b) From February 1966, fixed deposit rates have been 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	1974-75	1975-76	1976-77	1977-78
Belgium (b)	Francs	50.69	50.11	42.92	37.88
Canada	Dollars	1.35	1.26	1.16	1.23
France	Francs	6.04	5.62	5.67	5.34
Germany, Federal Republic of	Deutsche marks	3.34	3.21	2.78	2.43
Hong Kong	Dollars	6.68	6.25	5.45	5.19
India	Rupees	10.85	11.14	10.12	9.49
Italy	Lire	878	925	990	976
Japan	Yen	401.70	376.06	327.91	271.90
Netherlands	Guilders	3.44	3.34	2.91	2.60
New Zealand	Dollars	1.01	1.19	1.14	1.12
Pakistan	Rupees	n.a.	n.a.	11.13	10.91
Singapore	Dollars	3.18	3.09	2.71	2.65
South Africa	Rands	0.925	1.038	0.990	0.970
Sri Lanka	Rupees	9.01	9.79	9.48	13.63
Switzerland	Francs	3.66	3.25	2.85	2.36
U.S.A.	Dollars	1.37	1.26	1.15	1.13
United Kingdom	Pound stg	0.581	0.630	0.670	0.620

(a) Average telegraphic transfer selling rates at Sydney. Average rates are not available for China, Malaysia and U.S.S.R.; however, daily quotations are available on application to any trading bank.

(b) Two rates have been quoted for Belgium from 20.9.71. The rate shown for these periods is the financial rate used for trade transactions.

## 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* (Cat. No. 5615.0) published by the Canberra Office of the Bureau.

Finance Companies: Transactions, Tasmania (a)  
(\$m)

Year	Instalment credit for retail sales	Wholesale finance	Other consumer and commercial loans		Total all contracts
			Contracts including charges (a)	Contracts excluding charges (b)	
AMOUNT FINANCED					
1973-74	r 35.7	52.3	r 14.1		r 102.1
1974-75	r 44.4	65.7	r 12.5		r 122.6
1975-76	r 52.4	79.7	r 20.7		r 152.8
1976-77	r 62.2	114.5	49.5		r 226.2
1977-78	61.1	118.8	48.2		228.1
COLLECTIONS AND OTHER LIQUIDATIONS OF BALANCES					
1973-74	r 42.4	52.1	12.3	3.2	r 110.0
1974-75	r 46.2	64.2	14.6	3.2	r 128.2
1975-76	r 60.5	77.1	14.8	4.4	r 156.8
1976-77	75.7	r 110.4	r 24.0	10.2	220.3
1977-78	83.7	117.1	35.0	18.0	253.8

**Finance Companies: Transactions, Tasmania (a)—continued**  
(*\$m*)

Year	Instalment credit for retail sales	Wholesale finance	Other consumer and commercial loans		Total all contracts
			Contracts including charges (a)	Contracts excluding charges (b)	
<b>BALANCES OUTSTANDING AT END OF YEAR</b>					
1973-74 .....	r 51.5	7.0	16.4	5.7	r 80.6
1974-75 .....	r 63.5	8.2	18.0	6.4	r 96.1
1975-76 .....	r 78.0	12.4	23.7	9.6	r 123.7
1976-77 .....	r 95.5	19.5	43.7	20.6	r 179.3
1977-78 .....	104.0	23.6	56.9	20.4	205.0

(a) Includes details of personal loans.

(b) 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, Tasmania**  
(*\$m*)

Particulars	1973-74	1974-75	1975-76	1976-77	1977-78
Value of goods leased during period .....	14.5	14.8	18.1	25.6	32.0
Balances outstanding at end of year .....	21.3	27.3	35.2	46.1	63.9

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, Tasmania**  
(*\$m*)

Year	Amount financed during year					Cash collections and other liquidations during year	Balances outstanding at end of year
	Motor vehicles, etc.			Household and personal goods	Total		
	New	Used	Total				
1973-74 .....	9.3	20.3	r 32.3	3.4	r 35.7	r 42.4	r 51.5
1974-75 .....	14.0	22.8	r 40.4	r 4.0	r 44.4	r 46.2	r 63.5
1975-76 .....	14.1	25.5	r 45.6	r 6.8	r 52.4	r 60.5	r 78.0
1976-77 .....	15.2	32.3	54.7	7.5	62.2	75.7	95.5
1977-78 .....	13.7	34.3	55.0	6.2	61.1	83.7	104.0

(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 was 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'. These changes apply to statistics for 1973-74 and later years.

**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.

**Instalment Credit for Retail Sales, Tasmania (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	
<b>FINANCED BY FINANCE COMPANIES</b>				
1975-76 r.....	45 612	6 819	52 431	78 038
1976-77.....	54 738	7 465	62 203	95 463
1977-78.....	54 967	6 163	61 130	104 029
<b>FINANCED BY OTHER BUSINESSES</b>				
1975-76.....	282	5 752	6 034	4 371
1976-77.....	174	5 951	6 125	4 137
1977-78.....	—	5 063	5 063	3 117
<b>FINANCED BY ALL BUSINESSES</b>				
1975-76 r.....	45 894	12 571	58 465	82 409
1976-77.....	54 912	13 416	68 328	99 600
1977-78.....	54 967	11 226	66 193	107 146

(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 description 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 1950s, 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. As there is no uniform accounting period for these societies, details are in respect of membership as at the end of accounting periods ending during the years shown.

With F.H.S. excluded from consideration, it may be seen that: (i) a decline in membership of other ordinary societies has continued (from 6 816 members in 1962 to 2 405 in 1977); and (ii) the average age of members has continued to increase (from 36.7 years in 1920 to 68.0 in 1977).

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, Tasmania, 1977**

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 .....	2 343	2 354	67.9	1	138	200
Females .....	50	51	71.4	—	4	2
Total .....	2 393	2 405	68.0	1	142	202
Friendly Health Services .....	383	383	35.4	—	29	60
Total all societies .....	2 776	2 788	63.5	1	171	262

(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, Tasmania (a)**  
(Number)

Particulars	1972	1973	1974	1975	1976	1977
Societies .....	8	8	8	8	7	7
Lodges—Male .....	102	100	(b) 51	47	35	28
Female .....	5	5	7	7	7	7
Benefit members .....	3 726	3 509	3 275	3 108	2 546	2 405
Financial members .....	3 666	3 461	3 233	3 090	2 519	2 393

(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 accounting years which ended in the years shown.

**Friendly Societies (a): Net Revenue and Expenditure, Tasmania, 1977**  
(\$)

Revenue			Expenditure		
Particulars	Total	Per financial member	Particulars	Total	Per financial member
Members' contributions (b) .....	41 151	14.82	Medical attendance and medicine .....	3 159	1.14
Interest, rent and dividends .....	123 639	44.54	Sick Pay .....	17 350	6.25
All other income .....	16 250	5.85	Funeral benefits .....	36 540	13.16
			Administration .....	42 112	15.17
			Endowment benefits .....	51 054	18.39
			Other .....	22 183	7.99
<b>Total .....</b>	<b>181 040</b>	<b>65.21</b>	<b>Total .....</b>	<b>172 398</b>	<b>62.10</b>

(a) Includes Friendly Health Services.

(b) Includes levies.

**Friendly Societies (a): Receipts, Expenditure and Accumulated Funds, Tasmania**  
(\$'000)

Year	Net receipts (a)		Net expenditure (b)				Accumulated funds r
	Contributions and levies	Total (c)	Sick pay	Funeral benefits	Other (d)	Total	
1972 .....	66	175	23	47	90	160	1 460
1973 .....	64	176	25	51	r 112	r 188	1 448
1974 .....	56	r 172	24	r 43	73	r 140	1 481
1975 .....	47	169	16	33	72	121	1 529
1976 .....	61	r 205	r 18	39	r 82	r 139	1 436 (e)
1977 .....	41	181	17	37	118	172	1 445

(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.

(e) Does not reconcile with previous year due to dissolution and distribution of funds of I.O.O.F.M.U. Cornwall district.

**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, Tasmania (a)

Particulars	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78
	no.	no.	no.	no.	no.	no.
Operating societies .....	6	5	5	5	5	5
Investing shareholders .....	15 765	26 936	35 971	n.p.	n.p.	n.p.
Borrowers .....	7 514	7 124	6 795	n.p.	n.p.	n.p.
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Loans—Advanced .....	18 777	17 849	17 145	n.p.	32 677	27 488
Repaid .....	7 758	10 144	10 803	n.p.	26 334	28 012
Deposits—Received (b) .....	52 625	54 629	71 817	n.p.	n.p.	n.p.
Withdrawn .....	44 491	61 074	64 965	n.p.	n.p.	n.p.
Liabilities—						
Paid-up capital and subscriptions .....	31 169	40 379	55 782	n.p.	n.p.	n.p.
Accumulated profits, reserves .....	1 363	1 490	1 581	2 043	2 406	2 890
Deposits .....	30 763	24 318	30 002	40 854	38 135	37 631
Other .....	1 613	2 401	2 151	n.p.	n.p.	n.p.
Total .....	64 907	68 589	89 517	117 602	137 726	154 430
Assets—						
Loans on mortgage .....	50 676	58 381	64 723	86 805	104 803	117 131
Land and buildings .....	1 240	1 440	1 781	2 532	2 671	3 384
Government securities .....	4 003	4 149	3 884	7 093	29 519	33 722
Other investments .....	8 508	3 954	18 086	19 908		
Cash and current deposits .....	100	129	180	350	143	151
Other .....	380	536	863	914	590	42
Total .....	64 907	68 589	89 517	117 602	137 726	154 430

(a) As there is no uniform accounting period for these societies, financial details are in respect of accounting years ending during the years shown; details relating to the number of shareholders, etc. are in respect of numbers at the end of accounting period ending during the year shown.

(b) 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 in addition 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 \$20 000 then his borrowing ceiling is set at \$20 000—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'.

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, Tasmania (a)

Particulars	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78
	no.	no.	no.	no.	no.	no.
Operative societies .....	103	112	116	120	122	126
Shareholders .....	2 212	2 259	2 504	2 671	n.a.	n.a.
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Income—						
Interest on Loans .....	642	677	811	n.a.	994	1 061
Other interest income .....	8	11	13	n.a.	16	17
Other income .....	117	136	197	n.a.	185	159
Total .....	767	823	1 021	n.a.	1 195	1 236
Expenditure—						
Interest paid .....	566	595	716	n.a.	1 001	1 035
Management expenses .....	89	92	120	n.a.	110	115
Other expenses .....	23	39	29	n.a.	32	32
Total .....	679	727	865	n.a.	1 143	1 182
Liabilities—						
Share subscriptions .....	1 200	1 257	1 379	} 2 554	(b) 375	(b) 424
Reserves .....	604	698	876		r 12 934	13 684
Loans due to—Government .....	7 761	8 297	10 960	} 2 321	r 2 250	1 996
Other lenders (c) .....	2 658	2 481	2 428		{ 95	39
Other .....	193	185	193			
Total .....	12 415	12 917	15 836	17 125	15 654	16 143
Assets—						
Amount owing on loans .....	12 109	12 627	15 522	16 763 (d)	15 238 (d)	15 715
Other .....	306	290	314	362	416	429
Total .....	12 415	12 917	15 836	17 125	15 654	16 143

(a) As there is no uniform accounting period for these societies, financial details are in respect of accounting years ending during the years shown; details relating to the number of shareholders, etc. are in respect of numbers at the end of accounting periods ending during the years shown.

(b) For societies operating on an actuarial basis members' subscriptions have been offset against 'Amount owing on loans'.

(c) Includes bank overdrafts for day-to-day running of societies.

(d) Net of members' subscriptions for societies operating on an actuarial basis.

## Co-operative Societies

## Co-operative Societies, Tasmania (a)

Particulars	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78
	no.	no.	no.	no.	no.	no.
Societies .....	15	15	18	20	17	13
Shareholders .....	7 047	7 186 (b)	5 364	5 851 (c)	2 023	1 612
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Sales .....	11 918	10 638	11 523	13 424	18 987	18 438
Less cost of goods sold .....	10 401	9 229	9 773	11 148	16 434	16 103
Trading profit .....	1 517	1 409	1 749	2 276	2 552	2 335
Add non-operating receipts (d) .....	474	488	293	229	185	166
Less expenses—						
Wages and salaries .....	559	502	681	708	755	923
Interest .....	142	117	132	204	93	73
Administration .....	313	307	300	379	327	332
Other .....	798	780	1 072	1 358	1 238	1 007
Net surplus .....	178	192	-143	-144	325	166
Dividends paid .....	26	71	104	82	87	84

- (a) As there is no uniform accounting period for these societies, financial details are in respect of accounting years ending during the years shown; details relating to the number of shareholders, etc. are in respect of numbers at the end of accounting periods ending during the years shown.
- (b) Decrease in membership due to one large society going into liquidation during the year.
- (c) Decrease in membership due to one large society being incorporated on 30 June 1976.
- (d) Commissions, discounts, services, etc.

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: Assets and Liabilities at End of Year, Tasmania (a)  
(\$'000)

Particulars	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78
<b>Liabilities—</b>						
Paid-up capital . . . . .	1 410	1 425	1 516	1 826	744	583
Accumulated profits . . . . .	907	512	285	258	1 117	1 639
Reserve funds . . . . .	420	966	1 042	1 495	629	137
Loans and bank overdraft . . . . .	1 633	1 501	2 067	3 342	1 420	1 319
Sundry creditors . . . . .	1 319	1 467	1 359	1 483	1 780	1 692
Other . . . . .	342	333	1 359	1 654	1 212	485
<b>Total . . . . .</b>	<b>6 032</b>	<b>6 203</b>	<b>7 627</b>	<b>10 059</b>	<b>6 902</b>	<b>5 856</b>
<b>Assets—</b>						
Fixed . . . . .	2 067	2 227	2 369	3 629	2 433	2 120
Stock on hand . . . . .	944	922	2 176	2 591	1 921	1 515
Sundry debtors . . . . .	1 484	1 253	1 141	1 498	1 023	1 001
Investments and loans . . . . .	1 131	1 305	1 256	1 590	565	153
Other . . . . .	407	496	684	751	960	1 067
<b>Total . . . . .</b>	<b>6 032</b>	<b>6 203</b>	<b>7 627</b>	<b>10 059</b>	<b>6 902</b>	<b>5 856</b>

- (a) As there is no uniform accounting period for these societies, details are in respect of the end of accounting periods ending during the years shown.

### 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, Tasmania (a)

Particulars	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78
Operating societies . . . . .	no. 27	no. 27	no. 23	no. 23	no. 22	no. 21
Shareholders . . . . .	22 918	25 508	24 379	28 604	30 683	32 862
Loans—Advanced . . . . .	\$'000 (b) 7 664	\$'000 (b) 7 795	\$'000 9 400	\$'000 14 181	\$'000 18 250	\$'000 21 773
Repaid . . . . .	(b) 5 284	(b) 6 370	7 539	10 095	12 224	14 939
Deposits—Received (c) . . . . .	(b) 12 780	(b) 13 966	18 334	26 327	38 358	53 022
Withdrawn . . . . .	(b) 10 397	(b) 12 419	15 684	22 485	32 321	43 839

Co-operative Credit Societies, Tasmania (a)—continued  
(\$'000)

Particulars	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78
<b>Liabilities (at end of period)—</b>						
Paid-up capital .....	195	217	219	248	282	322
Reserves, accumulated profits .....	72	24	17	271	613	977
Deposits .....	10 615	12 161	(d) r 14 813	18 655	24 692	33 919
Other .....	500	549	317	695	746	999
<b>Total .....</b>	<b>11 382</b>	<b>12 952</b>	<b>r 15 366</b>	<b>19 869</b>	<b>26 333</b>	<b>36 217</b>
<b>Assets (at end of period)—</b>						
Loans .....	10 442	11 868	(d) r 13 878	18 039	24 013	30 829
Cash and current deposits .....	366	285	586	1 018	1 449	} 5 388
Other (e) .....	574	800	902	811	871	
<b>Total .....</b>	<b>11 382</b>	<b>12 952</b>	<b>r 15 366</b>	<b>19 869</b>	<b>26 333</b>	<b>36 217</b>

(a) As there is no uniform accounting period for these societies, financial details are in respect of accounting years ending during the years shown; details relating to the number of shareholders, etc. are in respect of numbers at the end of accounting period ending during the years shown.

(b) Partially estimated.

(c) Includes interest credited.

(d) Does not reconcile with data for previous year due to changed collection method.

(e) 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 unit 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; (vi) 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, Tasmania (a)

Particulars	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
<b>Income—</b>						
Contributions—						
Employees .....	4 098	4 945	6 966	8 286	9 553	10 402
Employing authorities .....	3 542	4 122	5 112	6 462	8 761	10 646
Interest, dividends and rent .....	2 513	2 990	3 936	5 040	6 014	7 627
Other income .....	241	447	562	547	1 010	975
<b>Total .....</b>	<b>10 394</b>	<b>12 505</b>	<b>16 576</b>	<b>20 335</b>	<b>25 338</b>	<b>29 650</b>
<b>Expenditure—</b>						
Pensions .....	4 126	4 862	5 910	7 675	9 796	12 344
Lump sum payments—						
On retirement or death .....	755	818	1 202	1 262	1 700	1 541
On resignation or dismissal .....	530	737	554	1 057	1 302	1 821
Other expenditure .....	30	47	272	657	323	364
<b>Total .....</b>	<b>5 441</b>	<b>6 464</b>	<b>7 938</b>	<b>10 650</b>	<b>13 121</b>	<b>16 071</b>
<b>Total assets at end of year .....</b>	<b>42 206</b>	<b>48 274</b>	<b>57 114</b>	<b>66 773</b>	<b>78 986</b>	<b>92 655</b>
	no.	no.	no.	no.	no.	no.
Funds in operation .....	12	12	12	11	11	11
Contributors .....	15 087	15 705	16 468	16 969	17 759	18 034
Number of pensioners .....	3 152	3 249	3 401	3 557	3 751	3 813

(a) As there is no uniform accounting period for these funds, financial details are in respect of accounting years ending during the years shown; details relating to the number of contributors, etc. are in respect of numbers at the end of accounting periods ending during the years shown.

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, Tasmania

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
1977.....	3 347	1 588	1 190	25 772
1978.....	3 048	1 615	1 167	28 233
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
1977.....	13 016	724	190	44 817
1978.....	13 834	754	213	55 073

(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 \$5 589 205 at 30 June 1978. 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, ambulance boards, 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, Tasmania (a)

Particulars	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Income—						
Contributions—						
Employees.....	653	914	1 168	1 508	1 803	2 064
Employing authorities.....	994	1 523	1 906	2 446	2 982	3 253
Surrenders.....	125	237	397	362	326	363
Death claims.....	68	156	174	200	431	155
Matured policies.....	567	521	511	608	1 224	844
Other income.....	20	155	166	254	339	144
Total.....	2 428	3 507	4 322	5 378	7 104	6 821

Local and Semi-Government Pension and Superannuation Schemes Operated Through Life Insurance Offices,  
Tasmania (a)—continued  
(\$'000)

Particulars	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78
Expenditure—						
Premiums paid to insurance companies .....	1 674	2 192	2 734	3 469	4 295	4 666
Benefits—						
On death or retirement .....	640	678	813	1 049	1 980	1 152
On resignation or dismissal .....	121	235	399	268	338	465
Other expenditure .....	7	10	24	36	35	211
Total .....	2 442	3 115	3 970	4 823	6 649	6 493
Funds in operation .....	no. 21	no. 22	no. 22	no. 20	no. 20	no. 21
Contributors .....	2 832	3 061	3 233	3 451	3 549	3 592

(a) As there is no uniform accounting period for these schemes, financial details are in respect of accounting years ending during the years shown; details relating to the number of contributors, etc. are in respect of numbers at the end of accounting periods ending during the years shown.

### 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, Tasmania

Particulars	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Income—						
Contributions—						
Employees .....	2	2	2	3	3	3
State Government .....	30	50	50	50	50	51
Mine owners .....	12	11	12	16	19	19
Interest, dividends and rent .....	10	10	13	13	17	18
Total .....	54	73	77	82	89	91
Expenditure—						
Pensions .....	52	50	58	57	56	56
Other expenditure .....	2	4	2	2	2	2
Total .....	54	54	60	59	58	58
Assets (at end of period) .....	168	187	203	226	258	291
Contributors at 30 June .....	no. 46	no. 55	no. 66	no. 80	no. 81	no. 106
Pensioners at 30 June .....	132	129	123	115	110	109

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 (see Chapter 17 for details) in each year ended March.

State Parliamentary Superannuation Scheme, Tasmania  
(\$'000)

Particulars	1972-73	1973-74 (a)	1974-75	1975-76	1976-77	1977-78
Income—						
Contributions—Members .....	49	86	97	127	145	158
Government .....	72	140	200	301 (b)	1 109	1 181
Total .....	121	227	297	428	1 253	1 339
Expenditure—						
Pension payments .....	120	216	295	423	558	708
Other .....	1	7	3	1	30	1
Total .....	121	224	299	424	588	709
Assets at end of year—						
Cash .....	—	6	6	6	672	669
Other .....	—	—	—	—	—	650
Total .....	—	6	6	6	672	1 319
Liabilities .....	—	2	4	—	—	—
Accumulated funds .....	—	3	2	6	672	1 302
Contributors at end of year .....	no. 54	no. 54	no. 54	no. 54	no. 54	no. 54
Pensioners at end of year .....	33	33	39	40	48	50

(a) New scheme introduced. See explanatory notes preceding table.

(b) Increase due to transfer of additional funds from Consolidated Revenue on the recommendation of the Actuary, to ensure solvency of the scheme.

*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 (see the section 'Salaries of Members of Parliament' in Chapter 3), 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.

### 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 there in 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 system.

#### 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 for recent years:

Real Estate Transactions, Tasmania (a)

Year	Property sales		Mortgages			
	Number	Total consideration	Registered		Discharged	
			Number	Amount	Number	Amount
		\$'000		\$'000		\$'000
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
1976-77 .....	16 319	301 839	14 989	217 298	11 229	77 903
1977-78 .....	14 161	259 367	13 899	228 525	9 894	78 912

(a) Registered under the *Real Property Act* and *Registration of Deeds Act*.

**Further References**

*ABS Publications Produced by the Tasmanian Office*

Private Finance, Tasmania (5601-6) (annual, 1976-77, 1977-78 double issue released 22/5/79, 20 pp.)  
Friendly Societies, Report on, Tasmania (5603-6) (annual, 1977 issue released 27/4/79, 7 pp.)

*ABS Publications Produced by the Canberra Office*

Savings Banks (Preliminary) (5602-0) (monthly, August 1979 issue released 8/10/79, 2 pp.)

Banking (5605-0) (monthly, June 1979 released 30/8/79, 23 pp.)

Housing Finance For Owner Occupation, Savings Banks and Trading Banks (5608-0) (monthly, July 1979 released 13/9/79, 6 pp.)

Housing Finance For Owner Occupation, Permanent Building Societies (5610-0) (monthly, August 1979 released 9/10/79, 6 pp.)

Credit Unions: Assets, Liabilities, Income and Expenditure (5618-0) (annual, 1977-78 released 21/3/79, 8 pp.)

General Insurance (5620-0) (annual, 1976-77 released 8/9/78, 7 pp.)

Life Insurance (5621-0) (monthly, April 1979 released 10/10/79, 8 pp.)

Life Insurance (5622-0) (annual, 1977 released 18/1/79, 37 pp.)

Instalment Credit for Retail Sales (5631-0) (monthly, July 1979 released 26/9/79, 6 pp.)

## Chapter 13

### HOUSING AND BUILDING

#### DWELLING STATISTICS

##### The 1976 Census and Intercensal Estimates

Information concerning the housing of the State's population is obtained from householders' schedules collected during population censuses. Statistics on dwellings derived from the 1976 Census of Population and Housing are included in the 1979 *Year Book* (pp. 349, 350). Details are included on: number of dwellings and occupants; occupied private dwellings by nature of occupancy, by structure and by power or fuel usage; and occupied dwellings by type of outer wall material. For Census purposes, dwellings are divided into two groups, occupied dwellings and unoccupied dwellings. These are defined below:

##### *Definitions*

*Occupied Dwelling:* An *occupied dwelling* is defined as the premises occupied by a household on Census night (for a definition of *household* see below). Occupied dwellings are further classified into the following two categories:

A *private dwelling* is normally a house, room or flat but it can also be a tent, houseboat, or a caravan if standing on its own block of land, and not occupied by members of the same household resident in an adjacent dwelling. It is important to note that the total number of dwellings may be more than the total number of known structures in any given area.

*Non-private dwellings* are hotels, motels, hostels, boarding houses, gaols, religious and charitable institutions, defence establishments and other communal dwellings. Usually, occupants of such dwellings use communal facilities such as hotel dining-rooms or mess halls. A caravan in a caravan park (whether there permanently or temporarily) is treated as part of a non-private dwelling, as are self-contained units provided by commercial enterprises such as hotels, motels or guest-houses.

*Unoccupied Dwelling:* An *unoccupied dwelling* is a structure built specifically for living purposes and capable of being lived in, but unoccupied at the time of the Census. Vacant houses, holiday houses, huts, cabins (other than seasonal workers' quarters) and houseboats are therefore counted as unoccupied dwellings; but vacant tents, garages and caravans (if not normally occupied) are not. Only private dwellings can be classified as unoccupied. Unoccupied dwellings include dwellings vacant because they have been newly completed, vacant for demolition or repair, holiday homes, dwellings to let, and dwellings where the household was absent on Census night.

##### *Household*

For Census purposes, a *household* is a group of people who live together as a single domestic unit and eat together, the food eaten by members being served from a common supply. A person living alone is also a household. It is possible, then, for more than one household to live in one house or structure. For example, a lodger who lives with a family and provides all his food for himself is not a member of the family's household but constitutes a separate household and therefore completes a separate Householder's Schedule.

*Intercensal Dwelling Estimates*

It is not possible to prepare a detailed analysis of private dwellings between censuses but intercensal estimates of the number of houses and other dwellings by local government areas are prepared. The base for these estimates is the total number of occupied and unoccupied private dwellings as recorded at the preceding census. The census figures are then adjusted for: (i) demolitions, destructions by fire, conversions and transfers of houses and other dwellings; and (ii) completions of new houses and other dwellings. The transfer of houses between local government areas is merely a redistribution and does not affect the total number of houses for the State. Information about demolitions, conversions and transfers is obtained from local government authorities and the Hydro-Electric Commission. The number of new houses and other dwellings completed is available from the quarterly building construction collection conducted by the Bureau.

The following table, showing the distribution of occupied and unoccupied private dwellings at 30 June 1976, 1977 and 1978 differs from the results of the 1976 Population Census in that non-self-contained and improvised dwellings have been excluded:

**Number of Occupied and Unoccupied Private Dwellings (a) at 30 June 1976, 1977, and 1978**

Local government area (statistical division and sub-division in bold type)	1976 Census			Estimated	
	Occupied	Unoccupied	Total	1977	1978
Hobart (H) .....	17 022	1 270	18 292	18 576	18 850
Glenorchy (H) .....	12 614	578	13 192	13 519	13 795
Clarence (H) .....	11 800	858	12 658	13 085	13 462
Brighton (H) (S) .....	1 312	30	1 342	1 610	1 815
Kingborough (H) (S) .....	4 090	310	4 400	4 715	4 999
New Norfolk (H) (S) .....	2 452	194	2 646	2 682	2 729
Sorell (H) (S) .....	1 384	1 412	2 796	2 915	3 023
Bothwell (S) .....	234	674	908	923	963
Bruny (S) .....	116	298	414	439	447
Esperance (S) .....	928	296	1 224	1 235	1 266
Glamorgan (S) .....	406	466	872	904	934
Green Ponds (S) .....	250	20	270	274	281
Hamilton (S) .....	910	146	1 056	1 004	928
Huon (S) .....	1 330	108	1 438	1 449	1 459
Oatlands (S) .....	652	142	794	796	803
Port Cygnet (S) .....	590	230	820	849	873
Richmond (S) .....	500	70	570	585	592
Spring Bay (S) .....	530	266	796	809	827
Tasman (S) .....	324	440	764	798	835
<b>HOBERT</b> .....	<b>48 952</b>	<b>4 190</b>	<b>53 142</b>	<b>54 872</b>	<b>56 397</b>
<b>SOUTHERN</b> .....	<b>8 492</b>	<b>3 618</b>	<b>12 110</b>	<b>12 295</b>	<b>12 484</b>
Launceston .....	11 008	860	11 868	11 913	12 065
Beaconsfield .....	3 666	706	4 372	4 520	4 646
Deloraine .....	1 422	206	1 628	1 654	1 688
Evandale .....	450	66	516	535	553
George Town .....	1 716	538	2 254	2 361	2 441
Lilydale .....	2 362	96	2 458	2 537	2 586
Longford .....	1 596	138	1 734	1 772	1 819
St. Leonards .....	5 174	260	5 434	5 631	5 833
Westbury .....	1 622	122	1 744	1 804	1 892
<b>Tamar</b> .....	<b>29 016</b>	<b>2 992</b>	<b>32 008</b>	<b>32 727</b>	<b>33 523</b>
Campbell Town .....	480	102	582	584	587
Fingal .....	874	278	1 152	1 161	1 174
Flinders .....	286	76	362	369	381
Portland .....	518	614	1 132	1 181	1 227
Ringarooma .....	694	146	840	849	852
Ross .....	166	74	240	240	241
Scottsdale .....	1 186	330	1 516	1 573	1 618
<b>North Eastern</b> .....	<b>4 204</b>	<b>1 620</b>	<b>5 824</b>	<b>5 957</b>	<b>6 080</b>
<b>NORTHERN</b> .....	<b>33 220</b>	<b>4 612</b>	<b>37 832</b>	<b>38 684</b>	<b>39 603</b>



Number of Occupied and Unoccupied Private Dwellings (a) at 30 June 1976, 1977, and 1978—continued

Local government area (statistical division and sub-division in bold type)	1976 Census			Estimated	
	Occupied	Unoccupied	Total	1977	1978
Burnie .....	5 670	316	5 986	6 134	6 344
Circular Head .....	2 110	422	2 532	2 561	2 614
Devonport .....	6 462	398	6 860	7 166	7 414
Kentish .....	1 126	134	1 260	1 271	1 288
King Island .....	732	112	844	858	867
Latrobe .....	1 528	294	1 822	1 876	1 928
Penguin .....	1 412	108	1 520	1 566	1 615
Ulverstone .....	3 552	294	3 846	3 961	4 173
Wynyard .....	3 174	370	3 544	3 651	3 754
<b>North Western</b> .....	<b>25 766</b>	<b>2 448</b>	<b>28 214</b>	<b>29 044</b>	<b>29 992</b>
Gormanston .....	86	34	120	115	119
Queenstown .....	1 204	126	1 330	1 331	1 319
Strahan .....	136	112	248	248	249
Waratah .....	468	70	538	561	561
Zeehan .....	1 104	216	1 320	1 470	1 558
<b>Western</b> .....	<b>2 998</b>	<b>558</b>	<b>3 556</b>	<b>3 725</b>	<b>3 796</b>
<b>MERSEY-LYELL</b> .....	<b>28 764</b>	<b>3 006</b>	<b>31 770</b>	<b>32 769</b>	<b>33 793</b>
<b>TASMANIA</b> .....	<b>119 428</b>	<b>15 426</b>	<b>134 854</b>	<b>138 620</b>	<b>142 277</b>

(a) Houses and other self-contained dwellings (flats, home units, etc.); excludes non-self-contained and improvised dwellings.

## 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.

### 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

**A Dwelling:** is classified as either a 'House' or an 'Other Dwelling':

- (i) A 'House' is defined as a building which has been designed or adapted so that its prime purpose is to be a single self-contained (i.e. including bathing and cooking facilities) dwelling unit which is completely detached from other buildings, and occupies (except in such cases as dwellings built for employees or families of the owner or lessee of the land) a separate titled block of land.
- (ii) An 'Other Dwelling' is defined as a self-contained structural dwelling unit other than a house as defined in (i) above. These include flats, home units, semi-detached dwellings, villa units, town houses, etc.

**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 erected by the owner, or under the owner's direction but without the services of a contractor 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 'commencements' and 'completions' 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.

**Value of Building:** approved, commenced, completed, or under construction represents the estimated value of the whole job when completed, *excluding* the value of the land on which the job is carried out.

**Value of Building Work Done:** represents the estimated value of the building work actually carried out during the period.

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 two tables show 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 1977-78, 42 per cent of the total value of building approvals was attributed to the Hobart Division, five per cent to the Southern Division, 30 per cent to the Northern Division, and 23 per cent to the Mersey-Lyell Division.

## Housing and Building

## Building Approvals, by Statistical Division, 1977-78

Particulars	Hobart	Southern	Northern	Mersey-Lyell	Total Tasmania
NUMBER					
New dwellings—Private .....	867	379	764	747	2 757
Government .....	448	9	300	175	932
Total .....	1 315	388	1 064	922	3 689
VALUE (\$'000)					
New dwellings—Private .....	28 575	6 676	20 286	22 599	78 136
Government .....	8 363	180	5 956	3 462	17 961
Alterations and additions to dwellings (a)—Private .....	2 098	467	937	1 314	4 817
Government .....	—	—	—	—	—
Other building—Private .....	19 551	686	9 847	11 539	41 623
Government .....	21 110	964	19 528	3 590	45 192
All building—Private .....	50 225	7 830	31 069	35 452	124 576
Government .....	29 473	1 144	25 484	7 053	63 153
Total .....	79 698	8 973	56 554	42 505	187 729

(a) Valued at \$10 000 and over.

## Building Approvals, Tasmania

Particulars	1972-73 (a)	1973-74	1974-75	1975-76	1976-77	1977-78
NUMBER						
New dwellings—Private .....	3 176	3 404	2 559	3 673	3 462	2 757
Government .....	650	771	800	763	940	932
Total .....	3 826	4 175	3 359	4 436	4 402	3 689
VALUE (\$'000)						
New dwellings—Private .....	39 436	51 330	48 277	88 100	92 367	78 136
Government .....	6 411	9 238	12 861	13 523	18 159	17 961
Alterations and additions to dwellings (b)—Private .....	n.a.	778	1 163	2 295	3 877	4 817
Government .....	n.a.	19	—	31	—	—
Other building—Private .....	15 834	19 878	21 318	25 217	37 474	41 623
Government .....	28 740	19 476	29 115	31 224	48 685	45 192
All building—Private .....	55 270	71 986	70 760	115 612	133 718	124 576
Government .....	35 151	28 733	41 977	44 777	66 844	63 153
Total .....	90 421	100 719	112 736	160 390	200 562	187 729

(a) Alterations and additions to dwellings valued at \$10 000 and over are included with the number and value of dwellings for 1972-73 but excluded from 1973-74.

(b) Valued at \$10 000 and over.

## Building Construction

## Houses Constructed

The next table shows details of the number and value of houses commenced, completed and under construction for recent years:

Construction of New Houses (a), Tasmania

Year	Commenced		Completed		Under construction at end of year	
	Number	Value (b)	Number	Value (b)	Number	Value (b)
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
1976-77 .....	2 966	81.0	3 137	84.9	1 778	49.1
1977-78 .....	2 688	77.5	2 833	82.6	1 615	46.0

(a) Alterations and additions valued at \$10 000 and over are counted as new houses for 1972-73 but excluded from 1973-74.

(b) 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 but, since then, brick veneer has become the principal outer wall material for new houses; in 1977-78 brick veneer houses accounted for 80 per cent of all houses completed.

Number of New Houses Completed Classified by Material of Outer Walls (a), Tasmania

Material of outer walls	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78
Brick, concrete, etc.—						
Solid .....	75	122	154	144	162	143
Veneer .....	1 943	2 383	2 173	2 296	2 473	2 277
Wood (weatherboard, etc.) .....	204	157	116	112	148	214
Asbestos cement .....	125	126	182	177	199	154
Other .....	37	31	25	75	155	45
Total .....	2 384	2 819	2 650	2 804	3 137	2 833

(a) Alterations and additions valued at \$10 000 and over are counted as new houses for 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 1977-78 under the 1973 Housing Agreement was \$20 000 000.

The 1973 Housing Agreement expired on 30 June 1978. It was replaced by the *Housing Assistance Act 1978* and a new agreement was entered into between the Commonwealth and the States. The new Agreement covers the three years from 1 July 1978 to 30 June 1981 and supersedes the provisions of all past Agreements where they are in conflict. It also permits the Federal and State Ministers to vary the provisions of the Agreement relating to rental and purchase assistance. Funds will be provided by the Commonwealth for the purpose of the

Agreement in each of the three financial years, the actual amount being set by the Commonwealth after discussion with the State Ministers. The Federal Minister will also decide the proportion of the total money which is to be used for home purchase assistance which for 1978-79 was to be not less than 40 per cent of the total. The Act also covers special grants for aged persons housing.

The following table shows, for Tasmania, the number of houses completed, for recent years 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), Tasmania

Year	For government authorities	For private persons	Total	Year	For government authorities	For private persons	Total
1972-73 .....	542	1 842	2 384	1975-76 .....	793	2 011	2 804
1973-74 .....	586	2 233	2 819	1976-77 .....	696	2 441	3 137
1974-75 .....	548	2 102	2 650	1977-78 .....	601	2 232	2 833

(a) Alterations and additions valued at \$10 000 and over are counted as new houses for 1972-73 but excluded from 1973-74.

The principal construction authority in Tasmania is the Housing Division of the State Department of Housing and Construction 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 1977-78 'Other new dwellings' comprised 27 per cent of the total number of dwellings completed compared to only eight per cent in 1967-68.

In the following table, details are given of completions of new houses and other new dwellings for recent years:

New Houses and Other New Dwellings Completed (a), Tasmania

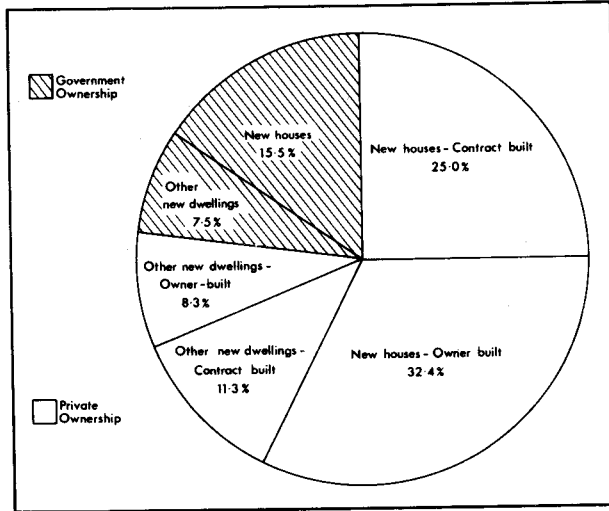
Particulars	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78
NUMBER						
New houses—						
Government ownership—						
Contract-built .....	280	290	269	465	327	342
Day labour .....	262	296	279	328	369	259
Private ownership—						
Contract-built .....	1 117	1 255	1 093	1 001	1 069	973
Owner-built .....	725	978	1 009	1 010	1 372	1 259
Total houses .....	2 384	2 819	2 650	2 804	3 137	2 833
Other new dwellings (b) .....	781	700	812	879	902	1 052
Total houses and other dwellings	3 165	3 519	3 462	3 683	4 039	3 885
VALUE (\$'000)						
New houses .....	29 648	41 634	48 154	63 272	84 877	82 565
Other new dwellings .....	6 542	6 625	10 028	13 858	18 011	23 136

(a) Alterations and additions valued at \$10 000 and over are counted as new houses for 1972-73 but excluded from 1973-74.

(b) Individual dwelling units.

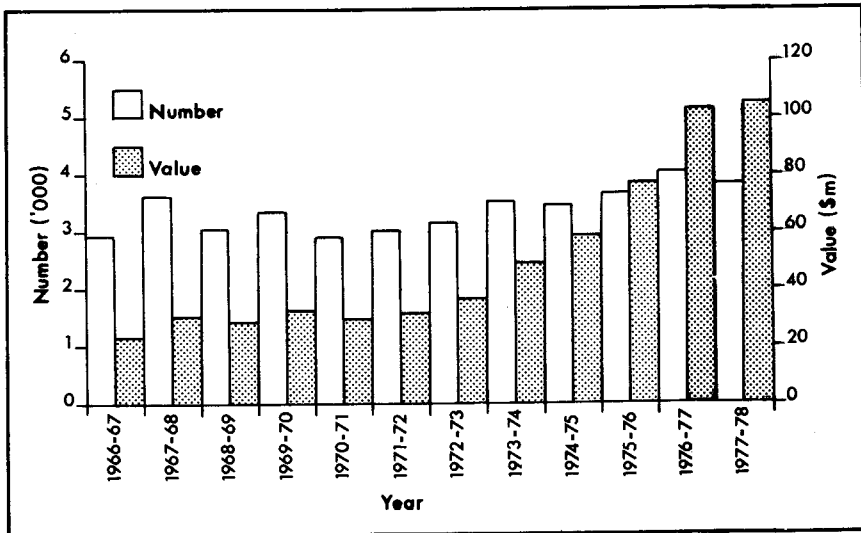
The pie chart below shows the number of new houses and other new dwellings completed, dissected by type of ownership, as a proportion of the total number of dwellings completed:

**New Dwellings Completed, Tasmania, 1977-78**  
(Proportion of Total Number)



The following graph shows the number and value of new dwellings completed from 1967-68 to 1977-78. 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 (a), Tasmania**



(a) Alterations and additions valued at \$10 000 or more are included for 1972-73 but excluded from 1973-74.

## Housing and Building

The following table dissects the numbers of dwellings commenced, completed and under construction for 1977-78 by statistical division:

Number of Dwellings Commenced, Completed and Under Construction, by Statistical Division, 1977-78

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 .....	970	1 055	554	478	569	425	1 448	1 624	979
Southern .....	327	276	278	10	12	26	337	288	304
Northern—									
Tamar .....	571	668	314	226	163	219	797	831	533
North Eastern .....	108	96	93	23	32	10	131	128	103
Total .....	679	764	407	249	195	229	928	959	636
Mersey-Lyell—									
North Western .....	704	725	368	188	276	62	892	1 001	430
Western .....	8	13	8	—	—	—	8	13	8
Total .....	712	738	376	188	276	62	900	1 014	438
Total Tasmania	2 688	2 833	1 615	925	1 052	742	3 613	3 885	2 357

## 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:

Value of all Building Completed: Classified According to Type, Tasmania (\$'000)

Type of building	1972-73 (a)	1973-74	1974-75	1975-76	1976-77	1977-78
New houses .....	29 648	41 634	48 154	63 272	84 877	82 565
Other new dwellings .....	6 542	6 625	10 028	13 858	18 011	23 136
Total new dwellings .....	36 190	48 259	58 182	77 130	102 888	105 701
Alterations and additions to dwellings(b) .....	n.a.	347	642	1 684	2 272	4 232
Hotels, etc. ....	7 751	4 488	2 256	3 828	3 674	5 528
Shops .....	2 470	3 980	3 156	2 056	6 838	11 979
Factories .....	4 447	3 820	5 670	6 955	5 186	5 875
Offices .....	7 287	8 381	5 721	15 390	7 432	11 652
Other business premises .....	2 038	2 398	4 296	2 736	4 888	4 475
Education .....	10 654	13 209	9 980	22 711	25 297	27 112
Religion .....	289	147	825	433	424	1 532
Health .....	4 208	848	3 120	5 835	5 879	6 354
Entertainment and recreation .....	1 802	1 322	1 700	2 559	3 003	2 593
Miscellaneous .....	969	1 747	3 946	3 791	6 779	5 988
Total other building .....	41 915	40 340	40 669	66 295	69 402	83 087
Total all building .....	78 105	88 946	99 493	145 109	174 563	193 019

(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, 1977-78  
(\$'000)

Statistical division or sub-division	New houses	Other new dwellings	Alterations and additions to dwellings (a)	Shops	Offices	Edu-cation	Other building	Total all building
Hobart .....	33 951	14 278	1 868	2 817	8 339	8 914	14 065	84 232
Southern .....	5 649	170	304	15	—	1 765	807	8 710
Northern—								
Tamar .....	18 636	3 021	678	6 030	2 329	5 477	9 082	45 251
North Eastern .....	2 229	514	67	103	81	871	1 492	5 356
Total .....	20 865	3 534	746	6 132	2 410	6 348	10 574	50 608
Mersey-Lyell—								
North Western .....	21 930	5 154	1 301	2 995	903	9 522	6 178	47 983
Western .....	170	—	13	20	—	563	721	1 487
Total .....	22 100	5 154	1 314	3 015	903	10 085	6 899	49 470
Total Tasmania ..	82 565	23 136	4 232	11 979	11 652	27 112	32 345	193 019

(a) Valued at \$10 000 and over.

The following table gives details of the total value of all building commenced, completed and under construction for recent years. The items included under 'all building' are specified in the previous table.

Value (When Completed) of All Building, Tasmania  
(\$m)

Year	Com-menced	Com-pleted	Under construc-tion (a)	Year	Com-menced	Com-pleted	Under construc-tion (a)
1972-73 .....	90.6	78.1	76.5	1975-76 .....	156.8	145.1	140.5
1973-74 .....	107.1	88.9	97.4	1976-77 .....	178.6	174.6	153.7
1974-75 .....	113.2	99.5	116.3	1977-78 .....	192.3	193.0	161.3

(a) 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.

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 which would 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 Building Work Done, Tasmania, Wholesale Price Indexes and Average Weekly Earnings

Particulars	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78
<b>Value of work done—</b>						
New houses . . . . . \$'000	32 568	46 332	48 757	73 190	85 669	81 487
Other new dwellings . . . . . \$'000	6 522	8 010	10 046	16 063	20 842	22 501
<b>Total new dwellings . . . . . \$'000</b>	<b>39 089</b>	<b>54 342</b>	<b>58 803</b>	<b>89 253</b>	<b>106 511</b>	<b>103 988</b>
<b>Alterations and additions</b>						
to dwellings . . . . . \$'000	(a)	444	744	1 883	2 407	4 584
Other building . . . . . \$'000	39 055	41 098	57 433	69 414	68 758	90 009
<b>Total building . . . . . \$'000</b>	<b>78 145</b>	<b>95 884</b>	<b>116 979</b>	<b>160 551</b>	<b>177 676</b>	<b>198 581</b>
<b>Percentage increase (b) . . . . .</b>	<b>11.3</b>	<b>22.7</b>	<b>22.0</b>	<b>37.2</b>	<b>10.7</b>	<b>11.8</b>
<b>Wholesale price index (c)—</b>						
<b>Materials used in house building—</b>						
Index number . . . . .	130.8	145.5	179.1	209.2	235.1	256.7
Percentage increase (b) . . . . .	8.4	11.2	23.1	16.8	12.4	9.2
<b>Materials used in building other than house building—</b>						
Index number . . . . .	129.7	143.8	179.3	210.4	234.8	253.7
Percentage increase (b) . . . . .	5.8	10.9	24.7	17.3	11.6	8.0
<b>Average weekly earnings (d)—</b>						
Amount . . . . . \$	95.20	110.50	140.20	157.80	181.20	199.0
Expressed as index to base 1966-67 = 100.0 (e) . . . . .	162.7	188.9	239.7	269.7	309.7	340.2
Percentage increase (b) . . . . .	8.8	16.1	26.9	12.6	14.8	9.8

(a) Alterations and additions to dwellings valued at \$10 000 and over are included with the value of new dwellings.

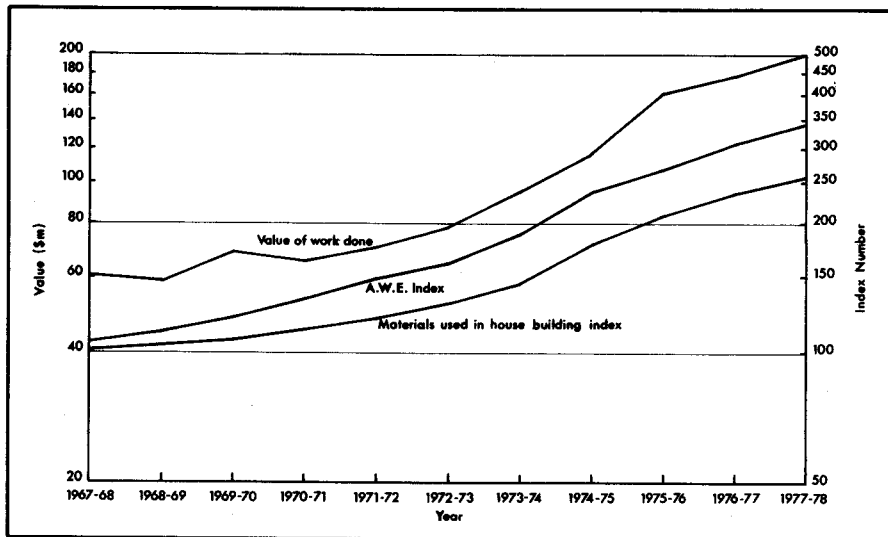
(b) Over previous year.

(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 for Tasmania in 1966-67 were \$58.50.

**Value of All Building Work Done, Tasmania, 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 Department of Housing and Construction—Housing Division

*General*

The former Housing Department, now the Housing Division of the State Department of Housing and Construction, 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 the State Loan Fund and formed part of the 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. On 14 September 1977, the former Housing Department was amalgamated with the Architectural Branch of the former Public Works Department to form the State Department of Housing and Construction. This new Department combines two Divisions—the Housing Division and the Construction Division. The Housing Division has, from the date of amalgamation, taken over the functions of the former State Housing Department. The Housing Division 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. The dwellings constructed are three-bedroom brick veneer units, roofed with tiles or corrugated iron. Due to the changing nature of housing a greater proportion of flats for elderly persons, multi-unit flats and villa units are now also being constructed.

*Construction of Dwellings*

During 1978-79, 810 dwellings (531 houses, 143 elderly persons' units, 135 villa units, and 1 movable unit) were completed. The following table shows the aggregate of dwelling units constructed since 1944 by the Housing Division of the State Department of Housing and Construction and by earlier State Housing Construction Authorities.

Aggregate of Dwellings Constructed by State Housing Authorities:  
From 1944 to 30 June 1979 (a), Tasmania

Type of dwelling	Bed-sitting room	One bedroom	Two bedrooms	Three bedrooms	Total
Houses (detached and semi-detached) . . .	—	—	659	15 926	16 585
Multi-unit flats . . . . .	1	129	178	17	325
Villa units . . . . .	—	23	448	85	556
Elderly persons' units . . . . .	462	566	—	—	1 028
Movable units . . . . .	28	—	—	—	28
<b>Total dwelling units . . . . .</b>	<b>491</b>	<b>718</b>	<b>1 285</b>	<b>16 028</b>	<b>18 522</b>

(a) Construction to 30 June 1953 was undertaken by the Housing Division of the Agricultural Bank of Tasmania. Subsequent construction was by the Housing Division of the State Department of Housing and Construction (previously the State Housing Department).

*Rental of Dwellings*

As from 1 August 1976, all Housing Division dwellings have been allotted on a rental basis only. Allocations are made in accordance with the income limits for eligibility. An applicant will be eligible for assistance provided the 'bread winner's' gross income does not exceed the Australian average weekly earnings per employed male unit, published quarterly (see Chapter 17). The weekly rental of newly erected three bedroom homes in the Hobart area as at 30 June 1979, was \$40.00. 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—Home Purchase Assistance

The Agricultural Bank of Tasmania is responsible for the administration of funds made under the Home Purchase Assistance Section of the *Housing Assistance Act 1978*. A new Housing Agreement operating from 1 July 1978 consolidated all past agreements. The State has also provided State Loan Funds for lending under the *Homes Act 1935* specifically available for first home builders. Interest rates vary from 6 per cent to 9.5 per cent, depending on need. Repayment terms are normally over 30 years. The new Agreement has the following aims:

- (i) To facilitate home ownership for those able to afford it but not able to gain it through the private market.
- (ii) To provide assistance for home ownership in the most efficient way and thus exclude from eligibility those not in need and minimise continued availability of assistance to those no longer in need. This is to involve provision of assistance that is related to particular recipients' current economic and social circumstances.
- (iii) To enable the states to exercise maximum autonomy and flexibility in the administrative arrangements necessary to achieve (i) and (ii), above.

The following table shows details for recent years:

Agricultural Bank of Tasmania—Advances for Housing (a)

Particulars	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
Advances approved:						
Number.....	490	453	431	393	366	350
Value (\$'000).....	5 480	6 148	6 100	8 355	8 354	7 532
Advances outstanding (b) (\$'000).....	25 608	30 290	33 481	38 832	43 726	49 187

(a) Excludes advances to building societies.

(b) At end of period.

The Agricultural Bank also administers the allocation of advances to Co-operative Housing Societies; details of such advances and of the 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 1918*. This was enacted in order to assist certain former and serving members of the Australian Forces and certain other persons (e.g. widows of eligible persons) to obtain housing with finance made available on a term of up to 45 years at interest rates from 3¾ per cent per annum.

#### Defence Service Homes Loans

In very broad terms, persons eligible for assistance from a Service viewpoint are: (i) members of the defence forces who enlisted for, or had, overseas service; (ii) members or ex-members of the defence forces who have completed at least for three years full time continuous service, provided that service did not end before 7 December 1972; and (iii) National Serviceman who completed the period of service for which deemed to have been engaged to serve, they were 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
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
1977-78 .....	126	79	16	32	1 807
1978-79 .....	90	79	6	17	1 447

(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 and 1978 may receive grants of up to \$667 and \$1 333, respectively, depending upon their savings. A maximum grant of \$2 000 applies to persons entering into their contracts from 1 January 1979. The Government announced that there is a qualifying limit of \$40 000 on the value of the home for persons contracting to buy on or after 25 May 1979.

People who acquired their home on or before 31 December 1976 could qualify 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 1976*. Details of grants made under the *Homes Savings Grant Act, 1964* for the years 1972-73 to 1977-78 are included in the 1979 *Year Book*, (p. 363).

## Grants Made in Tasmania Under the Homes Savings Grants Act, 1976

Year	Number of applications		Value of grants approved (\$'000)
	Received	Approved	
HOME SAVINGS GRANT ACT 1976			
1976-77 .....	434	390	250
1977-78 .....	1 736	1 644	1 270
1978-79 .....	1 844	1 587	1 751

## 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 or 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 of 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	1975-76		1976-77		1977-78	
	Number	Amount (\$'000)	Number	Amount (\$'000)	Number	Amount (\$'000)
<b>Housing—</b>						
Building a new house .....	69	1 504	149	3 618	61	1 677
Purchase of—						
New house .....	115	2 571				
Established house .....	1 111	19 074	928	18 903	613	13 852
Discharge of mortgage .....	37	605	16	307	14	450
Home Units .....	38	712	37	793	30	681
Other .....	13	248	—	—	—	—
<b>Total .....</b>	<b>1 383</b>	<b>24 714</b>	<b>1 130</b>	<b>23 621</b>	<b>718</b>	<b>16 660</b>

#### Further References

*ABS Publications produced by the Tasmanian Office*

Building Industry, Tasmania (8701.6) (annual, 1977-78 issue released 17.11.78, 19 pp.)

Building Approvals, Tasmania, Monthly Bulletin (8702.6) (monthly, August 1979 released 4.10.79, 6 pp.)

Building Statistics, Tasmania, Quarterly Bulletin (8703.6) (quarterly, March Quarter 1979 released 20.7.79, 11 pp.)

*ABS Publications produced by the Canberra Office*

Building Statistics, Australia (8705.0) (quarterly, March quarter 1979 released 13.9.79, 30 pp.)

Population and Dwellings in Local Government Areas and Urban Centres (Preliminary) 1976 Census of Population and Housing, Tasmania (2406.0) (released 15.11.77, 18 pp.)

Characteristics of the Population and Dwellings in Local Government Areas, 1976 Census of Population and Housing, Tasmania (2432.0) (released August 1979, 498 pp.)

## 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 principal 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:



## Education and Cultural Activities

Government and Non-Government Schools, Tasmania  
Pupils Enrolled at 1 August According to Grade of Education  
(Number)

Particulars	1973	1974	1975	1976	1977	1978
Government schools—						
Primary grades (a) .....	49 845	49 515	49 976	50 091	50 358	50 910
Secondary grades .....	28 935	29 347	30 042	30 183	29 616	28 843
Special (b) .....	925	973	899	908	898	829
Total .....	79 705	79 835	80 917	81 182	80 872	80 582
Non-government schools—						
Primary grades .....	7 882	7 973	8 204	8 183	8 168	8 308
Secondary grades .....	6 342	6 426	6 393	6 221	6 258	6 356
Special .....	13	8	—	27	20	24
Total .....	14 237	14 407	14 597	14 431	14 446	14 688
Total all schools	93 942	94 242	95 514	95 613	95 318	95 270

(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 30 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) further education. 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, Tasmania  
(\$'000)**

Particulars	1975-76	1976-77	1977-78
<b>From Consolidated Revenue—</b>			
General administration, regulation and research . . . . .	4 681	r 6 533	10 094
Student transport . . . . .	3 930	4 394	4 870
Primary and secondary . . . . .	67 351	r 79 031	86 378
Technical . . . . .	6 128	r 7 596	9 327
University . . . . .	18	r 19	36
Other higher education . . . . .	4 753	r 5 651	6 320
Special schools . . . . .	1 682	r 2 069	2 467
Other . . . . .	680	r 55	16
<b>Total . . . . .</b>	<b>89 223</b>	<b>r 105 348</b>	<b>119 508</b>
<b>From Loan Fund—</b>			
General administration, regulation and research . . . . .	5 953	r 9 407	7 136
Primary and secondary (including pre-school) . . . . .	18 062	r 15 182	17 396
Technical . . . . .	1 424	4 539	3 550
University . . . . .	—	—	—
Other higher education . . . . .	—	—	—
Adult education . . . . .	31	162	445
Special schools . . . . .	320	r 528	158
<b>Total . . . . .</b>	<b>25 792</b>	<b>29 817</b>	<b>28 685</b>
<b>From Trust Funds—</b>			
General administration, regulation and research . . . . .	17	17	354
Primary and secondary . . . . .	3 990	3 208	5 618
University . . . . .	16 380	17 238	18 696
Other higher education . . . . .	12 565	9 764	12 000
Adult education . . . . .	974	22	33
Other . . . . .	465	487	464
<b>Total . . . . .</b>	<b>34 391</b>	<b>30 736</b>	<b>37 165</b>
<b>Grand total . . . . .</b>	<b>149 406</b>	<b>r 165 901</b>	<b>185 358</b>

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 for the last six years were:

**Government Schools, Tasmania  
Number of Pupils at 1 August**

Pupils	1973	1974	1975	1976	1977	1978
Boys . . . . .	41 318	41 299	41 712	41 806	41 628	41 432
Girls . . . . .	38 387	38 536	39 205	39 376	39 244	39 150
<b>Total . . . . .</b>	<b>79 705</b>	<b>79 835</b>	<b>80 917</b>	<b>81 182</b>	<b>80 872</b>	<b>80 582</b>

### 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, Tasmania**  
**Average Ages of Pupils, Primary and Secondary, in Each Grade, and Certificates Issued**

Primary classes			Secondary classes			Certificate issued
Grade	Mean age at 1.8.78		Grade	Mean age at 1.8.78		
	Years	Months		Years	Months	
Kindergartens—						
Separate .....	4	10	7 ..	12	10	
Attached .....	5	1	8 ..	13	10	
Preparatory .....	5	9	9 ..	14	10	Preliminary School Certificate
1.....	6	8				
2.....	7	9	10 ..	15	9	School Certificate
3.....	8	9	11 (a)	16	11 }	Higher School Certificate
4.....	9	9	12 (a)	18	0 }	
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, Tasmania at 1 August

Type of school	1973	1974	1975	1976	1977	1978
Kindergartens (separate) .....	39	34	38	34	33	36
Primary (a) .....	148	155	r 152	r 153	r 155	159
Primary with secondary classes .....	2	1	r 1	r 1	r 1	1
Special (b) .....	17	18	18	19	18	19
District (c) .....	39	36	37	37	35	34
High .....	30	30	32	33	35	35
Matriculation colleges .....	5	5	7	7	7	7
<b>Total .....</b>	<b>280</b>	<b>279</b>	<b>285</b>	<b>284</b>	<b>284</b>	<b>291</b>

(a) Many have kindergartens attached.

(b) Includes the correspondence school.

(c) These schools provide both primary and secondary facilities.

### 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, Tasmania, at 1 August

Particulars	1973	1974	1975	1976	1977	1978
Kindergartens—						
Separate .....	1 714	1 449	1 628	1 486	1 398	1 533
Attached .....	5 277	4 538	4 957	5 163	5 224	5 347
<b>Total (a) .....</b>	<b>6 991</b>	<b>(b) 5 987</b>	<b>6 585</b>	<b>6 649</b>	<b>6 622</b>	<b>6 880</b>

(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 at 1 January is four years to kindergarten, five years to preparatory and five and a half to six years to grade 1.

**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 34 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), Tasmania, at 1 August**

Age last birthday (years)	1973	1974	1975	1976	1977	1978
Under 5 .....	2 054	1 888	2 260	2 392	2 633	3 156
5 .....	5 418	6 034	6 145	6 456	6 356	6 286
6 .....	6 219	6 511	7 019	6 749	7 034	6 655
7 .....	6 341	6 289	6 522	6 953	6 828	7 018
8 .....	6 502	6 287	6 436	6 736	6 934	6 774
9 .....	7 098	6 647	6 320	6 369	6 631	6 941
10 .....	7 036	6 939	6 352	6 186	6 260	6 520
11 .....	6 972	6 724	6 856	6 269	5 954	5 996
12 .....	2 048	2 049	1 960	1 869	1 644	1 502
13 .....	140	124	98	108	83	59
14 .....	11	13	6	4	—	3
15 and over .....	6	10	2	—	1	—
Total—Boys .....	24 797	25 613	25 711	25 822	25 892	26 258
Girls .....	25 048	23 902	24 265	24 269	24 466	24 652
Pupils .....	49 845	49 515	49 976	50 091	50 358	50 910

(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. A small number of primary schools built in the late 1960s and early 1970s provided open plan areas for up to four classes. Schools now being erected or planned provide both dual and single classrooms with annexes for small group organization to help cater for individual differences in pupils. 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; some have adopted family grouping, where children of different ages are in one classroom.

*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 fundamental 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 and district high schools are non-selective and comprehensive. All with the exception of two high schools are 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 internal assessment and 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; some subjects are not designed primarily for purposes of university entrance and are internally assessed.

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' and a more detailed account of government matriculation colleges is included in the later section, 'Further Education.'

The following table shows the age and number of students in Tasmanian Government secondary schools:

**Pupils Receiving Government Secondary Education, Tasmania, at 1 August, by Age**

Age last birthday (years)	1973	1974	1975	1976	1977	1978
11.....	261	246	235	188	159	210
12.....	4 902	4 943	4 977	4 920	4 687	4 199
13.....	6 924	7 137	6 710	6 623	6 539	6 141
14.....	6 787	6 848	7 177	6 971	6 723	6 736
15.....	5 640	5 792	6 101	6 630	6 356	6 153
16.....	2 645	2 671	2 742	2 993	3 073	3 246
17.....	1 284	1 231	1 382	1 240	1 408	1 457
18 and over.....	492	479	718	618	771	701
Total—Boys.....	14 928	15 067	15 420	15 414	15 179	14 680
Girls.....	14 007	14 280	14 622	14 769	14 437	14 163
Pupils.....	28 935	29 347	30 042	30 183	29 616	28 843

The next table shows the number of secondary pupils by sex and grade in all government schools:

Secondary Pupils in Government Schools, Tasmania at 1 August, by Grade

Year	Secondary grade						Total
	7	8	9	10	11	12	
<b>Boys</b>							
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
1977.....	3 390	3 604	3 458	2 979	902	846	15 179
1978.....	3 153	3 397	3 485	2 968	883	794	14 680
<b>GIRLS</b>							
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
1977.....	3 149	3 289	3 177	2 814	1 134	874	14 437
1978.....	2 967	3 094	3 224	2 799	1 206	873	14 163

#### *District High 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.

#### **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 1977-78 expenditure was \$2 462 000, which included a special grant of \$2 045 000. 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 1977-78 was \$300 000.

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, Tasmania, at 1 August  
(Number)

Particulars	Church of England	Presbyterian (a)	Catholic	Seventh-day Adventist	Other schools	All schools
PUPILS						
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
1977..... Boys	906	213	4 680	92	1 016	6 907
Girls	807	341	5 204	77	1 110	7 539
1978..... Boys	929	211	4 745	72	1 013	6 970
Girls	851	375	5 351	83	1 058	7 718
SCHOOLS						
1978.....	4	2	37	4	20	67

(a) Now Uniting Church of Australia.

The following table shows the number of secondary pupils by sex and class in all non-government schools:

Secondary Pupils in Non-Government Schools, Tasmania, at 1 August 1978 by Year.

Pupils	Secondary year						Total
	1	2	3	4	5	6	
Boys .....	631	592	612	557	290	210	2 892
Girls .....	724	714	713	733	358	222	3 464
Total .....	1 355	1 306	1 325	1 290	648	432	6 356

Of the 25 schools in 1978 which catered for secondary pupils, 16 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, Tasmania, at 1 August, by Age

Age last birthday (years)	1973	1974	1975	1976	1977	1978
Under 7 .....	2 363	2 496	2 773	2 737	2 603	2 470
7 .....	857	946	938	1 039	1 079	1 164
8 .....	1 000	906	988	997	1 061	1 120
9 .....	1 037	1 044	977	960	1 061	1 096
10 .....	1 098	1 090	1 072	1 020	1 040	1 114
11 .....	1 131	1 112	1 106	1 091	1 005	1 077
12 .....	367	346	319	312	302	253
13 .....	26	29	28	25	16	12
14 and over .....	3	4	3	2	1	2
Total—Boys .....	3 750	3 903	4 056	4 024	4 018	4 072
Girls .....	4 132	4 070	14 148	4 159	4 150	4 236
Pupils .....	7 882	7 973	8 204	8 183	8 168	8 308

The following table shows the ages of pupils in non-government schools at secondary level:

## Pupils Receiving Non-Government Secondary Education, Tasmania, at 1 August, by Age

Age last birthday (years)	1973	1974	1975	1976	1977	1978
11 and under .....	107	97	84	101	76	69
12 .....	1 051	1 063	1 059	991	980	1 047
13 .....	1 283	1 343	1 362	1 266	1 322	1 292
14 .....	1 337	1 341	1 344	1 415	1 367	1 316
15 .....	1 214	1 231	1 174	1 234	1 268	1 271
16 .....	799	816	866	732	809	813
17 .....	442	443	425	403	381	458
18 and over .....	109	92	79	79	55	90
Total—Boys .....	3 045	3 022	2 961	2 913	2 877	2 892
Girls .....	3 297	3 404	3 432	3 308	3 381	3 464
Pupils .....	6 342	6 426	6 393	6 221	6 258	6 356

## 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 and a Master's degree is also offered. 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, Tasmania, at 1 August 1978 (a)

Type of school	Full-time			Part-time and casual		
	Males	Females	Persons	Males	Females	Persons
Kindergarten (separate) . . .	—	195	195	—	12	12
Special (b) . . . . .	30	90	120	—	33	33
Primary . . . . .	391	1 423	1 814	19	433	452
District—						
Primary . . . . .	53	222	275	8	61	69
Secondary . . . . .	142	124	266	10	74	84
High . . . . .	939	697	1 636	12	54	66
Secondary colleges (c) . . . .	210	112	322	16	23	39
Total . . . . .	1 765	2 863	4 628	65	690	755

(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.

(c) Previously Matriculation Colleges.

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, Tasmania, at 1 August

Type of teacher	1973	1974	1975	1976	1977	1978
Head teachers—						
Males . . . . .	235	234	233	232	230	n. y. a.
Females . . . . .	15	16	20	20	23	n. y. a.
Other teachers—						
Males . . . . .	1 395	1 405	1 520	1 549	1 610	n. y. a.
Females . . . . .	2 506	2 560	2 657	2 795	2 739	n. y. a.
Total teachers (a)—Males . . .	1 630	1 639	1 753	1 781	1 840	n. y. a.
Females	2 521	2 576	2 677	2 815	2 762	n. y. a.
Teachers-in-training—						
Males . . . . .	473	465	435	445	462	509
Females . . . . .	997	1 060	1 130	1 203	1 215	1 231

(a) Includes teachers in non-teaching positions (e.g. curriculum branch staff, guidance officers, etc.) but excludes supervisors, those engaged in technical education, part-time teachers, and those on long service leave.

In primary schools in 1978, 78 per cent of the full-time 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 district high schools, because of the smaller numbers of secondary pupils, one teacher may take several subjects; rural science, home arts and crafts and technical subjects are usually handled by resident or itinerant specialists.

*Teacher Training:* The institutions where teachers-in-training are studying are shown in the next table:

## Teachers-in-Training, Tasmania, at 1 August

Institution attended	1973	1974	1975	1976	1977	1978
MALES						
University of Tasmania .....	244	237	217	224	207	210
Tasmanian College of Advanced Education .....	229	227	217	218	251	295
Other institutions .....	-	1	1	3	4	4
Total .....	473	465	435	445	462	509
FEMALES						
University of Tasmania .....	308	344	364	411	389	360
Tasmanian College of Advanced Education .....	686	704	752	772	804	847
Other institutions .....	3	12	14	20	22	24
Total .....	997	1 060	1 130	1 203	1 215	1 231

## 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.

*The School Certificate*

For the School Certificate there are no external examinations and awards are determined by internal assessment with a wide variety of methods of evaluation. 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 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.

#### *Moderation*

The Schools Board of Tasmania is responsible for ensuring development of satisfactory moderation procedures and the maintenance of subject standards. To this end, the State is divided into four *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*.)

#### *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 or 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 against the external examination results of the members of that class. In Level I and Level II 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.

#### **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, Services and Other Resource Materials*

The Tasmania Media Centre provides specialised assistance to schools by the development, production and supply of audio-visual hardware and software.

All government schools are equipped with colour television receivers. To overcome the difficulty in planning timetables so that classes may view educational broadcasts, all secondary schools and colleges, all district high schools, and 18 per cent of primary schools have been provided with video recording systems. The system is based on the mobile video cassette recorder which allows schools to record television broadcasts 'off-air' for replaying at convenient times and locations. This development has led to television being as flexible a teaching aid as the longer established pre-recorded radio program.

The Tasmania Media Centre records all ABC radio broadcasts and distributes copies of tapes to schools each week. The Centre also operates a Media Library. Similar resources are available at the Centre's two annexes at Launceston and Burnie.

The Centre's electronics section prepares specifications and evaluates, develops and modifies audio-visual hardware. All approved equipment supplied to government schools is maintained free of cost by the Tasmania Media Centre.

The Centre also co-ordinates the production of integrated resource materials to support areas of the school curriculum. Other services offered to schools by the Centre include in-service training of teachers in the operation and maintenance of equipment, and the

production or modification of resource materials; advice on the organisation and management of resources; and the provision of two mobile media vehicles for in-service education of teachers at schools which have inadequate access to the Centre or its annexes.

### *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 up to 15 new teacher-librarians each year.

The Library Services Branch, housed in the State Library building, Hobart, is under the direction of a supervisor of libraries. It offers expert bibliographic and technical advice to schools and controls a central cataloguing service to schools. The Branch works in very close co-operation with the State Library of Tasmania.

### *Radio and Television Programs*

Tasmania is well advanced in the availability and use of educational television and radio broadcasts. The Australian Broadcasting Commission provides programs which are selected by planning and appraisal committees upon which curriculum officers and teachers are represented. To facilitate the production of Tasmanian programs and the selection of programs from other sources the ABC employs a State Supervisor of Education, radio and television producers, and associated staff. The Education Department provides a Secondary and a Primary liaison officer seconded full-time to the ABC.

### *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. 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, materials and 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. There is an increasing emphasis on multi-cultural education (See also 'Federal Government Activities in Education'.)

### *Financial Assistance*

Currently the principal 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 \$100 per annum. The number granted during 1978 was 256 and expenditure was \$24 800.
- (ii) *Special Bursaries* awarded in cases of necessitous circumstances. For 1978, 187 special bursaries involving expenditure of \$10 122 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 1978 was \$251 540.

## FURTHER EDUCATION

## Division of Further Education

As from the 1 January 1979, the three sectors of Technical Education, Adult Education and Secondary Colleges were brought together to form the new Division of Further Education under the control of the Education Department of Tasmania. Establishment of the Division of Further Education was supported in recommendations in the TEND (Tasmanian Education Next Decade) and Kearney (Ministerial Working Party on Tertiary Education) Reports in 1978. The Division embraces the philosophy of community college education—having multi-purpose institutions to cater for all level of community educational and cultural demand.

The Report 'Further Education in Tasmania' of December 1978 set the foundations for the development of community colleges and an increased regional approach to Further Education. As a result, Regional Superintendents of Further Education have been appointed in the north-west, north and south to work with regional co-ordinating committees to further community college development. A senior committee, the Further Education Council, has also been established to recommend to the Director-General of Education new directions for further education in Tasmania.

The Division is headed by the Director of Further Education, who is supported by a Deputy Director, a Senior Superintendent and three Regional Superintendents. It runs colleges in Hobart, Launceston, Devonport, Burnie and Queenstown which cater for senior secondary, technical and adult education.

## Technical Education

## 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, Tasmania

Particulars	1973 (a)	1974	1975	1976	1977	1978
Schools, colleges, etc. . . . . no.	6	7	19	10	10	10
Teachers—Full-time . . . . . no.	194	258	294	335	428	(b) 469
Part-time . . . . . no.	513	653	572	735	719	(c) 722
Students (d) . . . . . no.	7 519	9 826	10 254	11 155	13 018	n.y.a.
Expenditure (e) . . . . . \$'000	3 004	3 667	5 775	6 007	n.y.a.	n.y.a.

(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) 374 males and 95 females.

(c) 560 males and 162 females.

(d) Gross number enrolled during the year.

(e) Excludes capital expenditure on new buildings, etc.

## Courses

**Certificate Courses:** These courses cater for middle level vocations for students who wish to work in a para-professional field. On successful completion of a course, a certificate is awarded by the Division of Further Education, Education Department. Courses provided include engineering, municipal administration, accounting, child care, social welfare and secretarial studies.

**Trade Courses:** These courses are provided for apprentices as an adjunct to on-site training performed by employers. Such training involves both practical and theoretical aspects of a trade and is offered in association with the Apprenticeship Commission of Tasmania. The introduction of trade courses in both farming and horticulture in 1979 indicates a widening of the definition of trade courses within Tasmania.

**Correspondence Tuition:** This is administered through the Hobart Technical College and is intended for isolated students. Many of the above courses are available through the correspondence school.

*Teacher Education:* Teacher education courses are available to teachers on a part-time basis and cover general teaching theory and the theory and method of trade teaching.

*Technical In-Service Education:* Non-formal staff development programs are organised by the Technical In-Service Education Committee. These are geared specifically to the needs of teaching and ancillary staff in Tasmanian technical colleges.

#### *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 Statewide basis except for the first and second year trade subjects in which case each college makes its own arrangements.

#### **Government Secondary Colleges**

At secondary colleges students are primarily concerned with Higher School Certificate subjects undertaken sometimes as one but mostly 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 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 advantage 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. For an explanation of higher school certificate examinations, see the earlier section, 'Examinations'.

#### **Adult Education**

##### *Origin and Organisation*

Establishment of a mechanics' institute in Hobart in 1827 was the start of adult education in Australia. Mechanics institutes, later established in other cities, provided public lectures and libraries. The first Tasmanian Workers Educational Branch was begun in Hobart in 1913 to promote the higher education of working men and women. For many years the W.E.A. worked in conjunction with the University of Tasmania and provided classes and public lectures.

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. On 1 January 1979, adult education came under the control of the Division of Further Education.

Hobart has four Adult Education Centres: at the Domain, South Hobart, North Hobart and at Rosny College; as well as an inquiries and enrolment centre in the city centre. There are also centres and offices established in Launceston, Devonport, Burnie, Queenstown, Oatlands and Campbelltown.

##### *Operations*

*Courses:* An extremely wide variety of courses, ranging in duration from one term to one year, is offered. A function of the Section is to initiate innovative programs and to respond to changes in community needs. Subject areas include basic education, business studies, foreign languages, arts and crafts and music and dance. In co-operation with the Federal Department of Immigration and Ethnic Affairs, the Division arranges courses in Hobart in advanced English for migrants and other courses for migrants throughout the State.

*Schools, Seminars and Special Events:* In 1978, in addition to a diverse summer school program featuring art, string music, historic buildings and landscape gardening, there were many notable special events. These included tours by Arthur Fairbairn, the Leicestershire

Director of Education; Lex Gray, authority on child care and parent education; poets Thomas Shapcott and Judith Rodriguez; and Ronald Maconaghie, actor/singer with the Australian Opera Company. The Section is also active in the community arts area and arranges, often in association with other bodies, art exhibitions, music recitals and drama events.

*Discussion Groups:* Throughout the State almost 60 groups of 10 to 15 people meet once a month to study and discuss books of educational value and other material. This is a joint service given by the State Library of Tasmania and the Division of Further Education. Discussion groups involved 700 suburban and isolated country people in 1979.

*Residential College:* 'The Grange' Residential College at Campbell Town, with accommodation for 30 students, has been leased from the National Trust since 1964. It is an old colonial country home built in 1848. It is one of only two adult education residential colleges in the country and is recognised by educationists as an institution of unusual worth. A few of the many activities conducted there in 1979 were self-enhancement, short story writing, choral singing, ancient civilizations and public relations.

## TERTIARY 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 students with about half accommodated in single study-bedrooms and the remainder in double rooms. Female students were admitted for the first time in mid-1978. 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.

#### *Finance*

From 1974 the Federal Government assumed full responsibility for tertiary education and in 1977 it provided \$16.2m 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:



**University Income and Expenditure (a), Tasmania**  
(\$'000)

Particulars	1974	1975	1976	1977
<b>INCOME</b>				
Recurrent purposes—				
Federal Government .....	9 427	13 107	14 892	16 213
Other .....	413	494	318	677
Total .....	9 840	13 601	15 210	16 890
Equipment grants—				
Federal Government .....	265	702	475	513
State Government .....	—	—	1	16
Total .....	265	702	476	529
Other purposes—				
Halls of residence .....	160	191	209	216
Prizes, scholarships and benefactions .....	83	99	105	125
Research grants .....	464	470	546	492
Other .....	49	46	63	53
Total .....	756	806	923	886
Total income .....	10 861	15 109	16 609	18 305
<b>EXPENDITURE</b>				
Recurrent purposes—				
Academic activities (incl. research) .....	6 605	8 880	9 801	10 992
Academic services .....	1 018	1 377	1 543	1 773
Student and staff services .....	131	222	290	288
General university services .....	2 293	2 981	3 224	3 660
Other .....	16	74	113	24
Total .....	10 063	13 534	14 971	16 737
Equipment grants—				
Academic activities (incl. research) .....	204	168	79	247
Academic services .....	619	175	130	329
General university services .....	91	17	36	26
Total .....	914	360	245	602
Other purposes—				
Halls of residence .....	195	231	247	241
Prizes, scholarships and benefactions .....	41	49	272	94
Research grants .....	434	530	419	524
Other .....	—	—	23	1
Total .....	670	810	961	860
Total expenditure .....	11 647	14 704	16 177	18 199

(a) Excludes receipts for capital purposes and capital expenditure.

#### *Government of the University*

The governing body of the University is the Council, comprising the Chancellor, the Vice-Chancellor and nineteen members, seventeen of whom are elected or appointed and two, the Director-General of Education and the 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.

The following table shows the number of teaching staff and students:

University Academic Staff (Full-time) and Students Enrolled, Tasmania, at 30 April

Particulars	1973	1974	1975	1976	1977	1978
Academic staff—						
Professors .....	32	33	33	6135	38	38
Other .....	219	238	247	255	260	270
Total academic staff .....	251	271	280	290	298	308
Individual students enrolled .....	3 263	3 414	3 399	3 539	3 525	3 517

### Staff and Students

The next table shows student enrolments by course:

University Enrolments, Tasmania, 1978

Course	Students enrolled			
	New enrolments 1978 (a)	Total enrolments at 30 April		
		Males	Females	Total
Master and Doctor degrees .....	68	203	49	252
Bachelor degrees—				
Agricultural Science .....	12	32	13	45
Arts .....	373	504	554	1 058
Commerce .....	84	150	21	171
Economics .....	40	96	17	113
Education .....	44	47	112	159
Special Education .....	6	1	10	11
Engineering .....	40	154	2	156
Surveying (b) .....	50	50	—	50
Law (c) .....	60	111	47	158
Medicine (d) .....	53	194	82	276
Pharmacy (b) .....	66	35	31	66
Science .....	170	372	159	531
Combined B.A./LL.B. ....	56	64	24	88
Combined B.Ec./LL.B. ....	12	27	1	28
Combined B.Com./LL.B. ....	17	14	3	17
Combined B.Sc./LL.B. ....	3	3	—	3
Total .....	1 086	1 854	1 076	2 930
Non-degree courses—				
Education .....	183	102	108	210
Other (e) .....	97	77	48	125
Total .....	280	179	156	335
Total all courses .....	1 434	2 236	1 281	3 517

(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 1978, or transferred from one faculty to another.

(b) Bachelor of Surveying and Bachelor of Pharmacy introduced in 1978.

(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' 14 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.

## Degrees Conferred

The following table shows degrees conferred:

## University of Tasmania: Degrees Conferred (a) During Year Ended 30 June

Degree		1973	1974	1975	1976	1977	1978
HIGHER DEGREES							
Higher Doctor .....	Males	3	1	2	—	—	2
	Females	—	—	—	—	—	—
Doctor of Philosophy .....	Males	11	14	7	r 14	7	14
	Females	2	1	4	r 3	1	4
Master .....	Males	8	11	8	r 10	r 14	10
	Females	1	2	1	—	r 3	5
BACHELOR DEGREES (b)							
Agricultural Science .....	Males	9	13	10	8	7	7
	Females	4	5	5	1	3	1
Arts .....	Males	109	120	96	91	r 90	r 93
	Females	149	169	127	r 131	r 121	r 130
Commerce .....	Males	—	—	—	—	—	8
	Females	—	—	—	—	—	—
Economics .....	Males	60	67	58	55	53	33
	Females	7	5	18	5	10	6
Education .....	Males	—	—	—	—	—	4
	Females	—	—	—	—	—	8
Engineering .....	Males	36	34	27	38	22	29
	Females	—	1	—	1	—	—
Law .....	Males	34	29	17	29	r 22	r 25
	Females	5	7	4	7	r 7	8
Medical Science .....	Males	21	14	38	25	22	37
	Females	8	11	5	15	r 13	7
Medicine/Surgery .....	Males	16	12	15	19	13	r 35
	Females	5	10	5	7	r 11	r 3
Science .....	Males	83	101	96	r 97	r 90	104
	Females	29	35	38	r 36	35	33
Total bachelor degrees .....	Males	368	390	357	r 362	r 319	r 375
	Females	207	243	202	203	r 200	r 196
	Persons	575	633	559	r 565	r 519	r 571

(a) Excludes honorary degrees.

(b) Includes bachelor degrees with honours.

## Advanced Education in Tasmania

## Concept

Education at tertiary level has been available at universities for many years but there have also been professional courses provided by other institutions; in Tasmania technical colleges have provided courses of this type in addition to playing their main role in providing apprentice training, trade courses, etc. The development of colleges of advanced education in Australia did not represent a radical innovation but rather a rationalisation and re-organisation of tertiary education courses.

In general terms, colleges of advanced education are now 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 Campus 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 the Divisions of Business and Administrative Studies, Science and Technology, Teacher Education and Education Services, the Schools of Art, General Studies and Environmental Design, and the Conservatorium of Music.

A Committee on Post-Secondary Education, appointed jointly by the Federal and State Governments in April 1975, recommended major changes in the structure of the Tasmanian College of Advanced Education. The proposals were for 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. Implementation of this restructuring is now well advanced.

#### Students and Courses

The next table shows total enrolments for a three-year period:

College of Advanced Education: Enrolments, Tasmania  
(number)

Description	1976			1977			1978		
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons
Full-time . . . . .	768	1 056	1 824	747	1 089	1 836	712	1 143	1 855
Part-time . . . . .	609	209	818	494	256	750	618	323	941
Total . . . . .	1 377	1 265	2 642	1 241	1 345	2 586	1 330	1 466	2 796

Awards are made at four levels: bachelor degree, diploma, graduate diploma and master's degree. The following table shows the number of students enrolled by course in 1978:

College of Advanced Education: Enrolments by Course, Tasmania, 1978  
(Number)

Course	Full-time		Part-time		Total	
	Males	Females	Males	Females	Males	Females
Applied chemistry . . . . .	5	1	23	1	28	2
Applied science . . . . .	1	-	12	-	13	-
Art . . . . .	-	-	2	2	2	2
Art and craft . . . . .	24	19	14	21	38	40
Visual arts . . . . .	59	70	1	-	60	70
Architecture . . . . .	1	-	18	1	19	1
Building operations . . . . .	-	-	1	-	1	-
Environmental design . . . . .	61	19	5	-	66	19
Landscape planning . . . . .	-	-	4	-	4	-
Urban planning . . . . .	-	-	18	3	18	3
Accounting . . . . .	47	10	147	15	194	25
Business administration . . . . .	3	1	49	5	52	6
Management . . . . .	2	-	66	7	68	7
Legal practice . . . . .	25	7	-	-	25	7
Public administration . . . . .	2	-	28	-	30	-
Valuation (a) . . . . .	9	-	1	-	10	-
Civil engineering . . . . .	5	-	11	-	16	-
Electrical power engineering . . . . .	4	-	6	-	10	-

**College of Advanced Education: Enrolments by Course, Tasmania, 1978—continued**  
(Number)

Course	Full-time		Part-time		Total	
	Males	Females	Males	Females	Males	Females
Electronic engineering . . . . .	8	1	9	—	17	1
Engineering (unspecified) (b) . . . . .	—	—	1	—	1	—
Mechanical engineering . . . . .	10	—	5	—	15	—
General studies . . . . .	5	7	37	65	42	72
Librarianship . . . . .	7	34	3	6	10	40
Social work . . . . .	41	77	6	14	47	91
Music . . . . .	30	24	7	13	37	37
Medical technology . . . . .	21	13	16	18	37	31
Pharmacy . . . . .	1	—	—	—	1	—
Teacher education . . . . .	169	657	123	137	292	794
Other education . . . . .	172	203	5	15	177	218
<b>Total students . . . . .</b>	<b>712</b>	<b>1 143</b>	<b>618</b>	<b>323</b>	<b>1 330</b>	<b>1 466</b>

(a) A two-year course leading to a diploma is offered. The second year must be completed either by correspondence with, or attendance at, the Royal Melbourne Institute of Technology.

(b) Students specialise in civil, electrical, mechanical or electronic engineering after completion of the first year common course.

### Teaching Staff

The next table shows teaching staff by full-time or part-time status:

**College of Advanced Education: Teaching Staff (a), Tasmania**

Description	1973	1974	1975	1976	1977	1978
Full-time . . . . .	167	184	203	205	201	210
Part-time . . . . .	28	43	44	17	18	38
<b>Total . . . . .</b>	<b>195</b>	<b>227</b>	<b>247</b>	<b>222</b>	<b>219</b>	<b>248</b>

(a) Teaching effort expressed as full-time equivalent units.

### 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.

## 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 is composed of the Department of Education, the Tertiary Education Commission (assisted by the Universities Council, the Advanced Education Council and the Technical and Further Education Council), the Schools Commission, the Curriculum Development Centre, the Commonwealth Teaching Service and the Australian Capital Territory Schools Authority. 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 also responsible for the production of language teaching materials, provides advice on Aboriginal education and provides 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.

#### *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	1973	1974	1975	1976	1977	1978
Tertiary education assistance .....	-	1 460	1 668	1 770	1 773	1 797
University .....	920	-	-	-	-	-
Advanced education .....	359	-	-	-	-	-
Technical .....	108	29	12	2	-	-
Secondary .....	274	2	-	-	-	-
Adult secondary .....	-	-	37	39	64	56
Senior secondary .....	739	1 341	670	2	-	-
Secondary allowances .....	-	164	200	260	298	377
Post-graduate .....	52	50	54	54	51	44
Aboriginal secondary .....	140	241	313	316	300	300
Aboriginal study .....	7	16	11	15	12	22
Isolated children .....	805	603	806	731	688	625
Other .....	55	37	23	9	-	-
Total .....	3 459	3 943	3 794	3 198	3 186	3 221

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 1979 included an allowance, subject to a means test, of up to \$1 250 per year for a dependent student (i.e. those under 25 and unmarried) living with his parents; up to \$2 075 per year for a dependent student living away from home; and up to \$2 348 per annum for an independent student. Dependent students received an additional \$5.25 per week representing a transfer of the average family allowance payment to the student. Dependants' allowances of \$31.40 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 1979: 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 students, aged 19 years or more on January 1 of the year of study, who have had a break from secondary studies and who have returned to undertake final year secondary or matriculation studies full-time at secondary schools, technical colleges and other approved institutions. Benefits payable are the same as those provided under the Tertiary Education Assistance Scheme.

**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 1979 an allowance of up to \$550 per year 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 1979, 18 new awards were made available. Selection is made on the basis of ranking by each institution and in the case of Course Awards and Advanced Education Institution 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 1979 award holders received a living allowance of \$4 200 per year. Provision is also made for assistance with travel, establishment and thesis costs and married award holders may qualify for an allowance in respect of dependants (spouse and children). Allowances are taxable.

**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 Aboriginals to undertake training and study after leaving school and provide the full-time student with fees and a living allowance. In 1979 married students or students 18 and over received \$57.27 per week, while unmarried students under 18 received \$47.25 per week. Dependent students received an additional \$5.25 per week representing a transfer of the average family allowance

payment to the student. Other special allowances were also payable, including some benefits to part-time students. 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 1979, was \$308 per year 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 access to schooling in the appropriate grade or year. In 1979, a boarding allowance of up to \$1 550 per child per year was payable in respect of children living away from home to attend school. Where a family, in preference to boarding their children away from home, sets up a second home to enable the children to attend school on a daily basis, a second home allowance of between \$500 and \$1 275 per year is paid, depending on the number of children involved. For children who studied by correspondence, an allowance of up to \$500 per child per year was payable.

*Commonwealth Teaching Service Scholarship Scheme:* This scheme provided 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. In August 1978, the Government announced its decision to phase out the scheme and no new awards were granted in 1979.

#### **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 Immigration and Ethnic Affairs 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 1978-79 financial year the direct expenditure by the Federal Government on the program in Tasmania was \$105 860. During 1978-79, 29 continuation classes operated in Tasmania for 400 students. A further 52 students were enrolled in the correspondence course, 73 students attended full-time accelerated courses and 96 migrants, mainly women, received one-to-one instruction in their homes under the home tutor scheme during the year.

#### **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 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 includes day-care centres, family day-care programs, play-groups, after school and holiday care programs, occasional care, emergency care and family support services with the priority on high need groups in the community. 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) Make recommendations on 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, Tasmania, 1979  
(\$)

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	154	229	4	230	351
2	192	290	5	269	412
3	192	305	6	322	479

#### *State Innovations Committees*

State and Territory Innovations Committees were appointed for the calendar year 1979 by the Minister, each having eight 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 1979*

The following table shows the grants allocated for the 1979 programs:

## Education and Cultural Activities

Schools Commission: Financial Allocations for 1979 (a)  
(\$'000)

Program	Total allocation for Australia	Allocation for Tasmania		
		Government schools	Non-Government schools	Total
<b>GOVERNMENT AND NON-GOVERNMENT SCHOOL PROGRAMS</b>				
Recurrent grants—				
General .....	402 444	5 879	(b) 4 905	10 784
Special assistance .....	574	—	—	—
Migrant .....	28 290	361	14	375
Disadvantaged schools .....	20 710	374	57	430
Special education .....	14 888	422	—	422
Total .....	466 906	7 035	4 975	12 010
Capital grants .....	164 836	4 224	645	4 869
Total .....	631 742	11 259	5 620	16 879
<b>JOINT GOVERNMENT-NON-GOVERNMENT SCHOOL PROGRAMS</b>				
Recurrent grants .....	26 791	n.a.	n.a.	776
Total .....	26 791	n.a.	n.a.	776
<b>ALL PROGRAMS</b>				
Total .....	658 533	n.a.	n.a.	17 655

(a) At June 1978 price levels.

(b) Estimate only.

The Commission operated eight programs during 1979. The programs and Tasmania's share of the funds are summarised below:

*General Recurrent Grants Program:* In Tasmania, government schools were allocated \$5.9 million and non-government schools an estimated \$4.9 million in 1979. Grants under this program are allocated to cover staffing and other running costs, including teaching materials and property maintenance.

*Migrant Education Program:* In 1979, \$28.3 million was allocated nationally to meet the special need of students whose first language is not English and support changes in schools which give recognition to other languages and cultures. Government schools were allocated \$361 000 and non-government schools \$14 000 in Tasmania.

*Multicultural Education Program:* The recent 'Galbally Report' recommended that an additional \$5.0 million be provided over 3 years to support activities related to multicultural education in schools. In 1979, \$514 000 was allocated nationally to foster the teaching of community languages in schools as the first stage in a wide-ranging adaptation of schools to Australia's changing ethnic composition. Tasmania's allocation was \$15 500 to be used jointly on projects in both government and non-government schools.

*Disadvantaged Schools Program:* \$20.7 million was allocated nationally in 1979 to provide additional help to schools declared as disadvantaged due to such factors as socio-economic background, ethnic origin or geographic location. Tasmania's allocation was \$430 000 comprising \$373 500 for government schools and \$56 500 for non-government schools. An additional \$4.8 million was allocated nationally for disadvantaged country areas, Tasmania's allocation was \$271 500.

*Services and Development Program:* For 1979, \$14.8 million was allocated nationally for teacher development, support services and staff replacement. In addition \$103 000 was allocated for the schools travel and exchange scheme and \$14 million for education centres. Tasmania was allocated \$449 000 for teacher development and associated activities.

*Special Education Program:* \$14.9 million was allocated nationally in 1979 to improve the quality and coverage of educational services for handicapped children. Tasmania was allocated \$422 000 for use in government special schools and education units. An additional \$1.3 million was allocated nationally to help residential institutions with projects that support school education and provide opportunities for a broad program of experience outside the institution. Tasmania's allocation was \$41 000.

*Special Projects (Innovations) Program:* \$3.9 million was allocated nationally in 1979 in response to initiatives by those concerned with creative change in primary and secondary education. Offers of grants are made to individual applicants on merit. Funds from the program are also allocated to support a broad range of activities which are considered to be projects of national significance. A new initiative for 1979 was a small grants scheme involving projects costing up to \$1 000.

*Capital Grants Program:* In 1979, \$164.8 million was allocated nationally for building and equipment projects including refurbishing and upgrading in both government and non-government schools. In Tasmania, government schools were allocated \$4.2 million and non-government schools \$645 500 under this program in 1979.

### 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 (TAFE) 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.

*Technical and Further Education:* The Federal Government first became involved in the provision of grants for technical and further education (TAFE) in 1964, when a scheme of unmatched capital grants to the States was introduced. 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 have been provided under the *States Grants (Technical and Further Education) Act 1974*, the *States Grants (Technical and Further Education Assistance) Act, 1976* and the *States Grants (Tertiary Education Assistance) Act 1977*. Under this last Act, for calendar year 1979, Tasmania was allocated grants (at December 1978 prices) of \$2 million for TAFE capital purposes and \$1.8 million for TAFE recurrent purposes.

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	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
University—						
Recurrent .....	6 415	12 274	13 659	(a) 16 427	18 057	18 864
Capital .....	694	1 279	2 589	573	456	790
Advanced Education—						
Recurrent .....	3 960	6 888	7 011	8 678	9 361	9 436
Capital (b) .....	292	2 969	5 313	404	1 493	3 221
TAFE—						
Recurrent .....	117	426	1 087	969	1 110	1 673
Capital (b) .....	690	471	887	1 665	1 970	394

(a) As from 1 July 1976, equipment grants for universities have been included in recurrent grants.

(b) Includes grants for equipment.

## CULTURAL ACTIVITIES

### 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 large collection of 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.

**Performing Arts Collection:** The collection contains over 5 700 films and approximately 94 500 records and 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 opened in January 1979.

The Hellyer Regional Library System serves 61 000 people in the north-west and west coast from a modern central building in 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 and architectural planning has commenced.

The Northern Regional Library System serves 110 000 people from a modern central library in 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 books held throughout these regions and in the State Headquarters:

Public Libraries: Tasmania, 30 June 1979

Regional system	Buildings			Book-mobiles	Books held ('000)
	Central Library	Branch Library	Depots(a)		
State Library Headquarters .....	1	-	-	3	516.8
Channel Region .....	-	6	-	-	48.9
Derwent Region .....	1	15	1	-	90.6
Hellyer Region .....	1	14	-	1	165.6
Mersey Region .....	-	6	1	-	55.0
Northern Region .....	1	22	9	3	232.9
Tasman Region .....	-	9	1	-	83.7
Total .....	4	72	12	7	1 193.8

(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:

State Library Department Expenditure, Tasmania (\$'000)

Particulars	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
Salaries and pay-roll tax .....	957	1 703	2 105	2 599	3 067	3 540
Purchase of books, etc. ....	390	588	665	790	910	893
Other .....	273	471	1 067	725	893	1 211
Total expenditure .....	1 620	2 762	3 837	4 114	4 870	5 644

### School and College Libraries

The Library Services Branch of the Education Department of Tasmania is also housed in the State Library building. This Branch, previously known as the Education 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.

The Branch 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.

Libraries under the control of professional teacher-librarians have been established in 138 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.

### Tasmanian Museum and Art Gallery

#### History

The Tasmanian Museum and Art Gallery has its origins in early scientific groups formed in Hobart Town in the 1820s and 1830s. In 1853 the Royal Society of Tasmania established a museum which was later vested in a Board of Trustees in 1885. The first building on the present site, on the corner of Argyle and Macquarie Streets, was designed by the city's best-known colonial architect, Henry Hunter (1832-1892), and completed in 1863. Later additions were made in 1889, 1901, 1966 and 1979. The income of the Museum is provided mainly by an annual grant from the State Government.

#### Activities

The Tasmanian Museum and Art Gallery houses collections in the fields of fine and applied art, zoology, geology, botany, history, anthropology and applied science. It is an integrated institution concerned with the whole range of natural and human heritage with particular emphasis on Tasmanian exhibits.

The Museum's traditional function, and still the major part of its operation today, is to collect, conserve, study and display items of cultural or scientific value to the community. It now performs a wide variety of additional roles, which include a continuing program of travelling exhibitions and a school education service which utilise the *Musbus*, a van, specially equipped for transporting museum displays.

Curators, in addition to working on collections and research on related subjects, handle public inquiries which touch on their fields. Display staff are responsible for installing museum displays, publicity and museum publications. The Museum also runs workshops on art conservation and taxidermy. The Tasmanian Herbarium, currently housed in the Botany Department of the University of Tasmania, is part of the Museum.

#### Collections

**Art:** The Gallery has a comprehensive collection of Australian paintings, drawings, prints and some sculptures from the early nineteenth century to the present day. The collection places particular emphasis on Tasmanian art of the colonial period, with large groups of paintings by Glover, Duterrau, Bull, Gould, Skinner, Prout and others. There are also some important European paintings, prints and sculptures of the nineteenth and early twentieth centuries, including works by Beechey, Bouguereau, Poynter, Rodin and Epstein. The collection of eighteenth and nineteenth century English watercolours is one of the largest in Australia. The Gallery also collects nineteenth and twentieth century international prints and recent international photographs.

The applied arts collection includes nineteenth century European and Australian costumes, silver, china and glass and a collection of contemporary Australian ceramics and works in metals and fibres. Asian material includes a collection of jade carvings and Japanese netsuke.

**History:** The presentation of Colonial history is highlighted by articles such as Andrew Bent's press of c.1825 and Lady Franklin's sedan chair (c.1840), and by a comprehensive maritime (including whaling) collection. A photograph collection covers the period from the mid-1950s to the present day. Coins and medals, including a collection of Greek, Roman and early British coins, and early time-pieces are other notable historical collections.

**Anthropology:** Tasmanian Aboriginal culture is represented by tools and artifacts, and stone carvings from Mount Cameron West in north-western Tasmania. There is a Melanesian collection assembled earlier this century, and representative Australian material.

**Zoology:** Present displays of vertebrate animals feature Tasmania's land mammals and birds, together with reptiles and marine life. Tasmanian invertebrates on show include insects, spiders, crabs, mollusc shells and sea stars. An extensive reference collection of Tasmanian animals is maintained for scientific study. The Museum safeguards many type specimens (original examples on which classification of new species have been based).

**Geology:** Rocks, minerals and fossils of predominantly Tasmanian origin are on display. Notable exhibits include the skeletons of *Wynyardia*, the 20-million-year-old marsupial from Wynyard, and *Zygomaturus*, a giant marsupial, the Chidley Mineral Collection and the world-famous mineral crocoite from Tasmania's west coast. The reference collection houses rocks and minerals, including the Petterd Mineral Collection, and fossils, which include many type specimens, mostly from Tasmania.

**Botany:** The Herbarium is at present housed at the University of Tasmania. It includes specimens collected early in Tasmania's history by R. C. Gunn, many of which are type specimens. Other early collectors represented include Archer, Meredith, Milligan, Stuart and Spicer. The Herbarium's current holdings number about 90 000 specimens of Tasmanian plants.

### Queen Victoria Museum and Art Gallery

The Queen Victoria Museum and Art Gallery was established by the Tasmanian Government in 1891. Since 1895 it has been vested in the Launceston Corporation and has received an annual State Government grant. It serves the northern half of Tasmania and its 14 public galleries contain collections and exhibits of special relevance to the natural and cultural environment of Tasmania. Educational, research and information services are provided. The Museum is regularly patronised by local, interstate and overseas researchers and sightseers. In 1978, it had 62 000 visitors.

The Museum operates a Zeiss Medium-type Planetarium seating 66 people in a comfortable, air-conditioned auditorium beneath a celestial dome eight metres in diameter. Various sessions are conducted for the general public and for school groups. It has its own air-conditioned theatre seating 166 people and a reference library of scientific and historical books and journals. The arms and armour collection is one of the finest in Australia and there are also extensive collections of Tasmanian animals, plants, artifacts, geological specimens, historical material and art works.

The education office of the Queen Victoria Museum and Art Gallery provides a service to schools throughout northern Tasmania, loaning a wide range of items for teaching aids and assisting with teaching programs in the public galleries. In 1979, with the assistance of the Australian National Railways Commission, a rail car was fitted out to display Museum materials and this will be stationed for short periods at various towns serviced by rail in northern Tasmania. Though primarily designed as a teaching aid for district schools, it will also open to the general public.

In addition to the Director there are five curatorial staff and fourteen other staff members. Research is undertaken both in the field and in the institution. The results of such programs are regularly published in the Museum's own journal, *Records of the Queen Victoria Museum*, and other research publications.

### The Performing Arts

The organisation and presentation of the performing arts in Tasmania has been subject to a process of continual change. During the early 1970s, four performing arts companies were set up and subsequently funded by both Federal and State Governments. They were the Tasmanian Theatre Company, Tasmanian Opera Company, Tasmanian Ballet Company and Tasmanian Puppet Theatre. However, by 1976 it was apparent that the maintenance of full-time drama, opera and dance companies in Tasmania was not feasible considering the subsidies available and the population of the island.

In 1977, the Tasmanian Theatre Company adopted an entrepreneurial role by promoting tours of Tasmania by other theatrical companies from Australia and overseas. In 1978, following the termination of the Tasmanian Opera Company and the discontinuance of Federal Government grants to the Tasmanian Ballet Company, the Tasmanian Theatre Company widened its theatrical interests, to include music and dance in its presentations. In 1979, following an initiative from the Minister for the Arts, the Tasmanian Theatre Company co-ordinated and promoted a full 12-month program of drama, opera and dance in Tasmania.

The Tasmanian Ballet Company currently presents a program mainly for schools in Tasmania and Victoria. The Tasmanian Puppet Theatre tours extensively and has had considerable success throughout Australia. In 1978 the Company toured Indonesia and, in

1979, Japan. In 1976 the Tasmanian Theatre Company's youth activities became a separate identity and now operates as the Salamanca Theatre Company, presenting a theatre-in-education program throughout the State. The Tasmanian Arts Council is an entrepreneurial body mainly involved in operating a touring program to schools and decentralised areas.

#### Music

The Australian Broadcasting Commission maintains the Tasmanian Symphony Orchestra which is resident at the Odean Theatre, Hobart, the only concert venue owned by the ABC in Australia. The Tasmanian Symphony Orchestra presents concert series for adult and youth audiences, special performances for schools and accompanies visiting professional opera companies. In 1979 the Orchestra accompanied the Australian Ballet in performances in Greece and Israel.

Musica Viva presents a comprehensive chamber music program at the University Centre, Hobart and a smaller program in the north and north-west of the State.

Professional training is offered at the Conservatorium of Music. Artists in residence at the Conservatorium form the Petra String Quartet which tours Tasmania and the mainland encompassing the school, college, conservatorium and university circuits.

#### Funding Bodies

Funds are made available to performing arts organisations through the Theatre, Music and Community Arts Boards of the Australia Council and through the Tasmanian Arts Advisory Board. The Tasmanian Arts Advisory Board consists of up to 12 members and a Chairman appointed by the Tasmanian Minister for the Arts.

#### Theatres

*Theatre Royal, Hobart:* This theatre, which opened in 1837, is the oldest theatre in Australia. There are three levels of audience seating: stalls, dress circle with two boxes and upper circle, with a total capacity of 703. Finance available from Federal and State Governments over the last eight years has enabled extensive maintenance to be done and backstage additions, including new dressing rooms, office facilities and a new heating system, have been commenced. The Theatre Royal is managed by the Theatre Royal Board which is appointed by the Tasmanian Government.

*Princess Theatre, Launceston:* This is the largest theatre in Tasmania, seating 1 072 on two levels—stalls and dress circle. It was built for live theatre in 1911, and was also used extensively as a cinema for many years. In 1970 it was purchased by the Launceston City Council and renovated as a live theatre with modern dressing rooms and facilities. Extensions and alterations since then include the installation of a full counterweight system and interior decoration. The Princess Theatre is managed by the Launceston City Council.

*Civic Centre, Burnie:* This is a new complex built by the Burnie Council and completed in 1976. It features an art gallery and a theatre. The auditorium of the Civic Theatre seats 418 on one level.

#### Further References

##### ABS Publication Produced by the Tasmanian Office

Education, Tasmania (4201-6) (annual, 1978 released 8-10-79, 29 pp.)

##### ABS Publications Produced by the Canberra Office

School Enrolments (Preliminary) (4201-0) (annual, 1978 released 16-1-79, 4 pp.)

Schools (4202-0) (annual, 1978 released 3-7-79, 33 pp.)

Colleges of Advanced Education (Preliminary) (4205-0) (annual, 1978 released 7-11-78, 8 pp.)

Colleges of Advanced Education (4206-0) (annual, 1978 released 9-7-79, 48 pp.)

University Statistics, Australia (Preliminary) (4207-0) (annual, 1979 released 25-9-79, 7 pp.)

University Statistics, Part I: Students (4208-0) (annual, 1978 released 31-10-79, 46 pp.)

University Statistics, Part 2: Staff and Libraries (4209-0) (annual, 1978 released 6-8-79, 23 pp.)

Expenditure on Education, Australia (5510-0) (annual, 1976-77 released 11-10-78, 18 pp.)

##### Other Publications

Annual Reports of the Education Department, Tasmania (Government Printer, Hobart)



## 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, Tasmania**  
(\$'000)

Benefit or service	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
Age and invalid pensions (a) . . . . .	r 43 032	60 118	77 976	91 788	107 203	117 678
Widows' pensions . . . . .	6 582	8 521	11 221	r 12 455	14 660	16 621
Supporting parent's benefit (b) . . . . .	1 385	2 819	4 742	5 578	r 6 573	7 494
Maternity allowances . . . . .	230	229	215	215	213	(c) 91
Family allowances (d) . . . . .	7 212	r 7 099	r 8 266	31 197	30 968	(e) 28 924
Handicapped child's allowance . . . . .	-	45	197	345	385	407
Double orphans' pension . . . . .	17	43	43	66	52	54
Unemployment benefits . . . . .	3 125	7 746	15 526	17 963	23 398	28 609
Sickness benefits . . . . .	1 247	1 692	2 409	2 380	2 385	2 024
Special benefit . . . . .	224	421	811	979	804	1 299
Rehabilitation services (f) . . . . .	r 191	r 386	440	r 526	461	519
Sheltered employment allow- ances . . . . .	-	41	269	474	637	745
Funeral benefit . . . . .	44	44	41	43	43	39
Total . . . . .	r 63 289	r 89 207	r 122 157	r 164 011	r 187 782	204 507

(a) Includes wives' pensions.

(b) Prior to November 1977, benefit was payable to supporting mothers only.

(c) Payments in respect of births occurring prior to 1 November 1978.

(d) Family allowances replaced child endowment and student endowment from July 1976.

(e) Payments effected by change in eligibility of students receiving payments from Commonwealth education schemes and rescheduling of payment dates associated with the change from four weekly to monthly payments.

(f) Payments for 1973-74 and 1974-75 include payments in respect of the Training Scheme for widow pensioners of \$28 033 and \$16 330 respectively.

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 or Disabled Persons Homes Act 1954*, the *Handicapped Persons Assistance Act 1974*, and the *Homeless Persons Assistance Act 1974*.

### Pensions and Benefits

Social Security benefit rates which applied as the result of recent legislation are set out in the next table:

**Social Security Benefits, 1977 and 1978: Maximum Rates, Tasmania**  
(\$ Per Week Unless Noted as Lump Sum Payments)

Benefit	1977	1978	
	Amending legislation (November)	Amending legislation (May)	Amending legislation (November)
Age and invalid pensions and sheltered employment allowances—			
Single person (a) .....	49.30	51.45	53.20
Married couple (both eligible and living together), each .....	41.10	42.90	44.35
Married couple (both eligible but living apart through ill health or one eligible), each (a) .....	49.30	51.45	53.20
Wife (if not a pensioner) .....	41.10	42.90	44.35
First and each subsequent child under 16 years (b) .....	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
Other cases .....	4.00	4.00	4.00
Maternity allowances (c)—			
No other children .....	30.00	30.00	(c)
One or two other children .....	32.00	32.00	(c)
Three or more other children .....	35.00	35.00	(c)
Multiple births, additional payment for each additional child .....	10.00	10.00	(c)
Family allowances (d)—			
One child .....	3.50	3.50	3.50
Two children .....	8.50	8.50	8.50
Three children .....	14.50	14.50	14.50
Four children .....	20.50	20.50	20.50
More than four children .....	(e)	(e)	(e)
Orphan's pension .....	11.00	11.00	11.00
Handicapped child's allowance .....	15.00	15.00	15.00
Supporting parent's benefit .....	49.30	51.45	53.20
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 .....	55.30	57.45	59.00
Other cases .....	53.30	55.45	57.20
First and each subsequent child under 16 years (b) .....	7.50	7.50	7.50
Class B, widows aged 50 years or more (f) .....	49.30	51.45	53.20
Class C, widows under 50 years of age in necessitous circumstances .....	49.30	51.45	53.20
Funeral benefit (g) .....	40.00	40.00	40.00
Unemployment and sickness benefits (h)—			
Single person (Under 18 years) .....	36.00	36.00	36.00
Single person (18 years and over; no dependants) .....	} 49.30	51.45	{ 51.45
Single person (18 years and over; at least one dependant) .....			
Married couple .....	82.20	85.80	88.70
First and each subsequent child under 16 years .....	7.50	7.50	7.50

(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 aged 16 to 24 years and dependent on the pensioner.

(c) Single, lump sum payment; abolished in August 1978 Budget for births occurring after 31 October 1978.

(d) Child under 16 years or student under 25 years. Payable at monthly rates from June 1979.

(e) \$88.90 plus \$30.35 per month for each subsequent child or student.

- (f) Class B Widows' pensions may also be payable to certain widows between 45 and 50 years of age.
- (g) Single, lump sum payment. If the person liable for the funeral costs is not a pensioner themselves, the funeral benefit will be \$20.
- (h) A supplementary allowance at a maximum rate of \$5 a week is payable to recipients of sickness benefit subject to the payment of rent and to an income test.

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 Federal Treasurer outlines social security proposals in his budget and these are implemented in later Acts. In the 1979-80 Budget the Government announced its decision to restore twice yearly automatic indexation to indexed pensions and benefits from November 1979.

#### *Income Test*

In November 1976, the income and property means test for persons under 70 years of age 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 parent'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 (to the extent of at least 85 per cent) or are permanently blind. Sheltered employment allowance is paid as an alternative to the invalid pension to invalids who take work in approved sheltered employment. Additional allowances are payable for dependants under certain conditions.

Under the income test, the maximum rate of pension is reduced by \$1 for every \$2 by which income as assessed exceeds the 'free' areas of \$20 per week for a single person and \$34.50 for a married couple.

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. From August 1978, the income test has been re-introduced for all pensions except in cases of persons who are permanently blind. However, the income test was not to apply to persons aged over 70 in respect of the level of pension received in August 1978 but pension increases for such persons are subject to the income test.

Subsidised medical service and medicine are provided for pensioners and their dependants 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.

#### *Wives' Pensions*

Where the wife of an age or invalid pensioner is not qualified for an age or invalid pension in her own right, and she is not a service pensioner, she may receive a wife's pension.

#### *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 parents' benefits; and the amounts paid out in pensions and allowances:

## Age, Invalid and Widow Pensioners and Supporting Parents' Benefits, Tasmania

Particulars	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
Age and invalid pensions—						
Number of age pensioners (a)—						
Males .....	10 304	11 225	11 700	12 114	(b) r 12 792	13 122
Females .....	21 600	23 044	23 894	24 840	(b) r 25 412	25 763
Persons .....	31 904	34 269	35 594	36 954	(b) r 38 204	38 885
Number of invalid pensioners (a)—						
Males .....	3 028	3 341	3 918	4 401	(b) r 4 162	4 365
Females .....	2 059	2 119	2 173	2 211	(b) r 2 043	2 052
Persons .....	5 087	5 460	6 091	6 612	(b) r 6 205	6 427
Number of wife pensioners (a)—	n.a.	1 806	2 054	2 360	2 547	2 641
Amount of pensions paid .....	\$'000 35 804	60 118	77 976	91 788	107 203	117 678
Widows' pensions—						
Number (a) .....	3 932	4 103	4 209	r 4 572	r 5 001	5 229
Amount paid .....	\$'000 6 582	8 521	11 221	12 455	14 660	16 621
Supporting parent's benefit—						
Number (a) .....	936	1 289	1 699	1 778	1 984	2 057
Amount paid .....	\$'000 —	2 819	4 742	5 578	6 404	7 494

(a) At 30 June.

(b) Figures affected by transfer to age pensions of residentially qualified invalid pensioners who had reached age pension age but who were not transferred in previous years.

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 injury 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 parents' 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, Tasmania Beneficiaries and Payments

Particulars		1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
Unemployment benefits—							
Claims granted .....	no.	11 562	22 088	30 930	23 860	27 337	26 294
Persons on benefit—							
At 30 June .....	no.	1 769	4 439	7 228	7 078	9 757	10 420
Weekly average .....	no.	2 089	3 555	6 302	7 161	8 538	10 295
Benefits paid .....	\$'000	3 125	7 746	15 256	17 963	23 398	28 609

**Unemployment, Sickness and Special Benefits, Tasmania**  
Beneficiaries and Payments—*continued*

Particulars	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
<b>Sickness benefits—</b>						
Claims granted .....	no. 3 739	4 144	5 018	4 635	4 284	3 881
Persons on benefit—						
At 30 June .....	no. 604	682	1 064	959	816	731
Weekly average .....	no. 642	632	772	933	887	709
Benefits paid .....	\$'000 1 247	1 692	2 409	2 380	2 385	2 024
<b>Special benefits—</b>						
Claims granted .....	no. 574	800	1 760	1 822	1 792	2 071
Persons on benefit—						
At 30 June .....	no. 172	297	471	469	516	556
Weekly average .....	no. 148	215	359	461	476	525
Benefits paid .....	\$'000 224	421	811	979	804	1 299
<b>Total benefits—</b>						
Claims granted .....	no. 15 875	27 032	37 708	30 317	33 413	32 246
Persons on benefit—						
At 30 June .....	no. 2 545	4 534	8 763	8 506	11 089	11 707
Weekly average .....	no. 2 879	5 286	7 433	8 555	9 901	11 529
Benefits paid .....	\$'000 4 596	9 859	18 476	21 322	26 587	31 933

A special benefit may be granted to a person not qualified for a pension or an unemployment or sickness benefit if, because of age, physical or mental disability, 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 and persons ineligible for age, 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 parents', unemployment, sickness or special benefits is classified as taxable income but the amount received in a full year is usually 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 pensions are exempt from taxation unless the invalid is of age pension age.

#### *Maternity Allowances*

The legislation providing for the grant of maternity allowance was repealed by the Social Services Amendment Act 1978. The Act permitted an allowance to be paid for births which occurred before 1 November 1978.

The following table shows payments made in Tasmania during recent years:

#### **Maternity Allowances, Tasmania**

Particulars	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79 (a)
Claims .....	no. 7 296	7 225	7 210	6 729	6 836	2 769
Amount .....	\$'000 230	229	227	r 212	213	91

(a) Claims paid during 1978-79 in respect of births occurring prior to 1 November 1978.

#### *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 1979 there were 99 orphans for whom pensions were being paid. Total payments in 1978-79 were \$54 000.

#### *Handicapped Child's Allowance*

The handicapped child's allowance is payable to the parent or guardian of a physically or mentally handicapped child who is living in the family home and needs constant, or almost constant, care and attention. At 30 June 1979, allowances were being paid with respect to 545

severely handicapped and 23 substantially handicapped children (117 new allowances were granted during 1978-79) and payments during 1978-79 totalled \$407 000.

### 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. Family allowances are not subject to automatic annual indexation and have remained unchanged since 1 July 1976. 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. During 1978-79, students aged 16 to 24 receiving payments under the Tertiary Education Assistance Scheme and certain other Commonwealth education schemes were excluded from eligibility and the payment cycle was changed from four-weekly to monthly.

The following table shows family allowance statistics for Tasmania for recent years:

**Family Allowances, Tasmania**  
**Child and Student Dependents and Payments**

Particulars	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
Dependent children and students						
(a)—						
Children in endowed families (b) . . . . . no.	126 595	126 461	125 391	(c) 129 054	(c) 127 806	(c) 125 359
Children in approved institutions (b) . . . . . no.	388	399	309	(c) 340	(c) r 292	(c) 244
Students (d) . . . . . no.	5 911	5 894	5 911	—	—	—
Total . . . . . no.	132 894	132 754	131 611	129 394	r 128 098	125 603
Amount paid during year . . \$'000	7 212	7 099	(e) 7 766	31 197	30 968	(f) 28 924

(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) Includes some payments of the increased family allowances.

(f) Payments affected by rescheduling of payments dates resulting from change from four-weekly to monthly payments.

### Commonwealth 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.

Amendments made to the Social Services Act in November 1977 enables assistance to be offered to all handicapped people, within the broad working age group, who would derive substantial benefit from the types of programs the Service offers.

The following table shows the numbers accepted for rehabilitation and placed in employment in Tasmania:

## Operation of the Rehabilitation Service, Tasmania

Particulars	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
Persons—						
Accepted for rehabilitation . . . . . no.	109	131	134	159	169	310
Placed in employment . . . . . no.	47	82	74	101	r 79	70
Expenditure (a) . . . . . \$'000	176	321	440	525	461	519

(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, \$12 100; double unit, \$14 035; 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 1978-79, eight grants were approved under the *Aged or Disabled Persons Homes Act 1954*; the amount granted was \$1 289 449.

*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 1954*, and for whom National Health Benefit is not received. During 1978-79, 21 organisations cared for 551 qualified residents and received subsidies totalling \$411 360.

*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 1978-79, 29 organisations in Tasmania provided approved meal services, and subsidy payments totalled \$85 847.

*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 1978-79 was \$1 599 885.

*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, Tasmania: Expenditure**  
(\$'000)

Particulars	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78
Administration and general .....	762	941	1 525	1 770	2 192	2 540
Relief Division .....	1 043	826	1 008	1 304	1 734	2 187
Child Welfare Division .....	408	477	632	774	830	945
Grants to organisations .....	149	157	174	160	361	496
<b>Total .....</b>	<b>2 363</b>	<b>2 401</b>	<b>3 339</b>	<b>4 008</b>	<b>5 117</b>	<b>6 168</b>

In 1977-78 the major expenses were: under Relief Division, fuel allowances for eligible pensioners, \$304 000 and relief and maintenance, \$1 720 000; under Child Welfare Division, maintenance of boarded-out children, \$418 000 and contributions towards maintenance of children in approved institutions, \$302 000; and under grants to organisations, Tasmanian Institute for Blind and Deaf, \$153 000.

#### *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. (Statistics relating to children appearing before Children's Courts are included in Chapter 16.)

Where, because of illness, a mother is unable to undertake her normal duties, accommodation may be provided for her children at Rochembank Hostel in Hobart, or at other suitable residences throughout the State.

*Adoption of Children:* 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 164 orders for adoption made in 1977-78.

#### *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 1978, there were 1 069 children under State control or supervision. Of these children 348 were under legal supervision of child welfare officers as a result of court-imposed supervision orders and 721 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. From 1 October 1978 these payments were set at from \$18.50 to \$21 per week.

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 55 cents to \$2.20 per week is provided for children in foster homes. Assistance, at the rate of \$22.50 per week from 1 October 1977, is also 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 six years:

**Wards of the State, Tasmania: Location, Admissions and Discharges  
(Number)**

Particulars	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78
Location at 30 June—						
In homes—						
Departmental .....	106	105	94	78	77	58
Other children's homes .....	202	163	179	159	147	138
Foster .....	378	390	390	329	300	284
With parents or relatives .....	155	201	201	232	207	193
In private lodgings .....	61	39	35	27	30	31
Other (a) .....	25	41	37	41	32	17
Total .....	927	939	936	866	793	721
Children made wards during the year—						
By courts—Delinquent .....	66	42	50	40	36	24
Neglected .....	50	76	90	33	24	36
On parents' or guardians' request—						
Neglected (uncontrolled) (b) .....	5	7	1	—	—	—
Deserted, or parents unable to provide (c) .....	45	59	40	31	40	16
Total .....	166	184	181	104	100	76
Children ceasing to be wards during the year—						
Adopted .....	21	28	27	37	25	131
Supervision not needed, age, etc. ....	155	144	157	137	148	15
Total .....	176	172	184	174	173	146

(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, Tasmania: Government Expenditure  
(\$'000)**

Particulars	1971-72	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78
Expenditure on departmental homes	341	384	412	703	760	843	901
Maintenance of children—							
In foster homes .....	178	179	244	325	387	395	418
In non-departmental homes .....	103	120	113	162	213	239	302
Total expenditure .....	622	683	769	1 190	1 360	1 477	1 621

*Departmental Homes:* The State's 13 receiving homes, which provide temporary accommodation for children, are maintained at Hobart, Launceston, Wynyard and Devonport.

Ashley Home for Boys, Deloraine, provides care and training for older wards who, because of maladjustment or delinquency, require 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; Glendel in Deloraine; Glenhaven in Devonport and Ulverstone; 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 dependents; (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 and for all ex-prisoners of 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. Benefits may be provided for seamen in respect of maritime service during the 1939-45 War under the *Seamen's War Pensions and Allowances Act 1977*.

### 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 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. 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, Tasmania (a)  
(\$ Per Week)

Benefit	Rate			
	At 5 Mar. 1977	At 3 Nov. 1977	At 4 May 1978	At 2 Nov. 1978
PAYABLE WITHOUT INCOME TEST				
Disability pensions—				
Special rate (T.P.I.) pensions—				
Veteran .....	90.15	94.40	98.55	101.90
Wife .....	4.05	4.05	4.05	4.05
Each child .....	1.38	1.38	1.38	1.38
Intermediate rate pensions—				
Veteran .....	62.10	65.00	67.85	70.15
Wife .....	4.05	4.05	4.05	4.05
Each child .....	1.38	1.38	1.38	1.38
General rate pensions (maximum rates)—				
Veteran .....	34.05	35.65	37.20	38.45
Wife .....	4.05	4.05	4.05	4.05
Each child .....	1.38	1.38	1.38	1.38
War widows—				
Pension .....	47.10	49.30	51.45	53.20
Domestic allowance .....	12.00	12.00	12.00	12.00
Orphans' pensions—				
One parent dead—				
Each child .....	10.45	10.45	10.45	10.45
Both parents dead—				
Each child .....	20.90	20.90	20.90	20.90
PAYABLE SUBJECT TO INCOME TEST (MAXIMUM RATES)				
Service pensions—				
Veteran—Standard (single person) .....	47.10	49.30	51.45	53.20
Married .....	39.25	41.10	42.90	44.35
Addition for each child .....	7.50	7.50	7.50	7.50
Wife's pension (if she is not a pensioner) .....	39.25	41.10	42.90	44.35
Guardians' allowances—				
Where there is a child under six 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

(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:

## Social Welfare and Health Services

## Disability Pensions, Tasmania: Pensioners and Payments

Year	Number of pensions current at 30 June				Expenditure during year (a) (\$'000)
	Incapacitated veterans	Dependents of—		Total	
		Incapacitated veterans	Deceased veterans (b)		
1973-74 .....	8 358	11 602	2 027	21 987	11 176
1974-75 .....	8 219	11 231	2 015	(c) 21 474	13 697
1975-76 .....	8 120	10 670	1 978	(c) 20 778	14 827
1976-77 .....	7 950	10 182	1 916	(c) 20 062	16 637
1977-78 .....	7 734	9 169	1 941	18 844	18 676
1978-79 .....	7 521	8 678	1 928	18 127	18 696

(a) Includes widows' allowances.

(b) Includes war widows' pensions.

(c) Includes miscellaneous pensions not specified under the 'veteran' details, e.g. seamen's war pensions and allowances.

At 30 June 1979 the proportions of veterans in Tasmania receiving disability pensions were: in respect of service in the 1914-18 War, 4.8 per cent; the 1939-45 War, 88.4 per cent; the Korea and Malaya operations, 1.8 per cent, and other operations 5.1 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 Tasmania: Pensioners and Payments

Year	Number of pensions current at 30 June				Expenditure during year (\$'000)
	Veterans	Dependants of—		Total	
		Living pensioners	Deceased pensioners		
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	(a) 9 313
1976-77 .....	4 386	2 564	119	(a) 7 162	(a) 12 327
1977-78 .....	4 945	3 094	62	(a) 8 101	(a) 15 722
1978-79 .....	5 428	3 466	53	(a) 8 947	(a) 18 486

(a) 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.

Benefits include: (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 \$50.75 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 \$50.75 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 or totally and permanently incapacitated.

*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 \$48.00 per fortnight and those living away from home, \$79.80.

**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 Government Analyst and Chemist Laboratory is under the control of the Government Analyst.

**Department of Health Services, Tasmania: Expenditure from Consolidated Revenue**  
(\$'000)

Particulars	1973-74	1974-75	1975-76	1976-77	1977-78
Administration, head office .....	476	665	705	943	1 009
Hospital and medical services—					
Administration .....	393	518	520	676	636
Grants to hospitals .....	19 193	33 030	40 057	53 630	61 877
Medical services, country districts .....	248	342	416	471	441
Dental Health Service .....	669	1 164	1 421	2 348	2 627
Nurses' Registration Board .....	8	12	8	19	22
Ambulance Commission .....	265	594	713	1 136	1 152
Government Analyst and Chemist .....	188	265	287	308	347
St John's Park Hospital .....	2 326	3 920	4 696	5 506	6 262

Department of Health Services, Tasmania: Expenditure from Consolidated Revenue—*continued*  
(\$'000)

Particulars	1973-74	1974-75	1975-76	1976-77	1977-78
Public Health—					
Administration and inspectors .....	425	475	586	635	677
School Medical Service .....	268	365	422	405	506
Child Health Service .....	311	424	505	566	667
Community Health Services .....	—	62	543	1 104	1 724
Tuberculosis .....	343	517	558	567	118
Miscellaneous grants and expenses .....	881	1 239	1 142	1 260	2 003
Total .....	25 993	43 591	52 579	69 574	80 068

### 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 1978, 45 static clinics were established at urban centres throughout the State while 31 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. Seventeen first-year and 17 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 1978. 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 fluoride 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 June 1979, 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, Tullah, Zeehan, Savage River and Bridport.

### 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 has 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 practitioner 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 Medibank 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 are midwifery, one child health, one psychiatric and one geriatric. There are six 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. No 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 six-year period:

**Notifiable Diseases Reported to Department of Health Services, Tasmania**  
(Number of Cases)

Particulars	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78
Brucellosis .....	1	-	-	-	-	1
Gonorrhoea .....	162	230	222	140	160	197
Hydatids .....	7	9	5	4	1	-
Infectious hepatitis .....	55	36	59	284	244	170
Leptospirosis .....	-	1	-	4	-	1
Malaria .....	1	1	2	1	1	1
Salmonella infections .....	33	27	53	21	49	36
Serum hepatitis .....	-	1	-	1	-	-
Shigella infections .....	21	14	2	1	1	-
Syphilis .....	2	4	4	1	1	4
Tetanus .....	1	-	-	-	2	-
Tuberculosis .....	54	48	41	44	22	28
Typhoid fever (incl. paratyphoid).....	1	-	1	-	-	-
Total .....	338	371	389	501	481	438

Special conditions apply to venereal diseases. Persons suffering from them must not marry until cured, or engage in the manufacture or distribution of foodstuffs, 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 1978, there were 105 Child Health Centres and 15 travelling units. Triple Certificated 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. 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 cases in which defects are diagnosed. They contribute to health education and research projects and may organise immunisation sessions at their schools.

#### *Handicap Assessment Centres*

Assessment Centres have been established in Hobart, Launceston and Burnie. The staff comprises medical officers, nursing sisters, psychologists, occupational therapists and welfare officers. 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 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.

**Royal Derwent Hospital, Tasmania (a), Patients at 30 June 1979 by Mental Disorder: Summary**

Mental disorder	Number	Per cent	Mental disorder	Number	Per cent
Senile and pre-senile dementia .....	73	9.6	Alcoholism .....	39	5.1
Alcoholic psychosis .....	22	2.9	Mental retardation .....	314	41.3
Schizophrenia .....	183	24.1	Other .....	94	12.4
Affective psychoses .....	35	4.6	Total .....	760	100.0

(a) Includes Millbrook Rise Hospital.

The following table shows the diagnosis of mental illness of patients in the Royal Derwent Hospital (incorporating Millbrook Rise):

## Social Welfare and Health Services

**Royal Derwent Hospital, Tasmania (a)**  
**Diagnosis of Mental Disorder of Patients, 1978-79**

Mental Disorder	Patients admitted (b) 1978-79			Patients at 30 June 1979		
	Males	Females	Total	Males	Females	Total
Senile and pre-senile dementia . . . . .	10	20	30	28	45	73
Alcoholic psychosis . . . . .	4	2	6	18	4	22
Psychosis with intracranial infection . . . . .	1	-	1	1	-	1
Psychosis with other cerebral condition . . . . .	6	3	9	7	13	20
Psychosis with other physical condition . . . . .	2	-	2	-	3	3
Schizophrenia . . . . .	61	40	101	112	71	183
Affective psychoses . . . . .	14	27	41	7	28	35
Paranoid states . . . . .	2	3	5	8	6	14
Other psychoses . . . . .	-	3	3	2	2	4
Neuroses . . . . .	4	17	21	4	12	16
Personality disorders . . . . .	33	32	65	15	10	25
Alcoholism . . . . .	167	17	184	32	7	39
Drug dependency . . . . .	2	-	2	-	-	-
Transient situational disturbances . . . . .	4	2	6	2	-	2
Mental disorders not specified as psychotic associated with physical conditions . . . . .	2	2	4	7	2	9
Mental retardation—						
Borderline . . . . .	2	5	7	4	2	6
Mild . . . . .	13	8	21	19	9	28
Moderate . . . . .	14	7	21	54	46	100
Severe . . . . .	7	13	20	60	59	119
Profound . . . . .	-	-	-	24	22	46
Unspecified . . . . .	-	-	-	13	2	15
Other . . . . .	9	10	19	-	-	-
<b>Total . . . . .</b>	<b>357</b>	<b>211</b>	<b>568</b>	<b>417</b>	<b>343</b>	<b>760</b>

(a) Includes Millbrook Rise Hospital.

(b) Excludes those returned from leave.

The following table shows the numbers of patients admitted and discharged and deaths in the Royal Derwent Hospital (including Millbrook Rise):

**Royal Derwent Hospital, Tasmania (a)**  
**Number of Patients Admitted and Discharged, and Deaths, 1978-79**

Particulars	Males	Females	Total
Patients at 30 June 1978 . . . . .	402	342	744
Patients admitted—			
First time . . . . .	121	72	193
Re-admitted (including statistical re-admissions) . . . . .	236	139	375
Total . . . . .	357	211	568
Patients discharged, etc.—			
Discharged from hospital . . . . .	239	132	371
Statistical discharges . . . . .	75	37	112
Died . . . . .	28	41	69
Total . . . . .	342	210	552
Patients at 30 June 1979 . . . . .	417	343	760

(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 in Hobart provides treatment to psychiatrically disturbed children. New referrals to the Centre during 1978-79 totalled 422.

(ii) In 1975 a Youth Counselling Service was commenced. Its objects include the care and psychiatric management of the adolescent with emphasis on family involvement.

(iii) The Quindalup Day Training Centre is located at New Town and provides a day training facility for retarded children. Attendances for 1978-79 totalled 3 917.

*Launceston:* (i) The Lindsay Miller Clinic at the Launceston General Hospital reported the following attendance figures during 1978-79: out-patient visits, 3 515; day patient visits, 3 240; in-patients, 630. Psychological consultations totalled 372 and social work consultations, 2 679. During the year an Alcohol & Drug Dependency Service was instituted and commenced operations from the Lindsay Miller Clinic. It is anticipated that during the forthcoming year this service will be transferred to separate quarters in the city.

(ii) The Eloneria Handicapped Children's Centre opened in 1973 and provides a day facility to cater for the education and training needs of retarded children. Attendance figures for 1978-79 totalled 2 694.

(iii) The Wellington Street Clinic provides treatment similar to that provided at the Combined Children's Centre in Hobart and conducted 723 interviews for the year ended 30 June 1979.

*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 1978-79, the North Western General Hospital, Spencer Division, treated 773 out-patients; Burnie Division, 1 136; Smithton District Hospital, 223; Devonport and Ulverstone Clinics, 1 780.

The Child and Adolescent Service was commenced in October 1975 with headquarters at Burnie. The aims of the service are similar in nature to the Youth Counselling Service in Hobart.

**State Controlled Hospitals***General*

In Tasmania, medical establishments include hospitals, nursing homes, geriatric establishments, convalescent homes, orthopaedic units, etc. Some are privately administered while the State Government accepts the major financial responsibility for others; in the case of the latter group, control is either direct or exercised through hospital boards.

Institutions controlled by the State include four general hospitals, 15 district hospitals, ten hospital annexes and district nursing centres with bed accommodation and six without, one mental hospital, two maternity hospitals and three hospitals for the aged. (The Department of Health Services directly administers one hospital for the aged.) These institutions could all legitimately be described as 'public'. 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.

### 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 comprehensive care and treatment in hospital free of charge 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 for accommodation. Private patients are also charged a medical service fee in the four general hospitals.

Out-patient charges in Public Hospitals for privately insured patients were introduced from 4 April 1979.

### State Controlled Hospitals: Finances, Staff and Patients

The following tables give summaries of the financial operations, staff and patient numbers of State controlled hospitals and hospitals for the aged:

**State Controlled Hospitals and Hospitals for the Aged, Tasmania**  
**Receipts and Payments (a), 1977-78**  
**(\$'000)**

Particulars	Hospitals (excluding mental)			Mental hospitals	Hospitals for the aged
	Public (b)	Maternity (c)	Total		
Receipts—					
Government aid—					
State .....	28 796	1 626	30 422	8 584	3 509
Federal .....	28 796	1 626	30 422	48	3 078
In-patient fees .....	6 892	1 442	8 334	953	2 020
Out-patient fees .....	228	-	228	-	151
Other .....	15 517	146	15 663	85	849
Total .....	80 229	4 840	85 069	9 670	9 607

**State Controlled Hospitals and Hospitals for the Aged, Tasmania**  
**Receipts and Payments (a), 1977-78—continued**  
**(\$'000)**

Particulars	Hospitals (excluding mental)			Mental hospitals	Hospitals for the aged
	Public (b)	Maternity (c)	Total		
Payments—					
Salaries and wages .....	52 217	4 031	56 248	7 904	7 028
Provisions .....	1 857	159	2 016	(d)	536
Domestic supplies .....	1 718	100	1 818	(d)	186
Dispensary, etc. ....	4 713	152	4 865	(d)	87
Other .....	5 784	396	6 180	(d)	695
<b>Total .....</b>	<b>66 289</b>	<b>4 838</b>	<b>71 127</b>	<b>9 670</b>	<b>8 532</b>

(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, Tasmania**  
**Staff, Accommodation and In-Patients**

Particulars	Hospitals (excluding mental)		Mental hospitals		Hospitals for the aged	
	1976-77	1977-78	1976-77	1977-78	1976-77	1977-78
Hospitals and homes .....	no. 22	22	1	1	3	3
Nursing staff .....	no. 2 237	2 565	(a) 375	(b) 272	311	(c) 385
Beds available .....	no. 2 240	2 235	950	950	724	891
In-patients—						
Total number treated .....	57 370	57 951	1 568	1 472	1 037	1 212
Daily average number of patients during year .....	1 558	1 497	803	767	698	743
In-patient costs—						
Total .....	\$'000 50 356	62 015	8 491	9 670	6 443	8 532
Daily average per patient .....	\$ 93	113.50	28	34	29	31

(a) Excludes nursing aides.

(b) Includes trained staff, auxiliaries and students.

(c) Includes students at St. John's Park Hospital.

*Hospitals for the Aged and Invalid*

**Government Hospitals for the Aged, Tasmania, 1977-78**

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) .....	110	140	250	141	144	285	370	91 390
St John's Park .....	12	450	462	20	555	575	802	168 696
Spencer Home for the Aged (b) .....	6	25	31	6	25	31	40	11 294
<b>Total .....</b>	<b>128</b>	<b>615</b>	<b>744</b>	<b>167</b>	<b>724</b>	<b>891</b>	<b>1 212</b>	<b>271 380</b>

(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).

The State Government administers three hospitals caring for the aged and for invalids. In the table above, 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.

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 84 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 and one is a psychiatric hospital. All 84 are registered under Part III of the *State Hospitals Act* but six are also registered under the Federal *National Health Act* and *Health Insurance Act* as hospitals. These are Calvary, St Johns, St Helen's and Hobart Clinic in Hobart, and St Lukes and St Vincent's in Launceston; all provide medical and surgical services except Hobart Clinic. Forty-one of the remaining 78 establishments are licensed to provide nursing home care and 23 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 (113), Freemasons Home (126), Lillian Martin Home (126), Mary's Grange (90), Strathaven Lodge (97), Queen Victoria Home for the Aged (82); Launceston area, Nazareth House (99), Ainslie House (58); North-Western area, Meercroft Home for the Aged (96), Eliza Purton Home for the Aged (78).

### **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 Interim Ambulance Authority 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 \$1 773 985 in 1978-79.

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 1978-79 was \$327 741.

#### *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, smallpox, rubella and measles. (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.

### **Commonwealth Department of Health**

#### *General*

The Department is concerned in Tasmania with the administration of the *Quarantine Act* 1908 the *National Health Act* 1953 the *Health Insurance Act* 1973 and the *Nursing Homes Assistance Act*, 1974; the control and maintenance of Pathology and National Acoustic Laboratories at Hobart and Launceston; and co-operating with the State Departments of Health Services and Social Welfare and the Mental Health Services Commission 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 Commonwealth action is necessary for the protection of a state.

#### *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 16 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 an approved basis.

*Nursing Home Benefits*

The *Nursing Homes Assistance Act* 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 Commonwealth 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 (\$50-90 per week with effect from 9 November 1978.) 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 provisions of the *Nursing Homes Assistance Act*, together with 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), Tasmania  
(\$ Per Week)**

Particulars	Ordinary care patients	Intensive care patients
Basic benefit from 1 October 1977 (a) .....	103.95	145.95
Patient's share of fees from 9 November 1978 .....	50.75	50.75
Total fee (b) .....	154.70	196.70

(a) Payable by the Commonwealth Government for persons who *have not* taken out basic hospital benefits insurance, and by approved hospital benefits organisations for persons who *have* taken out basic hospital benefits insurance with such organisations.

(b) 'Total fees' are the standard fees as determined by the Government at 9 November 1978. If fees actually charged are: (i) less than the standard fee, the basic 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 registered 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 \$2.50 (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*

In Tasmania the National Acoustic Laboratory has centres in Hobart, Launceston and Bellerive. There are also regular visits to larger country centres. Hearing centre services involve evaluation and definition of an individual's auditory capacity (audiological assessment) and the improvement of the individual's auditory function through the fitting of an appropriate hearing aid together with supplementary rehabilitative measures (audiological rehabilitation).

National Acoustic Laboratory services, are free to people under 21 years of age, aged and invalid pensioners and their dependants, Repatriation and Service pensioners and War Widows, Social Security rehabilitees and Armed Services personnel. Referral, except in the case of children, must be by an appropriate medical practitioner.

Three main types of 'Calaid' hearing aids are provided by the Laboratory: in-the-ear, behind-the-ear and body aids. Each type is made in a number of ranges of power to suit differing degrees of deafness, and each has been designed to allow ready acoustic and electronic modification of performance characteristics. This enables selective fitting for virtually every type of hearing loss, using a selection procedure developed by the Laboratory. In addition to Calaid's a limited number of imported spectacle aids are utilised in those few cases where the particular acoustic qualities of these aids is required.

### *Isolated Patients Travel and Accommodation Assistance Scheme*

This scheme, which was introduced on 1 October 1978, operates under the *National Health Act* and in general provides financial assistance to patients, and escorts or attendants where necessary, who need to travel more than 200 kilometres from their home to obtain specialist medical treatment or services. Benefits include the refund of travel costs less \$20.00 per person and an accommodation allowance of up to a maximum of \$15.00 a night per person for overnight stays due to transport limitations and/or medical considerations.

## 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. 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 and hospital health insurance program for *all* Australians, came into operation.

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. 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 were required to make direct contributions for their health insurance cover, with special arrangements to exempt most pensioners and low income earners from payment. Under the new scheme, every person had the choice of paying either: (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 at \$300 per annum for families or \$150 per annum for single people, which provided 'Medibank Standard' cover; (ii) contributions to 'Medibank Private'; or (iii) contributions to a registered private health insurance organisation which provided benefits that were at least equivalent to those of Medibank Standard.

**Changes to Health Insurance Effective from 1 September 1979**

On 24 May 1979, the Minister for Health announced details of major changes to health insurance and health programs. The following arrangements apply from 1 September 1979.

*Medical Benefits*

All patients other than Pensioner Health Benefit card holders and disadvantaged people (see below) are now responsible for medical costs up to a Schedule fee of \$20.00. The Schedule fee is the fee agreed on in negotiations between the 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.

Where the Schedule fee is above \$20.00 the patient is required to pay \$20.00 and the Commonwealth is responsible for the balance of the Schedule fee. People with medical insurance can claim part or all of these costs from their private health fund (depending on the cover for which they have insured) but uninsured patients are required to meet the costs up to \$20.00 per service entirely out of their own pockets.

*Pensioner Health Benefit Card Holders*

Pensioners with Pensioner Health Benefit entitlements and the dependants of such pensioners continue to be eligible to receive medical benefits from the Government at 85 per cent of the Schedule fee for each medical service. The maximum patient payment is \$5 for any one service where the Schedule fee is charged. The benefit is paid as a Commonwealth benefit.

The previously existing bulk-billing facility for these persons continues to be available. Claims for services after 1 November 1978 are to be processed by the Commonwealth Department of Health.

*Bulk Billing for Disadvantaged Persons*

Bulk billing arrangements are available in respect of persons identified by medical practitioners as disadvantaged. Medical practitioners may bulk-bill the Commonwealth for all services rendered to such persons (provided the patient is not privately insured) and receive 75 per cent of the Schedule as full payment for the service and are not permitted to recover any further amount from such patients.

*Hospital Benefits*

The cost of accommodation in public hospitals has risen from \$40.00 to \$50.00 per day for a shared room and from \$60.00 to \$75.00 for a private room. Patients without hospital insurance are still entitled to standard ward accommodation in recognised hospitals at no charge with treatment by doctors engaged by the hospital.

*Health Insurance*

Registered Medical and Hospital Benefits organisations continue to offer a basic medical benefits table providing coverage for 75 per cent of the Schedule fee, with a maximum payment by the patient of \$10.00 for any one service where the doctor charges the Schedule fee. The organisations also continue to provide a basic hospital benefits table covering accommodation in shared rooms of public hospitals (at the increased charge of \$50.00 a day) with doctor of choice (currently available at the Royal Hobart Hospital, Queen Alexandra Maternity Hospital, Hobart, and Queen Victoria Maternity Hospital, Launceston) or with doctors engaged by the hospital. In the latter circumstances a professional services fee of \$25.00 a day is charged to hospital insured patients. The benefits provided under the basic hospital benefits table cover this fee in addition to the accommodation charge. Organisations continue to offer supplementary and ancillary benefits.

*Optometrical Services*

The new arrangements outlined above for medical benefits also apply to those Optometrical Services covered by the Government's Medical Benefits Schedule.

*Long-Stay Hospital Patients*

To classify as a 'nursing-home type patient' patients must have been hospitalised for a continuous period exceeding 60 days unless a medical practitioner certifies that the patient is, and will continue to be for a specific period, in need of acute care, professional attention for an acute phase of the patients condition, active rehabilitation or continued management, for medical reasons, as an in-patient. 'Nursing-home type patients' will be required to make a specified 'patient contribution' towards the cost of their hospitalisation and will not be able to cover that contribution through insurance. The legislation provided that the 60 day period was to commence on or after 1 July 1979.

**HOSPITAL MORBIDITY**

In the following tables particulars are given of all in-patients treated in Tasmanian public hospitals during 1978. Patients still in hospital at the end of 1978 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*

The following table analyses patients by age group and length of stay in hospital:

Patients Treated in Public Hospitals, Tasmania: By Age Group and Average Length of Stay, 1978

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 .....	380	1.62	8	270	0.89	8
28-365 .....	691	2.96	6	507	1.67	8

Patients Treated in Public Hospitals, Tasmania: By Age Group and Average Length of Stay, 1978—continued

Age group	Males			Females		
	Number	Per cent of total	Average length of stay (days)	Number	Per cent of total	Average length of stay (days)
Years—						
1-4 .....	1 615	6.92	4	1 054	3.48	4
5-9 .....	1 296	5.56	4	985	3.25	4
10-14 .....	1 013	4.34	5	893	2.95	5
15-19 .....	1 439	6.13	6	2 773	9.16	6
20-24 .....	1 365	5.85	7	4 643	15.34	6
25-29 .....	1 098	4.71	7	4 137	13.67	6
30-34 .....	953	4.09	7	2 547	8.41	6
35-39 .....	918	3.94	7	1 441	4.76	7
40-44 .....	879	3.77	8	1 037	3.43	8
45-49 .....	1 046	4.48	9	1 076	3.55	9
50-54 .....	1 469	6.30	10	1 210	4.00	9
55-59 .....	1 680	7.20	10	1 256	4.15	10
60-64 .....	1 769	7.58	12	1 278	4.22	11
65-69 .....	1 816	7.79	13	1 324	4.37	14
70-74 .....	1 588	6.80	15	1 234	4.08	14
75 and over .....	2 312	9.92	21	2 607	8.61	23
Total .....	23 327	100.00	10	30 272	100.00	9

Accidents and violence were the main causes of hospitalisation of males in the 15-34 years age group. Separations with external causes accounted for 2 006 male patients in the age group 15-34 years (41 per cent) but for only 683 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, Tasmania: By Condition Treated and Average Length of Stay, 1978

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 . . . . .	751	4 272	6	687	3 096	5
Neoplasms . . . . .	1 675	20 359	12	1 713	20 835	12
Endocrine, nutritional and metabolic diseases . . . . .	309	4 293	14	431	6 228	14
Mental disorders . . . . .	1 087	15 474	14	1 155	19 818	17
Diseases of the—						
Blood and blood forming organs . . . . .	213	1 547	7	216	1 527	7
Nervous system and sense organs . . . . .	1 087	12 067	11	932	9 706	10
Circulatory system . . . . .	3 060	41 287	13	2 452	34 588	14
Respiratory system . . . . .	2 637	18 625	7	1 728	10 202	6
Digestive system . . . . .	2 379	18 026	8	1 973	15 349	8
Genito-urinary system . . . . .	1 134	9 029	8	2 830	14 893	5
Skin and subcutaneous tissue . . . . .	476	3 655	8	368	3 283	9
Musculoskeletal system and connective tissue . . . . .	1 143	12 911	11	955	11 558	12
Congenital anomalies . . . . .	376	2 581	7	260	2 004	8
Childbirth, complications of pregnancy and the puerperium (a) . . . . .	..	..	..	8 638	59 970	7
Certain causes (b) of perinatal morbidity and mortality . . . . .	282	3 486	12	254	2 957	12
Symptoms and ill-defined conditions . . . . .	1 812	20 065	11	1 858	22 944	12
Accidents, poisoning and violence . . . . .	4 254	34 461	8	2 433	26 507	11
Other special admissions or consultations . . . . .	652	3 456	5	1 389	6 670	5
Total . . . . .	23 327	225 594	10	30 272	272 135	9

(a) Includes supervision of normal pregnancy.

(b) Includes toxæmia of pregnancy, conditions of placenta, birth injury, etc.

Comparable treatment statistics (in total only) for 1977 were: (i) number of in-patients treated in public hospitals—males, 22 784 and females, 30 206; (ii) average stay in hospital—males, 10 days and females, 9 days; and (iii) total days in hospital—males, 227 615 and females, 270 568.

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'. When data under this classification are eliminated, total figures are as follows:

Patients Treated in Public Hospitals, Tasmania (a), 1978

Particulars	Males	Females
Number of patients . . . . .	23 327	21 634
Total days in hospital . . . . .	225 594	212 165

(a) Excluding the category 'Childbirth, complications of pregnancy and the puerperium'.

The most significant classification affecting males is 'Accidents, poisoning and violence', where males outnumber females nearly two to one. One factor is the greater exposure of

males to industrial and road traffic accidents. For females, the most significant classification (not including 'Childbirth, complications of pregnancy and the puerperium') is 'Diseases of the genito-urinary system' where females outnumber males nearly five to two.

**Further References**

*ABS Publications*

Hospital Morbidity, Tasmania (4301.6) (annual, 1978 issue released 20-9-79, 52pp)  
Mental Health Statistics, Tasmania (4302.6) (annual, 1975-76 released 24-10-78, 9pp)  
Year Book Australia (1301.0) (annual, 1979 released in September 1979, 730pp)

*Other Publications*

DEPARTMENT OF HEALTH (Federal). *Annual Report of the Director-General of Health.* (Australian Government Publishing Service, Canberra.)  
DEPARTMENT OF HEALTH SERVICES. *Report for the Year.* (Government Printer, Hobart.)  
DEPARTMENT OF SOCIAL SECURITY. *Annual Report.* (AGPS, Canberra.)  
DEPARTMENT OF SOCIAL WELFARE. *Report for the Year.* (Government Printer, Hobart.)

## 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 have been 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 have been abolished.
- (iii) Section 124 have been 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.
- (iv) Section 334 has been amended to make it a crime to cause the death of a person by dangerous driving.

- (v) Section 185 has been amended to the effect that committal proceedings in respect of a charge of rape are to be heard by a Magistrate sitting alone and are to be heard in closed court unless the Magistrate otherwise directs.

### 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.)

Cases Tried in Lower Courts, Tasmania

Offence		1973	1974	1975	1976	1977	1978
<b>Offence against—</b>							
The person	Males	1 198	1 319	1 082	869	704	703
	Females	51	38	64	53	37	63
Property	Males	4 513	4 989	4 500	4 274	4 489	5 492
	Females	523	361	571	449	565	474
The currency	Males	397	303	276	232	153	521
	Females	266	80	78	129	101	55
Good order	Males	2 835	3 412	3 810	2 839	2 329	2 138
	Females	205	191	174	185	92	111
Traffic regulations	Males	23 811	27 291	29 680	28 711	26 922	26 719
	Females	1 611	1 884	2 353	2 782	3 127	3 258
All other offences (a)	Males	8 610	7 188	8 210	7 789	5 854	4 944
	Females	870	930	1 563	1 193	762	627
Total offences	Males	41 364	44 502	47 558	44 714	40 451	40 517
	Females	3 526	3 484	4 803	4 791	4 684	4 588

(a) Includes offences mainly related to liquor, education, neglected children, revenue, gambling suppression laws, desertion of wives and children, perjury and subornation, and conspiracy.

Lower Courts, Tasmania, 1978

Offence	Cases tried	Results of trials				
		Convictions	Committed to higher courts	Adjourned sine die	Dismissed or withdrawn (a)	Remanded
<b>MALES</b>						
<b>Offences against—</b>						
The person	703	429	119	44	84	27
Property	5 492	4 195	609	182	431	75
The currency	521	334	93	1	91	2
Good order	2 138	1 714	31	131	236	26
Traffic regulations	26 719	22 530	259	783	2 963	184
All other offences (b)	4 944	3 986	22	209	710	17
Total	40 517	33 188	1 133	1 350	4 515	331
<b>FEMALES</b>						
<b>Offences against—</b>						
The person	63	40	9	8	6	—
Property	474	373	14	14	70	3
The currency	55	36	6	—	13	—
Good order	111	87	3	3	18	—
Traffic regulations	3 258	2 487	2	142	622	5
All other offences (b)	627	492	—	34	99	2
Total	4 588	3 515	34	201	828	10
<b>PERSONS</b>						
Total	45 105	36 703	1 167	1 551	5 343	341

(a) 'Dismissed' is equivalent to 'not guilty' in higher courts.

(b) Includes offences mainly related to liquor, education, neglected children, revenue, gambling, desertion of wives and children, perjury and subornation, and conspiracy.

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 have his action struck out if he brings it in a Court other than the Court having jurisdiction, i.e. the Court nearest to which the cause of action arose. In such circumstances the plaintiff may lose costs.

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 judgment 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 or 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 and five Puisne Judges. Regular sittings of the Court are held at Hobart, Launceston and Burnie, although the Court is empowered, subject to the provisions of the *Supreme Court Civil Procedure Act 1932*, 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 of Tasmania during 1977 and 1978. The 217 convictions during 1977 were the lowest number since 1966 when 204 convictions were recorded in the Supreme Court:

Supreme Court Convictions, Tasmania (a)

Offences	1977		1978	
	Males	Females	Males	Females
Offences against the person—				
Murder .....	5	—	2	1
Attempted murder .....	—	—	1	—
Manslaughter—Other than while driving .....	—	—	2	1
While driving .....	—	—	1	—
Dangerous or negligent driving .....	18	—	14	—
Rape .....	8	—	10	1
Other unlawful carnal knowledge .....	13	—	7	—
Incest .....	2	—	1	—

## Supreme Court Convictions, Tasmania (a)—continued

Offences	1977		1978	
	Males	Females	Males	Females
<i>Offences against the person—continued</i>				
Other offences against females .....	3	—	7	—
Indecent practices between males .....	6	—	—	—
Unnatural carnal knowledge .....	—	—	2	—
Robbery .....	12	2	13	—
Malicious wounding .....	4	1	5	—
Aggravated assault .....	3	—	1	—
Common assault .....	5	—	9	—
Other offences against the person .....	4	—	1	—
<i>Offences against property—</i>				
Burglary; break and enter; break, enter and steal .....	50	1	79	1
Receiving, including possession of stolen goods .....	4	1	6	1
Fraud and false pretences .....	5	1	9	3
Arson, n.e.i. ....	8	—	10	2
Stealing .....	24	4	24	3
Other offences against property .....	—	—	—	—
Forgery and offences against the currency .....	14	7	9	1
All other offences .....	11	1	5	3
<b>Total (b) .....</b>	<b>199</b>	<b>18</b>	<b>218</b>	<b>17</b>

(a) Conspirators, aiders, abettors and accessories are shown under the offence they allegedly conspired to commit, aid, etc. Except for murder, offences include attempts.

(b) 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 six-year period:

## Supreme Court Cases: Convictions, Tasmania

Offences	1973	1974	1975	1976	1977	1978
Offences against—The person .....	134	140	112	96	86	79
Property .....	188	178	211	159	98	138
Forgery and offences against the currency .....	3	9	14	11	21	10
All other offences .....	15	27	10	20	12	8
<b>Total .....</b>	<b>340</b>	<b>354</b>	<b>347</b>	<b>286</b>	<b>217</b>	<b>235</b>

There is a right of 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 Rule 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 a right of 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, 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 six other Justices.

Except in relation to an appeal that relates to the amount of any damages in respect of death or personal injury, there is a right of appeal to the High Court from a final judgment of a Full Court of the Supreme Court of the State in any civil matter where the sum involved amounts to at least \$20 000 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 23 other judges. The Court was created basically to reduce the work of the High Court, so that the High Court could give greater attention to its primary function as the interpreter of the Constitution. Consequently, the Federal Court was invested with original and appellate jurisdiction under a variety of statutes including the *Conciliation and Arbitration Act 1904*, the *Bankruptcy Act 1966*, the *Trade Practices Act 1974* and the *Administrative Appeals Tribunal Act 1975*. Sittings of the Court are held in each capital city—there is a District Registry in each.

#### *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, the Wardens' Court is constituted under the *Mining Act 1929*.

#### *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 State Fire Authority 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, \$100. 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 showing numbers of children appearing before Children's Courts by age, sex and alleged offence are given in the next two tables:

**Children Appearing Before Children's Courts, Tasmania(a), 1977-78**  
Classified by Age and Sex

Sex	Age (b) (in years)										Total (c)
	Under 8	8	9	10	11	12	13	14	15	16	
Boys .....	32	9	12	18	64	100	216	315	530	1 032	2 400
Girls .....	43	-	6	7	7	11	30	78	109	197	502
Total	75	9	18	25	71	111	246	393	639	1 229	2 902

(a) A child appearing twice or more before the Courts will appear twice or more in the table.

(b) Ages are at time of court hearing, not at time of offence.

(c) Includes 86 children (72 boys and 14 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, Tasmania(a)**  
Classified by Offence

Offence alleged	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78
Relatively serious offences—						
Damage to property .....	114	117	153	153	167	160
Breaking, entering and stealing .....	379	355	385	354	325	436
Stealing .....	431	433	578	586	616	619
Receiving .....	27	16	35	21	26	18
Illegal use of vehicles .....	235	209	285	224	292	207
Offences involving fraud .....	17	12	8	10	5	2
Sex offences .....	24	27	18	30	15	17
Other offences against the person .....	43	93	129	60	52	97
Offences against decency .....	51	49	6	15	10	18
Total .....	1 321	1 311	1 597	1 453	1 508	1 574

**Children Appearing Before Children's Courts, Tasmania(a)**  
**Classified by Offence—continued**

Offence alleged	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78
<b>Other offences—</b>						
Disorderly conduct .....	89	65	126	77	81	46
Traffic offences .....	339	481	661	710	634	508
Breaches of—Licensing laws .....	440	689	591	509	474	439
By-Laws .....	12	4	12	11	2	5
Firearms offences .....	18	36	19	28	9	29
Gaming .....	45	80	49	31	8	2
Trespass .....	26	18	57	49	27	14
Other .....	10	93	170	157	95	81
<b>Total .....</b>	<b>979</b>	<b>1 466</b>	<b>1 685</b>	<b>1 572</b>	<b>1 330</b>	<b>1 124</b>
<b>Complaints under Child Welfare Act—</b>						
Appearing as—Uncontrolled .....	33	122	48	53	32	20
Neglected .....	80	196	332	90	100	176
Breaches of supervision .....	11	12	28	9	8	8
<b>Total .....</b>	<b>124</b>	<b>330</b>	<b>408</b>	<b>152</b>	<b>140</b>	<b>204</b>
<b>Total, of all offences .....</b>	<b>2 424</b>	<b>3 107</b>	<b>3 690</b>	<b>3 177</b>	<b>2 978</b>	<b>2 902</b>

(a) A child appearing twice or more will appear twice or more in the table.

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, Tasmania, 1977-78**

Sex	Relatively serious offences (b)	Other offences (b)	Complaints under Child Welfare Act (b)	Total
Boys .....	644	606	39	1 289
Girls .....	112	127	47	286
<b>Total .....</b>	<b>756</b>	<b>733</b>	<b>86</b>	<b>1 575</b>

(a) See paragraph before table for definition of 'individual'.

(b) See previous table for classification of offences and complaints.

### 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:

#### Bankruptcy Proceedings, Tasmania

Particulars	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
<b>Bankruptcies and orders for administration of deceased debtors' estates—</b>						
Number .....	69	75	94	97	148	223
Liabilities .....	\$'000 660	636	1 158	931	1 607	2 222
Assets .....	\$'000 154	280	451	361	541	727
<b>Deeds of assignment, arrangement, compositions and schemes—</b>						
Number .....	12	6	4	5	8	13
Liabilities .....	\$'000 311	129	171	586	386	1 048
Assets .....	\$'000 315	176	132	336	304	594
<b>Total—</b>						
Number .....	81	81	98	102	156	236
Liabilities .....	\$'000 971	765	1 329	1 517	1 993	3 270
Assets .....	\$'000 469	456	583	697	845	1 321

#### The Licensing Board

The Licensing Board of Tasmania 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:

#### Hotels, Tasmania: Standard of Accommodation

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
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
1977 .....	3 950	2 150	1 530
1978 .....	3 700	2 238	1 215

The Board's inspectors and public health inspectors carry out a thorough inspection of each hotel prior to the renewal of licences by the Commissioner. Reports are furnished for the information of the Board and the Tourist Department. An officer of the State Fire Authority also carries out an annual inspection to ensure that each hotel complies with their requirements.

The following table shows the number of operative licences for hotels, restaurants, liquor wholesalers and clubs for recent years:

**Licensed Hotels, Restaurants, Clubs and Wholesalers, Tasmania**

At 30 June	Hotels (a)	Restaurants (b)	Clubs	Wholesale licences	Total
1973 .....	269	27	162	31	489
1974 .....	274	42	164	45	525
1975 .....	273	52	167	45	537
1976 .....	271	60	169	48	548
1977 .....	274	64	180	52	570
1978 .....	275	68	184	53	580

(a) Includes a small number of premises not providing accommodation and known as 'taverns'.

(b) Includes motels which have a licence for restaurants 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 could 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. The *Licensing Act* 1976 makes provision for the issue of a casino permit authorising liquor to be sold or supplied for consumption within the Casino. This permit applies only in respect of times when the Casino is open for gaming during the prescribed hours. Other permits are: (i) *occasional permits* for genuine clubs and associations which wish to hold functions; and (ii) *public event permits* which authorize the sale of liquor at public entertainment (e.g. football matches).

The *Licensing (Trading Hours) Act* 1975 amended the *Licensing Act* 1932 and allowed all hotels, restaurants and licensed clubs to set their own trading hours. However hotels must be open for trade 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* 1977 which repealed the *Prison Acts* 1868 and 1908. Provision is made for the appointment, by the Governor, of a Controller of Prisons who is responsible for the supervision of prisons, including the initiation and implementation of correctional programs for prisoners and staff training schemes.

Each year, two appointments are made to the position of Official Visitor to each institution. They visit the prison at least once per month to examine the treatment, behaviour and condition of prisoners, and the condition of the prison.

The main prison in Tasmania is at Risdon near Hobart, which has as an outstation, the Prison Farm at Hayes in the Derwent Valley. The Launceston Prison functioned as a holding centre for prisoners from the northern districts of the State prior to their transfer to Risdon. During 1977-78 that prison was abandoned and the prisoners were transferred to the new Police Headquarters building. Since then the Police Department have taken over the financial responsibility for the operation and control of remandees in Launceston.

The following table shows Prisons Department expenditure from Consolidated Revenue:

**Prisons Department: Expenditure From Consolidated Revenue, Tasmania (\$'000)**

Particulars	1973-74	1974-75	1975-76	1976-77	1977-78
Total expenditure .....	1 481	2 089	2 326	2 753	3 184
Net receipts (a) .....	84	70	85	73	86
Net expenditure .....	1 397	2 019	2 240	2 680	3 098

(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 1977-78, 809 male and 39 female prisoners were received into H.M. Prison, Risdon. In that period 800 male and 39 female prisoners were discharged. At 30 June 1978 there were 271 male and 2 female prisoners in custody. There is no distinction made between those on remand and those convicted and sentenced to imprisonment in these figures. Also, figures include those held in custody at the Hayes Prison Farm.

### Prisoners' Offences

The following table shows the offences for which convicted prisoners were received:

**Offences (a) for Which Convicted Prisoners Were Received in Tasmania, 1977-78**

Offence for which convicted	Males	Females	Persons	
			Number	Proportion of total
<b>Offences against the person—</b>				
Common assault .....	43	—	43	1.68
Assault police .....	23	—	23	0.90
Indecent assault .....	9	—	9	0.35
Other .....	53	3	56	2.19
<b>Total .....</b>	<b>128</b>	<b>3</b>	<b>131</b>	<b>5.13</b>
<b>Offences against property—</b>				
Stealing .....	411	168	579	22.67
Burglary and breaking offences .....	423	3	426	16.68
Steal a motor vehicle .....	135	—	135	5.29
Damage to property .....	34	—	34	1.33
Obtain goods by false pretences .....	162	57	219	8.57
Forgery, uttering and currency offences .....	82	37	119	4.66
Other .....	145	2	147	5.76
<b>Total .....</b>	<b>1 392</b>	<b>267</b>	<b>1 659</b>	<b>64.96</b>



## Offences (a) for Which Convicted Prisoners Were Received in Tasmania, 1977-78—continued

Offence for which convicted	Males	Females	Persons	
			Number	Proportion of total
<b>Offences against good order—</b>				
Drunkenness .....	52	14	66	2.58
Escape from lawful custody .....	6	—	6	0.23
Resist arrest .....	10	—	10	0.39
Indecent or threatening language .....	14	—	14	0.55
Fail to pay fines and costs or default .....	85	1	86	3.37
Other .....	180	7	187	7.32
<b>Total .....</b>	<b>347</b>	<b>22</b>	<b>369</b>	<b>14.45</b>
<b>Traffic offences—</b>				
Drive whilst licence suspended .....	197	1	198	7.75
Dangerous driving .....	10	—	10	0.39
Exceed .08 per cent .....	69	—	69	2.70
Drunken driving .....	29	—	29	1.14
Other .....	45	—	45	1.76
<b>Total .....</b>	<b>350</b>	<b>1</b>	<b>351</b>	<b>13.74</b>
<b>Offences against the Dangerous Drugs Act .....</b>	<b>44</b>	<b>—</b>	<b>44</b>	<b>1.72</b>
<b>Grand Total .....</b>	<b>2 261</b>	<b>293</b>	<b>2 554</b>	<b>100.00</b>

(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 Tasmania, 1977-78, According to Number of Previous Convictions (a)

Prisoners	Number of previous convictions				Total
	Nil	One	Two	Three or more	
Number received .....	41	22	18	501	582
Percentage of total .....	7.0	3.8	3.1	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: 62 per cent in 1973-74; 61 per cent in 1974-75; 58 per cent in 1975-76; and 59 per cent in 1976-77; and 60 per cent in 1977-78. The following table shows the age of convicted prisoners admitted to prison:

## Ages of Convicted Prisoners Received in Tasmania, 1977-78

Sex	Age group (in years)								Total
	16-17	18-19	20-24	25-29	30-39	40-49	50-59	60 and over	
Males .....	65	96	180	76	69	40	26	7	559
Females .....	3	3	1	4	2	1	6	3	23
<b>Total .....</b>	<b>68</b>	<b>99</b>	<b>181</b>	<b>80</b>	<b>71</b>	<b>41</b>	<b>32</b>	<b>10</b>	<b>582</b>

*Parole and Remission of 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 of Prisons' recommendation.

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 to prisoners who had served six months or one-third of their sentence, whichever was the greater. It also provided for the Board to make recommendations in relation to the release of prisoners who were serving life sentences or who were dangerous criminals.

*Risdon Prison*

The Risdon Prison, 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 prison 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 Prison over a six-year period:

Number of Prisoners, Risdon Prison (a)

Prisoners	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78
Maximum number .....	398	388	366	365	301	269
Daily average.....	371	344	342	309	263	241

(a) Includes Hayes Prison Farm.

The Risdon Prison 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 and chess. Feature and documentary films are screened fortnightly. The Prison Debating Society debates regularly against outside teams. The Education Section publishes a prison magazine periodically. 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.

Prison Suspense Account (Prison Industries), Tasmania (\$)

Particulars	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78
Receipts (a) .....	143 783	145 045	184 672	192 132	216 978	247 946
Paid to Consolidated Revenue .....	50 209	40 850	35 329	27 834	23 076	30 632

(a) Maintenance and material charges are met from receipts, the balance being paid to Consolidated Revenue in the following year.

*Hayes Prison Farm*

The Prison Farm 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:

**Prison Farm Suspense Account, Tasmania**  
(\$)

Particulars	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78
Receipts (a) .....	131 440	170 302	174 506	197 173	212 508	224 859
Paid to Consolidated Revenue .....	24 612	42 671	34 504	57 623	50 027	55 042

(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; and hot house cultivation. 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 but this was subsequently destroyed by vandals and was not rebuilt. 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 42 Probation and Parole Officers, including the Chief 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 Bellerive, Devonport, George Town, Glenorchy, New Norfolk, Queenstown and Ulverstone.

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***Organisation*

The Police Department is headed by the Commissioner of Police who is responsible to the Minister for Police. The Commissioner is assisted by a Deputy Commissioner and two Assistant Commissioners. The highest uniform rank in the Force is that of Chief Superintendent.

The State is divided into three geographical districts with headquarters at Hobart, Launceston and Burnie. The Force also has four specialist branches: Recruitment and Training; Criminal Investigation; Traffic; and Management Services. Each district and branch is under the control of a Superintendent.

### General Policing

General policing is performed by uniform personnel who maintain beat patrols on foot and in conjunction with vehicular patrols. Beat police are equipped with radios and are in constant touch with their bases.

### Recruitment and Training

Two induction schemes operate (one for adults and another for Cadets): (i) adult courses are of 20 weeks duration for persons who have attained the age of 19 years; and (ii) Cadet courses are run for youths aged from 16 to 18 years and are of two years duration. Regular in-service courses are conducted for personnel drawn from all ranks and all parts of the State. The Rokeby Academy has administrative, classroom and residential blocks, together with a pistol range, parade ground, library, lecture-theatre, gymnasium and driver training complex. Single-room accommodation is available for 120 students. Classrooms are equipped with audio-visual educational devices, including closed-circuit television.

### Criminal Investigation

While all personnel in the Force have a responsibility towards crime detection the Criminal Investigation Branch personnel specialise in this field—members are divided into specialised sections, including the Drug Bureau and Gaming Squad.

### Traffic Control

The Traffic Control Branch is responsible for enforcing regulations for the Transport Commission and deploys personnel in cars and on motor cycles. It makes use of sophisticated mechanical and electronic devices.

### Management Services

All support services, including the Information Bureau, Scientific Bureau, Planning and Research, Search and Rescue, Transport and Communications Sections, are part of the Management Services Branch.

The Information Bureau maintains a record of previous convictions, property tracing, *modus operandi* of crimes, missing persons and warrants issued as well as statistics on crimes and offences reported and cleared.

The Scientific Bureau provides specialist services in the fields of: (i) Fingerprinting. It has on file approximately 100 000 fingerprint sets. Close liaison is maintained with interstate and overseas sources as well as with the Central Fingerprint Bureau in Sydney. (ii) Photography. Duties involve attendance at the scene of major crimes and serious road accidents. Photogrammetric plans are produced. (iii) Ballistic examinations are provided, together with the maintenance of a ballistics library. (iv) Documents and drawing. Activities include examination of forged documents and use of 'Photo-fit' equipment to aid in the identification of offenders.

The Planning and Research Section is responsible for studying and improving existing work procedures and making recommendations on planning for future development.

A well equipped Search and Rescue Squad is based at Hobart and is augmented by part-time members from other sections of the Force. Duties include rescues from the bush, mountains, cliffs, caves, at sea and underwater. Valuable support is received from walking, climbing and boating organisations. A powerful motor launch, *Vigilant*, with a sea range of 1 300 kilometres is located at Hobart. Smaller craft are stationed at points around the State coastline and at inland waterways.

The mobility of the Force is provided by a fleet of 400 vehicles, including motor cycles, caravans and mobile headquarters.

Radio and telex systems operate both intrastate and interstate. Radio is installed in most cars, boats and motor cycles giving a statewide coverage.

### Division of Road Safety

The Division is headed by the Director of Road Safety. It 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 53 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	1973-74	1974-75	1975-76	1976-77	1977-78
Police officers (a) . . . . . no.	939	976	1 004	1 026	1 030
Persons per police officer(a) . . . . . no.	425	415	406	400	402
Cost (total expenditure of Police Department) ..... \$'000	9 118	13 738	16 053	19 025	20 979
Cost per head of mean population . . . . . \$	22.95	34.17	39.52	46.50	50.91

(a) At 30 June.

## EMERGENCY SERVICES

### State Emergency Service

Following a series of discussions at federal and state levels 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. Ministerial responsibility for the State Emergency Services is vested in the Minister for Police and Emergency Services.

### 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 set 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. The Service is responsible for the oversight and production of Counter Disaster Plans at municipal, regional and state level. To advise the Service in this function, specialist planning committees, incorporating senior representatives from government departments and instrumentalities, volunteer organisations and emergency services have been formed in the fields of transport, communications, medical care, welfare and public information. To ensure adequate communications during periods of disaster, the Service has developed a system of fail-safe communications covering the bulk of Tasmania and with links to the mainland. The communications system provides great flexibility and reliability, and is available for use by all emergency services.

*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. State headquarters (Hobart) is also responsible for maintaining and operating the State emergency operations centre. The centre is manned at all times by a duty operator and put into action in event of any major emergency. At other times the operations centre provides the all hours contact point for the State Emergency Service and monitoring and base facilities for a number of other government departments' and authorities' radio nets out of normal office hours.

*Training*

Training is undertaken at State and regional Headquarters and at Municipal level. The State Emergency Service is responsible for the nomination of Tasmanian representatives attending courses and seminars at the Australian Counter Disaster College, Mount Macedon, Victoria. The Service also conducts a variety of counter disaster skills and procedure courses for other Tasmanian emergency services and for involved members of the public, private enterprise and various government departments.

*Equipment and Finance*

Certain items of protective clothing, operational and training equipment for use by the Service are provided annually by the Federal Government through the Natural Disasters Organisation. All other funding is by the State Government.

**Fire Prevention and Fire Fighting***State Fire Commission*

Under the provisions of the Fire Service Act 1979, which was proclaimed on 1 November 1979, a new single Tasmania Fire Service was created. The State Fire Authority, the Rural Fires Board, and all Urban Fire Brigade Boards which had previously administered the several fire services, were abolished and their functions were assumed by a new State Fire Commission.

The Commission consists of the Commissioner, the Director of Urban Brigades, the Director of Country Brigades, two representatives of local government and a representative of the Treasurer.

The State is divided into three Regions (Southern, Northern, and North Western) each under the control of Regional Chief Officers for both Urban and Country Brigades, each having regional administrative support. The operational branches of the Service comprise 35 urban brigades and some 300 country fire brigades, Hobart and Launceston are almost totally manned by permanent officers and firefighters while Burnie and Devonport are manned by a combination of permanent officers and firefighters, and volunteer firefighters. All other urban fire brigades are manned by partly paid volunteers; all country fire brigades are manned by unpaid volunteers.

A central Training Division is responsible for the development and implementation of training of all brigades and for public education on fire prevention and protection matters. An Operations Division is responsible for the development of effective operational systems, facilities and procedures. The Fire Prevention Division is responsible for: inspection of premises; ensuring that general fire regulations are adhered to; development of programs of hazard reduction in urban and country areas; and public education on fire prevention matters.

A central Administration Division of the Fire Service has been developed by the amalgamation of the administrative sections of all previous branches and is responsible, through the Commissioner, to the State Fire Commission.

A Fire Service Advisory Council has been established under the *Fire Service Act 1979* to: advise the Minister for Police and Emergency Services on any matters affecting the administration of the Act referred to it by him; to advise the Commission on any matters

relating to preventing and extinguishing fires referred to it by the Commission; and to advise the Commission on any matter that should, in the opinion of the Council, be brought to the attention of the Commission. The Council, under a Chairman appointed by the Governor, consists of 17 members representing: Tasmania Police, Forestry Commission, Municipal Association of Tasmania, Tasmanian Farmers' Federation, Tasmanian Farmers, Stock-owners, and Orchardists' Association, Royal Australian Institute of Architects, Tasmanian Timber Association, pulp and paper manufacturers and woodchip exporters, United Firefighters' Union, Urban Volunteer Firefighters Association, Country Fire Brigades Association, Commissioner of the State Fire Commission, Director of Urban Brigades and Director of Country Brigades.

From 1 July 1980 the cost of maintaining the Service will be borne by a 40 per cent contribution from Consolidated Revenue and a 60 per cent contribution raised by way of a levy on urban and rural landowners (based on assessed annual values, and collected on behalf of the Commission by local government councils).

#### **Further References**

##### *ABS Publications*

Public Justice, Tasmania (4501.6) (annual, 1978 issue released 28-9-79, 23 pp.)

Official Year Book of Australia (1301.0) (annual, 1979 issue released Sept. 1979, 730 pp.)

## 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, 1971 and 1976 Censuses was as follows:

Elements of Labour Force, Tasmania: Censuses, 1966, 1971 and 1976 (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—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
1976 (a)—Males .....	15 390		92 447	441	4 003	112 281	201 512
Females .....	6 070		47 254	2 344	2 676	58 344	201 356
Persons .....	21 460		139 701	2 785	6 679	170 625	402 868

(a) See Chapter 6 for a dissection of the employed population by occupation.

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, 1971 and 1976 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, 1971 and 1976 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, 1971 and 1976 was compiled from persons answering *no* to questions (i), (ii) and (iii) and *yes* to question (iv).

### Labour Force Estimates (Intercensal)

#### The Population 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 inquiry, conducted in February, May, August and November of each year up to February 1978 and monthly, thereafter. 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 reliability of estimates based on sample surveys are measured by the 'standard error'. The specialist reader is referred to the Bureau's Canberra Office publication *The Labour Force* (Cat. No. 6203.0), where tables appear stating the standard errors associated with the estimates. The following table gives details of elements of the civilian labour force based on estimates derived from recent population surveys.

Civilian Population 15 Years of Age and Over, by Employment Status, Tasmania (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									
1976—									
August . . . . .	9.3	101.8	111.2	4.2	3.6	115.4	79.6	29.5	144.9
November . . . . .	9.5	102.9	112.4	4.3	3.7	116.7	80.1	28.9	145.6
1977—									
February . . . . .	9.4	103.7	113.1	4.8	4.0	117.9	80.6	28.4	146.2
May . . . . .	8.9	105.0	113.9	4.0	3.4	117.9	80.4	28.8	146.8
August . . . . .	8.8	103.9	112.7	4.4	3.7	117.1	79.6	30.1	147.2
November . . . . .	8.6	102.8	111.4	4.0	3.5	115.5	78.2	32.2	147.7
1978—									
February . . . . .	9.3	102.2	111.5	7.4	6.2	118.9	80.1	29.6	148.5
May . . . . .	8.8	100.6	109.3	6.5	5.6	115.9	77.9	32.9	148.8
August . . . . .	9.5	101.7	111.2	6.3	5.3	117.5	78.7	31.8	149.3
November . . . . .	8.3	103.1	111.4	6.0	5.1	117.4	78.5	32.2	149.6
1979—									
February . . . . .	8.6	104.1	112.7	7.2	6.0	119.8	80.0	30.0	149.9
May . . . . .	9.0	103.8	112.8	6.3	5.3	119.1	79.1	31.5	150.6

Civilian Population 15 Years of Age and Over, by Employment Status, Tasmania (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									
1976—									
August .....	3.6	49.5	53.1	3.9	6.8	56.9	38.8	89.7	146.6
November ...	3.2	51.3	54.5	4.0	6.8	58.5	39.7	88.8	147.3
1977—									
February .....	2.8	49.6	52.4	5.8	9.9	58.2	39.3	90.0	148.1
May .....	3.1	51.6	54.8	6.1	10.1	60.9	40.9	87.9	148.8
August .....	3.1	52.9	56.0	5.5	8.9	61.5	41.2	87.7	149.2
November ...	2.3	54.4	56.7	5.5	8.9	62.3	41.6	87.6	149.8
1978—									
February .....	3.0	51.2	54.2	6.0	9.9	60.2	39.9	90.5	150.7
May .....	3.2	52.2	55.4	4.3	7.2	99.7	39.5	91.5	151.2
August .....	2.3	52.4	54.7	4.7	7.9	59.4	39.1	92.4	151.8
November ...	2.4	53.4	55.8	4.5	7.5	60.3	39.7	91.7	152.1
1979—									
February .....	3.4	52.7	56.1	5.3	8.7	61.4	40.2	91.4	152.7
May .....	3.0	57.0	60.0	4.9	7.5	64.9	42.3	88.7	153.6

## PERSONS

1976—									
August .....	12.9	151.3	164.2	8.1	4.7	172.3	59.1	119.2	291.5
November ...	12.8	154.2	166.9	8.3	4.7	175.2	59.8	117.7	292.9
1977—									
February .....	12.1	153.3	165.5	10.6	6.0	176.0	59.8	118.4	294.4
May .....	12.0	156.7	168.7	10.2	5.7	178.8	60.5	116.8	295.6
August .....	11.9	156.8	168.7	9.9	5.5	178.6	60.3	117.8	296.4
November ...	10.9	157.3	168.2	9.6	5.4	177.7	59.7	119.8	297.5
1978—									
February .....	12.3	153.4	165.7	13.4	7.5	179.1	59.8	120.1	299.2
May .....	11.9	152.8	164.7	10.8	6.2	175.5	58.5	124.4	300.0
August .....	11.8	154.1	165.9	10.9	6.2	176.8	58.7	124.3	301.1
November ...	10.7	156.5	167.2	10.5	5.9	177.7	58.9	123.9	301.6
1979—									
February .....	12.0	156.8	168.7	12.5	6.9	181.2	59.9	121.4	302.6
May .....	12.0	160.8	172.8	11.2	6.1	184.0	60.5	120.2	304.2

- (a) This series is based on a regular 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 no work at all and who: (i) did not have a job and were actively seeking full-time or part-time 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 a 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 Censuses of 1971 and 1976.

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 census industry dissection bench-marks have 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, \$923 in January 1977 and \$1 154 in January 1978, 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.

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, (Excluding Employees in Agriculture and Private Domestic Service, and Defence Forces),  
Monthly Estimates, Tasmania r ('000)**

Month	1977			1978			1979		
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons
January . . . . .	89.6	46.7	136.4	89.7	47.7	137.4	89.4	48.1	137.4
February . . . . .	90.0	47.0	136.9	90.0	47.8	137.8	89.9	48.3	138.2
March . . . . .	90.3	47.2	137.5	89.6	48.1	137.7	89.9	48.6	138.5
April . . . . .	90.4	47.3	137.7	89.4	48.0	137.3	90.0	48.5	138.5
May . . . . .	90.2	47.2	137.4	89.4	47.9	137.3	89.8	48.5	138.2
June . . . . .	89.7	47.0	136.7	89.3	47.9	137.2	89.4	48.8	138.2
July . . . . .	89.2	47.0	136.2	89.1	47.7	136.8	<i>n. y. a.</i>	<i>n. y. a.</i>	<i>n. y. a.</i>
August . . . . .	89.2	47.2	136.4	88.8	47.6	136.4	<i>n. y. a.</i>	<i>n. y. a.</i>	<i>n. y. a.</i>
September . . . . .	89.0	47.3	136.3	88.8	47.5	136.3	<i>n. y. a.</i>	<i>n. y. a.</i>	<i>n. y. a.</i>
October . . . . .	88.6	47.3	135.8	88.7	47.6	136.3	<i>n. y. a.</i>	<i>n. y. a.</i>	<i>n. y. a.</i>
November . . . . .	89.1	47.7	136.9	88.8	47.4	136.2	<i>n. y. a.</i>	<i>n. y. a.</i>	<i>n. y. a.</i>
December . . . . .	89.5	47.7	137.2	89.2	48.0	137.3	<i>n. y. a.</i>	<i>n. y. a.</i>	<i>n. y. a.</i>

The table below gives estimated totals for employees in Tasmania at June and December of each year:

**Wage and Salary Earners in Civilian Employment, (Excluding Employees  
in Agriculture and Private Domestic Service, and Defence Forces), Tasmania r  
(\*000)**

Year	June			December		
	Males	Females	Persons	Males	Females	Persons
1974.....	88.8	44.1	132.9	89.4	44.6	134.0
1975.....	89.6	46.1	135.8	89.1	47.5	134.9
1976.....	88.4	46.0	134.4	89.8	47.1	136.9
1977.....	89.7	47.0	136.7	89.5	47.9	137.2
1978.....	89.3	47.9	137.2	89.2	48.0	137.3
1979.....	89.4	48.8	138.2			

**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 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 following table shows the number of government employees in Tasmania according to the level of government:

**Civilian Employees of Government Bodies, Tasmania, at 30 June  
(\*000)**

Year and sex	Level of government			Total
	Federal (a)	State (a)	Local	
1977—Males .....	5.9	21.1	2.7	29.7
Females .....	2.1	14.9	0.4	17.4
Persons .....	8.0	36.0	3.2	47.0
1978—Males .....	7.6	19.8	2.7	30.0
Females .....	2.2	15.7	0.5	18.4
Persons .....	9.8	35.5	3.1	48.4
1979—Males .....	7.4	20.0	2.7	30.1
Females .....	2.3	15.9	0.5	18.7
Persons .....	9.7	35.9	3.2	48.8

(a) Includes semi-government authorities.

The next table shows employees according to private and government sectors:

**Total Civilian Employees of Private Employers and Government Authorities, Tasmania,  
at 30 June r  
(\*000)**

Year	Private employers			Government authorities		
	Males	Females	Persons	Males	Females	Persons
1977.....	60.1	29.6	89.7	29.7	17.4	47.0
1978.....	59.3	29.5	89.8	30.0	18.4	48.4
1979.....	59.3	30.2	89.4	30.1	18.7	48.8

**Industrial Classification of Employees**

The next table specifies the main industrial groups and shows the industrial classification of *civilian employees only*, for recent years:

**Wage and Salary Earners in Civilian Employment, Tasmania at 30 June: Main Industry Groups  
(Excluding Employees in Agriculture and Private Domestic Service, and Defence Forces) r  
(\*000)**

A.S.I.C. Division	Year				
	1975	1976	1977	1978	1979
<b>MALES</b>					
A. (Part) Forestry, fishing and hunting ..	1.2	1.2	1.3	1.3	1.2
B. Mining .....	4.3	3.9	3.7	3.6	3.8
C. Manufacturing .....	23.3	23.6	23.9	23.2	22.8
D. Electricity, gas and water .....	3.3	3.3	3.3	3.3	3.3
E. Construction .....	11.8	11.3	11.2	11.0	11.3
F. Wholesale and retail trade .....	13.3	13.8	14.4	14.5	14.5
G. Transport and storage .....	7.3	6.5	6.4	6.4	6.2
H. Communication .....	2.8	2.7	2.7	2.7	2.7
I. Finance, insurance, real estate, etc. ...	4.5	4.6	4.8	4.9	5.2
J. Public administration and defence ...	5.0	5.1	5.2	5.3	5.3
K. Community services .....	8.9	9.0	9.3	9.7	10.0
L. Entertainment, recreation, etc. ....	4.0	3.3	3.4	3.3	3.2
Total .....	89.6	88.4	89.7	89.3	89.4

A.S.I.C. Division	Year				
	1975	1976	1977	1978	1979
<b>FEMALES</b>					
A. (Part) Forestry, fishing and hunting ..	-	0.1	0.1	0.1	0.1
B. Mining .....	0.2	0.2	0.2	0.2	0.2
C. Manufacturing .....	5.3	4.9	4.6	4.7	4.8
D. Electricity, gas and water .....	0.3	0.3	0.3	0.3	0.3
E. Construction .....	0.3	0.3	0.3	0.4	0.5
F. Wholesale and retail trade .....	9.5	9.3	9.6	9.6	9.9
G. Transport and storage .....	0.7	0.7	0.7	0.6	0.6
H. Communication .....	0.8	0.8	0.8	0.8	0.9
I. Finance, insurance, real estate, etc. ...	3.9	3.9	4.4	4.3	4.5
J. Public administration and defence ...	2.9	3.0	3.1	3.3	3.4
K. Community services .....	15.5	16.6	17.3	18.3	18.3
L. Entertainment, recreation, etc. ....	6.5	6.0	5.5	5.3	5.3
Total .....	46.1	46.0	47.0	47.9	48.8

**Wage and Salary Earners in Civilian Employment, Tasmania at 30 June: Main Industry Groups  
(Excluding Employees in Agriculture and Private Domestic Service, and Defence Forces)<sup>r</sup>—continued  
(<sup>'000</sup>)**

A.S.I.C. Division	Year				
	1975	1976	1977	1978	1979
<b>PERSONS</b>					
A. (Part) Forestry, fishing and hunting ..	1.3	1.3	1.4	1.4	1.3
B. Mining .....	4.5	4.1	3.8	3.8	4.0
C. Manufacturing .....	28.6	28.5	28.5	27.9	27.6
D. Electricity, gas and water .....	3.6	3.6	3.6	3.6	3.7
E. Construction .....	12.2	11.6	11.5	11.5	11.8
F. Wholesale and retail trade .....	22.9	23.1	24.1	24.2	24.4
G. Transport and storage .....	8.0	7.2	7.1	7.0	6.8
H. Communication .....	3.6	3.6	3.5	3.5	3.5
I. Finance, insurance, real estate, etc. ...	8.3	8.5	9.2	9.2	9.7
J. Public administration and defence ...	7.9	8.1	8.4	8.6	8.7
K. Community services .....	24.4	25.6	26.6	28.0	28.3
L. Entertainment, recreation, etc. ....	10.5	9.3	8.9	8.6	8.5
<b>Total .....</b>	<b>135.8</b>	<b>134.4</b>	<b>136.7</b>	<b>137.2</b>	<b>138.2</b>

## 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 and 1976 Censuses 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, Tasmania, 1966, 1971 and 1976 Censuses

Year (30 June) 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	3 047	2.0
1976—Males .....	112 281	4 003	3.6
Females .....	58 344	2 676	4.6
Persons .....	170 625	6 679	3.9

### Registrations with Commonwealth Employment Service

#### The Commonwealth Employment Service

The Commonwealth Employment Service (CES) was originally established by federal legislation under Section 47 of the *Re-Establishment and Employment Act 1945* and under the *Social Services Legislation Declaratory Act 1947*. In August 1978 a new *Commonwealth Employment Service Act* was passed providing for a National Director and State Directors of the CES and national, state and local committees, with an advisory role comprising a range of representatives from the community.

The functions of the CES are:

- (i) To assist persons seeking employment or a change in employment to obtain suitable positions having regard to their experience, training or qualifications, and to the economic and other needs of the Australian community. In particular to: (a) provide persons with information relating to employment, such as advice about qualifications for occupations and vocational guidance; and (b) make special arrangements and facilities to assist immigrants, Aboriginals, the young, the handicapped, school leavers and those with professional or technical qualifications or those who have special requirements or disadvantages in relation to employment.
- (ii) To assist employers to fill vacant positions with available persons who are suitable for the performance of the duties and who meet employers' requirements for the positions.
- (iii) To promote and implement manpower programs and other measures designed to ensure a high level of employment.
- (iv) To register persons who are unemployed and who wish to claim unemployment benefits under the *Social Services Act 1947* and provide help in seeking employment for persons claiming or receiving such benefits.
- (v) To publish information about the labour market or services relating to employment.
- (vi) To collect statistics and other information relating to the labour market.

#### 'Registered for Employment'

In the following table the persons shown are those who claimed, when registering for full-time work (35 hours or more per week) with the CES, 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 CES; persons receiving unemployment benefit are included.

Persons Registered for Employment with Commonwealth Employment Service(a), Tasmania

Year	June				December			
	Males	Females	Persons		Males	Females	Persons	
			Number	Rate (b)			Number	Rate (b)
1974.....	1 968	1 342	3 310	2.0	4 089	3 251	7 340	4.3
1975.....	3 648	2 542	6 190	3.6	6 450	3 791	10 241	5.9
1976.....	5 840	3 146	8 986	5.1	6 464	3 734	10 198	5.8
1977.....	5 142	3 644	8 786	4.9	8 266	4 355	12 621	7.1
1978.....	8 261	3 683	11 944	6.8	9 325	5 248	14 573	8.0
1979.....	8 361	4 430	12 791	7.1	n. y. a.	n. y. a.	n. y. a.	n. y. a.

(a) Recorded as unplaced on the Friday nearest the last day of the month.

(b) Persons registered for employment as a percentage of the estimated total labour force. Labour force estimates used are the latest available up to the month in question (i.e. the relevant May or November estimates for years prior to 1978 in which year the population survey was changed from a quarterly to a monthly basis).

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 'Labour Force Estimates (Intercensal)' 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	1977			1978			1979		
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons
January . . . . .	6 845	3 850	10 695	8 390	4 417	12 807	9 995	5 349	15 344
February . . . . .	6 174	3 870	10 044	8 395	4 484	12 879	9 768	5 540	15 308
March . . . . .	5 092	3 593	8 685	7 853	4 198	12 051	8 617	4 886	13 503
April . . . . .	4 555	3 420	7 975	7 673	4 007	11 680	8 439	4 772	13 211
May . . . . .	4 665	3 451	8 116	8 033	3 966	11 999	8 357	4 633	12 990
June . . . . .	5 142	3 644	8 786	8 261	3 683	11 944	8 361	4 430	12 791
July . . . . .	6 043	3 462	9 505	8 396	3 624	12 020	8 376	4 283	12 659
August . . . . .	6 217	3 523	9 740	8 393	3 688	12 081	8 290	4 289	12 579
September . . . . .	6 162	3 254	9 416	8 679	3 816	12 495	n.y.a.	n.y.a.	n.y.a.
October . . . . .	6 283	3 051	9 334	8 314	3 842	12 156	n.y.a.	n.y.a.	n.y.a.
November . . . . .	6 572	3 285	9 857	8 473	4 165	12 638	n.y.a.	n.y.a.	n.y.a.
December . . . . .	8 266	4 355	12 621	9 325	5 248	14 573	n.y.a.	n.y.a.	n.y.a.

(a) At Friday nearest last day of month.

#### **Differences between Population Surveys Estimates of Unemployment and Commonwealth Employment Service Figures**

The population (labour force) 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 Services 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 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 CES., whose name was not known to the interviewer.

Survey questionnaires were matched with the selected CES. 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. The results were published in *Survey of Persons Registered with the CES as Unemployed, March 1977* (6229.0).

### 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 for recent years:

Number of Persons Receiving Unemployment Benefit, Tasmania (a)

Month	1974	1975	1976	1977	1978	1979
January	2 706	4 687	8 516	7 397	9 244	11 244
February	2 538	5 413	7 169	7 501	9 577	11 876
March	1 630	4 938	6 438	6 926	8 785	11 028
April	1 748	3 664	6 425	6 575	9 119	9 975
May	1 655	3 835	6 611	6 554	9 383	10 104
June	1 769	4 439	7 228	7 078	9 757	10 420
July	2 325	4 787	7 603	7 978	9 770	9 922
August	2 615	5 223	7 609	7 917	9 935	10 257
September	3 139	5 378	7 541	8 083	10 206	n. y. a.
October	3 166	5 369	7 210	8 037	9 812	n. y. a.
November	2 650	5 634	7 053	7 179	9 639	n. y. a.
December	4 210	8 096	7 009	7 610	9 508	n. y. a.

(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 relate to the end of a four-week period and others to 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 at the end of June is shown for recent years in the following table:

Persons Receiving Unemployment Benefit, Tasmania at June (a)

Particulars	1974	1975	1976	1977	1978	1979
Males	1 034	2 717	4 927	4 381	6 881	7 040
Females	735	1 722	2 301	2 697	2 876	3 380
Persons—						
Number	1 769	4 439	7 228	7 078	9 757	10 420
Proportion (b)	1.1	2.6	4.1	4.0	5.6	5.8

(a) See footnote to previous table.

(b) Persons receiving benefit as a percentage of the estimated total labour force. Rates for 1973 to 1977 are based on labour force estimates for May.

## Unemployment Rates

The next table brings together details relating to the civilian labour force, persons registered for employment with the Commonwealth Employment Service and persons receiving unemployment benefits. Estimated unemployed (from the population survey), registered unemployed and unemployment benefit recipients are shown as proportions of the total labour force. It is noted that, while the labour force includes part-time workers and those seeking part-time work, only those seeking full-time work (35 hours or more per week) are registered with the CES and registration is a voluntary act.

The Civilian Labour Force, Unemployment and Unemployment Rates, Tasmania for May each Year

Particulars	1975	1976	1977	1978	1979
Civilian labour force (a)—					
Employed (b).....'000	163.7	167.7	168.7	164.7	172.8
Unemployed—					
Looking for full-time work (c).....'000	n.a.	n.a.	8.1	9.6	10.0
Looking for part-time work (d).....'000	n.a.	n.a.	2.1	(e)	(e)
Total unemployed.....'000	6.7	8.5	10.2	10.8	11.2
Total labour force.....'000	170.4	176.1	178.8	175.5	184.0
Unemployment rate (f).....%	4.0	4.8	5.7	6.2	6.1
Registered unemployed—					
Persons (g).....'000	5.9	8.7	8.1	12.0	13.0
Rate (h).....%	3.5	4.9	4.5	6.8	7.1
Unemployment benefit recipients—					
Persons.....'000	3.8	6.6	6.6	9.4	10.1
Rate (i).....%	2.3	3.8	3.7	5.3	5.5

(a) Aged 15 years and over; estimates derived from the population survey (see the earlier section 'Labour Force Estimates').

(b) Includes : (i) full-time workers who usually work for 35 hours or more per week and others who did so during the survey week; and (ii) part-time workers who usually work for less than 35 hours per week and who worked for one hour but for less than 35 hours for pay, or who worked for 15 hours or more without pay, during the survey week.

(c) Persons not classified as employed but who had actively looked for full-time work (35 hours or more per week) during the last month.

(d) Persons not classified as employed but who had actively looked for part-time work during the last month.

(e) Subject to sampling variability too high for most practical uses.

(f) Total unemployed as a proportion of the total labour force.

(g) Persons registered for employment (work of 35 hours or more per week) with the CES.

(h) Registered unemployed (for full-time work) as a proportion of the total labour force.

(i) Unemployment benefit recipients as a proportion of the total labour force.

## DEPARTMENT OF EMPLOYMENT AND YOUTH AFFAIRS

In addition to its function of operating the Commonwealth Employment Service, the Employment Division of the Department of Employment and Youth Affairs 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 are generally not restricted according to occupation and payment can be made either as a subsidy to employers or as allowances to trainees.

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.

Special initiatives under the N.E.A.T. System have been enacted in recent years in an attempt to offset the high levels of youth unemployment. These include:

- (i) The special youth employment training program (S.Y.E.T.P.). This provides a subsidy for an extended training period to employers willing to provide employment and training to youths who have been unemployed for more than four months in the past year.
- (ii) The Special Assistance Program (S.A.P.) which provides subsidies to employers of apprentices threatened by work shortage, or allowances for full-time trade training for apprentices whose indentures have been suspended.
- (iii) The education program for unemployed youth (E.P.U.Y.). This is a program initiated by the Commonwealth Department of Education to increase the employment prospects of unemployed young people through use of State Education Department facilities. Trainees are paid a N.E.A.T. allowance while attending these courses.

### **Community Youth Support Scheme**

The Community Youth Support Scheme (C.Y.S.S.) is a Federal Government Scheme which was introduced in October 1976 as a means of encouraging local community groups to become involved in assisting unemployed young people. The scheme, which is the first of its kind, recognises that young people experiencing periods of unemployment at a time when there is a shortage of jobs may need support or assistance.

The form in which this support may be offered varies according to the particular needs of the young people concerned. Organisations and groups within the community are encouraged to seek funding to run programs and services for young unemployed people. The scheme is designed to complement other Government initiatives previously introduced to increase employment and training opportunities for young people. Accordingly, C.Y.S.S. programs must contain some orientation towards employment. This need only be in fairly general terms. It is not intended that C.Y.S.S. should provide formal skills training as this may be dealt with under N.E.A.T.

C.Y.S.S. is not a job creation program, nor is it a means of getting jobs done for organisations which need free labour. C.Y.S.S. may help young people in several ways:

- (i) By better equipping them to get a job. Sessions on how to handle job interviews, how to go about applying for a job and even where to look for jobs will give a young person confidence and a better chance of finding employment.
- (ii) By giving assistance with social, financial, educational, health and general welfare problems that could be making it more difficult for them to find employment.

- (iii) By providing a wide range of activities to make the period of unemployment more interesting and more creative. Because of the shortage of job vacancies some young people may face long periods of unemployment. They may become bored, frustrated and disillusioned. C.Y.S.S. funds may be used to provide outdoor activity, art and craft workshops, sessions on basic car maintenance, cookery, etc.

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 a maximum of \$6 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 an other trade group.

#### *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, Tasmania

Particulars	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
Number at 30 June (a)—						
Indentured apprentices . . . . .	4 035	4 265	4 285	4 450	4 424	4 445
Apprentices on probation . . . . .	180	218	183	356	320	330
Total . . . . .	4 215	4 483	4 468	4 806	4 744	4 775
During year—						
New apprenticeships registered . . .	1 404	1 312	1 413	1 427	1 271	1 278
Apprenticeships completed . . . . .	750	771	1 052	1 007	1 077	1 007

(a) Distributed in proclaimed trades.

## Industrial Safety and Accident Prevention

## General

**Responsibility:** The Department of Labour and Industry administers legislation relating to safety, health and welfare in work places generally (but excluding work places subject to the *Mines Inspection Act 1968* which prescribes safety standards for mines and mining works and is administered by the Mines Department). The Department's Technical Services Division inspectorate performs inspection and advisory functions throughout the State.

**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 Department endeavours to develop an attitude of 'safety consciousness' among employees and employers. This is the primary aim of general safety training. More specific training is basically aimed at educating supervisors and foremen, since an attitude of 'safety consciousness' must involve 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 sessions on industrial, farm and forest safety are also available and the Department makes arrangements to provide instructors 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.

## Factory Legislation

Working conditions in factories in Tasmania are prescribed under the *Industrial Safety, Health and Welfare Act 1922*. 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.

## Inspection of Machinery

Generally, the *Inspection of Machinery Act 1960*, as amended, applies to all machinery rated at a kilowatt or more 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.

## Safety on Construction Sites

Safety on construction work is covered by provisions of the *Factories, Shops and Offices Act 1965*, the *Scaffolding Act 1960* and the *Inspection of Machinery Act 1960*.

*Industrial Safety, Health and Welfare Act*

The *Industrial Safety, Health and Welfare Act 1977* will progressively repeal the *Factories, Shops and Offices Act 1965*, the *Scaffolding Act 1960* and the *Inspection of Machinery Act 1960*. This Act combines the major provisions of these three Acts into one enactment and otherwise provides wide regulation-making powers in respect of safety, health and welfare matters generally. The Act and regulations have application to all work places (other than those subject to the *Mines Inspection Act 1968*).

**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. From 1977-78 the returns have been submitted by insurers to cover the number of accidents that occurred during a financial year. Previously, returns were collected for cases finalised during a financial year. The revised basis, therefore, does not allow for direct comparison between 1977-78 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.

*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 1977-78 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, Tasmania, 1977-78**

Industry group	Accidents		Time Lost	
	Fatal	Non-fatal	Total	Average per accident
	no.	no.	weeks	weeks
Primary, mining, etc.—				
Primary production .....	1	541	1 204	2.2
Mining .....	—	392	791	2.0
Total .....	1	933	1 995	2.1
Manufacturing—				
Food, drink, etc. ....	—	651	1 070	1.6
Wood and wood products, etc. ....	1	380	634	1.7
Glass and clay products, etc. ....	1	81	113	1.4
Metal and metal products, etc. ....	—	767	1 562	2.0
Transport equipment .....	—	117	284	2.4
Other manufacturing .....	—	464	688	1.5
Total .....	2	2 460	4 351	1.8

## Fatal and Non-fatal Industrial Accidents: Industry Group and Time Lost, Tasmania, 1977-78—continued

Industry group	Accidents		Time Lost	
	Fatal	Non-fatal	Total	Average per accident
	no.	no.	weeks	weeks
Other industries—				
Electricity, gas, etc. ....	—	586	676	1.2
Construction .....	—	970	1 362	1.4
Wholesale and retail trade .....	—	739	1 288	1.7
Transport, storage, etc. ....	—	480	962	2.0
Finance and property .....	1	59	86	1.5
Public administration .....	1	210	392	1.9
Community services .....	—	429	884	2.1
Amusements, hotels, etc. ....	—	261	499	1.9
Total .....	2	3 734	6 149	1.6
Grand total .....	5	7 127	12 495	1.8

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, Tasmania, 1977-78  
(\$)

Industry group	Cost of Claims			
	Fatal accidents	Non-fatal accidents	Total accidents	Average per non-fatal accident
Primary, mining, etc.—				
Primary production .....	31 898	248 834	280 732	460
Mining .....	—	252 345	252 345	644
Total .....	31 898	501 179	533 077	537
Manufacturing—				
Food, drink, etc. ....	—	275 003	275 003	422
Wood and wood products, etc. ....	34 022	117 931	151 953	310
Glass and clay products, etc. ....	1 000	25 418	26 418	314
Metal and metal products, etc. ....	—	441 296	441 296	575
Transport equipment .....	—	57 177	57 177	489
Other manufacturing .....	—	139 733	139 733	301
Total .....	35 022	1 056 558	1 091 580	429
Other industries—				
Electricity, gas, etc. ....	—	166 171	166 171	284
Construction .....	—	311 348	311 348	321
Wholesale and retail trade .....	—	401 721	401 721	544
Transport, storage, etc. ....	—	193 342	193 342	403
Finance and property .....	31 841	17 858	49 699	303
Public administration .....	35 000	91 684	126 684	437
Community service .....	—	210 256	210 256	490
Amusements, hotels, etc. ....	—	102 901	102 901	394
Total .....	66 841	1 495 281	1 562 122	400
Grand total .....	133 761	3 053 018	3 186 779	428

## 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 periods of incapacity and there is provision for a lump sum entitlement for specified injuries included in a schedule to the Act.

*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 basic rate, plus seven times the current Hobart basic rate for each worker's child under sixteen years at the date of injury. Partial dependants are entitled to proportionate amounts.

*Basic Rate* means the minimum weekly wage payable to the lowest paid adult male employed at Hobart under the federal Metal Trades Award (in June 1979 the minimum was \$119.70 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 basic 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 basic 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.

### Long Service Leave for Casual Employees

The *Long Service Leave Act 1976* provides for the granting of 13 weeks long service leave to all employees who complete 15 years continuous service with one employer. A pro-rata entitlement applies in respect of termination of employment after less than 15 years service in certain circumstances.

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, Tasmania

Year ended 31 December	Number of separate unions	Number of members ( <sup>000</sup> )	Annual increase in membership (a) (per cent)
1973.....	118	84.1	4.5
1974.....	121	89.1	5.9
1975.....	117	87.4	-1.9
1976.....	119	86.9	-0.6
1977.....	120	90.4	4.0
1978.....	120	88.5	-2.1

(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 for Australia. 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.

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	1972.....	658	+6.0
1911.....	100	+3.1	1951.....	313	+19.5	1973.....	720	+9.4
1921 (b).....	168	-13.0	1956.....	419	+6.3	1974.....	829	+15.1
1926.....	168	+1.8	1961.....	471	+2.6	1975(c).....	954	+15.1
1931.....	145	-10.5	1966.....	517	+3.0	1976 (c).....	1 083	+13.5
1936.....	141	+2.2	1970.....	586	+3.9	1977.....	1 216	+12.3
1941.....	167	+5.0	1971.....	621	+6.0	1978 (c).....	1 312	+7.9

(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 changes in the financing of health services.

## Consumer Price Index

The Consumer Price Index (CPI) measures quarterly changes in the price of a constant 'basket' of goods and services which account for a high proportion of expenditures by metropolitan wage and salary households. The CPI is described as a chain of 'fixed weight aggregative' linked indexes. Significant changes in the weighting pattern have been made at approximately five-yearly intervals to take account of changes in household spending patterns. However, during each period between links the range of items included and their quantity weights remain fixed (i.e. the 'quantity' for each type of item included in the 'basket' for calculation of the CPI does not change between linking dates)—base-weighted indexes of

this type are referred to as Laspeyre's indexes. The percentage contributions of items to the CPI (often described as 'value weights') change continually from quarter to quarter because of relative price movements which tend to differ from one item to another. The next table shows the percentage contributions of the various groups and sub-groups to the CPI as at the September quarter 1976, when the (current) ninth linked series was introduced, and as at the June quarter 1979:

Consumer Price Index, Six State Capital Cities Combined Percentage Contributions to the Total Index Aggregate(a)

Group, Sub-group, etc.	As at September quarter 1976		As at June quarter 1979			
	Sub-group, etc.	Group	Sub-group, etc.	Group		
<b>Food—</b>						
Dairy produce .....	2-138	} 21-026 {	2-07	} 22-10 {		
Cereal products .....	2-384		2-23			
Meat and seafoods—Meat .....	4-537		6-12			
Fish .....	0-420		0-48			
Fruit and vegetables—Fresh fruit and vegetables .....	2-017		1-83			
Processed fruit and vegetables .....	0-889		0-80			
Soft drinks, icecream and confectionery .....	2-080		2-06			
Meals out, take away food—Meals out .....	2-072		} 4-41 {			
Snacks, take away food .....	2-331					
Other food .....	2-158		2-11			
<b>Clothing—</b>						
Men's and boys' clothing—Men's clothing .....	2-339		} 10-141 {		2-88	} 10-16 {
Boys' clothing .....	0-589	4-60				
Women's and girls' clothing—Women's clothing .....	3-911	0-57				
Girls' clothing .....	0-578	1-59				
Piecegoods and other clothing .....	0-538	0-53				
Footwear—Men's footwear .....	0-549					
Women's footwear .....	0-774					
Children's footwear .....	0-328					
Clothing and footwear services .....	0-535					
<b>Housing—</b>						
Rent—Privately owned dwellings .....	4-779	} 13-544 {		4-54	} 12-93 {	
Government owned dwellings .....	0-468			0-56		
Home ownership—Local government rates and charges .....	1-759		1-81			
House price .....	4-708		6-02			
Repairs and maintenance .....	1-830					
<b>Household equipment and operation—</b>						
Fuel and light—Electricity .....	1-437	} 14-761 {	2-24	} 13-75 {		
Gas .....	0-520		2-96			
Other fuel .....	0-278		1-64			
Furniture and floor coverings .....	3-222		1-10			
Appliances .....	1-909		1-45			
Drapery .....	1-077		3-17			
Household utensils and tools—Household utensils .....	1-017		1-20			
Tools .....	0-490					
Household supplies and services .....	3-319					
Postal and telephone services—Postal charges .....	0-341					
Telephone charges .....	1-151					
<b>Transportation—</b>						
Private transport—Motor vehicle purchase .....	5-523	} 18-453 {	5-15	} 18-03 {		
Motor vehicle operation .....	10-788		10-97			
Public transport fares .....	2-142		1-91			
<b>Tobacco and alcohol—</b>						
Alcoholic beverages—Beer .....	4-769	} 10-247 {	4-74	} 10-10 {		
Wine .....	1-180		2-26			
Spirits .....	1-052		3-10			
Cigarettes and tobacco .....	3-246					

Consumer Price Index: Six State Capital Cities Combined Percentage Contributions to the Total Index  
Aggregate (a)—continued

Group, sub-group, etc.	As at September quarter 1976		As at June quarter 1979	
	Sub-group, etc.	Group	Sub-group, etc.	Group
Health and personal care—				
Health services—Hospital and medical .....	0.889	3.950	3.00	5.43
Dental .....	0.595			
Personal care products .....	1.799			
Personal care services .....	0.667			
Recreation—				
Books, newspapers, magazines .....	1.428	7.878	2.83	7.49
Other recreation goods .....	3.215			
Holiday accommodation .....	0.921			
Other recreation services .....	2.314			
Total .....	100.000	100.000	100.000	100.000

(a) Percentage contributions shown are based on estimates of household expenditure for the year 1974-75, valued at September quarter 1976 and June quarter 1979, prices respectively, see Chapter 18 for details relating to the 1974-75 Household Expenditure Survey.

*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 as at the September quarter 1974): '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 involved changed quantity weights for all items. The weights were based on spending patterns of households in the capital city statistical divisions estimated from 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.

Local quantity weights for the individual cities are used for some items.

### Consumer Price Index, Hobart

The Consumer Price Index for Hobart is compiled to 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
1973-74 .....	141.4	142.4	146.9	132.8	139.6	152.7	141.0	} n.a. {	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 (c) .....	201.5	232.5	244.9	201.8	220.7	222.0	250.3		103.6
1977-78 .....	224.3	257.1	264.6	222.0	241.6	232.2	302.6	110.2	239.1
1978-79 (d) .....	251.3	277.2	278.1	235.9	256.5	268.4	292.2	118.7	257.7
1978—									
March .....	225.5	258.4	267.0	224.6	244.5	233.2	298.9	111.4	240.8
June .....	229.5	265.5	270.2	227.3	247.9	235.7	324.1	112.6	245.5
September .....	238.4	269.7	272.0	228.8	247.0	238.8	331.3	115.4	249.3
Dec. (c) .....	245.0	275.2	277.3	233.4	252.4	276.0	274.2	117.7	254.5
1979—									
March .....	254.7	277.3	280.4	238.5	258.7	278.1	280.5	119.6	260.0
June .....	266.9	286.7	282.6	242.7	268.0	280.7	282.6	122.1	267.0

PERCENTAGE CHANGE: JUNE QUARTER 1979 OVER JUNE QUARTER 1978

	+16.3	+8.0	+4.6	+6.8	+8.1	+19.1	-12.8	+8.4	+8.8
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- (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 were affected by changes in the financing of health services.

The following table shows the 'All groups' index number 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)
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
1977-78 .....	232.0	238.1	240.8	245.5	239.1	+9.8
1978-79 .....	249.3	(c) 254.5	260.0	267.0	(c) 257.7	(c) +7.8

- (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 note (c) 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)		
1974—									
September . . . . .	162.0	+5.1	+16.0	} 158.1 (1974)	+15.1	} 171.1 (1974-75)	+16.7		
December . . . . .	168.1	+3.8	+16.3						
1975—									
March . . . . .	174.1	+3.6	+17.6	} 181.9 (1975)	(d) +15.1				
June . . . . .	180.2	+3.5	+16.9						
September (d) . . . . .	181.6	+0.8	+12.1	} (d)		} 193.3 (1975-76)	(d)+13.0		
December (d) . . . . .	191.7	+5.6	+14.0						
1976—									
March . . . . .	197.4	+3.0	(d)+13.4	} 206.5 (1976)	(d) +13.5	} 220.0 (1976-77)	(d)+13.8		
June . . . . .	202.4	+2.5	(d)+12.3						
September . . . . .	206.9	+2.2	(d)+13.9	} (d)					
December (d) . . . . .	219.3	+6.0	+14.4						
1977—									
March . . . . .	224.3	+2.3	(d)+13.6	} 231.9 (1977)	+12.3	} 241.0 (1977-78)	+9.5		
June . . . . .	229.6	+2.4	(d)+13.4						
September . . . . .	234.1	+2.0	(d)+13.1	} (d)					
December . . . . .	239.6	+2.3	+9.3						
1978—									
March . . . . .	242.7	+1.3	+8.2	} 250.3 (1978)	(d)+7.9	} 260.7 (1978-79)	(d)+8.2		
June . . . . .	247.7	+2.1	+7.9						
September . . . . .	252.5	+1.9	+7.9	} (d)					
December (d) . . . . .	258.2	+2.3	+7.8						
1979—									
March . . . . .	262.6	+1.7	(d)+8.2	} (d)					
June . . . . .	269.6	+2.7	(d)+8.8						

(a) Weighted average of six state capital cities combined.

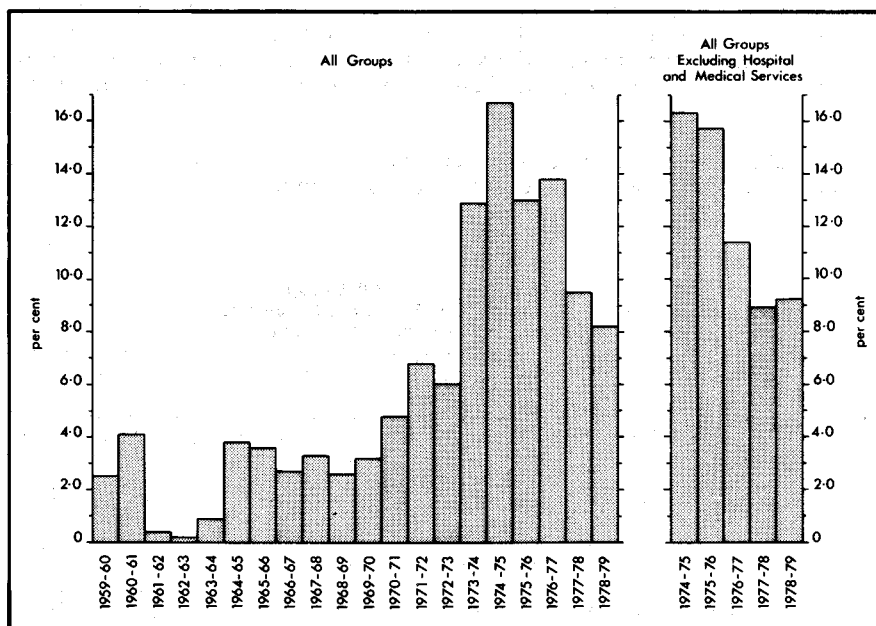
(b) Calendar year and fiscal year index numbers are averages of the four respective quarterly index numbers.

(c) Over preceding period (year or quarter).

(d) Affected by changes in the financing of health services.

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 Medibank), for the December quarter 1976 (following changes to Medibank), and for the December quarter 1978 (following changes in the financing of health services).

**Consumer Price Index: Weighted Average of the Six State Capital Cities,  
Percentage Increase Over Preceding Year**



**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	Percentage increase over preceding quarter	Equivalent annual rate (b) (per cent)	Percentage increase over same quarter of previous year	Index number	Percentage increase over preceding quarter	Equivalent annual rate (b) (per cent)	Percentage increase over same quarter of previous year
1973—								
September	139.6	3.6	15.2	10.6	139.3	3.4	14.3	10.6
December	144.6	3.6	15.2	13.2	144.2	3.5	14.8	13.0
1974—								
March	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
September	162.0	5.1	22.0	16.0	161.7	5.1	22.0	16.1
December	168.1	3.8	16.1	16.3	167.6	3.6	15.2	16.2
1975—								
March	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
September	(c) 181.6	(c) 0.8	(c) 3.2	(c) 12.1	184.0	2.9	12.1	13.8
December	(c) 191.7	(c) 5.6	(c) 24.4	(c) 14.0	195.6	6.3	27.7	16.7
1976—								
March	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
September	206.9	2.2	9.1	(c) 13.9	210.8	2.2	9.1	14.6
December	(c) 219.3	(c) 6.0	(c) 26.2	(c) 14.4	216.8	2.8	11.7	10.8
1977—								
March	224.3	2.3	9.5	(c) 13.6	221.9	2.4	10.0	10.2
June	229.6	2.4	10.0	(c) 13.4	227.3	2.4	10.0	10.2
September	234.1	2.0	8.2	(c) 13.1	232.0	2.1	8.7	10.1
December	239.6	2.3	9.5	9.3	237.7	2.5	10.4	9.6

**Consumer Price Index, Six State 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	Percentage increase over preceding quarter	Equivalent annual rate (b) (per cent)	Percentage increase over same quarter of previous year	Index number	Percentage increase over preceding quarter	Equivalent annual rate (b) (per cent)	Percentage increase over same quarter of previous year
1978—								
March .....	242.7	1.3	5.3	8.2	240.6	1.2	4.9	8.4
June .....	247.7	2.1	8.7	7.9	245.0	1.8	7.4	7.8
September .....	252.5	1.9	7.8	7.9	249.5	1.8	7.4	7.5
December .....	(c) 258.2	(c) 2.3	(c) 9.5	(c) 7.8	259.0	3.8	16.1	9.0
1979—								
March .....	262.6	1.7	7.0	(c) 8.2	263.5	1.7	7.0	9.5
June .....	269.6	2.7	11.2	(c) 8.8	270.6	2.7	11.2	10.4

(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 cent per quarter is equivalent to 17.0 per cent p.a. ( $1.04 \times 1.04 \times 1.04 \times 1.04 = 1.17$ ).

(c) Affected by changes in the financing of health services.

**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)									
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
1977.....	207.6	183.2	146.3	236.6	203.6	217.4	149.2	249.0	156.1
1978.....	224.0	199.8	150.1	265.3	211.4	243.7	150.8	269.6	167.9

**Consumer (Retail) Price Indexes: Various Countries (a)**  
 (Source: Monthly Bulletin of Statistics of the Statistical Office of the United Nations)—continued

Year	Australia (b)	France	Federal Repub. of Germany	Italy	Japan	New Zealand	Switzerland	United Kingdom	U.S.A.
PERCENTAGE INCREASE OVER PREVIOUS YEAR									
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
1977.....	12.3	9.8	3.9	18.4	8.1	14.3	1.3	15.9	6.5
1978.....	7.9	9.1	2.6	12.1	3.8	12.1	1.1	8.3	7.6

(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 1973 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, Percentage Contributions to the Total Index Aggregate'.

Average Retail Prices of Selected Food Items: Hobart (a)  
(Cents)

Item	Unit	1974	1975	1976	1977	1978	
						Average price	Percentage increase (b)
Groceries, etc.—							
Bread, ordinary white, sliced	680 g	n.a.	(c) 42.0	45.1	48.8	52.0	6.6
Flour, self-raising	1 kg	31.1	38.3	47.0	50.9	53.3	4.7
Tea	250 g	37.2	49.7	53.0	92.3	88.5	-4.1
Coffee, instant	150 g	n.a.	n.a.	159.2	283.2	284.0	0.3
Sugar	2 kg	48.0	52.4	56.7	63.5	68.8	8.3
Rice	500 g	22.7	26.5	31.7	35.5	37.8	6.5
Breakfast cereal, corn based	500 g	(c) 56.0	60.6	66.3	71.5	75.3	5.3
Peaches, canned	825 g	43.1	51.7	64.5	70.0	71.3	1.9
Potatoes	1 kg	30.4	19.6	33.7	26.6	35.8	34.6
Onions	1 kg	37.7	34.8	43.4	47.3	47.3	0.0
Dairy produce, etc.—							
Butter	500 g	67.5	77.0	85.2	91.5	91.3	-0.2
Cheese, processed	250 g	37.0	45.5	48.5	54.0	57.3	6.1
Margarine, table, poly-unsaturated	500 g	(c) 70.5	78.7	78.1	84.9	84.0	-1.1
Eggs	1 doz (55 g)	88.8	93.7	109.2	123.4	128.5	4.1
Bacon, rashers, pre-packed	250 g	75.6	91.9	111.6	123.0	126.5	2.8
Milk, fresh, bottled, delivered	2 x 600 ml	28.3	33.6	36.0	40.5	47.0	16.0
Meat—							
Beef—							
Rump steak	1 kg	319.7	287.0	323.4	354.7	391.5	10.4
Silverside, corned	1 kg	201.3	180.8	201.1	218.7	247.5	13.2
Lamb—							
Leg	1 kg	170.9	171.5	197.1	238.9	269.8	12.9
Loin chops	1 kg	174.8	173.1	198.2	240.0	277.8	15.8
Pork, leg	1 kg	220.0	256.6	302.7	326.1	344.5	5.6

(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 1977 price.

(c) Average price for six months only.

## 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* (6401.3) 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							
	1972	1973	1974	1975	1976	1977	1978	1979
Sydney .....	100	100	101	102	101	99	98	99
Melbourne .....	100	101	99	97	98	99	99	100
Brisbane .....	103	101	102	100	101	101	101	100
Adelaide .....	97	98	99	101	102	103	102	103
Perth .....	101	98	96	103	101	102	105	103
<b>Hobart</b> .....	<b>101</b>	<b>99</b>	<b>99</b>	<b>102</b>	<b>104</b>	<b>106</b>	<b>106</b>	<b>104</b>
Canberra .....	104	106	105	104	105	105	103	104
Darwin .....	125	119	119	120	121	n. a.	115	111
Launceston .....	100	97	98	97	100		102	103
Devonport .....	101	99	97	97	101		103	104
Burnie .....	101	98	97	97	101		104	102
Queenstown .....	109	105	107	108	108		111	107

(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 of one year may differ from that existing between them at another date during that 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.*

### 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'. The *Price Index of Materials used in the Manufacturing Industry* (for Australia) 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 quantity weights 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.

*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	Melbourne	Brisbane	Adelaide	Perth	Hobart	Index number	Percentage change (b)
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
1977-78 .....	254.0	238.6	265.1	270.7	253.4	256.7	252.0	+ 8.2
1978-79 <sup>p</sup> .....	272.7	251.4	281.3	292.1	268.2	273.6	268.1	+ 6.4
1978—								
March .....	256.6	241.6	269.1	273.3	257.2	260.9	255.1	+ 1.6
June .....	262.1	243.7	272.0	278.1	259.0	263.2	258.5	+ 1.3
September .....	265.4	244.9	275.1	279.7	261.8	265.5	260.9	+0.9
December .....	268.9	248.3	277.9	286.8	265.1	268.8	264.6	+1.4
1979—								
March .....	278.2	255.9	287.0	300.6	274.8	279.7	273.7	+3.4
June <sup>p</sup> .....	285.9	261.5	291.5	311.2	278.8	288.3	280.2	+2.4
PERCENTAGE CHANGE: JUNE 1979 OVER JUNE 1978								
	+ 9.2	+ 7.3	+ 7.2	+11.9	+ 7.6	+ 9.5	+ 8.4	..

(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
Value weight (a) . . .	7.25	7.01	10.14	38.15	7.49	7.93
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
1977-78 . . . . .	219.5	253.0	306.4	282.3	279.2	218.4
1978-79 <sup>p</sup> . . . . .	227.3	278.6	326.6	300.7	297.9	231.9
1978—						
March . . . . .	221.8	254.8	313.4	287.7	284.2	220.9
June . . . . .	227.5	256.5	318.7	287.9	285.3	222.7
September . . . . .	229.5	275.0	318.7	287.9	289.5	224.4
December . . . . .	229.7	275.7	327.9	290.8	293.2	227.7
1979—						
March . . . . .	221.9	277.2	333.1	311.8	307.7	237.1
June <sup>p</sup> . . . . .	233.4	294.8	333.1	323.1	309.7	246.9
PERCENTAGE CHANGE: JUNE 1979 OVER JUNE 1978						
	+ 2.6	+ 14.9	+ 4.5	+ 12.2	+ 8.6	+ 10.9

**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 (b)
Value weights (a) . . . . .	2.74	1.61	6.98	4.99	5.71	100.00	..
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
1977-78 . . . . .	247.4	201.2	154.9	218.2	250.8	256.7	+9.2
1978-79 <sup>p</sup> . . . . .	258.5	224.5	161.6	229.6	273.5	273.6	+6.6
1978—							
March . . . . .	251.4	200.9	156.1	219.4	255.7	260.9	+1.9
June . . . . .	252.4	209.3	159.3	225.0	259.3	263.2	+0.9
September . . . . .	255.1	212.6	159.6	227.1	265.1	265.5	+0.9
December . . . . .	254.1	217.7	159.6	230.1	271.6	268.8	+1.2
1979—							
March . . . . .	260.0	233.5	162.0	231.4	279.6	279.7	+4.1
June <sup>p</sup> . . . . .	271.0	240.1	167.3	234.2	284.8	288.3	+3.1
PERCENTAGE CHANGE: JUNE 1979 OVER JUNE 1978							
	+7.4	+14.7	+5.0	+4.1	+9.8	+9.5	..

(a) Composition and weighting pattern as at reference base year.

(b) 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 supplies 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 quantity 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 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)
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
1977-78 .....	239.9	254.4	260.9	254.2	258.3	253.7	249.7	+ 8.4
1978-79 <sup>p</sup> .....	259.2	271.4	278.6	274.4	276.8	270.5	268.1	+7.4
1978—								
March .....	243.2	257.7	264.1	257.8	261.4	256.4	252.9	+ 1.4
June .....	248.3	262.1	268.8	262.6	266.9	260.7	257.8	+ 1.9
September .....	251.8	262.3	271.4	262.8	269.8	263.5	259.9	+0.8
December .....	255.5	268.1	275.2	269.2	272.8	267.6	264.4	+1.7
1979—								
March .....	265.7	278.7	284.9	283.8	282.9	276.8	275.0	+4.0
June <sup>p</sup> .....	269.6	283.2	289.0	289.6	287.0	281.7	279.3	+1.6
PERCENTAGE CHANGE: JUNE 1979 OVER JUNE 1978								
	+8.6	+8.1	+7.5	+10.3	+7.5	+8.1	+8.3	..

(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
Value weight (a)	10.41	3.64	5.28	11.90	30.58	6.01
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
1977-78	220.9	258.8	290.6	269.8	282.1	218.4
1978-79 <sup>p</sup>	230.6	277.4	310.1	286.5	297.3	229.2
1978—						
March	223.3	260.6	292.5	274.2	284.3	219.3
June	228.9	265.6	297.3	276.0	287.8	224.3
September	232.4	275.4	297.3	277.9	289.8	225.5
December	232.9	275.8	311.8	279.9	292.7	227.0
1979—						
March	225.4	278.5	321.1	294.8	305.9	229.7
June <sup>p</sup>	236.8	284.6	321.1	301.3	307.8	240.5

**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 (b)	Mechanical services components (b)	All groups	
						Index number	Percentage change (c)
Value weight (a)	2.59	1.19	7.09	8.61	12.70	100.00	
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
1977-78	206.3	259.0	225.5	215.3	247.8	253.7	+8.0
1978-79	231.3	268.6	241.6	242.6	268.5	270.5	+6.6
1978—							
March	209.1	261.7	230.0	216.9	251.8	256.4	+1.0
June	209.6	263.3	232.6	225.0	257.0	260.7	+1.7
September	213.1	264.3	235.5	228.4	261.9	263.5	+1.1
December	223.3	264.1	240.8	237.8	266.3	267.6	+1.6
1979—							
March	244.6	271.8	244.5	255.2	274.5	276.8	+3.4
June <sup>p</sup>	258.5	281.6	251.9	257.6	277.2	281.7	+1.8

(a) Composition and weighting pattern as at reference base year.

(b) 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.

(c) Over preceding year or preceding month shown.

## Australian Export Price Index

This index has fixed quantity 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
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
1977-78 .....	168	212	147	196	237
1978-79 .....	186	309	152	237	245
1978—					
March .....	170	227	148	197	241
June .....	173	243	147	216	223
September .....	176	262	151	237	227
December .....	177	301	151	227	236
1979—					
March .....	203	342	152	243	265
June .....	201	379	153	265	272

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)
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
1977-78 .....	273	224	340	472	213	+3.4
1978-79 .....	280	339	398	641	247	+16.0
1978—						
March .....	267	225	339	515	214	+2.4
June .....	285	244	337	522	222	+3.7
September .....	265	272	354	596	230	+3.6
December .....	277	291	384	584	238	+3.5
1979—						
March .....	290	394	434	689	263	+10.5
June .....	291	443	462	805	279	+6.1

(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 not 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*. 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—			Australian G.D.P. implicit price deflator (c) r
	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	
INDEX NUMBERS							
1973-74	142.6	146.6	146.3	145.5	127.1	134.7	84.6
1974-75	166.7	171.1	170.1	179.1	181.5	145.1	100.0
1975-76	190.0	193.3	196.8	209.2	202.9	158.6	114.7
1976-77	217.7	220.0	219.2	235.1	233.2	182.1	127.6
1977-78	239.1	241.0	238.8	256.7	257.0	198.5	137.7
1978-79	257.7	260.7	260.7	p 273.6	p 275.7	p 248.5	148.1
PERCENTAGE INCREASE OVER PRECEDING YEAR							
1973-74	12.5	12.9	12.8	11.2	20.8	18.3	13.9
1974-75	16.9	16.7	16.3	23.1	42.8	7.7	18.2
1975-76	14.0	13.0	15.7	16.8	11.8	9.3	14.7
1976-77	14.6	13.8	11.4	12.4	14.9	14.8	11.2
1977-78	9.8	9.5	8.9	9.2	10.2	9.0	7.9
1978-79	7.8	8.2	9.2	p 6.6	p 7.3	p 25.2	7.6
PRICE (d) OF AN ARTICLE WORTH \$100 IN 1973-74 IF ITS PRICE INCREASED AT THE SAME RATE AS THE RESPECTIVE PRICE INDEX (\$)							
1973-74	100.00	100.00	100.00	100.00	100.00	100.00	100.00
1974-75	116.90	116.71	116.27	123.09	142.80	107.72	118.20
1975-76	133.24	131.86	134.52	143.78	159.64	117.74	135.58
1976-77	152.66	150.07	149.83	161.58	183.48	135.19	150.83
1977-78	167.67	164.39	163.23	176.43	202.20	147.44	162.77
1978-79	180.72	177.83	178.20	188.04	216.92	184.48	175.06

## Labour, Prices and Wages

## Selected Price Indexes: Comparison—continued

Year	Consumer price index (a)			Price index of materials used in—			Australian G.D.P. implicit price deflator (c) r
	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	

VALUE OF A \$1 NOTE EXPRESSED IN TERMS OF 1973-74 VALUES IF THE RESPECTIVE PRICE INDEX IS TAKEN AS A MEASURE OF INFLATION (\$)

1973-74 .....	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1974-75 .....	0.86	0.86	0.86	0.81	0.70	0.93	0.85
1975-76 .....	0.75	0.76	0.74	0.70	0.63	0.85	0.74
1976-77 .....	0.66	0.67	0.67	0.62	0.55	0.74	0.66
1977-78 .....	0.60	0.61	0.61	0.57	0.49	0.68	0.61
1978-79 .....	0.55	0.56	0.56	0.53	0.46	0.54	0.57

(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 1974-75 prices available in September 1979, *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 1973-74=100.0.

The next table demonstrates the (compounding) effects of a range of constant rates of price increase over a 20-year period. In real life, prices never maintain a constant rate of change and rates of price changes vary widely for different groups of items. Nevertheless, this table is still useful for demonstrating the type of effect that would result from various constant rates of price increase.

## The Effect of Various Rates of Price Increase

Number of years from base year	Annual rate of price increase (per cent)					
	5	10	15	20	25	30
PRICE OF AN ARTICLE ORIGINALLY WORTH \$100 (\$) (b)						
0 (base year) .....	100.00	100.00	100.00	100.00	100.00	100.00
1 .....	105.00	110.00	115.00	120.00	125.00	130.00
2 .....	110.25	121.00	132.25	144.00	156.25	169.00
3 .....	115.76	133.10	152.09	172.80	195.31	219.70
4 .....	121.55	146.41	174.90	207.36	244.14	285.61
5 .....	127.63	161.05	201.14	248.83	305.18	371.29
10 .....	162.89	259.37	404.56	619.17	931.32	1 378.58
15 .....	207.89	417.72	813.71	1 540.70	2 842.17	5 118.59
20 .....	265.33	672.75	1 636.65	3 833.76	8 673.62	19 004.96

## VALUE OF A \$1 NOTE EXPRESSED IN BASE YEAR DOLLAR VAULES (\$) (b)

1 .....	.95	.91	.87	.83	.80	.77
2 .....	.91	.83	.76	.69	.64	.59
3 .....	.86	.75	.66	.58	.51	.46
4 .....	.82	.68	.57	.48	.41	.35
5 .....	.78	.62	.50	.40	.33	.27
10 .....	.61	.39	.25	.16	.11	.07
15 .....	.48	.24	.12	.06	.04	.02
20 .....	.38	.15	.06	.03	.01	.01



The Effect of Various Rates of Price Increase—continued

Number of years from base year	Annual rate of price increase (per cent)					
	5	10	15	20	25	30
PERCENTAGE DECLINE IN VALUE OF A DOLLAR NOTE FROM BASE YEAR						
1.....	4.8	9.1	13.0	16.7	20.0	23.1
2.....	9.3	17.4	24.4	30.6	36.0	40.8
3.....	13.6	24.9	34.2	42.1	48.8	54.5
4.....	17.7	31.7	42.8	51.8	59.0	65.0
5.....	21.6	37.9	50.3	59.8	67.2	73.1
10.....	38.6	61.4	75.2	83.8	89.3	92.7
15.....	51.9	76.1	87.7	93.5	96.5	98.0
20.....	62.3	85.1	93.9	97.4	98.8	99.5

(a) These figures could also be regarded as price indexes to the base, year 0 = 100.00.

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 1973-74=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 unit 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 1973-74 = 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	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
Average weekly earnings, Tasmania—						
Amount .....	\$ 110.50	140.20	157.80	181.20	199.00	211.60
Index of, base year 1973-74 = 100.0 .....	100.00	126.88	142.81	163.98	180.09	191.49
Percentage increase (a) .....	16.1	26.9	12.6	14.8	9.8	6.3
Consumer price index (b)—						
Base year 1966-67 = 100.0 .....	142.6	166.7	190.0	217.7	239.1	257.7
Base year 1973-74 = 100.0 .....	100.0	116.9	133.2	152.7	167.7	180.7
Percentage increase (a) .....	12.5	16.9	14.0	14.6	9.8	7.8

(a) Over preceding year.

(b) 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 \$100 m in 1976-77 to constant 1973-74 values based on the Hobart all groups consumer price index (see the last table for index numbers), the calculations would be as follows:

$$\begin{aligned} \text{Value at 1973-74 prices} &= \$100\text{m} \times \frac{142.6}{217.7} \\ &= \underline{\underline{\$65.5\text{m}}} \\ \text{(Or, alternatively, } \$100\text{m} \times \frac{100.0}{152.7} &= \$65.5\text{m)} \end{aligned}$$

## WAGES

### The Basic Wage

#### 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 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 from 1973:

Tasmanian Basic Wage Rates  
(\$)

Date of operation (a)	Adult males	Adult females	Date of operation (a)	Adult males	Adult females
1973 29 May .....	43.50	34.40	1977 31st March .....	68.60	68.60
1974 23 May .....	46.00	36.90	1977 24 May .....	69.90	69.9
1975 15 May .....	47.00	38.20	1977 22 August .....	71.30	71.30
1975 18 September .....	50.00	50.00	1977 12 December .....	72.40	72.40
1976 15 February .....	54.00	54.40	1978 28 February .....	73.50	73.50
1976 15 May .....	58.20	58.20	1978 7 June .....	74.50	74.50
1976 15 August .....	60.00	60.70	1978 12 December .....	77.50	77.50
1976 22 November .....	62.90	62.90	1979 27 June .....	80.00	80.00

(a) Rates operative from the first pay-period commencing on or after the date shown.

### Minimum Wages

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).

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
31 March 1977 .....	107.00	108.00
24 May 1977 .....	109.00	110.10
22 August 1977 .....	111.20	112.30
12 December 1977 .....	112.90	114.00
28 February 1978 .....	114.60	115.70
7 June 1978 .....	116.10	117.20
12 December 1978 .....	120.70	121.90
27 June 1979 .....	124.60	125.80

(a) Rates operative from the first pay-period commencing on or after the date shown.

### 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 prior to the adoption of wage indexation principles in April 1975 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.

#### *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
	\$	\$	\$	\$
March 1977 .....	5.70	68.60	5.70	108.00
May 1977 .....	1.30	69.90	2.10	110.10
August 1977 .....	1.40	71.30	2.20	112.30
December 1977 .....	1.10	72.40	1.70	114.00
February 1978 .....	1.10	73.50	1.70	115.70
June 1978 .....	1.00	74.50	1.50	117.20
December 1978 .....	3.00	77.50	4.70	121.90
June 1979 .....	2.50	80.00	3.90	125.80

(a) Determination effective during this month.

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 determinations. 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, 1977:* Meetings of all industrial boards were convened to determine variations to the State basic wage and minimum wage following National Wage Case hearings during 1976 and 1977. 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 Relations Act, 1975*.

### National Wage Case Decisions

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 February 1976:

General Increases in award Total Wages: National Wage Cases Decisions

Date operative (a)	Increase
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 per week
24 May .....	1.9 per cent (d)
22 August .....	2.0 per cent
12 December .....	1.5 per cent
1978—28 February .....	1.5 per cent (e)
7 June .....	1.3 per cent
12 December .....	4.0 per cent
1979—27 June .....	3.2 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.

(e) Increase 1.5 per cent up to a maximum of \$2.60 per week.

### Wage Fixation Principles

#### Introduction

In April 1975, the Federal Conciliation and Arbitration Commission adopted the principle of wage indexation based upon quarterly movements in the Consumer Price Index. At that time the Commission established certain principles in relation to its quarterly indexation decisions. Over the first three years that indexation cases operated, the Commission expressed concern about the viability and future of the system. In its National Wage Decision of May 1977, the Commission commented on problems relating to principles of wage fixation. The Commission also announced that a conference would be called on 25 May 1977 to discuss these problems. The conference, held in private, was conducted between 25 May 1977 and 31 April 1978. The purpose of the conference was to achieve consensus in as many areas of wage fixation as possible. The organisations represented at the conference were: The Australian Council of Trade Unions; The Council of Australian Government Employee Organisations; The Australian Council of Salaried and Professional Associations; The Australian Public Service Federation; National Employers' Policy Committee; The Master Builders' Federation of Australia; the Commonwealth Government; each State Government; and the Australian Public Service Board. The conference and its report formed

the basis for the decision on wage fixation principles handed down by the President of the Commission, Sir John Moore, on 14 September 1978. (A more detailed statement of these principles can be found in the 1979 *Year Book*.)

In announcing the principles, Sir John emphasised that a prime consideration in making future awards would be whether there had been substantial compliance with the principles. The Commission also decided that the principles should continue to operate until 31 December 1979. It stated that all parties should meet to decide on a system to operate from 1 January 1980. To achieve this the Commission would call a conference towards the end of 1979.

### Weekly Wage Rates

#### 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 minimum weekly wage rates for adult males and adult females in Tasmania for recent years. The averages include Federal and State awards, etc., and are for all industry groups combined.

**Weighted Average Minimum Weekly Wage Rates, Tasmania (a)**  
**Adult Males and Adult Females: All Groups**  
 (\$)

End of December—	Adult rate		End of December—	Adult rate	
	Male	Female		Male	Female
1973.....	76.80	61.16	1976.....	134.14	122.15
1974.....	106.02	92.47	1977.....	147.58	134.91
1975.....	117.27	105.56	1978.....	158.86	144.83

(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, Tasmania**  
**Adult Males and Adult Females: Industry Groups, 31 December 1978**

Industry group	Adult males		Adult females	
	Rates of wage (\$)	Index numbers (a)	Rates of wage (\$)	Index numbers (a)
Mining and quarrying .....	170.32	603.1	—	—
Manufacturing—				
Engineering, metals, vehicles, etc. ....	152.49	540.0	146.41	735.4
Textiles, clothing and footwear .....	141.97	502.7	136.79	687.1
Food, drink and tobacco .....	154.79	548.1	143.62	721.4
Sawmilling, furniture, etc. ....	144.69	512.3	127.36	639.8
Paper, printing, etc. ....	155.32	549.9	143.70	721.8
Other manufacturing .....	147.43	522.0	—	—
All manufacturing groups .....	150.84	534.1	140.40	705.3
Building and construction .....	159.59	565.1	—	—
Railway services .....	149.78	530.3	156.50	786.1
Road and air transport .....	158.71	562.0	—	—
Shipping and stevedoring .....	190.73	675.3	—	—
Communication .....	183.46	649.6	158.15	794.4
Wholesale and retail trade .....	162.92	576.9	148.94	748.1
Public authority (n.e.i.) and community and business services .....	174.31	617.2	153.69	772.0
Amusement, hotels, personal service, etc. ....	142.97	506.2	138.22	694.3
All industry groups .....	158.86	562.5	144.83	727.5

(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, Tasmania: Index Numbers, All Groups  
Adult Males and Adult Females**

End of December—	Index numbers (a)		End of—	Index numbers (a)	
	Male	Female		Male	Female
1973.....	271.9	307.2	December 1977.....	522.6	677.7
1974.....	375.4	464.5	March 1978.....	530.6	687.8
1975.....	415.2	530.2	June 1978.....	539.0	697.8
1976.....	475.0	613.6	September 1978.....	540.7	698.2
1977.....	522.6	677.7	December 1978.....	562.5	727.5
1978.....	562.5	727.5	March 1979.....	562.5	727.5

(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:

**Weighted Average Minimum Weekly Wage Rates, Australia (a): All Groups, Adult Males**

End of December—	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Australia
RATES OF WAGES (\$)							
1973.....	78.13	77.42	79.82	75.20	75.66	<b>76.80</b>	77.69
1974.....	105.97	105.15	108.95	103.32	101.02	<b>106.02</b>	105.57
1975.....	118.70	117.32	121.48	115.13	113.32	<b>117.27</b>	117.95
1976.....	136.14	134.10	139.14	132.20	132.29	<b>134.14</b>	135.29
1977.....	r 149.93	r 147.50	152.76	r 145.69	r 148.55	<b>r 147.58</b>	r 149.08
1978.....	162.13	159.43	163.65	157.69	158.33	<b>158.86</b>	160.81

**INDEX NUMBERS (b)**

1973.....	276.7	274.1	282.6	266.3	267.9	<b>271.9</b>	275.1
1974.....	375.2	372.3	385.8	365.8	357.7	<b>375.4</b>	373.8
1975.....	420.3	415.4	430.1	407.6	401.2	<b>415.2</b>	417.6
1976.....	482.0	474.8	492.7	468.1	468.4	<b>475.0</b>	479.0
1977.....	r 530.9	r 522.3	540.9	r 515.9	r 526.0	<b>r 522.6</b>	r 527.9
1978.....	574.1	564.5	579.5	558.3	560.6	<b>562.5</b>	569.4

(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 1979, were: N.S.W., 39.71; Victoria, 39.90; Queensland, 39.82; S.A., 39.90; W.A., 39.78; Tasmania, 39.87; Australia, 39.80. Corresponding figures for adult female workers at 30 June 1979 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) for recent years:

**Weighted Average Minimum Hourly Wage Rates, Tasmania, All Groups  
Adult Males and Adult Females**

End of—	Rates of wage (\$)		Index numbers (a)	
	Males (b)	Females (c)	Males (b)	Females (c)
December—1972 .....	1.6591	1.2385	234.5	246.9
1973 .....	1.9010	1.4535	268.7	307.6
1974 .....	2.6396	2.3336	373.1	465.1
1975 .....	2.8989	2.6639	409.7	531.0
1976 .....	3.3176	3.0827	468.9	614.4
1977 .....	r 3.6547	3.4046	r 516.8	678.6

(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

##### 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 female to male 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 June quarter 1979 was 65 per cent and for Australia 67 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.

#### Summary of 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, Tasmania (a)

Year	Average for quarter ending— (\$)				Average for year	
	September	December	March	June	Amount (\$)	Percentage change (b)
1973-74 .....	102.40	117.20	101.60	120.60	110.50	16.1
1974-75 .....	127.30	146.70	135.30	151.40	140.20	26.9
1975-76 .....	150.30	164.70	151.20	165.10	157.80	12.6
1976-77 .....	175.60	188.70	175.10	185.50	181.20	14.8
1977-78 .....	195.90	204.80	194.00	201.10	199.00	9.8
1978-79 .....	205.50	214.50	208.50	217.80	211.60	6.3

(a) For definitions, see earlier section headed 'Definitions'.

(b) Over preceding year.

Average Weekly Earnings Per Employed Male Unit, Australia (a)  
(\$)

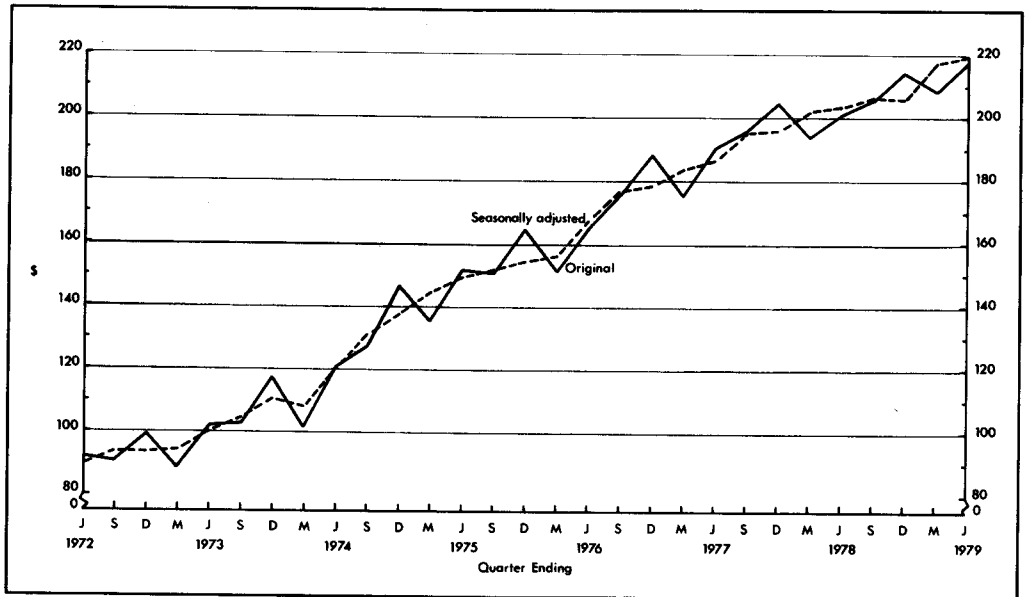
Period	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Australia
1973-74 .....	121.20	118.80	113.50	110.40	115.00	<b>110.50</b>	<i>n.a.</i>	<i>n.a.</i>	118.30
1974-75 .....	152.10	147.80	142.50	138.60	145.60	<b>140.20</b>	168.50	184.30	148.30
1975-76 .....	172.70	170.50	163.50	158.50	169.10	<b>157.80</b>	190.00	209.00	169.60
1976-77 .....	193.60	191.10	184.50	179.50	190.80	<b>181.20</b>	<i>r</i> 216.70	237.70	190.70
1977-78 .....	<i>r</i> 213.40	<i>r</i> 209.3	202.20	<i>r</i> 197.40	209.20	<b>199.00</b>	<i>r</i> 240.70	259.10	<i>r</i> 209.50
1978-79 .....	230.20	226.60	217.80	210.30	223.30	<b>211.60</b>	259.30	279.50	225.70

PERCENTAGE CHANGE: 1978-79 OVER 1977-78

	+7.9	+8.3	+7.7	+6.5	+6.7	<b>+6.3</b>	+7.7	+7.9	+7.7
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(a) For definitions, see the section preceding the tables.

**Average Weekly Earnings Per Employed Male Unit  
Quarterly Averages, Tasmania**



### 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 1978 Survey covered approximately 2 647 000 male and 1 432 000 female wage and salary earners, comprising 1 671 000 males and 905 000 females in private employment, and 976 000 males and 527 000 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 following table dissects average weekly earnings and hours by overtime earnings and hours for the private and total (private and government) sectors in Tasmania:

Average Earnings and Hours, Tasmania: Private and Total (Private and Government) Employment (a)  
October 1978

Particulars	Private employment	Private and government	Private	Private and government
-------------	--------------------	------------------------	---------	------------------------

## AVERAGE WEEKLY OVERTIME AND WEEKLY TOTAL EARNINGS (\$)

	Average weekly overtime earnings		Average weekly total earnings	
Adult males—				
Manufacturing .....	20.80	20.10	208.60	207.80
Non-manufacturing (b) .....	12.90	11.80	206.40	217.10
All industries (b) .....	16.80	14.10	207.40	214.50
Junior males, all industries (b) .....	5.00	4.30	114.90	117.60
Females, all industries (b)—				
Adult .....	3.90	2.60	159.70	184.10
Junior .....	2.50	2.10	102.10	110.20

## AVERAGE WEEKLY OVERTIME HOURS AND WEEKLY TOTAL HOURS PAID FOR

	Average weekly overtime hours paid for		Average weekly total hours paid for	
Adult males—				
Manufacturing .....	2.7	2.6	41.2	41.2
Non-manufacturing (b) .....	1.6	1.4	39.9	39.5
All industries (b) .....	2.1	1.7	40.5	40.0
Junior males, all industries (b) .....	1.1	1.0	40.2	39.9
Females, all industries (b)—				
Adult .....	0.6	0.4	38.4	37.8
Junior .....	0.7	0.5	39.5	39.1

## AVERAGE HOURLY OVERTIME AND HOURLY EARNINGS (\$)

	Average hourly overtime earnings		Average hourly earnings (c)	
Adult males—				
Manufacturing .....	7.70	7.73	5.06	5.04
Non-manufacturing (b) .....	8.06	8.48	5.17	5.50
All industries (b) .....	8.00	8.29	5.12	5.36
Junior males, all industries (b) .....	4.55	4.30	2.86	2.95
Females, all industries (b)—				
Adult .....	6.50	6.50	4.16	4.87
Junior .....	3.57	4.20	2.58	2.82

(a) Average for all employees represented in the survey but excluding managerial, executive, professional and higher supervisory staff. Full-time employees included only. For the last pay period in October.

(b) Excludes rural industry and private domestic service.

(c) Derived by dividing average weekly total earnings by average weekly total hours paid for.

## 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		
	1976	1977	1978
<b>ADULT MALES</b>			
Primary production—			
Farming (general), general hand .....	(a) 113-30	(a) 125-60	134-40
Grazing, shearer (per 100 flock sheep) (b) .....	53-55	57-70	61-48
Mining and quarrying—			
Coal mining, miner (machine) (c) .....	r 181-30	r 197-50	210-80
Quarrying, labourer .....	121-80	134-50	143-90
Engineering, metals, vehicles, etc.—			
Engineering—Fitter or turner .....	130-80	144-00	164-40
Toolmaker .....	137-50	151-00	175-00
Textiles, clothing and footwear—			
Clothing trades (readymade), tailor .....	126-60	139-60	149-50
Footwear, maker .....	115-90	128-30	137-20
Textiles—Knitting, knitter .....	116-70	129-10	138-00
Woolen, weaver .....	112-60	124-70	133-40
Food, drink and tobacco—			
Aerated waters and cordials, general hand .....	112-20	124-30	132-90
Bacon curing, boner .....	155-80	170-70	182-60
Bread baking, doughmaker .....	159-50	174-30	186-40
Brewing, general hand .....	108-75	120-88	130-60
Butter, cheese and milk processing, butter maker .....	130-40	143-70	153-70
Confectionery, confectioner (group 1) .....	126-20	151-30	161-80
Jam, fruit and vegetable preserving, general hand .....	120-50	133-20	142-50
Meat industry—Labourer (beef, mutton) .....	122-20	134-90	147-10
Slaughterman (mutton) .....	165-00	180-10	192-50
Sawmilling, furniture, etc.—			
Sawmilling and timber yards—Machinist (A grade) .....	135-70	149-20	159-50
Sawyer (circular) .....	119-50	132-20	141-30
Paper, printing, etc.—			
Printing (general)—Bookbinder .....	136-60	150-10	160-60
Machine compositor .....	143-30	157-10	168-10
Printing (newspapers)—Machine compositor (day work) .....	180-70	196-60	210-00
Machine compositor (night work) (d) .....	211-30	229-90	245-60
Other manufacturing—			
Brickmaking, drawer .....	129-70	142-90	152-80
Electricity generation and supply, electrical fitter .....	135-70	148-90	158-90
Building and construction—			
Building (e)—Bricklayer .....	r 182-71	r 201-28	213-70
Builder's labourer, skilled .....	177-20	175-40	196-53
Builder's labourer, unskilled .....	165-60	163-40	183-74
Carpenter .....	r 182-71	r 201-28	213-70
Electrician (installation) (f) .....	155-50	170-00	182-00
Plasterer .....	r 182-71	r 201-28	213-70
Painter .....	r 182-71	r 201-28	210-50
Plumber .....	161-80	177-00	190-60
Railway services—			
Traffic—Locomotive engine driver .....	149-85	163-95	191-02
Porter .....	112-05	124-05	132-35
Road and air transport—			
Road transport, motor truck driver (over 1-2 tonnes to 3-0 tonnes) .....	132-10	145-30	163-40
Tramways and buses, bus driver (one-man operator) (g) .....	134-80	148-30	159-60
Shipping and stevedoring—			
Shipping (cargo vessels), able seaman (h) .....	r 248-46	r 275-71	294-85
Stevedoring, wharf labourer (per hour) (i) .....	5-11	5-56	6-19
Communication—			
Post Office, postman (j) .....	138-63	152-17	162-21
Wholesale and retail trade—			
Butchers, general butcher .....	148-40	162-50	173-90
Petrol service stations, attendant .....	112-50	123-80	132-40
Retail stores, shop assistant (grocery) .....	106-60	118-50	126-80
Wool stores, wool classer .....	r 141-60	r 155-40	166-20

**Selected Minimum Wage Rates, Adult Males and Females: Hobart—continued**  
(\$)

Industry and occupation	31 December		
	1976	1977	1978
<b>ADULT MALES—continued</b>			
Public authority (n.e.c.), community and business services—			
Hospitals, orderly .....	r 135.25	r 148.67	158.98
Other services—Graduate engineer .....	r 169.82	r 185.17	198.00
Graduate scientist .....	157.40	r 172.03	184.00
Amusement, hotels, personal services, etc.—			
Hairdressing, hairdresser (men's) .....	141.40	155.20	166.00
Hotels (k), barman .....	121.20	133.90	143.70
Restaurants (l), cook (one cook only employed) .....	121.90	134.60	144.00
Watchmen, cleaners, etc., office cleaner (day) .....	126.80	139.80	149.60
<b>ADULT FEMALES</b>			
Textiles, clothing and footwear—			
Dry cleaning, presser .....	122.70	135.40	144.80
Order dressmaking, machinist .....	118.40	130.90	140.00
Readymade dressmaking, table hand or coat machinist .....	r 118.40	r 130.90	140.00
Textiles—Knitting, machinist .....	116.70	129.10	138.00
Woollen, weaver .....	116.40	128.80	137.70
Food, drink and tobacco—			
Confectionery, general hand .....	113.20	r 129.20	138.10
Jam, fruit and vegetable preserving, general hand .....	120.50	133.20	142.50
Transport and communication—			
Post Office, telephonist (l) .....	128.56	141.64	151.48
Wholesale and retail trade—			
Retail stores—Shop assistant (confectionery) .....	106.60	118.50	126.80
Shop-assistant (drapery) .....	106.60	118.50	126.80
Public administration and community and business services—			
Australian Public Service, typist (j) .....	129.82	142.95	152.86
Hospital nurses (qualified), first year .....	152.20	166.60	178.20
Amusement, hotels, personal service, etc.—			
Cleaners, office cleaner (day) .....	126.80	139.80	149.60
Hairdressing, hairdresser .....	141.40	155.20	166.00
Hotels (k), barmaid .....	119.70	132.40	143.70
Restaurants (k), waitress .....	116.20	128.60	137.50
Theatres, usherette, ticket-taker etc. (l) .....	115.30	127.70	136.60

(a) 44-hour week. (b) Rates shown are 'not found rates'. Shearers' hours of work are 40 per week. (c) 35 hour week. In addition to the rate shown, an attendance allowance is payable for each full fortnightly pay-period worked. (d) 38-hour week. (e) Rates shown are weekly equivalents of hourly rates. They include allowances for excess fares, travelling time, sick leave, statutory holidays following the job, etc. (f) Weekly rates prescribed for a full week's work (excluding overtime). (g) Government operated services only. (h) Includes an allowance valued at \$8.15 per week for keep and accommodation. (i) Rates shown are for casual wharf labourers on other than special cargo work. (j) 36¼-hour week. (k) Weekly cash payments where board and lodging are not provided. (l) 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' is 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 Labor 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 a determination made by a Board or the Chairman to include, or refuse to include, any specified provision in an award or to refuse to make an award on any specified matter. Such appeals must be made within 21 days of the making of a determination. After hearing the appeal, the Tribunal (unless it dismisses the appeal) may reverse or vary the determination in respect of which the appeal is brought; and to give effect to its decision the Tribunal may vary or revoke an award, or make a new 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 person 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*

The *Public Service Act 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.

The Public Service Board Department is the personnel authority for the Public Service and is required to examine the business of each department's activities and business methods to find ways of economising and promoting efficiency in the management and working of departments. The work of the Public Service Board Department, therefore, involves inspections and the recruitment, appointment, salary classification, training and promotion and disciplinary supervision of all persons employed under the *Public Service Act 1973*.

### 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 a principal award it may be amended by the Board to eliminate anomalies, errors or defects contained in it, to incorporate determinations of the Federal Conciliation and Arbitration Commission (e.g. national wage case decisions, etc), or for a number of other reasons.

### The Tasmanian 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. A new section provided 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.

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 1978 was \$79. 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 Tasmania for the last six years:

Industrial Disputes (a): Tasmania

Year	Disputes	Workers involved	Working days lost	Estimated loss in wages
	no.	'000	'000	\$'000
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	1 792.7
1977.....	39	7.9	26.7	928.0
1978.....	46	17.1	35.4	(b) 1 356.0

(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 1.7 per cent of the Australian total in 1978.

The next table summarises statistics relating to industrial disputes in Australia for the last six years:

Industrial Disputes (a): Australia

Year	Disputes	Workers involved	Working days lost	Estimated loss in wages
	no.	'000	'000	\$'000
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
1977.....	2 090	596.2	1 654.8	59 674.0
1978.....	2 277	1 075.6	2 130.8	78 404.0

(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: Tasmania

Period	Mining	Manufacturing					Other	Total manufacturing	Construction
		Metal products, machinery and equipment	Textiles, clothing, footwear	Food, beverages, tobacco	Paper and paper products, printing and publishing				
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	
1977.....	14	3	-	1	2	3	9	6	
1978.....	15	4	-	1	4	5	14	3	
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	
1977.....	3.1	0.9	-	0.1	0.3	-	1.4	0.3	
1978.....	3.0	5.2	-	1.3	1.6	0.3	8.4	1.3	

## Industrial Disputes by Industries: Tasmania—continued

Period	Mining	Manufacturing					Other	Total manufacturing	Construction
		Metal products, machinery and equipment	Textiles, clothing, footwear	Food, beverages, tobacco	Paper and paper products, printing and publishing				
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	
1977.....	18.2	0.9	—	0.8	0.2	0.2	2.0	3.0	
1978.....	15.2	7.5	—	2.6	2.1	0.5	12.7	1.3	
ESTIMATED LOSS IN WAGES (\$'000)									
1973.....	726.7	357.8	174.0	69.3	640.7	3.4	1 245.1	12.2	
1974.....	97.1	927.4	60.8	106.2	281.2	59.1	1 434.7	164.1	
1975.....	281.1	279.7	34.2	81.1	77.4	30.2	502.6	157.6	
1976.....	307.0	120.1	49.8	186.4	371.8	184.4	912.5	135.7	
1977.....	659.0	28.0	—	22.0	5.0	8.0	63.0	110.0	
1978.....	669.0	250.0	—	77.0	78.0	19.0	424.0	44.0	

## Industrial Disputes by Industries: Tasmania—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			
NUMBER OF DISPUTES							
1973.....	3	4	2	3	1	12	63
1974.....	3	4	8	2	3	11	79
1975.....	2	1	5	5	2	3	57
1976.....	3	2	—	3	—	4	43
1977.....	3	1	—	2	1	3	39
1978.....	2	5	2	1	1	1	46
WORKERS INVOLVED (DIRECTLY AND INDIRECTLY) ('000)							
1973.....	0.3	0.2	0.2	0.2	0.1	3.5	17.5
1974.....	0.4	0.4	1.6	—	0.9	4.2	33.6
1975.....	0.5	—	0.7	0.4	0.2	0.5	20.1
1976.....	1.6	1.7	0.2	0.1	0.4	5.5	30.9
1977.....	0.4	1.2	—	0.1	1.2	0.2	7.9
1978.....	0.3	1.6	0.8	—	0.2	0.1	17.1
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
1977.....	0.7	0.5	—	0.1	1.2	0.9	26.7
1978.....	0.6	2.1	0.8	—	—	—	35.4

## Industrial Disputes by Industries: Tasmania—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			
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
1977 .....	34.0	17.0	—	5.0	30.0	10.0	928.0
1978 .....	21.0	75.0	27.0	1.0	1.0	—	1 356.0

(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.

## Further References

The information contained in this chapter is generally available in the 6000.0 series of publications produced by the Canberra Office of the ABS. The main bulletins of this series are the following:

- Labour Statistics (6101.0) (annual, 1977 issue released November 1978, 99 pp.)
- The Labour Force (6203.0) (monthly, June 1979 released 15/8/79, 23 pp.)
- Civilian Employees (6213.0) (monthly, May 1979 released 1/8/79, 8 pp.)
- Survey of Persons Registered with the CES as Unemployed, March 1977 (24/6/77, 23 pp.)
- Average Weekly Earnings (6302.0) (quarterly, June quarter 1979 released 3/9/79, 4 pp.)
- Wage Rates (6312.0) (monthly, May 1979 released 3/8/79, 18 pp.)
- Industrial Disputes (6321.0) (monthly, May 1979 released 24/8/79, 2 pp.)
- Consumer Price Index (6401.0) (quarterly, June quarter 1979 released 25/7/79, 9 pp.)
- Average Retail Prices of Selected Food and Grocery Items, Six State Capital Cities and Canberra (6403.0) (quarterly, June quarter 1979 released 29/8/79, 2 pp.)
- Price Index of Materials Used in Building Other than House Building (6407.0) (monthly, July 1979 released 27/8/79, 8 pp.)
- Price Index of Materials Used in House Building (6408.0) (monthly, July 1979 released 27/8/79, 8 pp.)
- Price Index of Electrical Installation Materials (6409.0) (monthly, July 1979 released 10/8/79, 2 pp.)
- Price Index of Metallic Materials (6410.0) (monthly, July 1979 released 10/8/79, 2 pp.)
- Price Index of Materials Used in Manufacturing Industry (6411.0) (monthly, June 1979 released 3/9/79, 6 pp.)
- Price Index of Articles Produced by Manufacturing Industry (6412.0) (monthly, June 1979 released 15/8/79, 6 pp.)

## Other Publications

- COMMISSION OF INQUIRY INTO POVERTY (R. F. Henderson, Chairman). *Poverty in Australia*, Vols. 1 and 2 (AGPS, Canberra, 1975).
- DEPARTMENT OF EMPLOYMENT AND YOUTH AFFAIRS. *Monthly Review of the Employment Situation*.

# 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 currently 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; and (v) *Retail 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) (Preliminary 1969 Edition) was adopted for use in the 1968-69 and subsequent economic censuses. The 1978 Edition of ASIC was used for economic censuses from 1977-78. 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 *ASIC, Australian Standard Industrial Classification, 1978 Edition Vol. 1: The Classification* (1201.0).

### *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 Subdivision 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, Tasmania

ASIC classification of establishments and year	Number of establishments at 30 June	Persons employed at 30 June	Wages and salaries	Value added
			\$'000	\$'000
Mining (a)—		No.		
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
1976-77 .....	63	4 133	51 538	118 619
1977-78 .....	63	n.a.	53 870	143 877
Manufacturing—				
1972-73 .....	912	31 504	130 703	283 420
1973-74 .....	<u>935</u>	<u>32 359</u>	<u>161 386</u>	<u>340 250</u>
1974-75(b) .....	628	28 708	194 883	402 255
1975-76 .....	667	27 753	211 327	456 029
1976-77r .....	617	22 766	246 014	533 288
1977-78p .....	585	26 734	257 032	494 738
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 of agriculture, mining and manufacturing on the basis of value added for recent years.

## Integrated Economic Censuses and Agricultural Finance Survey, Tasmania: Value Added

Industry sector	1975-76		1976-77		1977-78	
	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) .....	66.6	164	77.9	190	p 93.5	227
Mining .....	80.6	198	118.6	290	143.9	349
Manufacturing .....	456.0	1 123	r 533.3	r 1 304	494.7	1 200

(a) Since the estimates are based on sample surveys they are subject to sampling errors. 'Standard errors' indicating the reliability of the estimates are included in the Canberra Office publication *Agricultural Sector, Part IV, Financial Statistics* (Cat. No. 7507.0).

## 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* (5213.0) 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* (5206.0) 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* (5204.0) 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 the 1976-77 issue of *Australian National Accounts, National Income and Expenditure* (Cat. 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 1974-75 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 1977-78 issue of *Australian National Accounts, National Income and Expenditure* (5204.0) and are subject to revision.

#### Gross Domestic Product, Australia

Particulars	1972-73 r	1973-74 r	1974-75 r	1975-76 r	1976-77 r	1977-78 p	
Wages, salaries and supplements .....	\$m	22 904	28 078	36 027	41 445	46 880	51 567
Gross operating surplus—							
Trading enterprises—							
Companies .....	\$m	6 178	6 735	7 249	8 269	9 868	10 591
Unincorporated enterprises .....	\$m	5 914	7 526	7 589	8 462	10 093	10 655
Dwellings owned by persons .....	\$m	2 278	2 669	3 209	3 911	4 854	5 932
Public enterprises .....	\$m	1 272	1 238	1 123	1 642	1 913	2 013
Financial enterprises .....	\$m	821	845	1 060	1 752	1 974	1 902
Less Imputed bank service charge	\$m	1 072	1 377	1 627	1 849	2 141	2 358
Gross domestic product at factor cost .....	\$m	38 295	45 714	54 630	63 632	73 441	80 302
Indirect taxes less subsidies .....	\$m	4 243	5 320	6 623	8 532	9 775	10 379
<b>Gross domestic product</b> .....	<b>\$m</b>	<b>42 538</b>	<b>51 034</b>	<b>61 253</b>	<b>72 164</b>	<b>83 216</b>	<b>90 681</b>
Percentage increase in G.D.P. (a) .....		13.8	20.0	20.0	17.8	15.3	9.0
G.D.P. at average 1974-75 prices—							
Value .....	\$m	57 247	60 305	61 253	62 894	65 187	66 053
Percentage increase (a) .....		3.7	5.3	1.6	2.7	3.6	1.3
G.D.P. implicit price deflator—							
Index number (1974-75=100.0)		74.3	84.6	100.0	114.7	127.7	137.3
Percentage increase (a)		9.7	13.9	18.2	14.7	11.3	7.5
Gross farm product .....	\$m	3 138	4 274	3 766	3 796	4 278	4 141
Gross non-farm product .....	\$m	39 400	46 760	57 487	68 368	78 938	86 540

(a) Over previous year.



*Implicit Price Deflators:* Indexes such as the gross domestic product implicit price deflators are obtained (to the base: year used as base for the constant prices series=100) by dividing aggregate flows of goods and services measured at current prices by the corresponding estimates at constant prices and multiplying by 100. 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.

The next 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, the consumer price index (six state capitals combined), and the G.D.P. implicit price deflator. 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 in the preceding table. In 1977-78 total 'General government receipts' as a proportion of gross domestic product was 32.3 per cent compared with 27.9 per cent in 1972-73.

General Government Income and Outlay Account, Australia: Receipts

Particulars	1972-73 r	1973-74 r	1974-75 r	1975-76 r	1976-77 r	1977-78 p
AMOUNT (\$ million)						
Income from public enterprises .....	780	684	547	894	1 191	1 370
Interest, etc., received .....	349	430	554	602	795	908
Indirect taxes .....	4 567	5 640	6 948	8 848	10 078	10 831
Direct taxes on income—						
Companies .....	1 545	1 934	2 344	2 505	2 803	3 072
Households .....	4 084	5 485	7 709	9 213	11 047	12 122
Withholding taxes .....	73	79	88	95	96	118
Other direct taxes, fees, fines, etc. ....	488	559	587	681	772	835
<b>Total receipts .....</b>	<b>11 886</b>	<b>14 811</b>	<b>18 777</b>	<b>22 838</b>	<b>26 782</b>	<b>29 256</b>
PERCENTAGE INCREASE OVER PREVIOUS YEAR						
Indirect taxes .....	11.7	23.5	23.2	27.3	13.9	7.5
Direct taxes on income—						
Companies, etc. ....	5.7	25.2	21.2	6.9	11.9	9.6
Households .....	8.5	34.3	40.5	19.5	19.9	9.7
Total receipts .....	8.9	24.6	26.8	21.6	17.3	9.2
Consumer price index (a) .....	6.0	12.9	16.7	13.0	13.8	9.5
G.D.P. implicit price deflator .....	9.7	13.9	18.2	14.7	11.3	7.5

(a) Weighted average for the six state capital cities (all groups).

*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. Relevant definitions are given below:

*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, interests, 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		1972-73	1973-74	1974-75	1975-76	1976-77	1977-78
		r	r	r	r	r	p
Wages, salaries and supplements	\$m	606	723	955	1 087	1 263	1 363
Income of farm unincorporated enterprises	\$m	50	64	25	26	59	78
Income of other unincorporated enterprises	\$m	70	86	106	131	161	173
Income from dwellings	\$m	18	23	24	29	39	60
Transfers from general government	\$m	87	105	147	196	237	266
All other income	\$m	80	98	128	152	174	199
<b>Total household income</b>	<b>\$m</b>	<b>911</b>	<b>1 099</b>	<b>1 385</b>	<b>1 621</b>	<b>1 933</b>	<b>2 139</b>
Less Income tax payable	\$m	100	140	206	249	309	n.y.a.
Other direct taxes fees, fines, etc.	\$m	10	12	12	17	20	n.y.a.
Consumer debt interest	\$m	} 12	16	19	23	28	n.y.a.
Transfers overseas	\$m						
<b>Household disposable income—</b>							
Amount	\$m	789	931	1 148	1 332	1 576	n.y.a.
Percentage increase (a)		17.1	18.0	23.3	16.0	18.3	n.y.a.

(a) Over previous year.

## Household Income by States, 1977-78 p

N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	A.C.T.	N.T.	Australia
TOTAL INCOME (\$ million)								
28 083	21 877	11 008	6 951	6 394	2 139	1 431	576	78 459
INCOME PER HEAD OF MEAN POPULATION (\$)								
5 638	5 757	5 113	5 418	5 284	5 192	6 750	5 236	5 540

Private Final Consumption Expenditure: Tasmania  
(\$ million)

Particulars	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78 p	
						r	Amount
Food	126	149	r 172	r 191	230	248	17.0
Cigarettes and tobacco	19	22	r 25	r 31	34	35	2.4
Alcoholic drinks	44	49	62	70	79	90	6.2
Clothing, etc.	65	83	r 100	103	120	136	9.3
Health	41	47	r 61	r 73	84	95	6.5
Rent	75	90	110	131	160	191	13.1
Gas, electricity, fuel	21	22	27	33	38	42	2.9
Household durables	45	61	81	r 105	118	124	8.5
Newspapers, books, etc.	12	15	16	r 20	23	30	2.1
All other goods, n.e.i.	26	34	r 42	r 46	54	60	4.1
Travel and communication	103	r 121	152	r 184	208	228	15.6
All other services	r 83	r 98	r 118	r 138	160	181	12.4
<b>Total</b>	<b>r 660</b>	<b>r 791</b>	<b>r 966</b>	<b>r 1 125</b>	<b>1 308</b>	<b>1 460</b>	<b>100.0</b>
PERCENTAGE INCREASE (OF TOTAL) OVER PREVIOUS YEAR							
	r 9.3	r 19.8	22.1	r 16.5	16.3	11.6	..

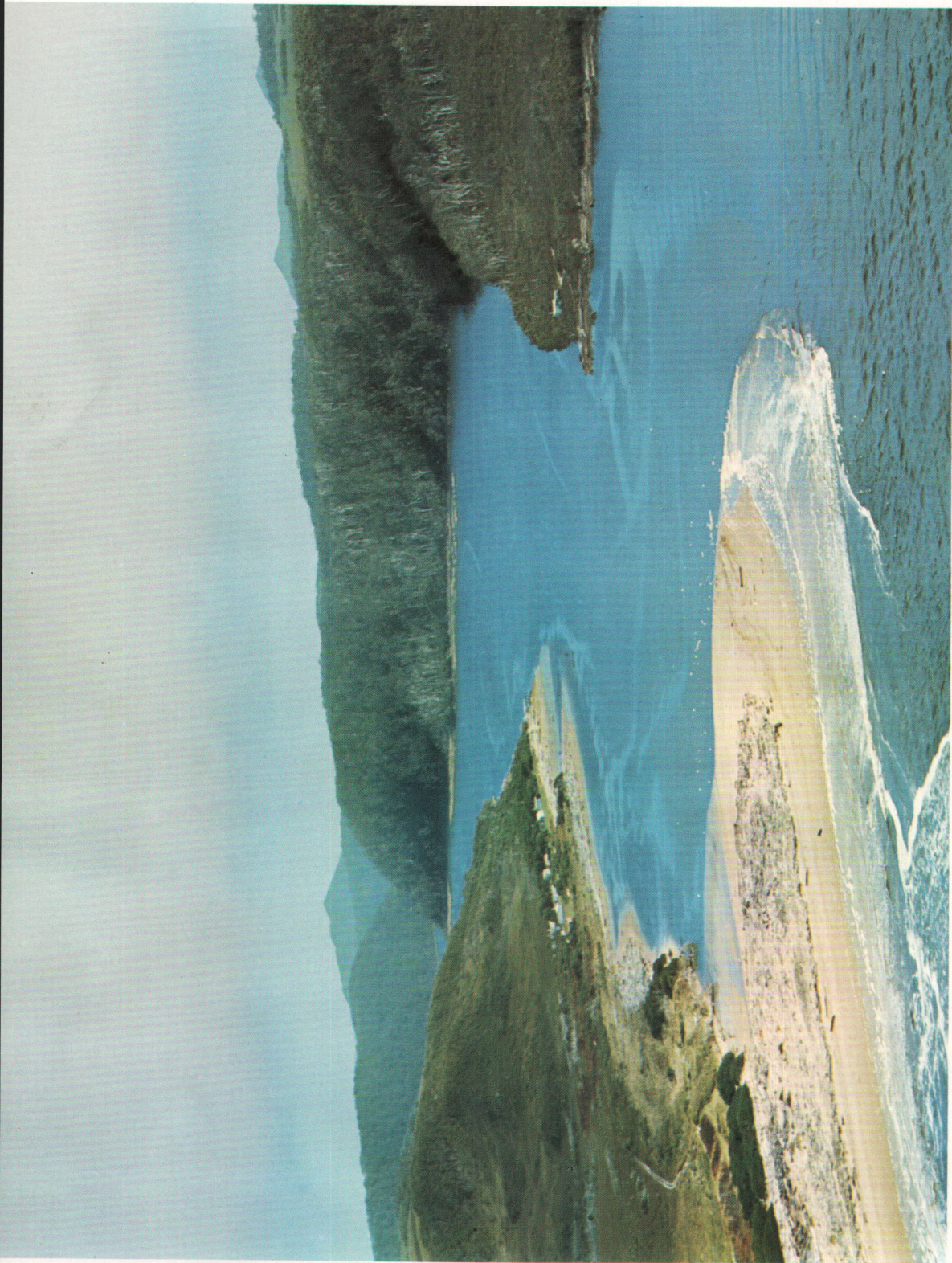




The township of New Norfolk

[Tasmanian Film Corporation]





*The Pieman River Estuary on the West Coast*

*[Tasmanian Film Corporation]*

Private Final Consumption Expenditure: States, 1977-78 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 . . . . .	3 299	2 532	1 362	942	896	248	9 279	17.1
Cigarettes and tobacco . . . . .	451	314	158	124	98	35	1 180	2.2
Alcoholic drinks . . . . .	1 359	740	504	276	304	90	3 273	6.0
Clothing, etc. . . . .	1 666	1 151	602	424	358	136	4 337	8.0
Health . . . . .	1 466	972	451	353	275	95	3 612	6.7
Rent . . . . .	3 191	2 833	1 228	760	721	191	8 924	16.5
Gas, electricity, fuel . . . . .	425	393	143	94	84	42	1 181	2.2
Household durables . . . . .	1 619	1 126	619	418	387	124	4 293	7.9
Newspapers, books, etc. . . . .	327	225	135	82	65	30	864	1.6
All other goods, n.e.i. . . . .	842	615	328	221	190	60	2 256	4.2
Travel and communica- tion . . . . .	3 163	2 169	1 165	738	690	228	8 153	15.0
All other services . . . . .	2 806	1 882	919	568	516	181	6 872	12.7
<b>Total . . . . .</b>	<b>20 614</b>	<b>14 952</b>	<b>7 614</b>	<b>5 000</b>	<b>4 584</b>	<b>1 460</b>	<b>54 224</b>	<b>100.0</b>
PERCENTAGE INCREASE (OF TOTAL) OVER 1975-76								
	11.6	11.9	13.5	10.5	14.3	11.6	(a) 12.1	..

(a) At average 1974-75 prices, the total for Australia for 1977-78 was \$38 580m, an increase of only 2.6 per cent over 1976-77.

Farm Income: Tasmania  
(\$ million)

Particulars	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78
Gross value of farm production—						
Wool (including skin wool) . . . . .	37	32	24	28	35	37
Livestock slaughterings . . . . .	44	58	32	34	45	58
Grain crops . . . . .	2	3	3	2	4	3
Fruit . . . . .	18	15	16	14	13	15
Other crops . . . . .	20	29	31	28	41	39
Other livestock products . . . . .	26	26	31	34	41	44
<b>Total . . . . .</b>	<b>147</b>	<b>163</b>	<b>137</b>	<b>140</b>	<b>179</b>	<b>196</b>
Less Stock valuation adjustment . . . . .	r 1	r -1	—	—	r —	} 71
Less Production costs other than wages and depreciation—						
Marketing costs . . . . .	18	16	17	13	r 15	
Seed and fodder . . . . .	15	14	16	12	r 15	
Other costs . . . . .	28	32	35	41	r 44	
<b>Gross farm product at factor cost</b>	<b>r 85</b>	<b>r 102</b>	<b>r 69</b>	<b>r 74</b>	<b>r 105</b>	<b>125</b>
Indirect taxes less subsidies . . . . .	2	4	6	7	8	7
<b>Gross farm product at market prices</b>	<b>87</b>	<b>106</b>	<b>75</b>	<b>81</b>	<b>113</b>	<b>132</b>
Less Depreciation . . . . .	10	10	12	12	r 13	} 47
Less Wages, net rent and interest paid and third party insurance transfers . . . . .	r 22	r 25	r 32	r 35	r 32	
Less Indirect taxes less subsidies . . . . .	2	4	6	7	8	
<b>Farm income . . . . .</b>	<b>r 53</b>	<b>67</b>	<b>r 25</b>	<b>r 27</b>	<b>r 60</b>	<b>78</b>



**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.

**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.

**Definitions**

The following definitions apply with respect to the surveys:

*Expenditure:* was defined as all payments for goods and services for private use made by all members of the selected household who were 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.

### Survey Results

The following table summarises 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	
	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	4 159.5
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	8.30	7.88	8.06
Dairy products, oils and fats . . . . .	4.30	4.84	5.02	5.12
Fruit and vegetables . . . . .	3.91	4.15	4.18	4.82
Other food . . . . .	10.86	10.74	10.49	11.80
Total food . . . . .	29.70	31.63	31.35	33.66
Current housing costs (a) . . . . .	19.57	21.43	18.34	23.65
Fuel and power . . . . .	3.96	4.83	4.42	4.02
Alcohol and tobacco . . . . .	8.48	10.16	9.03	10.24
Clothing and footwear . . . . .	13.39	18.12	15.01	14.35
Household equipment and operation . . . . .	16.17	20.81	18.88	17.28

Average Weekly Household Income and Expenditure, All Households—*continued*

Item	1974-75	1975-76		
	Hobart	Hobart	Tasmania	Australia
	\$	\$	\$	\$
Average weekly household expenditure— <i>continued</i>				
Medical care and health expenses .....	4.35	4.85	4.45	5.30
Transport and communication .....	23.29	34.42	35.47	33.62
Recreation and education .....	10.60	18.05	13.99	15.78
Miscellaneous goods and services .....	15.85	16.54	13.53	14.47
Total expenditure (b) .....	145.38	180.84	164.48	172.35
Other payments .....	33.92	51.46	41.24	48.80
Total payments .....	179.30	232.30	205.72	221.15
Average weekly household income .....	187.29	239.47	210.11	225.35

(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'.

The next table shows average weekly household income and expenditure in 1975-76 by income group for each of the capital cities.

## Average Weekly Household Income and Expenditure, 1975-76

States and territories	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
<b>AVERAGE WEEKLY HOUSEHOLD INCOME (\$)</b>							
New South Wales .....	49.25	110.45	169.61	229.30	293.26	450.29	220.78
Victoria .....	51.35	107.82	168.89	230.06	296.42	465.83	232.10
Queensland .....	49.70	114.61	169.34	227.34	296.88	500.54	220.39
South Australia .....	54.16	112.05	168.24	227.50	291.79	468.62	217.27
Western Australia .....	52.03	116.27	173.52	232.16	296.07	463.52	226.85
Tasmania .....	<b>56.24</b>	<b>113.21</b>	<b>166.49</b>	<b>226.75</b>	<b>297.88</b>	<b>448.08</b>	<b>210.11</b>
Australian Capital Territory .....	89.69		171.43	229.81	304.15	470.20	315.52
Northern Territory .....	92.58		165.88	232.87	300.92	490.40	336.51
Australia .....	50.80	111.33	169.51	229.27	295.05	465.15	225.35
<b>AVERAGE WEEKLY HOUSEHOLD EXPENDITURE (a) (\$)</b>							
New South Wales .....	74.91	148.14	190.40	231.04	292.85	394.89	225.08
Victoria .....	74.70	124.88	175.03	229.72	286.91	411.48	226.92
Queensland .....	79.50	120.40	158.24	210.25	269.26	402.70	201.87
South Australia .....	73.48	124.25	168.16	229.72	288.42	366.97	206.55
Western Australia .....	68.81	162.77	194.39	232.95	281.80	359.48	220.38
Tasmania .....	<b>71.30</b>	<b>109.82</b>	<b>211.44</b>	<b>190.48</b>	<b>276.77</b>	<b>406.03</b>	<b>205.72</b>
Australian Capital Territory .....	105.22		208.80	236.23	311.60	490.97	333.07
Northern Territory .....	147.05		158.07	276.85	268.60	381.21	291.44
Australia .....	74.87	135.46	180.58	226.59	286.77	398.63	221.15

(a) Includes 'other payments'.



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.

In the following table, details of household expenditure, etc. for 1975-76 are shown by weekly household income group for Tasmania:

Household Expenditure, etc. by Household Income, Tasmania, 1975-76

Particulars	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
Number of households in survey . . . . .	71	60	93	85	60	53	422
ESTIMATED TOTAL NUMBER IN POPULATION ('000)							
Households . . . . .	19.5	17.6	25.9	23.8	19.1	15.8	121.8
Persons . . . . .	38.5	56.2	84.5	87.0	68.6	59.6	394.3
Persons 18 years and over . . . . .	28.5	30.9	52.5	50.2	43.4	39.8	245.4
AVERAGE NUMBER OF PERSONS PER HOUSEHOLD							
Males . . . . .	0.82	1.48	1.66	1.86	1.88	2.04	1.62
Females . . . . .	1.16	1.71	1.60	1.78	1.71	1.74	1.62
Persons . . . . .	1.97	3.19	3.26	3.65	3.58	3.77	3.24
Children—							
Under 2 years . . . . .	0.03	0.16	0.13	0.13	0.07	0.09	0.11
2 and under 5 years . . . . .	0.16	0.18	0.22	0.26	0.21	0.16	0.20
5 and under 18 years . . . . .	0.32	1.10	0.88	1.15	1.03	1.00	0.91
Adults—							
18 and under 65 years . . . . .	0.86	1.32	1.87	1.94	2.19	2.52	1.78
65 years and over . . . . .	(a) 0.61	(a) 0.44	(a) 0.16	(a) 0.17	(a) 0.07	(a) 0.00	0.24
Persons working . . . . .	0.16	0.82	1.10	1.43	1.86	2.44	1.27
Retired persons . . . . .	(a) 0.45	(a) 0.18	(a) 0.14	(a) 0.08	(a) 0.05	(a) 0.00	0.15
AVERAGE WEEKLY HOUSEHOLD EXPENDITURE AND INCOME (\$)							
Current housing costs (b) . . . . .	9.29	16.34	19.08	17.55	22.47	26.68	18.34
Fuel and power . . . . .	3.76	3.07	5.20	4.62	4.52	5.01	4.42
Food—							
Bread, cakes and cereals . . . . .	2.98	3.36	3.61	4.21	4.26	4.23	3.77
Meat and fish . . . . .	5.07	6.06	8.05	8.18	10.07	10.01	7.88
Dairy products, oils and fats . . . . .	3.54	4.01	4.98	5.27	5.75	6.78	5.02
Fruit and vegetables . . . . .	2.19	3.39	4.15	4.34	5.10	6.23	4.18
Miscellaneous food . . . . .	2.61	4.49	4.89	5.76	6.95	6.46	5.17
Meals out and take-away foods . . . . .	1.67	3.03	4.32	5.22	6.87	12.34	5.33
Total food . . . . .	18.07	24.34	30.01	32.97	39.00	46.05	31.35
Alcohol and tobacco . . . . .	1.96	5.41	9.25	9.64	12.20	16.70	9.03
Clothing and footwear . . . . .	4.18	8.58	17.55	13.13	19.60	28.69	15.01
Household equipment and operation . . . . .	7.03	7.50	19.22	23.94	28.12	26.82	18.88
Medical care and health expenses . . . . .	1.12	3.53	4.35	4.79	6.53	6.74	4.45
Transport and communication . . . . .	13.40	14.50	46.72	30.08	44.12	65.26	35.47
Recreation and education . . . . .	3.36	9.71	17.42	9.80	19.41	26.03	13.99
Miscellaneous goods and services . . . . .	3.54	7.41	10.26	10.45	17.94	37.37	13.53
Total expenditure (c) . . . . .	65.69	100.40	179.06	156.98	213.93	285.34	164.48

## Household Expenditure, etc. by Household Income, Tasmania, 1975-76—continued

Particulars	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 EXPENDITURE AND INCOME (\$)—continued							
Selected other payments—							
Income tax .....	1.63	9.12	19.44	27.50	37.81	73.56	26.58
Other .....	(a) 3.98	(a) 0.30	(a) 12.94	(a) 6.00	(a) 25.03	(a) 47.13	14.66
Total payments .....	71.30	109.82	211.44	190.48	276.77	406.03	205.72
Average weekly household income .....	56.24	113.21	166.49	226.75	297.88	448.08	210.11

(a) Subject to large sampling error and should be treated with caution.

(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'.

## 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. (However, no state government had exercised this option by mid-1979.)

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, pp. 654-662.)

*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 years 1976-77 to 1978-79, 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 the income years 1974-75 and 1975-76.

It is noted that the tax payable by companies during the financial year 1980-81 is based on income derived during the year ended 30 June 1979 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 was to allow taxpayers who carry on a business a special deduction from their assessable income (to allow for the effect of inflation). This was related to the value of specified trading stock on hand at the commencement of the year of income. The deduction was 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 was available in respect of the year of income that commenced on 1 July 1976 and subsequent years up to 1978-79. This system was intended to reduce the artificial increase in taxable income due to inflation. However, termination of the system from the commencement of the 1979-80 income year was announced by the Federal Government on 24 May 1979.

#### *Retention Allowances of Private Companies*

Under Division 7 of the Income Tax Assessment Act, a private company becomes liable to additional tax if it does not distribute a prescribed proportion of after-tax taxable income. The purpose of the provision is to maintain, as far as practicable, equity of treatment between shareholders in private companies and persons who operate unincorporated businesses as sole traders or partnerships. Without such a provision, extensive tax minimisation, by retention of profits in the private company's hands, would be expected where the rate of company tax (currently 46 per cent) is well below the maximum marginal rate of tax on individuals (61.07 per cent for 1979-80).

The 1979-80 Federal Budget increased the retention allowance in respect of trading profits from 60 per cent in 1978-79 to 70 per cent maximum for the 1979-80 income year, thus placing more funds at the direct disposal of private companies for purposes of expansion and development. The allowance in respect of property remained unchanged at 10 per cent (maximum retention).

#### **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 indexation factor applied to the 1975-76 taxable income brackets, dependant rebates and the general (minimum) concessional tax rebate, to arrive at the 1976-77 tax scale, was +13.0 per cent.

#### *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 (provided the Government does not separately increase or decrease the tax rates). Indexation should, therefore, ensure that the level of income taxation does not continue to constantly rise due to inflation, but that, to change it, legislation is required. (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 (rebateable) 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. The indexation of personal income tax for 1977-78 involved application of an indexation adjustment of 10.9 per

cent to the previously existing tax brackets and dependant rebates. Indexation raised the general (minimum) concessional rebate to \$676 (equivalent to concessional expenditure of \$1 690). The maximum amount of concessional (rebatable) expenditure allowed in respect of residential rates, life assurance, etc. were *not* indexed. Allowable concessional expenditure in excess of \$1 690 attracted a rebate of 40 cents in the dollar.

#### 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 tax 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; 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 actual effective rates of tax for 1977-78 were a composite of those for this new scheme and the pre-Budget scheme based on indexation of the 1976-77 tax scale (details are set out in the 1978 *Year Book*). The maximum amounts that could be included as concessional expenditure for specified types of expenditure, dependant rebates and the sole parent rebate remained unchanged. The marginal tax rates applying from 1 February 1978 were: nil (up to an income of \$3 750; 32 cents in the dollar (on each dollar in the range \$3 751 to \$16 000); 46 cents in the dollar (\$16 001 to \$32 000); and 60 cents in the dollar (\$32 001 and over).

#### Personal Income Tax 1978-79

The August 1977 Federal Budget provided for full automatic indexation of income tax brackets and dependant rebates to continue *except* for the income year 1978-79. For that year only half indexation was to apply to the tax brackets. The full indexation factor of 1.076 was applied to dependant rebates while the income tax brackets shown in the last table were adjusted by a factor of 1.038. The indexation factor was derived from the percentage increase in the Consumer Price Index (for the six state capitals combined) for the year ended 31 March 1978 over the year ended 31 March 1977, adjusted to discount the effect of indirect taxes. (The price index numbers for the years ending 31 March 1977 and 1978 were 213.2 and 236.5, respectively, giving a non-discounted increase of 10.9 per cent). Under indexation, new rate scales following an indexation adjustment comprise adjusted tax brackets with the same respective tax rates applying as previously. However, the 1978-79 Federal Budget (introduced on 15 August, 1978) increased all tax rates apart from the zero rate by a surcharge of 1½ cents in the dollar. This was stated to be a temporary measure for 1978-79 only. As a result, P.A.Y.E. deductions were increased from 1 November, 1978. For P.A.Y.E. deductions, the marginal tax rates were increased by 2.57 cents in the dollar to make deductions for the full year broadly equivalent to the increased tax to be assessed.

#### 1978-79 Tax Rates

The following table shows the tax scales applying for the 1978-79 income year:

Income Tax Rates, 1978-79

Taxable income (a) bracket	Marginal tax rate (b)	Gross tax	
		On income in bracket specified in first column	Cumulative (i.e. on higher figure in first column) (c)
\$	cents per \$	\$	\$
1—3 893 .....	—	—	—
3 894—16 608 .....	33.5	4 259.53	4 259.53
16 609—33 216 .....	47.5	7 888.80	12 148.33
Over 33 216 .....	61.5	..	..

(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 that does not accrue on or after 1 November 1978.

(b) Marginal rate payable in respect of each dollar in the range specified, each rate included a surcharge of 1.5 cents for 1978-79.

- (c) Subject to reduction (if applicable) by (i) 33½ per cent of total concessional (rebateable) expenditure in excess of \$1 590; (ii) tax rebates in respect of dependants, housekeeper or sole parent; (iii) Zone A rebate of \$216 plus 25 per cent of rebates for dependents, including notional rebates for dependent children and students, or Zone B rebate of \$36 plus 4 per cent of rebates for dependants including notional rebates for dependent children and students; and (iv) a rebate of 30 cents for each dollar of paid-up capital subscribed to certain petroleum exploration and mining companies.

### Personal Income Tax 1979-80

On 24 May 1979, the Government announced that a 1979-80 tax indexation adjustment would not be applied to P.A.Y.E. deductions made from 1 July 1979. Also, pre-July 1979 P.A.Y.E. tax instalment deduction rates, incorporating the 2.57 cents in the dollar temporary increase in marginal tax rates (introduced from 1 November 1978), were to continue.

The percentage increase in the Consumer Price Index (for the six state capitals combined) for the year ended 31 March 1979 over the year ended 31 March 1978 was 7.9 per cent. Thus, if tax indexation had applied from 1 July 1979, the taxable income brackets and dependant rebates would have been increased by this percentage discounted for the effect of indirect taxes. The additional effect of the measures announced on 24 May was to make the standard tax rate applied to P.A.Y.E. deductions 8.03 per cent higher than it would otherwise have been (i.e. 34.57 cents in the dollar compared with 32).

In the 1979-80 Budget Speech, delivered by the Federal Treasurer on 21 August 1979, it was announced that 2.57 cents in the dollar increase in the normal tax rates would continue until 30 November for P.A.Y.E. deduction purposes. From 1 December 1979, the tax rates would revert to those applying prior to 1 November 1978 for P.A.Y.E. deductions (i.e. 32, 46 and 60 cents in the dollar). It was also announced that tax indexation was suspended for 1979-80 and that, 'Whether or not tax indexation can be restored in 1980-81 will depend on economic conditions.'

### 1979-80 Tax Rates

The tax rates for the 1979-80 income year announced in the 1979-80 Federal Budget are a composite of the P.A.Y.E. rates applying from 1 July 1979 to 30 November 1979 and the standard rates that apply for the rest of the year. The following table shows the tax scales applying for the 1979-80 income year (as announced in August 1979):

Income Tax Rates, 1979-80 (a)

Taxable income (b) bracket	Marginal tax rate (c)	Gross tax	
		On income in bracket specified in first column	Cumulative (i.e. on higher figure in first column) (d)
\$	cents per \$	\$	\$
1—3 893 .....	—	—	—
3 894—16 608 .....	33.07	4 204.85	4 204.85
16 609—33 216 .....	47.07	7 817.39	12 022.24
Over 33 216 .....	61.07	..	..

(a) As announced in August 1979.

(b) Gross income less: expenses incurred in earning that income; subscriptions to trade, business or professional association or union; and gifts to approved funds or institutions.

(c) Marginal rate payable in respect of each dollar in the range specified.

(d) Subject to reduction (if applicable) by: (i) 33.07 per cent of total concessional (rebateable) expenditure in excess of \$1 590; (ii) tax rebates in respect of dependants, housekeeper or sole parent; (iii) Zone A rebate of \$216 plus 25 per cent of rebates for dependants, including notional rebates for dependent children and students, or Zone B rebate of \$36 plus 4 per cent of rebates for dependants including notional rebates for dependent children and students; and (iv) a rebate of 30 cents for each dollar of paid-up capital subscribed to certain petroleum exploration and mining companies.

### Dependant and Sole Parent Rebates

The dependant and sole parent rebates for 1978-79 and 1979-80 are 7.6 per cent above those that applied for 1977-78 and are shown below:

## Dependant and Sole Parent Rebates, 1978-79 and 1979-80

Dependant	Maximum tax rebate (a)
	\$
Dependent spouse or daughter-housekeeper .....	597
Housekeeper (b) .....	597
Parent or parent-in-law .....	539
Invalid relative .....	270
Sole parent (c) .....	417

- (a) Reduced proportionately if dependant was only dependent upon the taxpayer for part of the year. Each rebate, except the sole parent and housekeeper rebate, is reduced by one dollar for every four dollars by which the dependant's separate net income exceeds \$203.
- (b) Allowable, subject to certain other conditions, only if no daughter-housekeeper or sole parent rebate claimed.
- (c) Allowable to a sole parent if neither a daughter-housekeeper nor a housekeeper rebate is claimed.

## Concessional Rebates

The maximum concessional expenditure limits have remained unchanged since 1975-76 with the exception of health insurance contributions (see note (a) to the next table). For the income years 1975-76 and 1976-77, a concessional rebate of 40 per cent of *all* allowable concessional expenditure applied, including *minimum* concessional tax rebates of \$540 and \$610 for 1975-76 and 1976-77, respectively. However, for the years 1977-78, 1978-79 and 1979-80 the concessional rebate was reduced to 32 per cent, 33½ per cent and 33·07 per cent, respectively, of concessional expenditure *in excess* of \$1 590. The maximum amounts of concessional (rebatable) expenditure in respect of qualifying items are shown in the following table:

## Personal Income Tax: Concessional Expenditure Limits, 1975-76 to 1979-80

Particulars	Maximum rebatable expenditure
	\$
Rates and land taxes on principal residence .....	300
Health insurance costs .....	(a)
Direct medical, dental, optical, etc. expenses (b) (c) .....	no limit
Funeral expenses (b) .....	100 (per dependant)
Life insurance premiums plus superannuation contribution (d) .....	1 200
Education expenses (e) .....	250 (Per student)
Self-education expenses .....	250
Adoption expenses .....	no limit
Calls paid on shares in afforestation companies .....	½ amount paid

- (a) For the income year 1975-76 there was no limit on subscriptions paid to registered medical and hospital benefits funds for the personal benefit of a taxpayer, his spouse or children. However, for 1976-77 such subscriptions allowable as rebatable concessional expenditure were limited to: (i) amounts paid by a taxpayer between 1 July 1976 and 1 October 1976 for cover up to 1 October 1976; and (ii) amounts paid prior to 1 October 1976 giving entitlement beyond that date in respect of cover in excess of 'standard' medical and hospital cover. Health insurance contributions paid after 1 October 1976 are not allowable concessional expenditure subject to rebate.
- (b) In respect of a resident taxpayer and/or his 'dependants' who are residents.
- (c) Net of refunds.
- (d) For benefit of the taxpayer, or the spouse or child of the taxpayer.
- (e) In respect of the taxpayer's child or other dependant under 25 for whom the taxpayer is entitled to a rebate or notional rebate.

## Changes in the Level of Personal Income Tax

Frequent changes to the tax system in Australia over recent years make it difficult to assess the rate of increase in personal income taxation in real terms. The following table shows the percentage increases in net income tax assessed per taxpayer for recent years, together with Consumer Price Index (C.P.I.) increases, for Australia and Tasmania:

## Federal Personal Income Tax Assessed

Income year	Australia					Tasmania		
	Number of taxpayers	Income tax assessed			Increase in the C.P.I.	Income tax assessed per taxpayer		Increase in the C.P.I.
		Total	Per taxpayer			Amount	Increase	
			Amount	Increase (c)	(a)			(c)
		\$'000	\$	per cent	per cent	\$	per cent	per cent
1971-72 .....	5 691 431	3 583 725	630	19.5	6.8	541	19.2	6.5
1972-73 .....	5 076 252	3 681 326	725	15.2	6.0	638	17.8	5.7
1973-74 .....	5 420 004	5 227 738	965	33.0	12.9	867	35.9	12.5
1974-75 .....	5 551 322	6 570 765	1 184	22.7	16.7	1 112	28.3	16.9
1975-76 .....	5 334 818	8 767 981	1 644	38.9	13.0	1 585	42.5	14.0
1976-77 (d) ..	5 527 309	10 750 124	1 945	18.3	13.8	1 877	18.4	14.6

- (a) Over the previous year for the all groups weighted average of the six state capital cities index.  
 (b) Over the previous year for the all groups Hobart index.  
 (c) Over the previous year.  
 (d) Tax indexation was introduced from 1 July 1976.

The next table shows actual personal income tax receipts by the Federal Government and wages and salaries paid in Australia for recent years:

## Personal Income Tax Receipts and Wages and Salaries Paid: Australia

Year	Personal income tax receipts (a)		Wages and salaries paid (b)		Index of tax receipts to wages and salaries paid (c)	
	Amount	Increase (d)	Amount	Increase (d)	Index number	Increase (d) per cent
	\$ million	per cent	\$ million	per cent		
1972-73 .....	4 084	8.5	21 964	11.4	18.6	-2.6
1973-74 .....	5 485	34.3	26 847	22.2	20.4	9.7
1974-75 .....	7 709	40.5	34 386	28.1	22.4	9.8
1975-76 .....	9 213	19.5	39 434	14.7	23.4	4.5
1976-77 (e) .....	11 047	19.9	44 544	13.0	24.8	6.0
1977-78 .....	12 122	9.7	48 875	9.7	24.8	..

- (a) The item 'Income tax paid on household income' in the *Australian National Accounts* (Cat. No. 5204.0); consists of actual receipts less refunds during the year.  
 (b) *Australian National Accounts* (Cat. No. 5204.0) item; excludes payments to proprietors of unincorporated enterprises.  
 (c) Personal income tax receipts expressed as a percentage of wages and salaries paid.  
 (d) Over the previous year.  
 (e) Tax indexation was introduced from 1 July 1976.

It is noted that in the 1979-80 Federal Budget Statement No. 4, it was estimated that net collections of income tax from individuals in 1979-80 would increase by 18.2 per cent to \$15 128 million. It was also estimated that gross P.A.Y.E. receipts by the Government would increase by 15.0 per cent to \$13 150 million in 1979-80, compared with increases of 8.1 per cent in 1978-79 and 7.8 per cent in 1977-78.

## TOURISM

This section, apart from the 'Tourist Industry' and 'Tourist Accommodation Statistics', has been contributed by the Department of Tourism.

## Introduction

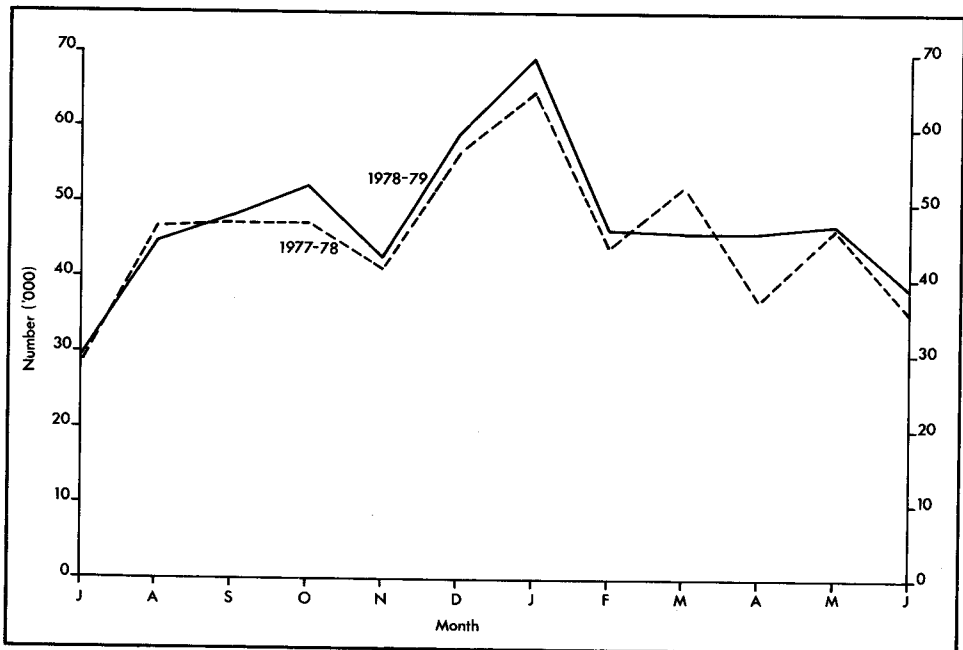
Tasmania is unique among the Australian States because it is an island with relatively short distances separating population centres. The populated areas of the State are serviced

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 caverning are strong attractions for enthusiasts. As a result, tourism is of great importance to Tasmania and is vigorously promoted.

#### Visitors to the State

During 1978-79 more than 570 000 paying passengers travelled to Tasmania, including about 240 000 returning Tasmanian residents. Over the past five 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.

Passenger Arrivals, Tasmania



Excluding returning Tasmanians, it is estimated that of the 330 000 visitors travelling to Tasmania each year, around 246 000 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.

Approximately 63 per cent of visitors (around 209 000) 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 1978-79. (For details of recorded interstate arrivals and departures for the years 1972 to 1978, see the section 'Interstate Arrivals and Departures' in Ch. 6.)



**Passenger Arrivals, Tasmania, 1978-79**  
(Source: Department of Tourism)

Month	Port of entry								Total
	Hobart	Launceston	Wynyard	Devonport			King Is.	Flinders Is.	
				By air	By sea	Total			
July .....	13 021	8 897	2 571	2 135	1 909	4 044	370	29	29 103
August .....	18 221	15 991	3 364	3 025	3 761	6 786	546	33	44 941
September .....	19 910	14 826	3 748	3 368	5 609	8 977	579	60	48 100
October .....	22 251	17 357	3 786	3 052	4 993	8 045	535	36	52 010
November .....	16 625	15 133	2 909	2 413	5 106	7 519	448	49	42 683
December .....	21 582	20 956	4 636	4 837	6 419	11 256	695	147	59 272
January .....	25 225	27 238	4 912	5 645	5 322	10 967	761	191	69 294
February .....	18 579	15 575	3 477	2 913	5 308	8 221	574	68	46 494
March .....	18 031	15 683	2 707	2 666	6 456	9 122	507	53	46 103
April .....	18 783	15 947	3 395	3 115	4 360	7 475	642	68	46 310
May .....	18 912	16 844	3 295	3 065	4 236	7 301	658	67	47 077
June .....	18 238	10 916	3 045	2 946	3 185	6 131	498	57	38 885
Total .....	229 567	195 345	41 845	39 180	56 664	95 844	6 813	858	570 272

Almost all vehicle traffic and passenger sea traffic from the mainland to Tasmania is between Melbourne and Devonport on the Australian National Line's 'sea-road' service. The next table shows details of Bass Strait vehicle and passenger sea traffic from Melbourne to Devonport for 1978-79 by month.

**Bass Strait Vehicle and Passenger Sea Traffic: Melbourne to Devonport 1978-79**  
(Source: Department of Tourism)

Month	Motor vehicles	Caravans and trailers	Passengers
July .....	536	20	1 909
August .....	1 097	43	3 761
September .....	1 633	83	5 609
October .....	1 271	62	4 993
November .....	1 334	67	5 106
December .....	1 633	82	6 419
January .....	1 352	102	5 322
February .....	1 457	61	5 308
March .....	1 745	71	6 456
April .....	1 152	32	4 360
May .....	1 066	18	4 236
June .....	970	32	3 185
Total .....	15 246	673	56 664

*Campervans:* The use of campervans, hired on arrival in Tasmania, is growing in popularity with holiday visitors. At 30 June 1979, 258 campervans were licensed by the Transport Commission as hire and drive vehicles; 134 factory-new campervans were registered by the Commission during 1978-79 (98 for use as hire and drive vehicles and 36 for private use).

**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 continues to expand its promotional and publicity activities. In 1978-79 direct expenditure on these activities amounted to \$849 990, an increase of 22.7 per cent over the expenditure of \$693 000 in the previous year. National campaigns conducted in spring and autumn incurred an expenditure of about \$410 000.

The sales arm of the Department consists of the Tasmanian Government Tourist Bureaux which are located at Hobart, Launceston, Devonport, Burnie, Queenstown, Melbourne, Canberra, Sydney, Brisbane and Adelaide. 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 1978-79, the sales receipts of all bureaux amounted to \$22 151 365, of which 65 per cent was generated outside Tasmania. This represents an increase of 16.4 per cent on receipts of \$19 028 069 for the previous year. Receipts of the mainland bureaux increased by \$1 977 015 compared with an increase of \$1 146 281 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 1978-79, the Minister for Tourism approved 3 loans totalling \$164 600 for tourist projects and guarantees totalling \$1 010 000. In addition, 38 grants to a value of over \$575 000 were made to municipal councils, sporting bodies and other organisations for tourism promotional activities and development projects throughout the State. Grants totalling \$305 140 were advanced for the development of caravan parks at Bruny Island, Port Cygnet, George Town, Bridport, Ilfraville and Strathgordon.

### *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, hostels, holiday flats, holiday cabins, camping grounds, caravan parks and tourist caravan parks. Such premises are required to conform to minimum standards of quality relating to health and hygiene, safety and comfort. During 1978-79, 66 inquiries were received regarding proposals for the establishment of new premises. The Department received 21 complaints against registerable premises, and a total of 320 inspections were made.

At 30 June 1979, there were 260 registerable accommodation houses in Tasmania (excluding hotels), of which 244 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.)

Ninety-three caravan parks and camping grounds throughout the State are registered with the Department, providing 3 412 powered sites. Most provide communal washing and toilet facilities, and showers. More than half are owned and operated by municipal councils.

### *Research*

On 31 December 1978, the Department's 12-month Tasmanian Visitor Survey, conducted in conjunction with the Australian Bureau of Statistics, was brought to a successful conclusion. Based on a 2.7 per cent sample of passengers departing from all major Tasmanian ports of departure, with the exception of Currie and Whitemark, the survey sampled almost 15 000 travellers of whom more than 6 000 were residents of Tasmania and more than 8 500 were visitors to the State. Following the contact interview, a mail-back questionnaire was given to adult visitors who stayed one night or more in the State, and a very creditable 80 per cent response was achieved.

By June 1979, a bulletin of preliminary results had been published and widely distributed, and work had commenced on the final report on the Survey. Some of the results from the Survey are included in a later section.

Early in the 1978-79 financial year, the Department published the report on the Tasmanian Tourist Toilet Facilities Study, undertaken on the Department's behalf by the Department of Environmental Design at the Tasmanian College of Advanced Education.

This report was distributed among government departments, local government councils and other organisations having an interest in, or involved with, the provision of toilet facilities for the travelling public.

In October 1978 the Department commenced a 12-month survey of tourist accommodation establishments. The survey aimed to establish by region the dependence of the accommodation industry on Tasmanian and visiting tourists and non-tourists, and the impact of visiting tourists on Tasmania's economy through the accommodation sector.

The Australian Tourist Commission's International Visitor Survey, which commenced on 1 April 1979, was amended to include a series of questions commissioned by the Department to establish the main reasons for Tasmania's relatively low rate of international visitation.

A study of King Island was undertaken during 1979 and a draft report prepared on the island's tourism potential. This included estimates of visitor numbers and expenditure, an assessment of King Island's tourist attractions and facilities, and the identification of potential tourist developments.

### **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, conducted a survey of air and sea passengers departing from the State during 1978. Some of the preliminary results from this survey are summarised in a later section.

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 tourist accommodation surveys. Details of the results of the 1973-74 Census are contained in Chapter 18 of the 1977 *Year Book*.

### 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 current survey is the same as that for the 1973-74 Census except for the omission of holiday flats.

The following definitions apply:

**Licensed Hotel with Facilities:** A tourist accommodation establishment which is licensed to operate a public bar, provides bath or shower and toilet in most guest rooms, and has breakfast available for guests.

**Licensed or Unlicensed Motel, Private Hotel or Guest House with Facilities:** (referred to as 'Motels, etc.' in tables): A tourist accommodation establishment which provides bath or shower and toilet in most guest rooms and has breakfast available for guests, but is not licensed to operate a public bar. This category also includes motels that are licensed to serve liquor with meals.

**Caravan Park:** A tourist accommodation establishment which provides powered sites for caravans, and toilet, shower and laundry facilities for guests.

**Tourist Accommodation Establishment:** There is no generally accepted definition of a tourist accommodation establishment but, for the purpose of the surveys, a tourist accommodation establishment has been defined as an establishment which provides accommodation of a predominately short term nature (i.e. for periods of less than two months) available to the general public. Note that data are collected and published for both long term and short term guests at these establishments.

**East Coast:** A tourist area comprising the municipalities of Spring Bay and Glamorgan (in the Southern Division), and Fingal and Portland (in the Northern Division).

The following table shows details of the survey for the 12 months ended 30 June 1979:

**Hotels, Motels, etc. (a) With Facilities: Details by Statistical Division,  
Twelve Months Ended June 1979**

Period	Hobart	Southern	Northern			Mersey-Lyell			Total Tasmania	East Coast
			Tamar	North Eastern	Total	North Western	Western	Total		
NUMBER AND CAPACITY										
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
1978, June qtr—										
Establishments .....	40	11	30	7	37	28	6	34	122	12
Guest rooms .....	1 444	254	825	213	1 038	687	205	892	3 628	331
Bed spaces .....	3 482	743	2 146	579	2 725	1 860	552	2 412	9 362	1 018
1979, June qtr—										
Establishments .....	41	12	30	7	37	28	6	34	124	13
Guest rooms .....	1 486	263	817	210	1 027	687	203	890	3 666	351
Bed spaces .....	3 684	800	2 174	578	2 752	1 850	543	2 393	9 629	1 075
PROPORTION OF ROOMS OCCUPIED TO ROOMS AVAILABLE (per cent)										
1978—July .....	43.9	18.2	31.6	19.4	28.9	34.7	21.6	31.6	34.7	19.3
Aug. ....	54.5	31.1	42.4	32.8	40.3	39.9	38.6	39.6	45.0	32.9
Sept. ....	66.0	38.9	47.1	31.6	43.7	51.2	52.1	51.4	51.6	38.5
Oct. ....	66.5	49.0	57.4	47.8	55.4	57.5	66.0	59.5	60.5	49.7
Nov. ....	68.6	51.6	53.2	54.0	53.4	57.5	77.3	62.2	61.6	54.5
Dec. ....	51.8	46.4	42.7	42.8	42.7	50.1	54.5	51.1	48.7	46.0
1979—Jan. ....	79.1	80.6	60.3	76.5	63.7	74.3	87.0	77.2	74.4	83.5
Feb. ....	70.8	58.6	70.4	60.5	68.4	62.1	77.4	65.6	68.0	61.8
March ....	79.2	57.8	60.8	59.7	60.6	60.8	82.1	65.7	69.2	59.8
April ....	64.0	50.3	46.8	47.5	47.0	47.7	67.8	52.3	55.4	50.1
May ....	59.5	38.7	49.4	35.3	46.5	46.8	56.8	49.1	51.8	34.5
June ....	46.9	29.5	35.8	26.6	33.9	35.6	30.8	34.5	39.0	29.6





*The Fiesta fireworks display over the Derwent Estuary*

*An estimated 20 000 people lined Hobart streets to view the inaugural Tasmanian Fiesta Procession*

*[Tasmanian Fiesta Ltd]*



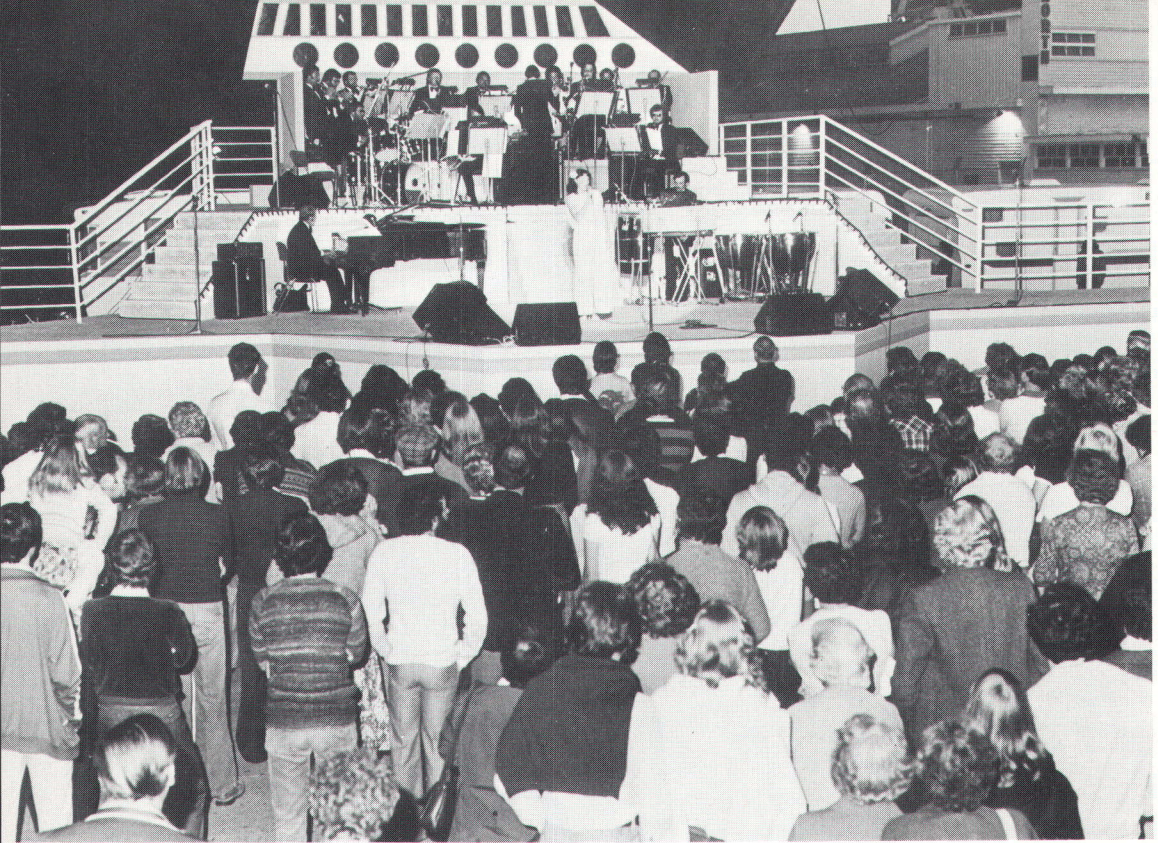




*Yachts in Constitution Dock after completing the Sydney-Hobart race*

*[Tasmanian Film Corporation]*





The variety show, stars Under the Stars, at Constitution Dock, 1978-79  
Tasmanian Fiesta

[Tasmanian Fiesta Ltd]

Hobart's waterfront was alive with excitement during the inaugural Fiesta







Hobart yachtsman, Frank Hickman, winner of the 1979 'King of the Derwent' title, being crowned by Miss Tasmania 1979, Sue Hickey



The 1978-79 Fiesta 'Craft Happening' staged in St David's Park



The outdoor art exhibition staged in historical Salamanca Place, 1978-79 Fiesta

[Tasmanian Fiesta Ltd]



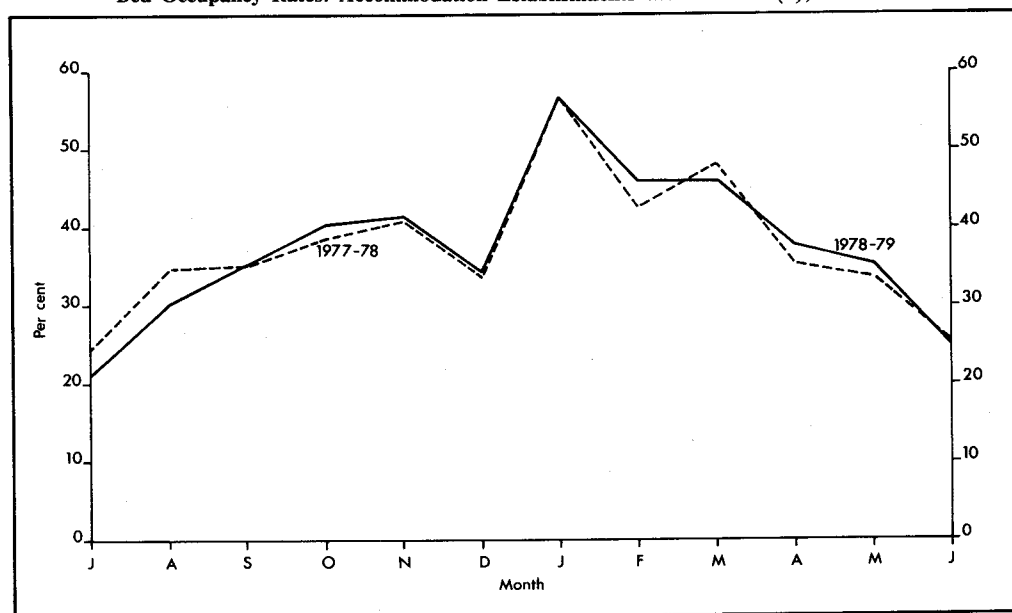
Hotels, Motels, etc. (a) with Facilities: Details by Statistical Division,  
Twelve Months Ended June 1979—continued

Period	Hobart	Southern	Northern			Mersey-Lyell			Total Tasmania	East Coast
			Tamar	North Eastern	Total	North Western	Western	Total		
PROPORTION OF BEDS OCCUPIED TO BEDS AVAILABLE (per cent)										
1978—July	29.4	12.4	17.4	12.6	16.4	19.0	12.7	17.6	21.2	12.1
Aug.	39.2	24.0	25.4	23.6	25.0	24.1	27.2	24.8	30.2	23.3
Sept.	43.6	28.8	29.0	24.3	28.0	32.1	38.2	33.5	35.3	26.6
Oct.	47.5	33.3	36.3	31.3	35.3	34.5	46.5	37.3	40.3	31.7
Nov.	49.9	36.9	32.8	35.9	33.4	34.3	55.4	39.2	41.5	35.9
Dec.	39.1	33.6	27.0	30.5	27.8	33.2	40.4	34.9	34.4	31.1
1979—Jan.	61.8	61.5	44.6	58.5	47.5	53.9	66.9	56.9	56.5	62.8
Feb.	49.4	41.1	46.3	41.1	45.2	39.8	54.4	43.1	46.0	42.1
March	55.3	39.1	38.8	39.9	39.0	37.5	58.1	42.2	46.0	38.7
April	46.6	34.0	29.5	32.4	30.1	30.2	47.7	34.1	37.7	33.0
May	44.8	27.4	30.4	24.3	29.1	27.7	40.1	30.5	35.3	24.0
June	32.3	19.8	20.4	17.6	19.8	21.1	19.5	20.7	24.8	19.6

TAKINGS FROM ACCOMMODATION (\$'000)

1978—July	486	30	164	25	189	148	31	179	884	42
Aug.	601	54	236	47	283	168	54	221	1 159	79
Sept.	673	68	271	49	320	218	79	296	1 357	93
Oct.	819	86	337	66	403	258	100	358	1 667	117
Nov.	801	89	308	75	383	243	116	359	1 633	128
Dec.	674	87	252	64	316	227	86	313	1 390	114
1979—Jan.	1 081	178	409	124	533	361	151	512	2 304	248
Feb.	843	117	420	82	502	271	119	390	1 851	162
March	1 050	121	398	90	488	281	140	420	2 080	167
April	845	96	302	70	372	236	108	344	1 657	131
May	812	77	326	52	378	227	93	320	1 586	93
June	612	56	215	37	252	164	43	207	1 127	75

Bed Occupancy Rates: Accommodation Establishments with Facilities(a), Tasmania



(a) Hotels, motels, etc. which provide a bath or shower, and a toilet in most guest rooms.

**Hotels, Motels, etc. (a) with Facilities: Details by Statistical Division,  
Twelve Months Ended June 1979—continued**

Period	Hobart	Southern	Northern			Mersey-Lyell			Total Tasmania	East Coast
			Tamar	North Eastern	Total	North Western	Western	Total		
<b>EMPLOYMENT AT 30 JUNE 1979 (persons)</b>										
Full time—										
Males .....	494	32	90	18	108	75	16	91	725	37
Females .....	319	19	71	19	90	76	13	89	517	26
Part time—										
Males .....	195	23	67	18	85	80	6	86	389	33
Females .....	548	83	362	58	420	303	83	386	1 437	113
Total .....	1 556	157	590	113	703	534	118	652	3 068	209

(a) Establishments consisting predominantly of rooms which incorporate a bath or a shower and a toilet.

The next table gives number, capacity and occupancy details in respect of caravan parks for 1979 by statistical division (separate details for the North Western and Western Subdivisions are not available for publication). Sites occupied by on-site vans are included.

**Caravan Parks: Details by Statistical Division,  
Twelve Months Ended June 1979**

Period	Hobart	Southern	Northern			Mersey-Lyell	Total Tasmania	East Coast
			Tamar	North Eastern	Total			
<b>NUMBER AND CAPACITY</b>								
	No.	No.	No.	No.	No.	No.	No.	No.
1979, June quarter—								
Establishments .....	5	13	7	8	15	19	52	10
Powered sites .....	267	399	299	368	667	1 129	2 462	522
Total sites .....	466	843	543	924	1 467	1 709	4 485	943
<b>PROPORTION OF SITES OCCUPIED TO SITES AVAILABLE (per cent)</b>								
1978—July .....	24.5	4.1	30.5	2.1	11.9	9.6	10.9	3.3
Aug. ....	29.2	5.7	31.8	2.4	12.5	11.2	12.4	5.0
Sept. ....	32.5	6.2	35.4	3.7	14.6	12.9	14.2	5.3
Oct. ....	33.8	8.0	32.9	2.9	13.6	13.7	14.6	6.6
Nov. ....	38.5	13.0	37.8	5.0	16.7	17.5	18.5	10.6
Dec. ....	43.2	24.1	39.5	13.1	22.5	30.9	28.1	23.9
1979—Jan. ....	76.2	49.3	44.6	32.4	36.8	69.2	55.2	51.2
Feb. ....	53.4	25.8	39.5	15.4	24.1	42.1	34.1	23.0
March .....	46.5	18.4	40.2	8.5	19.9	20.6	22.7	15.6
April .....	34.6	15.8	37.6	6.7	18.2	21.2	20.6	13.7
May .....	39.4	8.4	38.3	3.4	16.3	14.0	16.4	7.2
June .....	28.0	6.3	29.0	3.2	12.8	13.1	13.2	6.1

**The 1978 Visitor Survey**

*Purpose and Historical Background*

In August 1965 the Tasmanian Treasurer approved a survey to assess the economic value of the tourist industry to the State. Results from that survey (covering the period 1 April 1968 to 31 March 1969) were published by the State Treasury in *Survey of the Tourist Industry in Tasmania* (Hobart, 1969).

In December 1976 the Director of Tourism learned of a survey technique successfully used at the Canberra Airport terminal between 1 August 1975 and 31 July 1976. In that survey, random contact interviews were conducted with departing passengers. Interviewers also handed to certain categories of visitors written questionnaires to complete later. The response rate to these questionnaires proved to be much higher than in other Australian tourism survey situations where initial personal contact and subsequent reminder action had not been employed.

On 18 May 1977 the Director of Tourism, with endorsement from the State Statistics Committee, commissioned the Australian Bureau of Statistics to design a sample survey using the A.C.T. Visitor Study approach. This would update the 1968-69 results, obtain additional data about visitors, analyse the seasonal pattern of tourism within the 1978 calendar year and give some facts about the reverse flow of Tasmanians who leave the State.

#### *Coverage*

The survey covered revenue and non-revenue passengers carried by Ansett Airlines of Australia, T.A.A. and East-West Airlines, and in the Australian National Line's *Empress of Australia*.

#### *Method of Collection*

At all ports of departure interviewers intercepted approximately 2.7 per cent of travellers in a two-stage sample which permitted all passengers an equal chance of selection (e.g. at Launceston Airport every third passenger on every eleventh departing plane was interviewed). Of those interviewed, only 'adult visitors' to the State who spent at least one night on the island were given a questionnaire to complete. Attention to any detail that would encourage return of the completed questionnaire resulted in a response rate of 80 per cent (45 per cent was quoted in the Treasury report on the less sophisticated 1968-69 survey).

Fortuitously, 1978 proved to be a 'normal' year by comparison with those preceding and following it. This Survey's data should prove to be an authoritative benchmark as a base for an historical series. The data collection and processing (done co-operatively by both departments) could not have been commercially costed by a consultant for less than \$100 000. Such expense prevents a collection on this scale from being mounted annually.

#### *Definitions*

*Tasmanian*: self-defined at interview; but when respondent was confused, 'currently resident in Tasmania' was given as the criterion.

*Visitor*: a non-Tasmanian.

*Excursionist*: a departing visitor who had not spent a night in Tasmania.

*Adult*: 15 years and over.

*Regions*: 'Tourism regions' used for the Survey were the Bureau's statistical divisions, sub-divisions and districts modified by the ad hoc creation of an East Coast region.

#### *Standard Errors*

As the estimates are based on a sample survey rather than a census of all visitors, they are subject to sampling errors. For 'standard errors' which measure the reliability of the estimates see the joint Department of Tourism/A.B.S. publication *Visitor Survey: Preliminary Results for Year Ended 31 December 1978* (3401.6).

#### *Results*

Some of the results from the Survey are summarised in this section (altogether, 119 different cross tabulations of results from the Survey were produced). The following table shows interstate passenger departures from the four main Tasmanian airports and the Devonport sea terminal during 1978 by category of traveller. Figures for 'Total travellers' were obtained from data supplied from the carriers' records while the estimated number of travellers in each category is based on the Survey interview results.

## Departing Passengers from Tasmania: Classified by Type and Port of Departure, 1978

Category of traveller	Hobart	By air from—				By sea from Devonport (a)	Total Tasmania	
		Launceston	Devonport	Wynyard	Total air		Number	Per cent of total
<b>Visitors—</b>								
Adult excursionists . . . . .	4 556	4 353	(b)	(b)	10 604	(b)	10 669	1.9
Other adults . . . . .	117 689	98 727	17 741	18 244	252 401	35 368	287 769	52.0
Children under 15 years . . . . .	3 571	9 878	2 806	1 987	18 242	1 947	20 189	3.6
Total . . . . .	125 816	112 958	21 310	21 163	281 247	37 380	318 627	57.6
<b>Tasmanians—</b>								
Adults . . . . .	101 291	63 828	18 322	19 929	203 370	17 391	220 761	39.9
Children under 15 years . . . . .	5 704	4 324	1 670	2 223	13 921	(b)	14 234	2.6
Total . . . . .	106 995	58 152	19 992	22 152	217 291	17 704	234 995	42.4
<b>Total travellers . . . . .</b>	<b>232 811</b>	<b>181 110</b>	<b>41 302</b>	<b>43 315</b>	<b>498 538</b>	<b>55 084</b>	<b>553 622</b>	<b>100.0</b>

(a) Includes a lower than normal proportion of children due to a sampling problem during the first six months at the sea terminal.

(b) Subject to sampling variability too high for most practical uses.

The remaining tables in this section cover only departing 'adult visitors' to the State who spent at least one night in Tasmania. The estimates were derived from completed Survey questionnaires. The following table shows adult visitors and average visitor nights by purpose of visit:

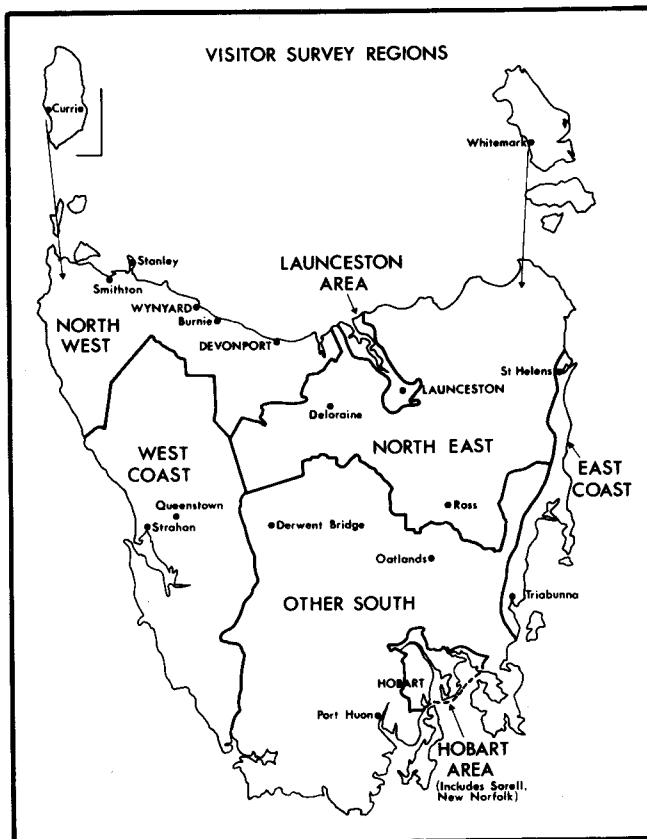
## Adult Visitors and Average Stay by Purpose, Tasmania 1978

Purpose of visit	Adult visitors		Average no. of nights stay	Purpose of visit	Adult visitors		Average no. of nights stay
	Number	Per cent of total			Number	Percent of total	
<b>Holiday—</b>				<b>Business—</b>			
Conference, carnival or championship . . . . .	11 505	4.0	9.1	Convention . . . . .	10 299	3.6	5.5
School or educational tour . . . . .	5 844	2.0	6.6	Other business . . . . .	49 731	17.3	7.0
Other organised coach tours . . . . .	16 806	5.8	8.5	Total business . . . . .	60 030	20.9	6.7
Meet friends and relatives . . . . .	82 037	28.5	13.4	Other purposes . . . . .	10 726	3.7	17.5
Honeymoon . . . . .	7 122	2.5	9.0	Not stated . . . . .	3 626	1.3	18.2
Other holiday . . . . .	90 073	31.3	9.8	Total other and not stated . . . . .	14 352	5.0	17.7
Total holiday . . . . .	213 387	74.2	10.9	All purposes . . . . .	287 769	100.0	10.4

The next table shows the number of nights spent in Tasmania by adult visitors by region (statistical sub-divisions and districts modified to incorporate an 'East Coast' region):

## Adult Visitor Nights by Region, 1978

Quarter ending	Region							Total Tasmania
	Hobart	Other South	East Coast	Launceston	North East	North West	West Coast	
March . . . . .	495 864	86 696	82 861	243 137	75 588	197 567	79 773	1 261 486
June . . . . .	287 410	30 757	27 455	107 379	20 906	128 063	58 335	660 305
September . . . . .	183 756	13 496	16 192	86 632	17 494	66 304	23 164	407 038
December . . . . .	284 070	35 256	38 495	142 358	31 457	84 532	36 479	652 647
<b>Total</b>	<b>1 251 100</b>	<b>166 205</b>	<b>165 003</b>	<b>579 506</b>	<b>145 445</b>	<b>476 466</b>	<b>197 751</b>	<b>2 981 476</b>



Adult Visitors to Tasmania: Transport Booking Arrangements 1978

Method of booking	State or country of origin							Total (a)
	N.S.W.	Vic.	Qld	S.A.	W.A. and territories	Total Australia	Over-seas	
Transport to Tasmania—								
Air or shipping line . . . . .	18 914	62 613	7 849	9 234	10 146	108 756	5 408	114 317
Govt. tourist bureau—Tas. . . . .	8 777	17 547	4 006	6 065	1 240	37 635	(b)	38 677
Other . . . . .	(b)	2 348	(b)	(b)	1 054	5 311	(b)	5 504
Travel agent or bank, etc. . . . .	22 109	42 033	4 780	4 499	4 454	77 875	5 355	83 230
Motorist association . . . . .	(b)	(b)	(b)	(b)	(b)	2 375	(b)	2 419
Own arrangements (c) . . . . .	5 304	13 962	1 940	1 567	2 746	25 519	1 457	27 087
Other . . . . .	1 689	4 843	1 141	(b)	1 140	9 284	(b)	9 866
Not stated . . . . .	1 460	3 371	(b)	(b)	(b)	6 344	(b)	6 669
Total . . . . .	59 393	147 495	21 334	22 981	21 896	273 099	14 200	287 769
Percentage . . . . .	20.6	51.3	7.4	8.0	7.6	94.9	4.9	100.0

(a) Includes 'origin not stated'.

(b) Subject to sampling variability too high for most practical uses.

(c) For most this response is equivalent to 'Air or shipping line'.

## Total and Average Expenditure Within Tasmania by Adult Visitors, 1978 (a)

Purpose of visit	Components of total expenditure (\$'000)				Average expenditure per night in Tasmania (\$)
	Accommodation	Transport	Other	Total	
<b>Holiday—</b>					
Conference, carnival or championship	1 598	635	2 096	4 329	41.42
School or college educational tour	(b)	(b)	(b)	579	15.06
Other organised coach tour	1 666	669	2 654	4 989	35.01
Meet friends or relatives	3 158	2 488	14 645	20 290	18.49
Honeymoon	1 300	566	2 050	3 916	61.30
Other holiday	12 895	6 752	18 331	37 978	42.94
<b>Total holiday</b>	<b>20 984</b>	<b>11 318</b>	<b>40 155</b>	<b>72 457</b>	<b>31.08</b>
<b>Business—</b>					
Convention	1 374	(b)	1 205	2 915	51.04
Other business	5 127	1 427	5 256	11 809	34.17
<b>Total business</b>	<b>6 507</b>	<b>1 763</b>	<b>6 463</b>	<b>14 732</b>	<b>36.58</b>
<b>Other purposes</b>	<b>1 333</b>	<b>872</b>	<b>2 487</b>	<b>4 692</b>	<b>25.37</b>
<b>Not stated</b>	<b>508</b>	<b>(b)</b>	<b>869</b>	<b>1 574</b>	<b>25.03</b>
<b>All purposes</b>	<b>29 301</b>	<b>14 098</b>	<b>49 828</b>	<b>93 226</b>	<b>31.27</b>

(a) Each cell in the table has been independently expanded from sample results. None are produced by summing other cells in the same column. When comparing a cell in a 'Total' row with the sum of the cells in the column which would normally contribute to that total, the figure in the total cell will be the more reliable.  
 (b) Subject to sampling variability too high for most practical uses.

The following table shows the estimated number of adult visitors who occupied hotel, motel and guest house rooms with facilities during 1978 and the estimated number of (adult) visitor nights by main purpose of visit:

**Hotel and Motel, etc. Rooms with Facilities (a) Occupied by Adult Visitors to Tasmania, by Main Purpose of Visit (b), Year Ended 31 December 1978: Estimated Adult Visitors and Visitor Nights**

Main purpose of visit	No. of Visitors, Tasmania	Estimated visitor nights				
		Hobart	Rest of State	Total Number	Tasmania Per cent	East Coast
<b>Holiday—</b>						
Conference/Carnival/Championships	30 259	98 002	112 384	210 386	30.7	(c)
Organised coach tours						
Meet friends/relatives	44 777	137 117	143 557	280 674	40.9	(c)
Honeymoon						
Other holiday						
<b>Business—</b>						
Convention	52 175	114 725	80 245	194 970	28.4	(c)
Other business						
Other purposes						
<b>Total</b>	<b>127 211</b>	<b>349 844</b>	<b>336 186</b>	<b>686 030</b>	<b>100.0</b>	<b>47 028</b>

(a) Included are facilitated rooms in accommodation houses whose guests are predominantly long-term, and those in other houses where most rooms are without facilities.  
 (b) The allocation of total visitor nights to statistical divisions and to main purposes of visit was made by applying the proportions derived for those visitors who used no other form of accommodation while in Tasmania.  
 (c) Subject to sampling variability too high for most practical uses.

In the Survey, adult visitors to Tasmania were asked to express their feelings about aspects of their visit. Visitors were most satisfied with the friendliness of residents and least happy with retail trading hours. The rankings, in descending order of satisfaction, were: (i) friendliness of residents; (ii) tourism employee courtesy; (iii) accommodation; (iv) motel, etc., trading hours; (v) tourist information; (vi) tour coaches; (vii) shops and personal services; (viii) restaurants; (ix) amenities in public parks and reserves; (x) signs relating to places of interest; (xi) weather; (xii) entertainment and night life; (xiii) roads; and (xiv) retail trading hours.

## THE TASMANIAN FIESTA

*(This article was contributed by Tasmanian Fiesta, Ltd)*

### Introduction

The first Tasmanian Fiesta, the most ambitious holiday entertainment program ever held in the State, was run over the 12-day period from 30 December 1978 to 10 January 1979. It was such a resounding success that its continuation in the future is virtually assured.

The idea for holding the Fiesta crystallised from a suggestion made by Sir Donald Trescowthick at a West Coaster Yacht Race Dinner held in Hobart in January 1978. The initial plan was for a mardi gras for visiting yachtsmen and their families, in order to capitalise on the already exciting atmosphere around the Hobart docks that exists following the finishes of the two major ocean classics—the Sydney to Hobart and Melbourne to Hobart yacht races. However, the mardi gras proposal grew into one for a State-wide carnival to be held over twelve days, because the organisers saw the potential for the Fiesta in the atmosphere and events in Tasmania over the New Year period.

What was required to achieve the Fiesta was an intensive campaign of planning and co-ordination to give existing events an umbrella to work under, and to add more events to the program. A permanent Fiesta office was established in Hobart and a General Manager, Mr Colin Crawford, appointed. Mr Crawford, formerly involved in organising Melbourne's Moomba, set in train the necessary planning to make the first Fiesta a reality.

### The Inaugural Fiesta

The 1978-79 Fiesta was officially launched at an outdoors entertainment spectacular at Hobart's historic Constitution Dock on New Year's Eve by the State Government leader in the Legislative Council, Mr Brian Miller. However, the Fiesta is a much wider concept than one show and incorporated events to cater for all tastes. About 530 events held throughout the 1978-79 Festival period fell under the Fiesta's banner.

Fiesta events included rich foot races through Launceston, Devonport, Burnie and Hobart for a prize of \$2 000. The races, which attracted the cream of Australia's distance runners, formed a series, each leg covering a distance of 2 000 metres through the city streets to give spectators the chance to watch the professionals in action. Then there were the Tasmanian Pacing Championships for racegoers, internationally acclaimed theatre shows performed around the State, rowing regattas, golf days, puppet theatre shows, yachting carnivals and a range of other events such as thumb-wrestling and graffiti street contests. A highlight was a spectacular parade through the streets of Hobart.

### *Stars Under the Stars*

The 'Stars under the Stars' show, held on New Year's Eve on Constitution Dock, attracted a large crowd estimated at 12 000. Police estimated that 30 000 people crowded into the Dock area on New Year's Eve to inspect the berthed yachts and/or watch the open air concert. The show included Australian and international entertainers who performed from a specially constructed outdoor stage. The atmosphere at the dock—normally exciting anyway on New Year's Eve—took on a new dimension in revelry as yachtsmen, tourists and Tasmanians joined the fun. The multi-million dollar collection of Sydney-Hobart yachts

formed a backdrop for the proceedings. At midnight, with thousands of people thronging the dock area, a spectacular fireworks display started over Hobart's deep-water harbour to herald the New Year and entrench the Fiesta as part of the Tasmanian scene.

Because of its success and public acclaim, 'Stars Under the Stars' was planned to be held again for the 1979-80 Fiesta, using the sets specially built for the first show.

### *Yacht Races*

The two major ocean classic yacht races which finish in Hobart each year during the Christmas-New Year period always bring a great deal of excitement to the city. The 1978-79 Fiesta added a further yacht race, the rich 'King of the Derwent' held on New Year's Day. The two ocean races that finish in Hobart commence on Boxing Day. A third ocean race, the Queenscliffe to Devonport, commences on the following day.

The 1979 Sydney-Hobart race had both an official and an unofficial winner for line honours. Because of a difference of opinion with race organisers, West Australian Rolly Tasker was not allowed to officially start his new aluminium maxisloop *Siska* with the official fleet. So he started unofficially and 'won' by hours. The official line honours winner was Jack Rooklyn's veteran sloop *Apollo*; handicap honours went to *Love and War*.

Line honours in the difficult Melbourne-Hobart 'Westcoaster' race were won by a veteran yacht, Neil Batt's *Sandra*, from Hobart. The elated crew defeated a fleet of much newer yachts to take the prize. Handicap honours went, for the second time, to the Victorian yacht, *Hot Prospect*.

Some of the finest ocean racing yachts in the world did battle on Hobart's harbour on New Year's Day in a bid to win the title 'King of the Derwent'. This race was a handicap event over 25 nautical miles and was designed specifically so that both locals and visitors could see the spectacle of the yachts in Hobart at the time competing under full sail. (In previous years, there had been a tendency for some people to miss the spectacle of the Sydney-Hobart and Melbourne-Hobart yachts under full sail, as they finish sporadically, and sometimes in darkness.) To give the visiting ocean race yachtsmen a reasonable incentive to take part in the harbour race, a prize of \$3 000 in gold sovereigns was offered. The sovereigns awarded for the first 'King of the Derwent' stayed in Hobart. Local veteran sailor, Frank Hickman, making full use of local knowledge in his huon pine yacht, *Antagonist*, won the race.

In the Queenscliffe to Devonport race, both line and handicap honours went to *Damel* (Vic.).

### *Salamanca Carnival*

To add to the atmosphere around Hobart's historic waterfront, carnival equipment worth about \$2 million was set up along the Salamanca Place-Princes Wharf area. It was the first time in Tasmania that so much equipment had been imported to offer entertainment for adults and children, alike.

In addition, the popular Saturday morning Salamanca outdoor market opened for an extended period during the Fiesta and puppeteers, story tellers, singers, dancers and other entertainers performed at Salamanca Place.

Salamana Place was also the site of the Mobil outdoor art exhibition, which was the biggest such outdoor exhibition shown to date in Tasmania. One painting, by Pastor Kenneth Mead of Hobart, sold for \$700.

### *Antique Fair*

An antique fair held in the Hobart City Hall offered antique lovers the chance to see and buy more than three quarters of a million dollars worth of antiques. Stall holders' exhibits ranged from chairs to paintings and chronometers.

### *Coastal Carnivals*

At the other end of the island, sports enthusiasts were able to watch the rich coastal carnivals, which also fell under the Fiesta's umbrella. Events included were the \$2 500 Burnie Gift for runners, the famous Burnie Wheel Race, the Devonport Gift and the Mersey Wheel



Race. Spectators were also able to watch Tasmania's world-class axemen take part in a major woodchopping event, the Burnie New Year 1 000. The Myer 2 000 foot race also started in the North-West. The first stage was through Burnie and the second through Devonport.

### *Theatre*

Tasmanian theatre-goers saw some of the best shows as part of the Tasmanian Fiesta. Two top plays and a famous dance quintet were among the major attractions. A stage play, 'The Ballad of Salomon Pavey', which has since won wide acclaim in Britain, had its international debut in Hobart for the Fiesta.

As well, a revue-style play for five actors, 'Bullshot Crummond', was produced locally and played during the Fiesta. The play, a spoof of novels and films of the 1930s, starred the hero/detective, 'Bulldog Drummond'. It had been running for three years in San Francisco, and had already played for two capacity seasons at Auckland's Mercury Theatre at the time of the 1978-79 Fiesta.

A prestigious young dance company, the New York Dance Quintet founded by a 26-year old negro dancer, Gregory Reynolds, made its Australian debut for the Fiesta. The Quintet had international standing before coming to Tasmania. Its production, 'The Passion of Mary', was so well regarded in the United States that the State Department sent the dancers on a tour to Moscow.

An International Puppet Festival was held at Hobart's Theatre Royal and lunch-time concerts were held in the Town Hall throughout the Fiesta.

### *New Year's Day 1979*

New Year's Day saw intensive holiday activity around the State. The Coastal Carnivals were in full swing, and in the south there was the grand parade through Hobart streets in the morning and the 'King of the Derwent' yacht race in the afternoon. The sporting program was linked to other activities such as 'Life Be In It' games, rowing, theatre and the huge Antique Fair in the Hobart City Hall.

The Fiesta parade, the first such parade held in Tasmania for many years, was a great success. An estimated 20 000 people lined the streets to see the colourful floats proceed through Hobart, commencing from Salamanca Place and finishing at Constitution Dock where some of the later Sydney-Hobart yachts continued to come in throughout the day.

Later in the day, the yacht-watching crown was thrilled by a parachute jumping display put on by the Hobart Sky Divers Association.

### *Invite a Friend Campaign*

Once the massive Fiesta program for 1978-79 had been finalised, the organisers made a move to add to the number of people visiting Tasmania to join the holiday activity. A survey of visitors to Tasmania showed that more than half stayed with friends. And so the 'Invite a Friend Campaign' was launched.

The Fiesta organisers urged Tasmanians to send a printed Fiesta invitation form to a friend either interstate or overseas, inviting them to come to Tasmania to take part in the holiday program. More than 1 250 completed forms were returned to the Fiesta office from people who said they would come to Tasmania to stay with friends for the Fiesta.

The aim of the campaign was to boost the number of tourists in Tasmania during the early New Year period. The campaign was successful, and was to be promoted again during 1979.

### **Plans for the 1979-80 Fiesta**

The inaugural Fiesta covered 12 days but, at the time of writing, the 1979-80 Fiesta was planned to run for only nine days—from 29 December 1979 to 6 January 1980. The organisers felt that it would be better to intensify the program over a shorter period to maximise the entertainment available so that every day could be filled with action-packed Fiesta fun. The

historic streets surrounding the docks, Salamanca Place and the area around the Jones & Co. buildings, were again to be used for Fiesta activities in Hobart in 1979-80.

Fiesta activities in the North and North-West for 1979-80 were to be dramatically expanded, making it the only State-wide festival in Australia. The North and North-West shared in the action during the first Fiesta but since then a full-time co-ordinator was appointed in Launceston to widen that involvement. Events were to be staged in every municipality and city in Tasmania during the 1979-80 Fiesta, which would further develop the tourist potential of each region.

The yachting side of the 1979-80 Fiesta was expected to attract a record fleet for the Sydney-Hobart race. While big fleets have traditionally fought out this classic, 1979 is a Southern Cross year. International teams were expected to be sailing in Australia in the Southern Cross competition and the Sydney-Hobart is the last race of that series.

The *Parmelia* race, between London and West Australia, was also to be held during 1979. New maxi-racers, including several from Australia, had been built especially for the race, which was to trace the route of the clipper ship, *Parmelia*. Several of the starters in the epic *Parmelia* race had already indicated, in mid-1979, that they would start in the Sydney-Hobart race; Rolly Tasker's aluminium sloop *Siska* among them.

Organisers were confident that more than 200 of the best ocean racers in the world would be in the Sydney-Hobart fleet.

For the first time, two of Hobart's fully enclosed docks were to be opened to accommodate the visiting fleet. The sheer number of competitors promised to provide an unprecedented spectacle in the dock area.

## TASMANIA AND NEWFOUNDLAND: ISLAND STATES WITH MUCH IN COMMON

### Introduction

Compared with the other Australian states, Tasmania has a limited range of industries, a high level of unemployment, the lowest per capita income, the highest incidence of poverty relative to its population and the highest level of out-migration. All of these problems are at least partly caused by Tasmania's separation from the mainland by Bass Strait, because transport across the Strait for both goods and people is more expensive than land transport over a similar distance on the mainland. Although other major regions in Australia have economic and social problems similar to Tasmania's none are separate states, and none are islands.

The Tasmanian situation is not unique. Nor is it, by any means, the worst example of its type. Several other countries have large island-states which experience the same sort of problems as Tasmania. Comparison with the attitudes of other countries towards these problems, and their attempted solutions, may help Tasmanians and Australians alike.

One of the most appropriate island-states to compare with Tasmania is Newfoundland, a member of the Canadian Federation since 1949. Before this it was an independent British colony with stronger economic ties with Britain and the United States than with Canada.

Strictly, the province of Newfoundland is not an island-state as it includes not only the island of that name, but also Labrador, an area of 284 899 sq km in the north-eastern corner of the Canadian mainland. Although Labrador contains mineral resources, and is an important source of hydro-electric power, it is an infertile land of severe climate, and is sparsely populated. Therefore it has little impact on the economic and vital statistics for the province and most data for the province may be considered as basically representative of the island of Newfoundland.

### Physiography

Like Tasmania the island of Newfoundland is roughly triangular in shape, although its 108 860 sq km is 60 per cent larger than Tasmania's 67 896 sq km. It lies between the latitudes

of 47° and 52°N compared with Tasmania's 40° to 44°S. Although summers are only slightly cooler than in Tasmania, winters are much more severe. The cold weather sweeps down from the Arctic. All but the southermost ports freeze over and there are heavy snowfalls throughout the island.

**Climatic Comparison, Tasmania and Newfoundland**  
(Source: Tasmania, Bureau of Meteorology; Newfoundland, Canadian Yearbook)

City or town	Mean temperature (°C), middle month of—		Highest recorded temp. (°C)	Lowest recorded temp. (°C)	Annual precipitation (mm)	Annual snowfall (cm)
	Winter	Summer				
Tasmania—						
Hobart .....	7.9	16.5	40.8	- 2.8	633	rare
Launceston .....	6.5	16.5	37.4	- 7.0	720	very rare
Queenstown .....	6.9	14.8	36.6	- 6.2	2 416	occasional
Newfoundland—						
Belle Isle .....	- 9.6	9.4	22.8	- 35.0	893	240
Gander .....	- 6.1	16.5	35.6	- 31.1	1 078	354
St Johns .....	- 3.8	15.3	30.6	- 23.3	1 512	364

Much of Newfoundland has only a skeletal soil cover. Bogs, marshes and lakes are common. Agriculture is of only local importance and commercial production is very small. Only 16 per cent of the island has any agricultural potential at all, and currently much less than this is used. By comparison, in 1978, 33.8 per cent of Tasmania comprised agricultural holdings and agricultural production is an important sector of the economy. Apart from the soil, the climate in Tasmania is much more suitable for agriculture than is the severe Newfoundland winter.

### Population

The population size of both islands is similar. In mid-1979 the Tasmanian population was 418 000 persons and that of Newfoundland 574 000 about 30 000 of whom were in Labrador).

In both islands the population is much more decentralised than on the respective mainlands. Only 57.2 per cent of the Newfoundland population is urbanised, compared with 76.1 per cent for the whole of Canada.<sup>1</sup> In Tasmania 42 per cent of the population live in centres of less than 10 000 people, and 18.8 per cent in centres of less than 200. The figures for other Australian states range from 20.5 per cent (Vic.) to 32.2 per cent (Qld) in centres of less than 10 000, and 9.4 per cent (N.S.W.) to 16.2 per cent (Qld) in centres of less than 200.

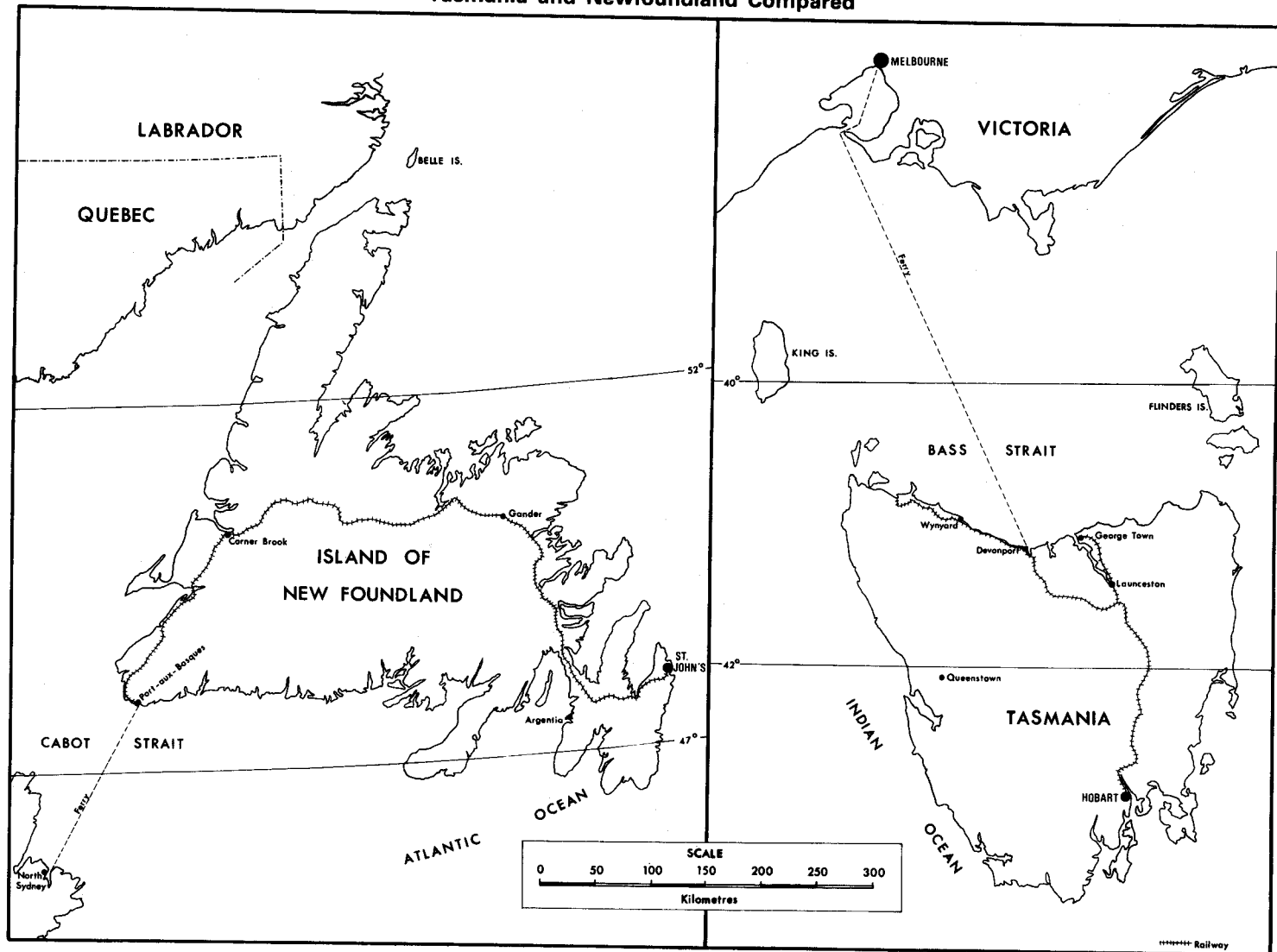
**Population Data: Tasmania and Newfoundland**

State	Population, June 1979	Proportion of national population (per cent)	Annual growth rate 1971-1976 (per cent)	Net interstate migration 1971-1976	Net interstate migration 1966-1971
Tasmania .....	418 000	2.9	0.85	- 3 947	- 7 119
Newfoundland (a) .....	574 000	2.4	1.36	- 6 880	- 20 338

(a) Including Labrador.

Both islands have a history of net outmigration, a symptom of relatively slow economic growth and high unemployment. The pattern of young people as the most common emigrants leaving for the mainland in search of jobs, higher education and more urbanised life styles, is similar in both cases. The magnitude of outmigration is higher in Newfoundland. This may be attributed to its higher rate of natural increase and the higher rate of unemployment: there are more people and fewer jobs.

# Tasmania and Newfoundland Compared



Seeking jobs outside Newfoundland is actively encouraged by the Canadian Government Manpower Mobility Program which provides relocation grants for people unemployed for more than four months. The Government's attitude is that inter-province (and intra-province) migration, rather than being a problem, can help alleviate regional disparities in the labour market.

### Employment Opportunities

As in the rest of Australia, the unemployment rate in Tasmania rose rapidly during the mid-1970s. In 1976 Sir Bede Callaghan<sup>2</sup> found that during the previous decade Tasmanian workers were, on average, more likely to be out of work than their mainland counterparts and that, once out of work, they generally took longer to find another job. However, during 1978 and 1979 the Tasmanian unemployment rate was below the Australian average in certain months and for most of this time the rates for South Australia, Queensland and Western Australia were higher.

Newfoundland has a history of high unemployment compared with the rest of Canada. There are high seasonal peaks during winter and the average period of unemployment is longer than on the mainland<sup>1</sup>. Although comparison is hindered by seasonal fluctuations there is no doubt that Tasmania's unemployment problem is considerably less severe than Newfoundland's.

### Unemployment Rates: Tasmania and Newfoundland

Proportion of labour force unemployed (per cent)				As a proportion of the national rate (per cent)	
Tasmania—		Australia—		Tasmania to Australia—	
May 1976 (a) .....	4.8	May 1976 .....	4.4	May 1976 .....	109
July 1979 (a) .....	6.0	July 1979 .....	5.9	July 1979 .....	102
Newfoundland—		Canada—		Newfoundland to Canada—	
June 1976 (b) .....	12.4	June 1976 .....	7.0	June 1976 .....	177

(a) Representative month without marked seasonal abnormalities.

(b) Seasonally adjusted.

Labour force participation rates for both islands have been below their respective mainland averages, although again it is evident that Tasmania is better off than Newfoundland. Data for 1979 showed that Tasmania no longer had the lowest participation rate of the Australian states.

### Labour Force Participation Rates (a), November 1976: Tasmania and Newfoundland (per cent)

	Tasmania	Australia	Newfoundland	Canada
Males .....	80.1	80.2	64.9	76.8
Females .....	39.7	43.2	32.5	44.8
Persons .....	59.8	61.5	48.9	60.5

(a) The labour force expressed as a percentage of the civilian population aged 15 years and over.

### Social Indicators

Several other social indicators show that Tasmania and Newfoundland are disadvantaged in comparison with their respective mainlands. Again it is evident that Tasmanians fare much better than Newfoundlanders. For Tasmania, personal disposable income per capita in 1970-71 was 84 per cent of that for Australia and in 1977-78 had risen to 92 per cent; for Newfoundland in 1970 it was only 63 per cent of that for Canada. The proportion of children aged 16 attending school on both islands was considerably lower than the respective mainland averages and the proportion of low income families higher.

On the other hand, there are some aspects of the quality of life in which the island-states are better off than their mainland counterparts. The divorce rate is lower, the incidence of major crime less, and for those who prefer it, the pace of living is slower and more relaxed.

### Industry

The structure of industry in Tasmania is dominated by a few large mining and manufacturing enterprises decentralised throughout the State. Production is mainly for export. Most either extract or process Tasmania's natural resources or are large users of electricity provided by the State's hydro-electric grid. Agriculture remains important despite a continuing decline of employment in rural industries. Forestry and fishing also are more important to the Tasmanian economy than on the mainland.

In his inquiry into industry and unemployment in Tasmania, Sir Bede Callaghan in 1976 found that the growth of the Tasmanian economy was slower than the rest of the Australian economy, and that it was more vulnerable to adverse effects. He concluded that there was '... no panacea for the present and projected situation ...'

In Newfoundland, also, the economy is depressed in comparison to the rest of Canada. Fishing is the dominant industry, employing over 16 per cent of the workforce. Other important industries are mining, forestry and construction. In contrast to Tasmania, agriculture and manufacturing are of little importance.

There are a number of interesting parallels between the structure of industry in Tasmania and Newfoundland:

- (i) Fishing is more important than on the respective mainlands. On both islands catches have declined in recent years and offshore grounds have been fished by foreign vessels better equipped than the local fleet.
- (ii) Forestry is important. Both have large saw-milling operations and large pulp and paper plants.
- (iii) Mining remains a large employer, but in both cases declined in importance during the mid-1970s as some mines became uneconomic. There has since been some resurgence in the Tasmanian industry.
- (iv) Hydro-electric power supplies almost all the electrical energy. Since the Second World War almost all of Tasmania's electricity has been produced by hydro-electric generation. Cheap, abundant power has been used as an incentive to attract industry. In recent years the percentage of the State's electric power produced by hydro-electric schemes has averaged 98-99 per cent. About 99 per cent of Newfoundland's electricity was generated by hydro schemes in 1976 and there are extensive plans to tap more fully the hydro-electric potential of both Newfoundland and Labrador.
- (v) Tourism is increasingly important.

In Newfoundland the agricultural, mining and tourist industries are severely curtailed by the harsh winter. This causes a wide seasonal variation in incomes and unemployment which is not typical of Tasmania.

Both islands have similar problems when it comes to attracting new industries, or even in maintaining the viability of established industries. The islands' populations are not adequate to create a large enough market for many industries to be economic without having to export a significant proportion of their production. The crux of this problem lies in the high cost of transporting goods by sea or air to the mainland, which puts the island industry at a disadvantage in comparison to mainland competitors. In turn this creates the islands' economic and social problems outlined above.

The panacea for many of Newfoundland's economic problems may lie in the recent discovery of oil in commercially viable amounts 320 km south-east of St. John. Over the next five to ten years the development of this industry may help turn Newfoundland into what is locally known as a 'have' province.

## Federal Government Assistance

The Canadian and Australian Governments both subscribe to the philosophy that there should be no significant difference in the standard of public services provided by their member states, and that all people in all states should, as far as possible, have equal opportunity to achieve a high standard of living. Therefore, because of their economic ills and relatively small revenue-raising capacity, Tasmania and Newfoundland have been provided with various forms of financial assistance by their respective federal governments.

## Tasmania

Tasmania has long benefited from the fiscal equalisation policy of the Australian Government. Originally this was dispensed through the general purpose financial assistance grants and special grants of the Commonwealth Grants Commission. However, assistance is now allocated by differentials in the State's share of personal income tax. On a per capita basis Tasmania receives more assistance each year than any other state. The next table shows grants made to Tasmania in 1977-78 compared to the Australian average on a per capita basis.

Commonwealth of Australia Grants, 1977-78  
(\$ per capita)

Particulars	Tasmania	Australian total
General purpose payments .....	598	338
Specific purpose payments .....	398	313
Total .....	996	651
Percentage of Australian per capita figure .....	153	100

The Australian States also may apply for Special Grants from the Federal Government. Tasmania has not been an applicant since 1974. Further aid may be received as Federal Government subsidies. The largest subsidy payments to benefit Tasmanians in recent years have been for the transport of goods and people across Bass Strait. This is discussed in some detail later.

After the release of the Callaghan Report<sup>2</sup> (1977) the Australian Government announced that it would adopt 'a considerate policy making approach towards Tasmania'. In addition to existing special assistance for Tasmania, for example the Tasmanian Freight Equalisation Scheme, in 1978 Cabinet developed a special program of initiatives broadly based on Callaghan's recommended strategy. The program, referred to as the 'Ten-Point Plan', is of a short-term nature (three years) and is co-ordinated through the Department of National Development and Energy. Positive action has been instigated on eight of the ten points, and financial assistance amounting to \$3.7m has been approved under six points.

## Newfoundland

The Canadian Government introduced fiscal equalisation in 1967 through differential payments of general purpose funds to the provinces. Specific purpose payments are also made, in much the same way as in Australia.

Canadian Government Transfers 1975-76  
(\$Aust. per capita)

Particulars	Newfoundland	Canadian total
General purpose payments .....	301	89
Specific purpose payments .....	245	169
Total .....	546	258
Percentage of Canadian per capita figure .....	211	100

Other federal aid to Newfoundland comes by the way of subsidies for transport (discussed later) and through the Department of Regional Economic Expansion (D.R.E.E.).

D.R.E.E. was set up in 1969 to alleviate regional economic disparities, and administers several Acts through which money is made available for economic development. The largest expenditure is made through General Development Agreements (G.D.A.) made with each province. In Newfoundland, specific subsidiary agreements made under the G.D.A. support major development programs in the fishing, forestry, tourist and mining industries and the improvement of urban and transport infrastructures. Further funds are available for the encouragement of business investment (*Regional Development Incentives Act*) and other programs covering agricultural and rural development.

D.R.E.E. Expenditure in Newfoundland, 1977-78  
(\$Aust.)

Total expenditure	Per capita expenditure	Total Canadian per capita expenditure
49 154 000	87	18

One aspect of federal finance in which both Tasmania and Newfoundland are not as well treated as the mainland states is *direct* budgetary expenditure. On a per capita basis, they receive less than the national averages of expenditure on wages and infrastructure for federal government departments and the armed forces.

### Transport

Most Tasmanians are conscious of the fact that separation from the mainland is an economic disadvantage when it comes to transporting themselves or their goods. The disadvantage is particularly significant for industries which must export production to the mainland or import raw materials. Choice of transport across Bass Strait is limited to ships or aircraft. Air transport is too costly for most goods, while the relatively short distance across Bass Strait and the additional handling involved make sea transport for non-bulk freight more expensive than moving it a comparable distance by land.<sup>3</sup>

Newfoundland industry has a similar basic structure and experiences similar transport problems. The main links with the Canadian mainland are by general cargo ships connecting with ports in the Gulf of St. Lawrence and ferries transporting road and rail traffic across the Cabot Strait between Port aux Basques (Newfoundland) and North Sydney (Nova Scotia). Although parts of Labrador are closer they have no road or rail connections with the rest of Canada.

In recent years there have been a number of government inquiries into transport to, from, and within both Tasmania and Newfoundland. The fact that they are islands has meant that their transport services have had to be viewed differently from those on their respective mainlands. A central issue has been the question of federal government subsidies for transport to help alleviate the islands' disadvantages. This article focusses upon the reports of the most recent of these commissions, the Nimmo Commission of Inquiry into transport to and from Tasmania,<sup>3</sup> the Joy Report on Tasmanian railways<sup>4</sup> and the Sullivan Inquiry into Newfoundland transportation.<sup>5</sup>

### ROAD TRANSPORT

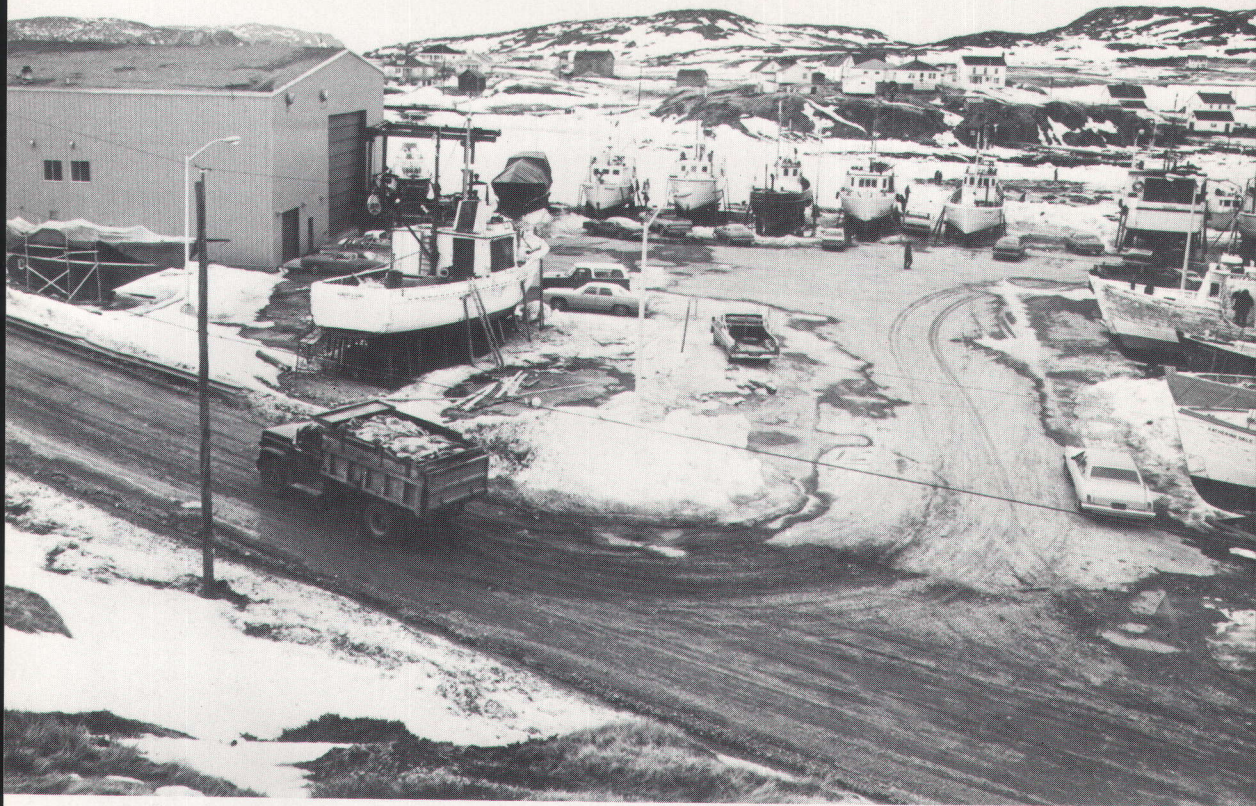
The history of road development on the two islands has been different because of different patterns of early settlement. After the early sporadic attentions of whalers and sealers, Tasmania was settled in a manner typical of the rest of Australia. Although the first settlements were established along the coast, it was not long before exploration of the interior began with a view to locating natural resources and good farming land. As the Derwent Valley and Midlands showed good agricultural potential, settlement soon extended from the coast and, although ships served the coast and the D'Entrecasteaux Channel area in particular, a network of roads evolved to meet inland transportation needs.





St John's, Newfoundland: view of the harbour and city  
[Dept of Regional Economic Expansion (DREE), Canada]





*Typical marine service centre in Newfoundland constructed under a DREE agreement*

*[Dept of Regional Economic Expansion, Canada]*

*Fisherman tending a cod trap off the Newfoundland coast*





In Newfoundland the incentive for settlement was the proximity to good fishing grounds. The harsh climate and poor soil did not encourage agriculture and even at the beginning of this century (over 300 years since settlement began) hamlets and villages were virtually restricted to the coastal fringe. Transport was primarily by boat, and roads were scarce and poor. Only after 1925 was an integrated road system considered. Even now the Newfoundland winter makes it difficult to maintain unpaved roads in usable condition, and road construction is rendered expensive by the rugged terrain which requires frequent blasting, filling, bridging and the construction of steep grades. Tasmanian engineers face similar problems in some areas, but not on the same scale.

The culmination of these historical and physiographic factors is that Newfoundland has considerably less road per unit area of land or per head of population.

#### Roads

State	Area	Total length of roads	Percentage of total road length paved	Road per unit area	Road per capita
Tasmania, 1977 . . . . .	km <sup>2</sup> 68 300	km 21 835	33.5	km/km <sup>2</sup> 0.32	km 0.053
Newfoundland (a), 1976	108 860	13 110	45.5	0.12	0.024

(a) Does not include Labrador; source: Statistics Canada.

The Sullivan Inquiry<sup>5</sup> found that the Trans-Canada Highway within Newfoundland was substantially below the standard of the mainland sector. The commissioners made a strong recommendation that it be upgraded and rebuilt to meet this standard by 1983. Further, because the population of Newfoundland is small in relation to the length of highway within the province, and because of the restricted provincial economy, they suggested that the Canadian Government should be prepared to meet 90 per cent of the cost of this project (estimated at \$A216m). Provincial highways, also, need further development if transport problems are not to retard economic development nor compound the unemployment situation through restricting mobility. Although responsibility for roads lies with the provincial government, the Sullivan Inquiry argued a case for considerable federal assistance for this purpose.

In Tasmania the standard and extent of roads is considered by most to be adequate to meet current needs. As in Canada, the Australian states are responsible for road construction and maintenance. Each year the Commonwealth Government provides a substantial grant to each state for roadworks. In Tasmania this usually forms a smaller proportion of total roadworks expenditure than in other states. Nevertheless, in 1976-77 it amounted to \$25.4m and comprised about 37 per cent of total expenditure on roads within the State.

The trucking industry in Newfoundland has expanded dramatically in the last decade. For intra-island movements of non-bulk freight, trucking provides a quicker, more efficient and cheaper service than the railway. Because of the frequency and low cost of the Cabot Strait ferry service, trucks can compete effectively with rail and shipping for inter-provincial trade. Perhaps the most important area of growth in recent years has been service of the fishing industry where trucks have become almost the sole means of transporting the catch.

The main problem for the industry is the poor condition of the roads servicing many communities. This both limits the size of truck that can be used and increases travelling time, thereby increasing the cost of service. Also, the poor condition of the major highways necessitates lower load limits in Newfoundland than other provinces and thereby precludes maximum efficiency.

In 1969 the *Atlantic Region Freight Assistance Act* extended to trucking those Federal Government subsidies which had previously given rail transport preferential advantage under the *Maritime Freight Rates Act*. Since then the two have been in open competition and trucking has captured a considerable amount of the freight previously transported by rail.

Currently, goods being moved out of the Atlantic region (which includes Newfoundland) are subsidised for either 30 per cent (basic rate) or 50 per cent (selected goods) of the transport costs within the region. Further, transport within the Atlantic region is subsidised at a rate of 15 per cent.

The Nimmo Commission<sup>3</sup> reported that the trucking industry in Tasmania operated with a high level of efficiency. Trucking mostly caters for intra-island transport, as the ferry service across Bass Strait is neither frequent nor cheap.

An important factor affecting Tasmanian trucking is the Out-of-Area permit system which was introduced in 1927 to protect the railways from competition by road transport. It operates by dividing the state into eight traffic zones. Each commercial road-transport vehicle is registered in one zone, and may operate freely within it. However, a fee must be paid if it is used to transport goods to or from another zone. The fees are calculated on a tonne-km basis and vary within the type of goods and whether or not the route is parallel with a rail link. The system has evolved to meet not only the original aim of protecting the railway, but also raises money for road maintenance and protects small operators from the large national hauliers.

## RAILWAYS

In recent times most government-owned railways have operated at a loss. The losses of the Tasmanian and Newfoundland railways have been particularly heavy, and have prompted government inquiries and recommendations of rationalisation. In 1975-76 the Tasmanian Railways lost \$14m (operating loss plus depreciation). In 1976 the losses incurred by Canadian National Railways on its Newfoundland operations may be broken up as follows: operating loss \$A11.2m, Cabot Strait Ferry subsidy \$A22.3m, and capital costs \$A5.5m, to make the total cost to the Canadian taxpayer \$A39m.

The first tramway in Australia was built in 1836-37 on the Tasman Peninsula, Tasmania and the first leg of the present Tasmanian rail system (between Launceston and Deloraine) was opened in 1871. Early development was by private companies but the State Government took over the major lines in 1890. Today the network comprises 851 km of narrow-gauge (1 067 mm) track, although during the hey-day of rail in 1926, 1 339 km of Government and private line was in operation.

The railway in Newfoundland was begun in 1881 by a private company. By 1897 the main line from St. John to Port aux Basques (875 km) had been completed, and during the next two decades several branch lines were built. All track was narrow gauge. In 1923 the railway was taken over by the Government as the private company had been unable to bear the financial burden of operation. Many of the branch lines were closed down and today only 1 519 km of track remains.

Short-term economy seems to have been an overriding factor in the construction of both island railways. With the benefit of hindsight this now seems to have been shortsighted and the root cause of current problems. One of these is the use of narrow gauge track. Two of the Cabot Strait ferries carry roll-on roll-off rail trucks moving inter-provincial freight. As rail track throughout the rest of North America is standard gauge, these trucks cannot run on the Newfoundland line. Either the standard gauge cars must be lifted off their trucks (wheels) and placed on narrow-gauge trucks (and replaced for the return journey), or the goods must be transferred by hand into narrow-gauge cars. Both methods are costly and time-consuming. The latter has resulted in many claims for loss and damage.

By comparison, narrow-gauge is probably the least of the Tasmanian Railway's problems for there is no movement of rail trucks across Bass Strait. However, some consider it is a disadvantage that the narrow-gauge in Tasmania reduces the possibility of a rail-ferry.

Historically, there has been cost cutting in the route design and in the layout of tracks. On both islands the maximum allowable grades and angles of curve are greater than on the mainland. This is largely a consequence of the more hilly terrain, but it has meant longer travelling times and smaller train size. In Newfoundland, train size is also limited by the lower load limit of bridges compared with those on the mainland. As crew costs, the major portion

of running costs, do not vary with train size, and the cost per kilometre increases as speed decreases, the cost per unit work performed is higher on the islands than on their respective mainlands.

**Freight Carried by Rail**  
(Source: Tasmania, Joy Report<sup>4</sup>; Newfoundland, Sullivan Inquiry<sup>5</sup>)

Tasmania, 1975-76		Newfoundland, 1976	
Commodity	Quantity (tonnes)	Commodity	Quantity (tonnes)
Internal—			
Forest products .....	693 244	Forest products .....	250 896
Cement .....	285 292	Construction materials .....	49 182
Coal .....	130 142	Fuels and chemicals .....	18 484
Sulphuric acid .....	100 712	Ores, minerals, metals .....	67 653
Manures and fertilisers .....	46 306	Agricultural and food products .....	5 780
Other .....	210 347	Other .....	10 741
Total internal .....	1 466 043	Total internal .....	402 826
Interstate containers .....	144 068	Inter-province trade .....	483 303
Total freight .....	1 610 111	Total freight .....	886 129

Major criticisms of the Tasmanian rail system made by both the Nimmo<sup>3</sup> and Joy<sup>4</sup> Inquiries, were that goods were hauled over much shorter distances than the mainland average, and that too many shipments involved small quantities of non-bulk freight. Rail can only compete with road transport when dealing with bulk goods over relatively long hauls. This is also a problem in Newfoundland where a substantial part of the financial loss is due to short-haul internal traffic. With ferry subsidies, the long haul inter-province trade more than breaks even.

As road transport technology has developed it has become a quicker, cheaper and more flexible competitor for rail freight. In consequence the rail systems in Tasmania and Newfoundland are not used to their full potential, and this, in itself, contributes to unprofitability.

Tasmanian Railways endeavoured to maintain their volume of business by undercutting road transport. The Nimmo Commission<sup>3</sup> found that the average cost of moving all goods over the Tasmanian rail system in 1974-75 was 7.50 cents/tonne km, while the average revenue raised during the same period was only 2.71 cents/tonne km. Rail also is favoured by the Out-of-Area permit system which imposes an excess charge on certain types of freight being transported by road in direct competition with rail.

Directly comparable cost data for Newfoundland are not available, but the revenue raised on inbound freight is lower at 1.83 cents (Aust.)/tonne km (1976) and costs seem likely to be greater with a similar number of staff, lower volume of goods moved and greater length of track to maintain. Rail freight rates were preferentially subsidised under the *Marine Freight Rates Act* until 1969. This gave rail some protection from competition by road transport. However in that year the subsidies were extended to trucking by the *Atlantic Region Freight Assistance Act*, and the protection eliminated.

In 1975 an agreement between the Tasmanian and Federal Governments transferred the administration, maintenance, financial liability and running of the State's railways to the Australian National Railways Commission. The State retains the right of consultation on such matters as freight rates and the abolition of services. Newfoundland's railway was taken over by Canadian National in 1949 (when Newfoundland joined Canada), but the Province was constitutionally guaranteed the retention of a rail system. Now both federal bodies are faced with heavy financial liabilities and the future of the islands' railways have been under review.

The Newfoundland railway appears to be in the worst position with twice the amount of track to maintain and the same number of staff but only half the weight of goods to move; hence its heavier financial losses.

## Railway Systems

State	Financial loss	Per capita financial loss	Length of track	Total freight carried	Number of staff
	\$Am	\$A	km	'000 t	
Tasmania, 1975-76	14	34	851	1 610	1 955
Newfoundland, 1976	39	80	1 519	886	2 000

Two members of the Sullivan Commission<sup>5</sup> recommended (in 1978) that the Newfoundland railway be abandoned over a 10-year period. They suggested that during the first five years present services should be maintained but that there should be no major capital expenditure. After this period the decision to abandon the railway should be reviewed in the light of developments during the period, and a firm commitment made. If the railway continues its predicted decline, and the commitment to dismantle it is made, a further five years would be required to resolve constitutional issues and develop alternative transport facilities. They recognised the grave implications of this decision, particularly for towns which largely depended upon the railway for employment. However, the projected alternatives were less attractive. If no action was taken they thought that the railway would eventually die from natural attrition, while the immense cost of major improvements (the estimated cost of rebuilding in standard gauge was \$A656m) was neither economically nor socially justifiable nor would it solve all problems. Finally, lowering rates would unfairly disadvantage other transport industries and result in inefficiency. They decided that the taxpayers' money could be better spent developing other methods of transport, particularly the more fuel-efficient inter-provincial shipping.

The other commissioner dissented from the majority decision. He thought it not inevitable that the railway would die a natural death, but that more aggressive management and leadership could play a large part in its revival.

The Joy Report<sup>4</sup> concluded that although the Tasmanian Railway will never make a profit, through rationalisation the 1976 deficit could be reduced to about one half in a few years and that there was significant social benefit in maintaining the railway. The major rationalisations proposed were:

- (i) The elimination of passenger, parcel and livestock traffic, and of the handling of consignments of less than a wagon load, i.e. concentration on bulk haulage.
- (ii) Substantial freight rate increases for the remaining non-bulk traffic.
- (iii) A large reduction in the number of terminals in operation.
- (iv) Moderate capital expenditure on rehabilitation measures (\$23m).

The most important social benefit from maintaining the railway was considered to be its generation of employment. Another important factor was that rail transport reduces the volume of inconvenient and hazardous bulk haulage by road. (Interestingly, this argument was not considered by the Sullivan Inquiry, perhaps because in Newfoundland the role of rail in transporting freight which must otherwise be moved by road is only one half that in Tasmania.)

In summary, for Tasmania the deficit could be reduced to an acceptable level by rationalisation and moderate expenditure on rehabilitation. In Newfoundland the deficit was nearly three times as much, and even with the expenditure of \$A43m for the upgrading of trackbed and easing of curves, or \$A656m for conversion to standard gauge, there was serious doubt that the deficit could be reduced to a socially justifiable amount.

There was strong public reaction against the proposal to abandon the railway in Newfoundland and the Canadian Government has rejected the idea. Instead they will institute a five-year program of testing and evaluation during which the operations of the railway will be streamlined and an effort made to determine its correct role in the transportation system. In Tasmania the major recommendations of the Joy Report have been or are being implemented, although their success cannot be measured as Australian National Railways has not released financial data on its Tasmanian operations.

## SEA TRANSPORT

Most freight moved in and out of Tasmania and Newfoundland travels by sea, and an efficient and reliable shipping service is essential to the economies of both islands.

*Intra-island Shipping*

In the early years of settlement, shipping was the only method of getting between the islands and their mainlands. It was also the main means of intra-island transport, particularly in Newfoundland with its numerous offshore fishing villages. During the 18th and 19th centuries a regular coastal boat service evolved and by 1875 the Newfoundland Government had become involved in the organisation of passenger, freight and mail services. As land transport was slow to develop, the coastal service continued to flourish well into the 20th century. It persists today as a significant part of the Newfoundland transport network—albeit at large financial cost to the taxpayer.

In Tasmania, too, ships played an important role in the transport of produce and people between coastal centres during the 19th and early 20th centuries. However, as roads and railways developed, the importance of coastal shipping declined and today its significance is small.

*Ferries*

The Government body, Canadian National Marine, operates passenger, vehicle and rail ferry services across the Cabot Strait from North Sydney (Nova Scotia) to Port aux Basques, and from North Sydney to Argentia. Up to six vessels (3 chartered) are used on these routes during winter and a further chartered vessel is added to the fleet during summer.

During winter, two passenger-vehicle ferries provide a minimum service of one sailing each per day on the shorter North Sydney-Port aux Basques route. This service may be supplemented by two more passenger vehicle-ferries as need requires, while the remaining two vessels operate an unscheduled rail ferry service. In summer, three passenger-vehicle ferries and the two rail ferries operate the Port aux Basques service, and two passenger-vehicle ferries are used on the Argentia run. At times of peak demand the passenger-vehicle ferries to Port aux Basques are placed on fast turnaround service, each providing three one-way trips in a 24-hour period, with a crossing time of 5½ hours (compared with the normal 6½ hours).

The Bass Strait passenger-vehicle service provided by the Australian National Line (ANL) is less comprehensive. Only one vessel, the *Empress of Australia* is used, making only three return trips per week—even during the peak tourist season. This means that at times such as Christmas, bookings must be made about one year in advance—a tricky exercise in advance holiday planning. Formerly a second vessel provided a passenger-vehicle service from Sydney to Hobart and Launceston, but was withdrawn in 1976 for economic reasons.

The Canadian ferries are larger than the *Empress* and, when their more frequent sailings are taken into account, the daily transport capacity across the Cabot Strait exceeds that of the Bass Strait service by a factor of more than seven.

Passenger-Vehicle Ferries: Bass Strait and Cabot Strait 1976  
(Source: *Empress*, ANL; Cabot Strait Ferries, Sullivan Inquiry<sup>5</sup>)

Vessel	Service speed (knots)	Sleeping facilities (persons)	Total passenger capacity (persons)	Vehicle capacity (no.)	Average total passenger capacity, one way travel, per day
<i>Empress of Australia</i>	17.5	250	440	150	440
<i>Marine Atlantica</i>	19	88	715 (a)	290	} 3 213 (a)
<i>Marine Nautica</i>	19	88	715 (a)	290	
<i>Sterna Nordica</i>	18	88	712	265	

(a) 715 is the 'comfort' seating capacity of the *Marine Atlantica* and *Marine Nautica*. The absolute capacity is 820 persons, giving a one-way transport capacity (for all three ships) of 3 318.

When comparing services, it should be kept in mind that Bass Strait is classed as ocean water. Conditions can often be very rough. The distance between the ports currently used is 239 nautical miles and a crossing takes 14½ hours. On the other hand Cabot Strait, at the mouth of the Gulf of St Lawrence, is a more protected stretch of water. It is only 94 n miles across and the crossing time is 6½ hours.

Because of the journey-time the crossing of Bass Strait is made overnight. Sleeping facilities are provided in the form of cabins and 'deck chairs' (reclining aircraft-type seats arranged in lounges). Most of the Canadian ferries are designed for daylight crossings and have cabins for only a small percentage of the passengers.

Although the *Empress* has been in service since 1965 she is operationally efficient at 1979 fuel prices and may remain in service for another five years. The Nimmo Commission<sup>3</sup> recommended that she be replaced by two fast vessels operating from Westernport Bay to Burnie (172 n miles compared with the current route of 239 n miles) making the crossing in about ten hours and completing a return journey every 24 hours. Passengers and their vehicles would be transported during the day, reducing the need for crew and sleeping facilities, while semi-trailers and furniture vans could be moved by night. It was predicted that the high degree of utilisation of the ship and the reduction in the number of crew needed would both reduce operating costs and increase revenue. The service also would be improved through a much-needed increase in transport capacity. However, it seems unlikely that this recommendation will be implemented in full.

Both the Newfoundland and Tasmanian ferry services run at a loss and are government subsidised. Nonetheless, public opinion on both islands is that the fares charged on the ferries are too high.

Comparison of Charges for Passenger-Vehicle Ferries 1976 (a):  
Tasmania and Newfoundland

Route	Distance	Passenger fare (one-way)	Cost per passenger/mile	Vehicle (b) fare (two-way)	Cost per vehicle/mile
Melbourne-Devonport	n miles	\$A	cents	\$A	\$A
North Sydney-Port aux Basques—	239	(c) 24.90	10.4	134.50	0.56
Normal rate .....	94	4.72	5.0	28.35	0.30
Peak rate .....	94	6.30	6.7	39.37	0.42

(a) Canadian charges converted at 1975-76 exchange rate.

(b) 'Average' family vehicle.

(c) 'Deck chair' for sleeping. Includes breakfast.

Particularly during the 1970s, the costs of both ferry services rose dramatically. In 1976 the Canadian Government subsidy for the Newfoundland service totalled \$A33.8m, much of which may be attributed to the terminal operating costs and running of the rail ferries. Until mid-1979 separate accounts for the passenger-vehicle ferries are not kept, precluding direct comparison with the Bass Strait passenger-vehicle service, which required a \$1m subsidy in the same year.

The Sullivan Inquiry<sup>5</sup> concluded that the Cabot Strait ferry service required 'an abnormal amount of expenditure of public funds'. Much of the loss was attributed to the handling and ferrying of rail traffic, and elsewhere they recommended that the rail system in Newfoundland ultimately be abandoned. Further loss was due to inefficient management and running of the ferry service. However, the commissioners did not think that the service should be reduced, nor the charges increased to eliminate the need for subsidy. Rather, they recommended that the basic charge should be calculated from the cost of travel by road over a similar distance, and the balance of costs made up by government subsidy. If this policy were applied to the 1976 charges, the cost of travel for passengers, private vehicles and trucks would be reduced. However, there has since been no change in the method of calculating ferry charges.



The Nimmo Commission<sup>3</sup> showed that travel to Tasmania by passenger-vehicle ferry also was more expensive than surface travel over a comparable distance on the mainland. While the need for some government subsidy of ferry travel was recognised, the commissioner did not share the Sullivan Inquiry's ideal that this should be sufficient to make travel across Bass Strait as cheap as surface travel on the mainland. Instead he recommended a flat subsidy of \$2m per year for the operation of the *Empress* and that, taking this into account, ANL adjust its charges to produce enough revenue to meet full operating costs.

Alternatives to the use of conventional ships and ferries have been considered in both countries. The Sullivan Inquiry examined the use of hovercraft for the Cabot Strait service and a proposed service between the northern tip of Newfoundland and Labrador. It showed that the service provided would be much quicker, more comfortable and convenient, but that the economics of such an operation required careful study. It was concluded that the potential benefits and possible feasibility warranted a further detailed study.

The Nimmo Commission briefly touched on the possibility of a hydrofoil service across Bass Strait, but concluded that wave conditions probably were too severe. A more detailed investigation by the P and O private shipping company released in November 1979 rejected the proposal on the economic grounds of competition from airlines, frequent interruption through unsuitable weather conditions, and a lack of sheltered ports.

### Freight Shipping

Tasmania and Newfoundland are each serviced by four main shipping companies which move general cargoes. Of the Australian lines, two are government-owned and two are private. All of the Canadian companies are private enterprises. In addition to the general cargo industry large quantities of bulk cargo, mostly petroleum products, are moved to each island under contract to individual suppliers.

#### Shipping Lines Servicing Tasmania and Newfoundland

Tasmania	Newfoundland
Australian National Lines (ANL) (Fed. Gov.) Union Steamship Co. of New Zealand (Union) William Holyman & Sons Pty Ltd (Holyman) Shipping Services Branch, Tasmanian Transport Commission (TTC)	Chimmo Shipping Ltd (Chimmo) Newfoundland Steamships Co. (NSC) Newfoundland Container Lines Ltd (NCL) Federal Offshore Services Ltd (FOS)

The amount of cargo transported to both islands is similar, but a much greater tonnage is exported from Tasmania, about two-thirds going overseas. When making comparisons, it should be noted that significant quantities of non-bulk freight are moved in and out of Newfoundland by rail and trucks using the Cabot Strait ferries.

#### Movement of Goods by Shipping (Source, Newfoundland: Sullivan Inquiry<sup>5</sup>)

Particulars	Tasmania, 1975-76	Newfoundland, 1976
Incoming freight—Total .....	cargo tonnes (a) 3 663 000	tonnes 3 726 000
Main commodities .....	Petroleum, etc. (22%)	Petrol (29%), Mining products (24%)
Outbound freight—Total .....	6 576 000	2 413 000
Main commodities .....	Mining products (33%) Woodchips (26%)	Mining products (40%), Petroleum, etc. (15%)

(a) Freight is measured either by weight (tonnes) or volume (cubic metres), whichever is the greater. Cargo tonnes are calculated by adding freight in cubic metres to freight measured in tonnes to give a single approximate unit of measurement.

Tasmania and Newfoundland suffer no economic disadvantage through bulk shipping when compared with mainland states. However, shipping non-bulk goods across the Bass and Cabot Straits is more expensive than the road or rail transport used on the mainland.

During 1975-76 in Newfoundland only one of the general cargo lines (NSC) received a government subsidy (\$A2.9m), but another (NCL) was expected to run at a substantial loss during its first year of operation. Chimmo was adamant that it was possible to operate a marine carrier service without subsidy, although the Sullivan Inquiry received no cost data to support this contention, and concluded that it was probably wrong. At the time of the Inquiry it was expected that the subsidies applying to road and rail freight would be extended to the marine carriers, improving their competitive position. Subsidies for selected commodities now apply.

In 1975-76 the two government shipping lines serving Tasmania, ANL and the TTC, were subsidised, but the private companies, Union and Holyman, were not, and lost heavily on their Bass Strait operations. ANL received \$4.5m to cover losses caused by a Government directive to freeze freight rates, and the TTC subsidy amounted to \$2.9m. From 1 July 1976 the Freight Equalisation Scheme was implemented, providing specific subsidies for freight and requiring the government-owned lines to charge economic rates. This scheme has ensured more equitable competition and allowed the private lines to operate profitably. It is discussed in more detail below.

### AIR TRANSPORT

Travel by air is considerably quicker and more convenient than by sea, road or rail, but it is also more expensive. Newfoundland and Tasmania are each adequately serviced with airports. Newfoundland has five major airports, including an international airport at Gander. In Tasmania there are major airports at Hobart, Launceston, Wynyard and Devonport. During late 1979 it was proposed that the Hobart airport should be upgraded to international standard for flights to New Zealand. In addition, there are air strips at smaller settlements on both islands and a number of water aerodromes in Newfoundland. Small craft can use the latter with floats in summer and skis in winter, but not during the autumn freeze or spring thaw.

Because of the expense, air transport is a viable proposition only for goods which are perishable, fragile or of high value and small bulk. Most freight transported to and from Tasmania and Newfoundland is not of this nature, and hence, by weight, air freight is of small importance. When measured by value its significance increases.

**Air Freight Movements between Tasmania, Newfoundland and  
their respective Mainlands, 1976**  
(Sources: Tasmania, Dept of Transport; Newfoundland, Sullivan Inquiry<sup>5</sup>)

State	Interstate air freight (t)	Percentage by weight of all interstate non-bulk trade
Tasmania .....	37 088	1.1
Newfoundland .....	9 814	0.8

Although charges for air freight to and from Tasmania do not differ from those on the mainland, a number of companies have negotiated more favourable rates on the basis of regular consignment or backloading. A number of Tasmanian exporters use air freight for goods which would be moved by rail or road on the mainland, as they find shipping too slow. Indeed, the Tasmanian trade is the largest component of the Australian air freight business. The Nimmo Commission<sup>3</sup> recommended that the assistance given to sea freight under the Freight Equalisation Scheme should be extended to air freight in cases where goods must be moved by air to compete effectively with mainland products. This policy has not been implemented.

When the report of the Sullivan Inquiry<sup>5</sup> was written (1977) there was no government subsidy on air freight to and from Newfoundland. However since 1978 the 15 per cent subsidy for road and rail transport within the Atlantic provinces has been extended to air freight for selected goods.

In contrast to freight, more people are transported to and from Newfoundland and Tasmania by aircraft than by ship.

**Interstate Passenger Travel, 1976**  
(Source, Newfoundland: Sullivan Inquiry<sup>5</sup>)

State	Air passengers	Ferry passengers	Total	Air passengers as a proportion of total passengers (per cent)
Tasmania .....	890 335	120 029	1 010 364	88
Newfoundland .....	477 321	289 913	767 234	62

The proportion of interstate travellers who fly is greater for Tasmania, probably because the sea ferry service has a smaller passenger capacity, runs less frequently, costs more and has a longer journey-time in comparison to the Newfoundland service. It is interesting that the total number travelling to and from Tasmania is 32 per cent greater than the number travelling to and from Newfoundland.

Public opinion in both Tasmania and Newfoundland is that air fares are unreasonably high. However, air fares to, from and within both islands are calculated on the same basis as for routes on the mainlands. The Tasmanian Government argued to the Nimmo Commission that fares to and from the State should be subsidised by the Federal Government due to the virtual restriction of the choice of travel to aircraft. The Commission concluded that this did disadvantage certain members of the community, particularly those in low socio-economic groups, who would travel by road or rail at lower cost were these options available. However, others such as business men would use air in any case. The Commission could suggest no way to distinguish those who were in need of travel assistance from those who were not and did not recommend subsidy. There is no subsidy of passenger air fares to and from Newfoundland, but the dependence on air travel is not as great.

#### GOVERNMENT ASSISTANCE FOR TRANSPORT TO AND FROM TASMANIA AND NEWFOUNDLAND

There is no doubt that the physical separation of Tasmania and Newfoundland from their respective mainlands results in door-to-door transport costs for interstate goods in excess of those for mainland states or provinces. The federal governments have responded to this situation by introducing various forms of financial assistance for transport to offset this disadvantage. Newfoundland also receives the transport assistance made available to all of the disadvantaged provinces in the 'Atlantic Region' of Canada—Newfoundland, Nova Scotia, New Brunswick and Prince Edward Island.

In 1927 Canada proclaimed the *Maritime Freight Rates Act* (MFRA) which provided a subsidy of 20 per cent, payable to the railways, on freight movements within the Atlantic region and on the Atlantic portion of movements to the rest of Canada. The subsidy for the latter category was increased to 30 per cent in 1957 and again in 1970, to 50 per cent for certain goods while the intra-region subsidy was decreased to 15 per cent in 1970. Newfoundland inherited this assistance when it joined the Canadian Federation in 1949. The subsidies of the MFRA were extended to trucking in 1969 by the *Atlantic Region Freight Assistance Act* (ARFAA) and to selected commodities for shipping and air transport in 1979. The aim of these Acts was to encourage economic development by removing the burden of excess transport costs for movement to the markets in central Canada. The Sullivan Inquiry<sup>5</sup> considered that this aim had not been achieved and, indeed, that the MFRA had made some goods captive to rail transport when they might be moved more efficiently by road or shipping.

Financial assistance allocated specifically to offset the transport disadvantage caused by Newfoundland's separation from the mainland takes the form of large subsidies for the Cabot Strait ferries and a smaller amount paid to offset losses incurred through non-bulk shipping. The Sullivan Inquiry<sup>5</sup> was critical of the method of application and distribution of these subsidies which heavily favour rail and road in comparison to shipping. It listed a series of principles which should be applied to existing and future Newfoundland transport subsidies. In essence these provided that, wherever possible, subsidies should be direct and for a specific service, should encourage the most cost effective and efficient mode of transportation, should be reviewed periodically to ensure that they are serving their purpose, should apply equally to all companies offering similar services and should encourage economic development.

Prior to the publication of the report of the Nimmo Commission<sup>3</sup>, Australian Government assistance for transport to and from Tasmania took the form of subsidies paid to the government shipping line (ANL) for the movement of passengers and their vehicles and non-bulk freight. This severely disadvantaged private companies moving non-bulk freight in competition with ANL. The Nimmo Commission, on the basis of principles similar to those put forward by the Sullivan Inquiry<sup>5</sup>, recommended a completely new system of subsidies for non-bulk freight and an increase in the flat subsidy paid towards the operation of the passenger-vehicle ferry. The new scheme was introduced on 1 July 1976 and is known as the Tasmanian Freight Equalisation Scheme (TFES).

The objectives of the TFES are: to give Tasmanian industry compensation for excess interstate transport costs; to stimulate the use and development of Tasmania's resources by removing an obstacle to investment; and to promote the development of a more efficient transport network. The subsidy is specific: a separate rate is calculated for each common item of freight for each major route between Tasmania and interstate ports. The amount of assistance is calculated as the difference in cost for door-to-door transport of the item between Tasmania and the mainland and that for transporting it over a similar distance on the mainland. The payment is made to the person or company footing the freight bill, leaving them to choose the shipper of their choice—presumably the one offering the best service for their needs. ANL is no longer subsidised and must charge economic rates. The items subsidised are restricted to the output of industries in Tasmania which compete with their mainland counterparts on mainland markets. It excludes goods transported in bulkships; but it includes raw materials which these industries must ship in. About 90 per cent of the money allocated through the scheme has been for the 'north-bound' shipment of goods from Tasmania to the mainland. In 1976-77, TFES cost the Australian Government \$16.4m and in 1977-78, \$20.9m.

The notable omissions from the new scheme are 'south-bound' consumer durables (e.g. building fixtures and fittings) and consumer perishables like fruit and vegetables and packaged groceries. At first sight, the higher competitive sea freight rates for general cargo to Tasmania could be expected to lead to higher investment and living costs on the island. On the other hand this natural 'protection' should stimulate the local flour mills, aerated drinks factories, furniture makers, etc., which the Sullivan Inquiry found were suffering in Newfoundland from the effects of the same type of benevolent blanket freight subsidy which the Australian Government has now discontinued.

Since 1976 the Australian Government subsidy for the Bass Strait passenger-vehicle ferry has been a flat \$2m.

Not all forms of government assistance for transport are as readily quantified as subsidies or the underwriting of losses. For example, transport infrastructure such as airports and roads may be built with government funds, with no expectation that charges for their use will ever offset the cost of building and maintenance. (The Australian Government has stated that its future policy will involve full cost recovery from airport construction and operation, although currently this is not the case.) This must be borne in mind when comparing financial assistance given to Tasmania and Newfoundland by their respective federal governments.

Federal Financial Assistance for Transport  
(\$Amillions)

Newfoundland		Tasmania		
Particulars	1976	Particulars	1975-76	1976-77
Cabot Strait ferries (including terminal costs) . . . . .	33.8	Railway . . . . .	13.9	n.a.
Coastal shipping . . . . .	16.9	Passenger-vehicle ferry . . . . .	1.0	2.0
Inter-provincial non-bulk shipping . . . . .	2.8	Interstate non-bulk shipping . . . . .	4.5	16.4
Railway . . . . .	16.6			
Roadcruisers . . . . .	1.5			
Total . . . . .	71.6	Total . . . . .	19.4	n.a.

## THE FUTURE

The Sullivan Inquiry devoted considerable effort to examining the likely transport needs of Newfoundland industry during the next 20 years. These findings were then taken into account in formulating solutions for existing problems. The Nimmo Commission was specifically concerned with the identification of the disadvantages suffered by Tasmania as a result of transport costs, but this, of necessity, involved consideration of the immediate future.

Most predictions of future developments in the Tasmanian and Newfoundland transport systems have already been discussed. One which has not, but which may yet be one of the most important factors in the coming decade, is the rapidly rising cost of fuel.

The Sullivan Commission gave some weight to this factor in formulating their policies and predictions. They considered the argument that rail was more fuel efficient than trucking before recommending that the railway be abandoned. The rationale behind this was that all long-haul and some short-haul rail traffic would not be taken over by truck, but by shipping which is even more fuel efficient than rail. Intra-province and short-haul inter-province rail freight would be absorbed by trucking, but presumably the increased fuel consumption involved would be more than offset by the savings in rail subsidy payments. This reasoning was not accepted by one of the commissioners and was a source of public criticism. The commissioners did not comment on the effect of fuel prices on future subsidy requirements, and in fact considered that all subsidies, except that for the Cabot Strait ferry service, ultimately could be phased out.

The Nimmo Commission (1976) barely considered the likely effect of increasing fuel prices. However, this was discussed by Professor John Taplin in his inaugural lecture in 1979 as the Professor of Transport Economics at the University of Tasmania. He showed that during the 1970s the price of ship bunker fuel rose by a factor of seven, while diesel fuel for land transport increased in price by only two and one half times. Higher fuel prices combined with several other factors to considerably increase the cost of shipping relative to land transport. He predicted that shipping was likely to remain more sensitive to increases in fuel costs than land transport, and therefore, that Tasmania's transport disadvantage would probably worsen as the price of fuel increased during the coming decade.

This may be reflected in Tasmanian retail and wholesale prices becoming progressively higher than those of the mainland through the increasing and unsubsidised sea freights for 'south-bound' consumer goods. The Nimmo assumption that ' . . . Tasmanian consumers suffer very little financial disadvantage due to excess transport costs than their fellow countrymen . . . ' could break down.

The need for the subsidy for industry through the Freight Equalisation Scheme is likely to continue, and indeed may need to be increased.

The situation with the passenger vehicle ferry will be similar with regard to fuel costs, although there are other factors (e.g. a daylight crossing) which may offset higher subsidy

requirements. In late 1979 the Federal Government announced a Bureau of Transport Economics study of the passenger-vehicle ferry service with a view to eliminating the need for subsidy when the *Empress of Australia* is replaced.

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FOOTNOTE: Exchange rates for converting Canadian dollars to Australian dollars vary on a day to day basis. All conversions in this article have been made by averaging the buying and selling rate for each month, and then calculating the average of these for the 12 months of a financial year. Figures used are: 1974-75, 1.36 Can. dollars = 1 Aust. dollar; 1975-76, 1.27 Can. dollars = 1 Aust. dollar; 1976-77, 1.16 Can. dollars = 1 Aust. dollar; and 1977-78, 1.24 Can. dollars = 1 Aust. dollar. Projected estimates have been converted at the 1976-77 rate.

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## Appendix A

### STATISTICAL SUMMARY

In the next 29 pages, an historical summary of the more important statistics available that relate to Tasmania is shown. Only brief footnotes have been included and readers should refer to the relevant chapter of the *Year Book* for more detailed definitions. Naturally, the range of statistics for early years is very limited. Also, it should be borne in mind that perfect comparability over long periods of time is difficult to attain due to changes in definitions, scope of statistical collections, etc. While major breaks in series are shown, minor changes to series are not indicated and the statistics should be interpreted with this in mind.

Generally, the first year shown on each page is the earliest for which any series on that page is available. Due to space constraints, earlier details for some series are given only for either every five or ten years. Items included have been arranged in chapter order.

(Chapter 4)

#### Local Government Finance, Tasmania

Year	Value of ratable property			Revenue Fund— ordinary services and business undertakings		Loan Fund			
	Land value (a) (b) (c)	Total capital value (a) (b)	Assessed annual value	Revenue (d)	Expendi- ture (d)	Loan raisings	Expendi- ture	Total debt (b)	Annual interest liability
	\$ million	\$ million	\$ million	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
1929-30	46-17	101-40	5-51	1 954	1 956	227	212	6 502	n.a.
1939-40	46-16	109-82	6-10	2 174	2 192	212	230	6 712	300
1949-50	50-73	134-70	9-02	3 694	3 696	1 400	1 423	7 219	267
1950-51	55-86	155-35	10-24	4 283	4 327	1 860	1 594	8 534	304
1951-52	63-43	187-66	11-43	5 357	5 351	2 554	2 558	10 453	372
1952-53	69-93	224-91	12-87	6 024	6 048	2 184	2 166	11 900	444
1953-54	74-31	252-69	13-84	6 641	6 506	2 418	1 758	13 600	533
1954-55	83-58	296-37	15-88	6 972	7 053	2 796	2 408	15 603	639
1955-56	93-84	345-27	15-56	6 386	6 596	2 367	2 730	(e) 15 389	654
1956-57	130-13	495-31	25-42	7 417	7 261	2 310	2 682	16 967	761
1957-58	140-55	553-90	28-23	7 998	7 904	4 024	3 237	20 192	944
1958-59	164-66	653-48	33-41	8 837	8 837	3 685	3 541	22 979	1 111
1959-60	179-03	739-35	37-31	9 781	9 762	5 232	4 671	27 144	1 337
1960-61	185-93	808-21	40-04	10 867	10 924	5 277	5 259	31 285	1 571
1961-62	193-52	870-08	42-89	12 097	11 779	6 159	5 658	36 181	(f) 1 515
1962-63	216-01	942-88	48-62	13 765	13 256	5 268	7 212	39 842	1 897
1963-64	271-83	1 075-09	57-51	14 792	14 654	5 823	7 431	44 063	2 061
1964-65	290-52	1 140-40	61-27	16 250	16 176	6 237	6 354	48 368	2 209
1965-66	316-91	1 202-22	68-54	17 395	17 085	6 512	8 342	52 844	2 442
1966-67	328-50	1 271-87	72-47	19 594	19 068	6 981	8 091	57 611	2 893
1967-68	350-81	1 350-44	86-35	21 235	20 858	8 183	9 364	62 821	3 186
1968-69	374-49	1 452-38	95-57	23 478	22 790	7 633	8 616	66 922	3 496
1969-70	411-72	1 571-96	102-98	25 914	24 816	6 793	7 972	71 854	3 858
1970-71	441-88	1 691-37	107-78	28 236	27 195	6 964	7 494	75 752	4 149
1971-72	454-47	1 768-07	114-86	31 505	30 985	7 326	8 504	79 907	4 534
1972-73	483-44	1 874-17	124-61	37 000	34 552	8 151	9 668	84 781	4 865
1973-74	511-39	1 995-91	147-41	40 376	39 641	8 574	8 803	89 766	5 298
1974-75	619-19	2 317-03	165-47	52 313	52 224	12 260	12 677	97 892	5 951
1975-76	696-26	2 570-15	185-36	68 345	65 076	15 870	19 368	109 655	7 071
1976-77	763-67	2 902-51	218-86	75 641	75 641	17 775	20 579	122 950	8 655
1977-78	1 155-61	3 531-99	260-11	82 588	77 455	18 514	23 135	136 285	10 283

(a) State Government valuation.

(b) At 30 June.

(c) Prior to 1977-78 figures are 'unimproved capital value'.

(d) Excludes loans.

(e) As from 1955-56, the loan debt of Hobart and Launceston Corporations for tramways has been excluded and treated as a direct liability of the Metropolitan Transport Trust.

(f) From 1961-62 actual interest payments.



(Chapter 5)

Consolidated Revenue Fund: Revenue and Expenditure, Tasmania (a)  
(\$'000)

Year	Revenue	Expenditure	Budget result	Aggregate net deficit at end of year
1891	1 889	1 827	+63	497
1901	1 652	1 741	-89	487
1910-11	1 940	2 034	-94	490
1911-12	2 169	2 129	+40	450
1912-13 (b)	2 413	2 192	+221	229
1913-14	2 476	2 470	+6	223
1914-15	2 488	2 768	-280	503
1915-16	2 753	2 681	+72	432
1916-17	2 739	2 826	-87	519
1917-18	3 006	2 919	+87	432
1918-19	3 164	3 289	-125	557
1919-20	3 630	3 657	-27	584
1929-30	5 379	5 430	-51	1 451
1930-31	5 219	5 709	-490	1 942
1931-32	4 771	5 314	-543	2 485
1932-33	5 044	5 155	-110	2 596
1933-34	5 396	5 492	-95	2 691
1934-35	5 744	5 983	-238	2 930
1935-36	6 235	6 495	-259	3 189
1936-37	6 977	6 887	+90	3 099
1937-38	7 280	7 266	+14	3 086
1938-39	7 230	7 281	-52	3 138
1939-40	6 111	6 106	+5	3 133
1940-41	5 843	6 206	-363	3 496
1941-42	6 717	6 714	+3	3 493
1942-43	6 581	6 800	-219	3 712
1943-44	6 997	6 937	+60	3 651
1944-45	7 313	7 351	-38	3 690
1945-46	7 867	8 068	-201	3 891
1946-47	9 014	9 147	-132	4 023
1947-48	10 156	10 204	-48	4 071
1948-49	11 288	11 691	-402	4 473
1949-50	13 882	14 165	-283	4 756
1950-51	15 831	16 324	-493	5 249
1951-52	20 386	21 490	-1 104	6 353
1952-53	22 922	23 526	-604	6 957
1953-54	26 502	26 840	-338	7 294
1954-55	29 877	30 614	-737	8 032
1955-56	34 389	35 792	-1 403	9 434
1956-57	37 889	39 543	-1 655	11 089
1957-58	43 210	43 228	-18	11 107
1958-59	45 520	45 518	+2	11 105
1959-60	50 542	50 657	-114	11 219
1960-61	54 054	54 167	-113	11 332
1961-62	61 191	61 352	-161	11 493
1962-63	64 018	64 019	-1	11 493
1963-64	69 167	69 021	+147	11 346
1964-65	76 012	76 465	-452	11 799
1965-66	84 453	85 585	-1 132	12 931
1966-67	91 486	93 248	-1 762	14 693
1967-68	100 463	102 413	-1 951	16 644
1968-69	109 526	111 540	-2 015	18 659
1969-70	120 619	121 004	-385	19 044
1970-71	135 829	138 207	-2 378	21 422
1971-72	156 432	160 237	-3 805	25 226
1972-73	181 866	185 998	-4 132	29 358
1973-74	206 947	210 097	-3 150	32 508
1974-75	268 522	282 065	-13 544	46 052
1975-76	322 091	317 947	+4 144	41 908
1976-77	396 617	395 033	+1 583	40 325
1977-78	444 263	450 706	-6 443	46 768

(a) From 1947-48 until 1971-72, the items 'Revenue' and 'Budget result' are shown adjusted according to the Special Grant Adjustment.  
(b) System of annual Commonwealth Special Grants introduced.

(Chapter 5)

## Aggregate Net Loan Expenditure and Public Debt, Tasmania

Year	Aggregate net loan expenditure to end of year							Public debt at end of year (a) (at mint par of exchange)	Annual interest liability at current rates of exchange	
	Purpose								Amount	Average rate
	Railways and transport	Hydro-electric works	Roads, bridges, harbours	School buildings and University	Housing advances and construction	Other	Total			
\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	%	
1890.....	6 508	-	3 354	238	-	2 282	12 382	12 866	n.a.	n.a.
1900.....	7 820	-	5 352	334	-	2 986	16 492	17 022		
1910-11.....	8 866	-	7 258	488	-	5 034	21 646	22 156		
1920-21.....	11 702	3 994	10 390	848	206	12 302	39 442	37 552		
1930-31.....	13 866	7 692	13 540	1 312	412	16 568	53 390	46 778		
1940-41.....	14 520	13 018	14 412	1 986	902	19 392	64 230	56 332		
1950-51.....	20 958	40 448	16 214	4 694	9 946	33 468	125 728	114 066		
1960-61.....	31 126	181 578	35 076	27 266	29 536	87 422	392 004	354 558	n.a.	4.3845
1961-62.....	31 418	195 206	39 144	30 450	29 190	96 684	422 092	379 252	17 064	4.3948
1962-63.....	31 296	208 706	42 942	34 048	28 990	106 621	452 603	404 594	19 523	4.4585
1963-64.....	34 410	222 905	47 704	38 342	28 577	113 570	485 508	432 311	19 790	4.4634
1964-65.....	34 984	239 419	51 171	42 395	28 244	122 653	518 866	462 302	21 706	4.5890
1965-66.....	35 789	255 919	55 593	46 832	27 970	133 325	555 428	491 658	23 987	4.7693
1966-67.....	36 088	273 919	57 486	50 858	27 692	146 021	592 064	524 918	25 940	4.8432
1967-68.....	36 910	293 919	58 774	54 964	27 217	162 408	634 192	560 893	27 777	4.8879
1968-69.....	37 170	314 644	59 563	59 387	27 230	176 586	674 580	599 736	30 040	4.9517
1969-70.....	40 503	337 769	60 686	64 853	26 469	189 370	719 650	637 407	32 939	5.1163
1970-71.....	42 169	362 269	61 706	70 544	26 104	204 250	767 042	665 397	36 203	5.3928
1971-72.....	47 199	388 269	62 636	78 952	31 497	224 757	833 310	705 271	39 202	5.5220
1972-73.....	58 643	410 629	63 176	90 753	36 837	240 516	900 554	749 583	41 620	5.5300
1973-74.....	67 609	433 629	63 886	102 567	36 228	261 248	965 167	787 618	45 922	5.8300
1974-75.....	81 033	456 854	64 504	114 219	35 771	288 832	1 041 213	833 862	49 005	6.4100
1975-76.....	(b) 15 186	486 554	65 559	132 917	37 475	316 692	1 054 383	753 797	53 748	7.1300
1976-77.....	13 714	517 554	71 407	156 939	34 014	370 933	1 164 561	811 012	60 437	7.4500
1977-78.....	14 730	540 554	75 526	178 496	42 558	417 616	1 269 481	870 097	68 233	7.8400

(a) Expenditure under Commonwealth and State Housing Agreements is excluded from Public Debt.

(b) The Tasmanian Government Railways were taken over by the Australian National Railways Commission from 1 July 1975.

(Chapter 5)

## Gross and Net Loan Expenditure, Tasmania

Year	Gross expenditure	Net expenditure	Revenue deficit funded (a)	Net Loan expenditure per head of population	Year	Gross expenditure	Net expenditure	Revenue deficit funded (a)	Net loan expenditure per head of population
1900 to 1904-05 (b)	543	473	-	2.68	1947-48	8 361	6 528	132	24.98
1905-06 to 1909-10 (b)	571	519	-	2.78	1948-49	11 051	9 013	488	33.82
1910-11 to 1914-15 (b)	1 147	1 039	-	5.40	1949-50	11 742	9 884	48	36.02
1915-16 to 1919-20 (b)	2 004	1 549	-	7.84					
1920-21.....	6 181	5 435	-	25.68	1950-51	30 802	27 465	402	96.86
1921-22.....	5 377	4 292	-	19.98	1951-52	34 047	30 047	283	103.28
1922-23.....	3 422	2 307	699	10.68	1952-53	40 152	26 137	493	86.38
1923-24.....	2 752	1 492	-	6.88	1953-54	31 816	27 544	1 104	89.00
1924-25.....	1 907	1 496	-	5.30	1954-55	35 310	29 378	604	93.96
1925-26.....	2 226	1 138	-	2.30	1955-56	35 213	27 048	338	84.98
1926-27.....	2 290	659	-	3.08	1956-57	23 544	22 039	737	67.88
1927-28.....	2 068	809	-	3.78	1957-58	23 990	21 666	1 403	33.26
1928-29.....	2 059	698	-	3.22	1958-59	27 610	25 112	1 655	74.16
1929-30.....	2 932	294	-	1.34	1959-60	29 130	26 443	18	76.84
1930-31.....	(c) 2 921	(c) 1 651	-	7.40	1960-61	33 865	30 611	-	87.38
1931-32.....	1 319	193	-	0.86	1961-62	32 521	30 088	112	84.60
1932-33.....	887	-147	-	-0.64	1962-63	33 332	30 511	113	84.58
1933-34.....	1 050	238	-	1.04	1963-64	35 354	32 905	161	90.32
1934-35.....	1 572	723	-	3.16	1964-65	35 816	33 352	-	90.65
1935-36.....	3 717	2 000	678	8.66	1965-66	39 411	36 573	-	98.46
1936-37.....	3 996	1 684	-	7.00	1966-67	40 161	36 636	306	98.15
1937-38.....	3 785	1 701	-	7.32	1967-68	46 054	42 128	1 132	111.62
1938-39.....	3 699	1 479	-	6.22	1968-69	44 458	40 164	1 762	105.02
1939-40.....	3 628	1 806	-	7.52	1969-70	49 411	45 069	-	116.67
1940-41.....	4 231	2 268	363	9.40	1970-71	52 079	47 393	-	121.75
1941-42.....	3 581	1 430	-	5.96	1971-72	73 037	66 268	4 350	169.22
1942-43.....	3 001	1 002	-	4.14	1972-73	76 813	67 243	2 378	170.67
1943-44.....	5 218	3 350	219	13.70	1973-74	73 947	64 603	3 805	162.60
1944-45.....	3 587	1 806	910	7.32	1974-75	90 060	76 056	7 282	189.15
1945-46.....	3 540	1 590	-	6.36	1975-76	98 818	81 369	-	200.32
1946-47.....	5 899	2 725	239	10.70	1976-77	126 223	110 178	9 400	269.31
					1977-78	123 459	104 920	-	254.60

(a) These amounts are included in both Gross and Net Loan Expenditure. The figures shown are a complete record of funded deficits since 1900.

(b) Annual average for the five-yearly period shown.

(c) Includes \$1 233 000, the amount re-appropriated to provide for certain deferred revenue charges.

(Chapter 6)

Summary of Population at Census Dates, Tasmania (a) (b)

Particulars	Census Date							
	April 1921	June 1933	June 1947	June 1954	June 1961	June 1966	June 1971	June 1976
Population—								
Males .....	no. 107 743	115 097	129 244	157 129	177 628	187 390	196 442	201 512
Females .....	no. 106 037	112 502	127 834	151 623	172 712	184 045	193 971	201 356
Persons .....	no. 213 780	227 599	257 078	308 752	350 340	371 435	390 413	402 868
Masculinity (males per 100 females) .....	no. 102	102	101	104	103	102	101	100
Average annual increase since previous Census—								
Males .....	% 1.0	0.6	0.8	2.8	1.8	1.1	1.0	0.5
Females .....	% 1.3	0.5	0.9	2.5	1.9	1.3	1.0	0.8
Persons .....	% 1.1	0.5	0.9	2.7	1.8	1.2	1.0	0.6
Age distribution of population—								
Under 16 years .....	no. 77 654	73 030	77 483	102 171	123 331	127 379	129 307	124 267
36-3 .....	% 32.1	30.1	33.1	33.1	35.2	34.3	33.1	30.8
16 years and under 65 years .....	no. 126 055	138 515	159 925	183 230	200 001	214 981	230 069	243 885
59-0 .....	% 60.9	62.2	62.2	59.3	57.1	57.9	58.9	60.5
65 years and over .....	no. 10 071	16 054	19 670	23 351	27 008	29 075	31 037	34 719
4-7 .....	% 4.7	7.0	7.7	7.6	7.7	7.8	7.9	8.6
Religions of the population—								
Church of England .....	no. 112 222	105 228	123 158	147 407	159 101	166 023	169 089	158 749
Methodist .....	no. 27 171	26 470	33 358	38 236	42 236	43 084	42 173	37 107
Catholic (c) .....	no. 35 465	33 189	39 844	53 042	63 993	71 089	77 250	75 092
Presbyterian .....	no. 14 796	13 194	12 644	15 607	16 757	17 498	17 281	14 899
Baptist .....	no. 5 332	4 666	5 374	6 293	7 227	7 759	8 039	7 940
Congregational .....	no. 4 543	3 963	4 007	4 425	4 193	4 530	4 134	3 266
Churches of Christ .....	no. 1 935	1 892	2 039	2 267	2 507	2 701	2 500	2 188
Protestant (Undefined) .....	no. 2 271	1 979	1 661	2 157	1 975	1 924	4 243	3 455
Salvation Army .....	no. 1 357	1 142	1 612	1 815	2 316	2 661	3 176	2 880
Other Christian .....	no. 3 597	3 530	4 518	8 238	11 229	13 058	16 510	18 667
Total Christian .....	no. 208 689	195 253	228 215	279 487	311 534	330 327	344 395	324 244
Non-Christian .....	no. 245	87	173	256	268	485	561	779
Indefinite .....	no. 520	373	797	796	1 766	2 275	993	2 223
No Religion .....	no. 399	159	506	516	775	2 020	44 464	27 625
No Reply .....	no. 3 927	31 727	27 387	27 697	35 997	36 328		47 998
Conjugal condition of the population—								
Never married—								
Under 15 years of age .....	no. 73 444	68 590	73 371	97 452	117 299	120 164	121 323	115 665
15 years of age and over .....	no. 54 297	61 009	53 912	54 890	58 039	64 365	65 213	70 229
Total never married .....	no. 127 741	129 599	127 283	152 342	175 338	184 529	186 536	185 894
Married .....	no. 76 482	86 014	114 625	139 801	157 110	167 421	181 855	185 056
Widowed .....	no. 8 874	10 954	12 933	14 030	15 563	16 959	18 621	19 340
Divorced .....	no. 118	416	1 319	2 002	2 329	2 526	3 401	5 868
Not stated .....	no. 565	616	918	577	(d)	(d)	(d)	(d)
Birthplaces of the population—								
Australia .....	no. 196 268	215 213	247 379	282 491	317 478	335 582	350 150	361 866
New Zealand .....	no. 1 356	1 201	1 030	1 112	1 128	1 237	1 550	1 801
United Kingdom and Republic of								
Ireland .....	no. 12 734	9 588	7 123	14 113	16 741	19 101	22 513	22 913
Netherlands .....	no. 9	11	13	2 340	3 556	3 367	3 183	2 916
Germany .....	no. 389	238	171	1 794	2 223	2 016	2 009	1 886
Italy .....	no. 37	92	64	974	1 536	1 448	1 485	1 423
Other European .....	no. 512	334	325	4 535	5 789	6 033	6 184	5 970
Other birthplaces .....	no. 2 475	922	973	1 393	1 889	2 651	3 339	4 095

(a) Full-blood aboriginals excluded from census data prior to 1971.

(b) As recorded. Not adjusted for under-enumeration.

(c) Includes Catholic and Roman Catholic.

(d) Conjugal condition was allocated prior to tabulation in all instances where this information was not stated.

(Chapter 6)

## Population; Arrivals and Departures, Tasmania

Year	Estimated Population (a)							Arrivals	Departures (c)	Annual Rate of Increase of Population (d)
	Total at 30 June	Mean: year ended 30 June	Mean: year ended 31 Dec.	Totals at 31 December						
				Persons	Males	Females	Masculinity (b)			
1820	no.	no.	no.	no.	no.	no.	no.	no.	no.	per cent
1825	n.a.	n.a.	n.a.	5 400	n.a.	n.a.	n.a.	n.a.	n.a.	-
1830	n.a.	n.a.	n.a.	14 192	10 979	3 213	342	n.a.	n.a.	21.26
1835	n.a.	n.a.	n.a.	24 279	18 108	6 171	293	n.a.	n.a.	11.35
1840	n.a.	n.a.	n.a.	40 172	28 749	11 423	252	n.a.	n.a.	10.59
1845	n.a.	n.a.	n.a.	45 999	32 040	13 959	230	n.a.	n.a.	2.75
1850	n.a.	n.a.	n.a.	64 291	43 921	20 370	216	n.a.	n.a.	6.91
1855	n.a.	n.a.	n.a.	68 870	44 229	24 641	179	n.a.	n.a.	1.37
1860	n.a.	n.a.	n.a.	69 962	38 680	31 282	124	n.a.	n.a.	0.32
1865	n.a.	n.a.	n.a.	88 752	89 821	49 653	124	3 432	2 782	5.12
1865	n.a.	n.a.	n.a.	93 111	93 967	50 549	116	3 597	3 691	0.90
1870 (e)	n.a.	n.a.	100 038	100 886	53 517	47 369	113	5 982	5 936	1.44
1875	n.a.	n.a.	104 000	103 759	54 678	49 061	111	6 535	6 083	0.55
1880	n.a.	n.a.	113 648	114 790	60 568	54 222	112	10 411	10 034	2.02
1885	n.a.	n.a.	127 763	128 860	67 712	61 148	111	14 822	15 228	2.33
1890	n.a.	n.a.	143 224	144 895	76 453	68 334	112	29 517	29 086	2.38
1895	n.a.	n.a.	153 701	154 895	80 485	74 410	108	18 767	19 357	1.35
1900	n.a.	n.a.	172 631	172 900	89 763	83 137	108	23 056	25 479	2.21
1905	183 351	183 834	184 478	186 385	95 947	90 438	106	31 116	33 311	1.52
1910	189 807	190 792	191 005	193 803	98 866	94 937	104	35 377	38 159	0.79
1915	195 370	196 320	196 238	197 536	98 653	98 883	100	39 767	44 764	0.38
1920	209 425	208 599	210 350	212 752	107 259	105 493	102	34 829	35 648	1.37
1925	213 991	215 997	215 552	219 364	110 172	109 192	101	40 227	43 757	0.70
1930	219 983	219 269	220 933	225 297	113 505	111 792	102	40 291	41 110	0.48
1935	228 988	229 339	229 867	233 423	118 124	115 299	102	42 470	42 912	0.63
1936	230 104	230 689	231 426	235 773	119 038	116 735	102	49 478	49 452	1.01
1937	233 203	232 651	234 463	239 570	121 136	118 434	102	52 514	51 468	1.61
1938	234 827	235 628	236 328	242 119	122 427	119 692	102	58 113	58 315	1.06
1939	237 419	237 637	238 845	243 256	123 194	120 062	103	(g) 59 330	(g) 60 893	0.47
1940	240 191	240 023	241 134	244 002	123 650	120 352	103	(g) 51 672	(g) 53 644	0.31
1941	239 677	241 009	240 389	242 135	122 153	119 982	102	(g) 49 348	(g) 53 865	-0.77
1942	240 913	240 358	241 087	242 437	122 440	119 997	102	(g) 42 463	(g) 44 834	0.13
1943	242 561	241 704	242 860	244 253	123 067	121 186	102	(g) 20 152	(g) 21 272	0.75
1944	245 616	244 178	245 618	246 889	124 293	122 596	101	n.a.	n.a.	1.08
1945	248 633	246 971	248 596	250 280	125 854	124 426	101	n.a.	n.a.	1.37
1946	251 998	250 309	252 192	254 570	128 007	126 563	101	(g) 24	(g) 159	1.71
1947 (e)	257 078	254 553	257 636	267 936	135 195	132 741	102	(g) 49 920	(g) 40 833	5.25
1948	261 206	261 202	263 445	273 401	138 843	134 558	103	112 666	110 490	2.04
1949	267 062	266 518	270 327	281 343	143 433	137 910	104	117 614	113 232	2.91
1950	275 902	274 493	278 785	290 333	147 103	143 230	103	127 709	122 333	3.20
1951	286 193	283 526	288 294	301 787	153 721	148 066	104	137 341	129 514	3.95
1952	296 299	293 340	298 361	309 558	157 702	151 856	104	130 583	126 979	2.57
1953	304 080	302 529	306 318	316 465	161 305	155 160	104	127 484	125 812	2.23
1954 (e)	308 752	309 416	311 055	319 218	162 393	156 825	104	126 976	128 424	0.87
1955	314 092	312 694	315 065	324 919	165 356	159 563	104	137 834	137 144	1.00
1956	318 470	318 309	321 539	331 340	168 695	162 645	103	143 104	141 686	1.98
1957	326 130	324 666	328 435	338 807	172 186	166 621	103	143 601	141 310	2.25
1958	333 066	332 046	335 382	343 898	174 465	169 433	103	141 814	141 995	1.50
1959	339 376	338 628	341 423	351 349	178 109	173 240	103	162 761	160 569	2.17
1960	343 910	344 111	346 913	355 969	180 511	175 458	103	182 537	183 513	1.31
1961 (e)	350 340	350 077	353 623	353 258	178 864	174 394	103	186 423	184 165	-0.76
1962	355 668	353 175	355 682	358 087	181 085	177 002	102	185 268	186 023	1.37
1963	360 727	358 180	360 590	362 799	183 330	179 469	102	198 443	199 918	1.32
1964	364 311	362 758	364 554	366 508	185 051	181 457	102	219 930	223 380	1.02
1965	367 905	366 366	367 970	369 608	186 483	183 125	102	248 964	249 617	0.85
1966 (e)	371 436	369 600	371 483	373 309	188 180	185 129	102	257 463	256 068	1.00
1967	375 244	373 321	375 397	377 841	190 369	187 472	102	270 934	271 812	1.21
1968	379 649	377 582	379 916	383 055	192 871	190 184	101	276 798	276 856	1.38
1969	384 893	382 710	385 079	386 998	194 788	192 210	101	296 186	297 069	1.03
1970	387 720	386 665	388 180	390 253	196 363	193 890	101	320 867	323 449	0.84
1971 (e) (f)	390 220	389 723	390 235	391 699	197 079	194 620	101	340 163	340 642	0.37
1972	392 235	391 627	392 378	394 001	198 024	195 977	101	r 356 561	r 355 224	0.59
1973	395 676	393 974	395 775	397 197	199 403	197 794	101	r 450 707	r 448 556	0.81
1974	399 303	397 338	399 563	402 459	201 688	200 771	100	r 508 449	r 502 488	1.32
1975	404 677	402 101	404 544	406 565	203 809	202 756	101	r 510 639	r 514 278	1.02
1976 (e) (f)	407 363	406 150	407 548	409 252	205 080	204 168	100	r 509 356	r 507 384	0.66
1977	410 590	409 095	410 588	412 065	206 273	205 792	100	r 538 665	r 530 535	0.69
1978	413 683	412 049	413 694	415 645	n.y.a.	n.y.a.	n.y.a.	557 275	559 293	p 0.87

(a) Prior to 1966 excludes Aborigines.

(b) Number of males per 100 females.

(c) Series of recorded interstate arrivals and departures prepared by State Department of Tourism replaces ABS series from 1972.

(d) The rate of increase during the previous 12 months or, in the years prior to 1936, the average (compound) rate of increase during the previous five years.

(e) Census year.

(f) Census results adjusted for under-enumeration.

(g) Excludes troop movements.

(Chapter 6)

Births, Deaths, Marriages and Divorces, Tasmania

Year	Number				Rate per 1 000 of mean population			Deaths under one year of age	
	Births	Deaths	Marriages	Divorces	Births	Deaths	Marriages	Number	Rate per 1 000 live births
	no.	no.	no.	no.					
1820	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1830	460	270	163	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1840	404	501	457	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1845	1 506	697	658	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1850	2 025	1 070	923	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1855	2 948	1 692	1 257	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1860	3 238	1 749	689	n.a.	36.48	19.71	7.76	n.a.	n.a.
1865	3 069	1 263	591	n.a.	32.96	13.56	6.35	n.a.	n.a.
1870	3 054	1 404	670	n.a.	30.53	14.03	6.70	298	97.6
1875	3 105	2 079	689	n.a.	29.86	19.99	6.83	407	131.1
1880	3 739	1 832	840	n.a.	32.90	16.12	7.39	420	112.3
1885	4 637	2 036	1 054	n.a.	36.29	15.94	8.25	522	112.6
1890	4 813	2 118	954	n.a.	33.60	14.79	6.66	508	105.6
1895	4 790	1 811	846	5	31.16	11.78	5.50	391	81.6
1900	4 864	1 903	1 332	4	28.18	11.02	7.72	389	80.0
1905	5 257	1 844	1 365	2	28.50	10.00	7.40	424	80.7
1910	5 586	2 120	1 493	6	29.25	11.10	7.82	568	101.7
1915	5 845	2 015	1 600	7	29.79	10.27	8.15	423	72.4
1920	5 740	2 036	1 999	18	27.29	9.68	9.50	376	65.5
1925	5 218	1 996	1 504	37	24.21	9.26	6.98	288	55.2
1930	4 786	1 948	1 450	42	21.66	8.82	6.56	242	50.6
1931	4 762	2 057	1 501	47	21.18	9.15	6.68	219	45.9
1932	4 491	2 022	1 508	33	19.78	8.90	6.64	185	41.2
1933	4 553	2 192	1 629	42	19.93	9.60	7.13	187	41.1
1934	4 470	2 345	1 678	60	19.50	10.23	7.32	189	42.3
1935	4 456	2 353	1 875	87	19.39	10.24	8.16	231	51.8
1936	4 581	2 387	2 073	62	19.79	10.31	8.96	227	49.6
1937	4 841	2 225	2 042	30	20.65	9.49	8.71	202	41.7
1938	4 907	2 288	2 082	109	20.76	9.68	8.81	195	39.7
1939	5 004	2 426	2 264	80	20.95	10.16	9.48	203	40.6
1940	4 994	2 387	2 476	83	20.71	9.90	10.27	176	35.2
1941	5 206	2 575	2 150	84	21.66	10.71	8.94	255	49.0
1942	5 305	2 430	2 431	83	22.00	10.08	10.08	255	42.4
1943	5 597	2 527	2 102	89	23.05	10.41	8.66	227	40.6
1944	5 200	2 494	1 935	115	21.17	10.15	7.88	199	38.3
1945	5 785	2 413	1 868	172	23.27	9.71	7.51	159	27.5
1946	6 847	2 549	2 650	219	27.15	10.11	10.51	207	30.2
1947	7 140	2 363	2 584	210	27.71	9.17	10.03	195	27.3
1948	6 979	2 528	2 428	185	26.49	9.60	9.22	193	27.7
1949	7 110	2 389	2 422	266	26.30	8.84	8.96	170	23.9
1950	7 242	2 466	2 560	152	25.96	8.85	9.18	172	23.8
1951	7 357	2 567	2 607	194	25.52	8.93	9.04	196	26.6
1952	7 916	2 579	2 553	217	26.53	8.64	8.56	172	21.7
1953	7 736	2 551	2 424	210	25.25	8.33	7.91	177	22.9
1954	7 770	2 696	2 512	238	24.98	8.67	8.08	186	23.9
1955	8 089	2 489	2 600	233	25.63	7.89	8.24	189	23.4
1956	8 104	2 513	2 601	197	25.24	7.83	8.10	170	21.0
1957	8 435	2 670	2 507	180	25.68	8.13	7.63	170	20.2
1958	8 568	2 708	2 475	176	25.55	8.07	7.38	167	19.5
1959	8 625	2 780	2 567	222	25.26	8.14	7.52	202	23.4
1960	8 853	2 670	2 713	210	25.52	7.70	7.82	169	19.1
1961	8 892	2 789	2 677	286	25.40	7.89	7.57	151	16.8
1962	8 894	2 870	2 485	249	25.01	8.07	6.99	184	20.7
1963	8 530	2 818	2 579	261	23.66	7.82	7.15	153	17.9
1964	8 252	3 174	2 869	230	22.64	8.71	7.87	166	20.1
1965	7 535	3 043	2 888	280	20.48	8.27	7.85	125	16.6
1966	7 401	3 159	2 946	319	19.92	8.50	7.93	108	14.6
1967	7 547	3 228	3 213	248	20.10	8.60	8.56	130	17.2
1968	8 317	3 284	3 426	303	21.89	8.64	9.02	143	17.2
1969	8 445	3 309	3 532	331	21.93	8.59	9.17	139	16.5
1970	8 185	3 174	3 535	426	21.09	8.16	9.11	116	14.2
1971	8 321	3 295	3 578	432	21.32	8.44	9.17	114	13.7
1972	7 824	3 227	3 426	446	19.94	8.22	8.73	127	16.2
1973	7 326	3 347	3 395	444	18.51	8.46	8.58	137	18.7
1974	7 398	3 484	3 567	536	18.52	8.72	8.93	123	16.6
1975	6 982	3 339	3 242	591	17.26	8.26	8.02	128	18.3
1976	6 702	3 389	3 477	r 1 761	16.44	8.32	8.53	77	11.5
1977	6 735	3 269	3 166	r 1 134	16.40	7.96	7.71	99	14.7
1978	6 788	3 271	3 148	p 1 248	p 16.41	p 7.91	p 7.61	97	14.3

(Chapter 7)

Land Settlement: Land Utilisation, Tasmania  
(\*000 ha)

Year (b)	Land settlement (a)				Land utilisation on rural establishments				
	Land		Crown land		Year	Area under		Balance of area	Total area of rural estab.
	Alienated	In process of alienation	Leased or licensed (c)	Other		Crops (d)	Sown grasses (d)		
1860	1 242				1860-61	62			
1870	1 540				1870-71	64	(e)	(e)	(e)
1880	1 713				1880-81	57			
1890	1 900		293	4 640	1890-91	64	81		
1900	1 957		513	4 364	1900-01	91	124	1 782	1 996
1910	1 996	447	591	3 799	1910-11	116	200	1 862	2 178
1920	2 121	390	920	3 402	1920-21	120	267	2 216	2 603
1921	1 228	372	980	3 352	1921-22	119	316	2 157	2 592
1922	2 156	356	994	3 327	1922-23	121	347	2 122	2 590
1923	2 189	323	979	3 342	1923-24	113	324	2 167	2 604
1924	2 222	295	971	3 345	1924-25	107	351	2 157	2 614
1925	2 208	283	977	3 327	1925-26	108	332	2 170	2 610
1926	2 264	261	1 158	3 150	1926-27	117	320	2 198	2 636
1927	2 279	249	1 542	2 763	1927-28	120	317	2 257	2 694
1928	2 292	238	1 768	2 535	1928-29	111	310	2 264	2 684
1929	2 306	227	1 140	3 160	1929-30	107	297	2 245	2 650
1930	2 315	219	1 122	3 177	1930-31	108	305	2 241	2 654
1931	2 323	209	1 075	3 227	1931-32	100	262	2 265	2 627
1932	2 331	203	1 057	3 243	1932-33	113	262	2 294	2 669
1933	2 337	197	1 061	3 238	1933-34	117	272	2 313	2 701
1934	2 349	189	1 094	3 201	1934-35	118	291	2 348	2 757
1935	2 358	180	1 104	3 191	1935-36	98	292	2 414	2 805
1936	2 366	179	1 074	3 215	1936-37	107	304	2 362	2 773
1937	2 372	177	1 115	3 170	1937-38	103	309	2 322	2 734
1938	2 379	175	1 090	3 189	1938-39	98	308	2 336	2 743
1939	2 385	175	1 053	3 196	1939-40	104	311	2 328	2 743
1940	2 392	171	1 098	3 172	1940-41	103	313	2 282	2 698
1941	2 400	169	1 129	3 135	1941-42	114	318	2 316	2 748
1942	2 411	163	1 113	3 146	1942-43	121	n.a.	2 394	2 641
1943	2 418	162	1 140	3 113	1943-44	136	164	2 287	2 587
1944	2 427	168	1 134	3 104	1944-45	139	165	2 331	2 635
1945	2 439	165	1 123	3 107	1945-46	132	234	2 256	2 622
1946	2 448	161	1 110	3 115	1946-47	123	230	2 237	2 590
1947	2 460	157	1 100	3 116	1947-48	112	223	2 167	2 502
1948	2 473	153	1 087	3 121	1948-49	112	268	2 098	2 478
1949	2 486	148	1 134	3 065	1949-50	118	308	2 169	2 594
1951	2 496	145	1 080	3 112	1950-51	122	322	2 176	2 621
1952	2 514	142	1 108	3 069	1951-52	124	237	2 155	2 605
1953	2 525	139	1 111	3 058	1952-53	130	326	2 198	2 654
1954	2 534	137	1 055	3 107	1953-54	142	336	2 156	2 635
1955	2 516	134	1 018	3 136	1954-55	132	363	2 177	2 672
1956	2 554	126	1 010	3 143	1955-56	137	400	2 145	2 682
1957	2 561	127	655	3 490	1956-57	122	424	2 088	2 634
1958	2 568	84	623	3 558	1957-58	122	458	2 070	2 649
1959	2 575	81	615	3 562	1958-59	144	461	2 055	2 660
1960	2 584	77	618	3 554	1959-60	135	491	2 009	2 635
1961	2 591	86	626	3 531	1960-61	153	487	1 995	2 635
1962	2 597	80	606	3 551	1961-62	155	508	1 988	2 651
1963	2 602	80	586	3 565	1962-63	165	515	1 919	2 599
1964	2 670	89	628	3 446	1963-64	158	552	1 871	2 581
1965	2 679	83	595	3 476	1964-65	167	576	1 855	2 598
1966	2 677	84	540	3 531	1965-66	158	622	1 849	2 629
1967	2 692	100	535	3 506	1966-67	181	628	1 825	2 633
1968	2 692	93	478	3 571	1967-68	170	680	1 813	2 663
1969	2 693	96	465	3 579	1968-69	193	618	1 776	2 667
1970	2 697	100	442	3 594	1969-70	169	737	1 732	2 637
1971	2 702	99	381	3 651	1970-71	172	747	1 712	2 631
1972	2 697	100	274	3 760	1971-72	147	772	1 688	2 607
1973	2 729	133	248	3 723	1972-73	80	856	1 656	2 592
1974	2 731	135	236	3 728	1973-74 (f)	74	920	1 567	2 561
1975	2 755	159	223	3 693	1974-75	67	921	1 504	2 492
1976	2 751	154	229	3 696	1975-76 (f)	60	935	1 464	2 459
1977	2 743	146	r 163	r 3 778	1976-77 (f)	65	904	1 340	2 308
1978	2 517	120	165	4 028	1977-78	70	910	1 302	2 281

(a) Area of State, 68 300 square kilometres.

(b) At 31 December until 1948; at 30 June for 1950 and subsequent years.

(c) Excludes areas under pulpwood concessions and exclusive forest permits.

(d) Area of sown grasses cut for hay, seed and green fodder is included under 'crops'.

(e) Not available on a comparable basis.

(f) Not strictly comparable with earlier years due to changes in definition of a 'rural establishment'.

# Statistical Summary

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(Chapter 7)

## Area and Production of Principal Crops, Tasmania

Year	Barley for grain			Oats for grain			Wheat for grain			Blue peas		
	Area	Total production	Yield per hectare	Area	Total production	Yield per hectare	Area	Total production	Yield per hectare	Area	Total production	Yield per hectare
	ha	tonnes	tonnes	ha	tonnes	tonnes	ha	tonnes	tonnes	ha	tonnes	tonnes
1860-61	2 524	2 877	1.14	12 263	16 844	1.37	26 891	38 267	1.42			
1870-71	3 082	3 676	1.19	12 523	12 568	1.00	23 222	24 240	1.04			
1880-81	3 358	3 844	1.14	8 034	7 990	0.99	20 243	20 271	1.00			
1890-91	1 771	2 269	1.28	8 393	9 444	1.13	13 133	17 378	1.32			
1900-01	1 822	2 657	1.46	18 240	25 580	1.40	20 973	30 011	1.43	n.a.	n.a.	n.a.
1910-11	2 119	3 234	1.53	25 854	37 515	1.45	21 142	30 290	1.43			
1911-12	2 461	3 364	1.37	23 303	27 357	1.17	15 058	17 827	1.18			
1912-13	3 562	6 043	1.70	25 271	24 397	0.96	10 209	17 036	1.67			
1913-14	3 125	4 261	1.36	23 830	28 976	1.22	7 459	9 452	1.27			
1914-15	2 362	2 382	1.01	23 093	24 397	1.06	9 658	10 384	1.08	1 921	2 019	1.05
1915-16	2 189	2 625	1.20	31 651	39 809	1.26	19 685	26 859	1.36	1 474	1 684	1.14
1916-17	1 877	2 016	1.07	22 269	18 294	0.82	11 246	9 414	0.84	2 267	3 234	1.43
1917-18	2 098	2 228	1.06	14 071	10 713	0.76	8 827	6 821	0.77	4 518	5 584	1.24
1918-19	2 847	3 208	1.13	14 662	15 426	1.05	4 823	5 042	1.05	8 408	9 541	1.13
1919-20	2 547	2 739	1.08	19 500	22 587	1.16	4 653	5 773	1.24	5 060	4 589	0.91
1920-21	2 489	3 667	1.47	20 426	27 530	1.35	11 446	15 294	1.34	3 476	4 945	1.42
1921-22	2 930	3 794	1.29	22 113	28 066	1.27	11 325	15 599	1.38	4 182	5 212	1.25
1922-23	2 309	3 455	1.50	23 801	30 450	1.28	10 216	15 394	1.51	3 532	4 377	1.24
1923-24	1 712	2 151	1.26	20 825	24 723	1.19	5 869	8 260	1.41	2 927	4 346	1.48
1924-25	1 218	1 153	0.95	18 686	19 381	1.04	5 242	6 254	1.19	3 112	3 362	1.08
1925-26	2 114	2 059	0.97	14 869	15 191	1.02	7 726	10 692	1.38	3 324	2 891	0.87
1926-27	2 293	3 405	1.48	19 571	24 673	1.26	9 386	14 513	1.55	3 043	4 055	1.33
1927-28	2 064	3 214	1.56	17 381	25 452	1.46	8 531	20 896	2.45	5 672	5 631	1.00
1928-29	1 867	2 252	1.21	15 217	18 389	1.21	9 134	12 306	1.35	3 960	4 624	1.17
1929-30	2 806	3 795	1.35	15 807	21 365	1.35	6 801	10 158	1.49	4 097	6 031	1.47
1930-31	2 506	3 832	1.53	14 536	19 141	1.32	7 732	10 581	1.37	2 859	4 060	1.42
1931-32	3 390	2 721	0.80	7 451	6 488	0.87	4 744	4 944	1.04	2 439	2 079	0.85
1932-33	3 478	4 808	1.38	12 404	15 059	1.21	8 492	11 704	1.38	3 687	5 688	1.54
1933-34	3 173	3 915	1.23	12 626	15 532	1.23	9 752	15 153	1.55	5 663	6 592	1.16
1934-35	2 339	3 989	1.71	14 816	19 168	1.29	6 740	8 311	1.23	5 283	4 722	0.89
1935-36	2 115	2 107	1.00	9 683	10 123	1.05	4 210	5 027	1.19	4 116	3 430	0.83
1936-37	2 811	5 470	1.95	8 884	13 659	1.54	8 627	15 430	1.79	2 613	3 912	1.50
1937-38	3 762	6 958	1.85	13 128	18 767	1.43	8 531	14 216	1.67	1 882	2 707	1.44
1938-39	3 518	4 731	1.34	10 049	11 727	1.17	3 986	5 548	1.39	1 787	2 050	1.15
1939-40	3 125	4 446	1.42	9 352	9 626	1.03	3 033	2 911	0.96	2 113	3 407	1.61
1940-41	2 286	3 349	1.47	7 099	7 569	1.07	3 253	3 794	1.17	3 830	5 237	1.37
1941-42	2 153	2 672	1.24	11 043	15 248	1.38	2 596	3 924	1.51	7 485	8 452	1.13
1942-43	1 104	1 428	1.29	5 325	5 310	1.00	1 671	1 982	1.19	10 989	10 961	1.00
1943-44	1 391	2 150	1.55	3 943	5 438	1.38	1 958	3 301	1.69	15 176	15 785	1.04
1944-45	2 189	3 616	1.65	5 977	7 630	1.28	1 551	2 504	1.61	8 828	13 014	1.47
1945-46	2 730	2 803	1.03	5 656	5 120	0.91	2 016	1 801	0.89	9 420	7 922	0.84
1946-47	2 532	3 538	1.40	9 181	10 825	1.18	3 051	3 763	1.23	4 773	6 364	1.33
1947-48	3 298	4 961	1.50	6 910	6 548	0.95	3 147	3 195	1.02	2 783	3 938	1.42
1948-49	2 966	4 728	1.59	4 734	4 756	1.00	2 779	4 211	1.52	2 625	3 999	1.52
1949-50	1 759	2 975	1.69	9 232	10 499	1.14	2 215	3 440	1.55	3 101	3 955	1.28
1950-51	1 320	2 061	1.56	9 486	7 802	0.82	2 152	2 564	1.19	3 395	4 630	1.36
1951-52	1 716	3 400	1.98	10 740	10 803	1.01	1 458	2 541	1.74	3 078	5 338	1.73
1952-53	3 253	4 930	1.52	8 114	5 197	0.64	2 707	4 227	1.56	1 411	1 903	1.35
1953-54	3 819	6 738	1.76	8 141	8 381	1.03	3 921	7 116	1.81	2 159	3 096	1.43
1954-55	2 936	4 541	1.55	9 154	8 212	0.90	2 955	4 286	1.45	2 292	3 093	1.35
1955-56	2 558	4 339	1.70	11 604	9 964	0.86	2 519	3 478	1.38	2 334	3 690	1.58
1956-57	2 865	5 341	1.86	6 701	4 594	0.69	1 578	2 393	1.52	3 349	5 088	1.52
1957-58	3 393	6 140	1.81	8 381	8 762	1.05	2 381	4 148	1.74	2 923	3 854	1.32
1958-59	3 777	6 696	1.77	8 984	8 921	0.99	2 605	4 423	1.70	1 002	1 302	1.30
1959-60	5 016	9 511	1.90	8 910	9 305	1.04	3 344	4 912	1.47	1 285	2 148	1.67
1960-61	6 204	7 821	1.26	9 449	7 114	0.75	2 797	4 003	1.43	1 332	1 198	0.90
1961-62	7 579	13 794	1.82	10 908	10 676	0.98	6 300	9 327	1.48	1 566	2 814	1.80
1962-63	7 993	14 340	1.79	12 587	15 046	1.20	6 208	11 322	1.82	2 299	3 409	1.48
1963-64	5 581	9 414	1.69	12 280	15 339	1.25	7 107	13 047	1.84	2 087	2 693	1.29
1964-65	6 264	12 031	1.92	11 366	9 463	0.83	6 801	9 842	1.45	1 603	2 752	1.72
1965-66	8 056	15 541	1.93	11 449	12 304	1.07	5 709	9 955	1.74	2 223	2 779	1.25
1966-67	8 521	17 540	2.06	14 532	17 236	1.19	5 159	10 412	2.02	1 769	3 039	1.72
1967-68	9 733	20 096	2.06	14 314	18 430	1.29	4 864	8 548	1.76	1 725	2 540	1.47
1968-69	10 608	20 092	1.89	12 721	10 598	0.83	7 039	11 088	1.58	1 358	2 160	1.59
1969-70	12 016	24 896	2.07	8 971	8 272	0.92	5 962	9 531	1.60	1 577	3 224	2.04
1970-71	12 884	29 825	2.31	9 444	8 839	0.94	4 479	7 638	1.71	2 023	4 608	2.28
1971-72	12 576	27 753	2.21	6 432	7 065	1.10	4 570	8 299	1.82	1 025	1 650	1.61
1972-73	12 802	18 711	1.46	6 477	7 144	1.10	4 251	7 701	1.81	504	387	0.77
1973-74 (a)	11 121	23 790	2.13	9 173	8 247	0.89	2 521	3 510	1.39	587	1 027	1.74
1974-75	12 020	27 266	2.27	6 069	5 496	0.90	1 535	2 282	1.48	969	2 171	2.24
1975-76 (a)	11 475	18 389	1.60	3 924	3 497	0.89	1 644	1 728	1.05	209	261	1.25
1976-77 (a)	11 644	24 571	2.11	6 387	8 801	1.38	1 980	3 929	1.98	81	139	1.72
1977-78	11 444	19 403	1.70	4 616	4 279	0.93	1 257	1 545	1.23	326	417	1.28

(a) Area and production details are not strictly comparable with data for earlier years due to changes in the definition of a 'rural establishment'.

(Chapter 7)

## Area and Production of Principal Crops, Tasmania—continued

Year	Potatoes			Hops			Hay			Apples		
	Area	Total production	Yield per hectare	Bearing area	Total production	Yield per hectare	Area	Total production	Yield per hectare	Bearing area	Total production	Yield per hectare
	ha	tonnes	tonnes	ha	tonnes	tonnes	ha	tonnes	tonnes	ha	tonnes	tonnes
1860-61	3 084	34 128	11.07	n.a.	n.a.	n.a.	12 880	63 318	4.92		2 267	
1870-71	3 975	36 606	9.21	260	339	1.30	13 602	41 417	3.04		2 819	
1880-81	4 217	33 070	7.84	230	292	1.27	12 794	36 459	2.85		2 953	
1880-81	8 147	74 332	9.12	151	196	1.30	18 365	52 856	2.88		7 030	
1890-91	9 335	95 368	10.22	253	316	1.25	24 868	95 710	3.85	n.a.	10 497	n.a.
1900-01	10 615	71 215	6.71	420	805	1.92	29 539	117 039	3.96		25 681	
1910-11												
1911-12	8 829	63 162	7.15	416	480	1.15	31 349	109 412	3.49		28 691	
1912-13	9 960	73 730	7.40	505	871	1.72	40 403	186 658	4.62		25 357	
1913-14	12 469	81 679	6.55	548	705	1.29	34 049	114 771	3.37	6 860	36 692	5.35
1914-15	12 793	80 173	6.27	540	768	1.42	36 259	83 287	2.30	7 164	28 996	4.05
1920-21	12 950	90 102	6.96	516	845	1.64	45 980	179 636	3.91	10 364	44 941	4.34
1921-22	14 890	109 351	7.34	572	995	1.74	37 006	139 190	3.76	10 829	56 982	5.26
1922-23	13 924	102 825	7.38	599	986	1.65	40 504	169 967	4.20	10 372	59 592	5.75
1923-24	14 989	101 540	6.77	604	1 040	1.72	39 329	146 614	3.73	10 393	36 006	3.46
1924-25	14 638	84 715	5.88	605	1 009	1.67	35 590	123 054	3.46	10 383	42 103	4.05
1925-26	13 431	68 422	5.09	483	791	1.64	37 472	116 764	3.12	10 311	78 719	7.63
1926-27	13 753	115 931	8.43	528	974	1.84	39 776	153 627	3.86	10 120	55 248	5.46
1927-28	17 951	141 065	7.86	514	1 119	2.18	34 710	126 929	3.66	10 237	89 025	8.70
1928-29	15 094	76 429	5.06	480	875	1.82	32 452	121 344	3.74	10 219	47 628	4.66
1929-30	13 647	92 600	6.79	472	872	1.85	32 437	121 723	3.75	9 562	75 251	7.87
1930-31	15 066	96 818	6.43	393	760	1.93	33 697	131 027	3.89	9 672	72 394	7.48
1931-32	14 727	96 920	6.58	345	725	2.10	34 118	94 081	2.76	9 377	111 334	11.87
1932-33	14 475	99 809	6.90	321	628	1.96	37 501	143 403	4.20	9 402	84 015	8.94
1933-34	14 778	82 578	5.59	328	730	2.22	31 414	111 153	3.54	9 436	94 360	10.00
1934-35	14 714	71 142	4.83	334	831	2.49	38 857	152 492	3.92	9 485	74 947	7.90
1935-36	14 050	87 183	6.21	352	981	2.79	30 247	98 443	2.53	9 296	75 251	8.09
1936-37	14 960	140 781	9.41	365	950	2.60	36 177	139 068	3.84	8 745	87 844	10.05
1937-38	13 139	101 574	7.73	357	958	2.68	29 561	114 809	3.88	8 881	91 292	10.28
1938-39	10 803	90 764	8.40	373	1 041	2.79	32 358	111 291	3.44	8 684	109 048	12.56
1939-40	12 323	116 245	9.43	368	808	2.20	38 957	143 674	3.69	8 850	98 075	11.08
1940-41	15 121	115 871	7.66	369	1 351	3.66	30 789	96 708	3.14	8 808	113 277	12.86
1941-42	12 400	111 613	9.00	427	1 280	3.00	37 488	149 997	4.00	8 970	121 107	13.50
1942-43	16 359	138 112	8.44	448	1 283	2.64	33 209	111 721	3.36	8 889	109 410	12.31
1943-44	24 484	221 296	9.04	435	1 267	2.91	40 178	156 303	3.89	8 896	152 846	17.18
1944-45	32 817	350 773	4.55	441	1 102	2.50	38 855	148 253	3.82	8 723	125 165	14.35
1945-46	22 762	239 930	10.54	445	904	2.03	40 371	118 958	2.95	8 702	162 353	18.66
1946-47	17 493	173 359	9.91	490	1 005	2.05	42 093	172 103	4.09	8 544	80 548	9.43
1947-48	16 342	145 037	8.88	506	1 113	2.20	34 137	139 857	4.10	8 239	150 389	18.25
1948-49	13 079	133 915	10.24	508	694	1.37	36 656	153 118	4.18	7 826	88 828	6.24
1949-50	13 804	123 958	8.98	518	977	1.89	36 962	158 151	4.28	7 661	91 330	11.92
1950-51	12 780	125 990	9.86	518	1 125	2.17	39 007	163 301	4.19	7 378	92 359	12.52
1951-52	12 753	153 424	12.03	531	778	1.47	39 563	175 051	4.42	7 273	93 921	12.91
1952-53	14 304	116 338	8.13	524	1 367	2.61	44 534	195 289	4.39	7 200	71 575	9.94
1953-54	13 971	146 616	10.49	518	973	1.88	49 877	245 459	4.92	7 184	101 047	14.07
1954-55	10 606	102 621	9.68	539	1 353	2.51	39 051	160 495	4.11	6 890	95 426	13.85
1955-56	8 434	79 181	9.39	531	1 437	2.71	55 505	265 619	4.79	6 950	112 896	16.24
1956-57	7 740	91 140	11.78	569	974	1.71	49 837	242 209	4.86	6 754	64 792	9.59
1957-58	8 780	103 129	11.75	571	1 302	2.28	44 581	208 062	4.67	6 804	126 403	18.58
1958-59	6 550	87 279	13.32	579	1 535	2.65	62 250	306 923	4.93	6 651	94 931	14.27
1959-60	6 283	99 573	15.85	581	1 270	2.19	51 211	224 778	4.39	6 509	104 266	16.02
1960-61	4 401	39 677	9.02	569	1 279	2.25	69 206	331 206	4.79	6 404	106 571	16.64
1961-62	4 504	72 709	16.14	571	1 287	2.25	63 632	289 971	4.56	6 239	149 436	23.95
1962-63	5 600	83 870	14.98	588	1 298	2.21	66 952	318 028	4.75	6 268	119 297	19.03
1963-64	4 373	66 470	15.20	592	717	1.21	60 557	253 175	4.18	6 291	162 791	25.88
1964-65	3 801	57 978	15.25	597	947	1.59	72 947	370 204	5.07	6 286	118 250	18.81
1965-66	4 853	77 626	16.00	603	1 392	2.31	59 824	261 366	4.37	6 254	159 343	25.48
1966-67	4 159	74 476	17.91	594	948	1.60	82 225	443 919	5.40	6 165	120 040	19.47
1967-68	4 435	80 327	18.11	608	1 363	2.24	72 373	314 060	4.34	6 048	151 322	25.02
1968-69	4 638	73 278	15.80	616	1 582	2.57	85 212	502 159	5.89	5 863	135 986	23.19
1969-70	3 790	67 995	17.94	565	1 268	2.24	69 526	367 340	5.28	5 804	140 977	24.29
1970-71	3 640	72 591	19.94	452	1 077	2.38	85 656	447 766	5.23	5 715	140 463	24.58
1971-72	3 593	70 370	19.59	539	1 159	2.15	81 176	449 936	5.54	5 218	111 887	21.44
1972-73	3 330	78 286	23.51	616	1 450	2.35	53 937	215 580	4.00	4 980	133 449	26.80
1973-74 (a)	3 127	62 866	20.10	703	1 949	2.77	88 884	448 355	5.04	4 748	113 012	27.24
1974-75	4 143	95 610	23.07	662	1 439	2.17	78 557	375 969	4.79	3 335	95 247	28.56
1975-76 (a)	3 354	95 614	28.51	513	1 129	2.20	70 262	322 235	4.59	2 947	72 529	24.61
1976-77 (a)	3 705	112 269	30.30	587	1 330	2.27	69 730	334 961	4.80	2 741	71 781	26.19
1977-78	3 592	107 240	29.86	567	1 201	2.12	46 480	166 495	3.58	2 601	63 444	24.39

(a) Area and production details are not strictly comparable with data for earlier years due to changes in the definition of a 'rural establishment'.



(Chapter 7)

Livestock Numbers; Production of Wool; Lambing, Tasmania

Year	Livestock (a)				Production of Wool (b)			Lambing	
	Horses	Cattle	Sheep	Pigs	Number of sheep and lambs shorn	Average yield per sheep and lamb shorn (including crutchings)	Production of wool (including dead, fell-mongered & exported on skins)	Ewes mated	Lambs marked
	'000	'000	'000	'000	'000	kg	'000 kg	'000	'000
1860	21	83	1 701	31			2 058		
1870	23	101	1 350	49			1 881		
1880	25	127	1 794	48			4 094		
1890	31	162	1 619	82			4 075		
1900	32	166	1 684	68			3 064	n.a.	n.a.
1910	41	202	1 788	64	n.a.	n.a.	6 050		
1911	42	217	1 823	67			5 773		
1912	44	222	1 863	49			6 539		
1913	44	206	1 745	38			5 485	596	399
1914-15	42	177	1 675	35	1 572	n.a.	5 465	560	369
1920-21	39	208	1 571	38	1 551	2-94	5 218	416	299
1921-22	38	217	1 551	50	1 428	3-25	5 278	506	378
1922-23	37	218	1 558	46	1 503	3-26	5 542	524	411
1923-24	38	220	1 558	47	1 507	3-13	5 312	517	392
1924-25	37	226	1 614	47	1 630	3-16	5 662	557	423
1925-26	38	212	1 619	41	1 639	3-18	5 699	554	390
1926-27	37	213	1 808	39	1 738	2-93	5 594	563	433
1927-28	36	211	1 905	42	1 859	2-99	6 021	629	488
1928-29	35	209	2 001	48	1 902	3-22	6 759	640	502
1929-30	34	215	2 091	53	1 983	3-14	6 804	679	534
1930-31	33	230	2 120	55	1 961	3-11	6 713	695	547
1931-32	31	232	2 012	41	1 913	3-14	6 668	647	478
1932-33	30	251	2 041	41	1 940	3-16	6 895	679	526
1933-34	30	262	2 035	38	1 991	2-91	6 441	686	517
1934-35	31	262	2 038	40	1 976	2-90	6 366	672	497
1935-36	31	270	2 140	45	2 010	3-37	7 394	735	586
1936-37	31	262	2 234	40	1 106	2-72	6 381	791	594
1937-38	32	255	2 521	43	2 460	2-60	7 076	873	722
1938-39	30	262	2 626	45	2 432	3-03	7 946	940	737
1939-40	30	252	2 677	45	2 509	3-08	8 316	940	756
1940-41	29	259	2 682	47	2 517	2-78	7 746	988	764
1941-42	29	253	2 398	45	2 416	3-04	7 704	844	669
1942-43	27	245	2 227	49	2 293	2-98	7 827	785	655
1943-44	26	230	2 188	46	2 260	2-93	8 130	811	669
1944-45	26	225	2 156	47	2 235	2-79	7 404	756	629
1945-46	25	216	1 926	47	2 015	2-73	7 411	701	509
1946-47	24	220	1 933	47	2 005	3-04	7 549	577	440
1947-48	23	244	2 087	45	2 085	3-18	6 952	779	656
1948-49	22	266	2 160	37	2 198	3-09	7 641	803	662
1949-50	21	275	2 170	36	2 255	2-97	7 692	800	652
1950-51	20	272	2 182	45	2 245	2-99	7 824	774	637
1951-52	19	266	2 338	47	2 379	3-42	9 305	839	726
1952-53	18	275	2 422	39	2 502	3-19	8 984	894	768
1953-54	17	295	2 465	46	2 553	3-16	9 124	916	788
1954-55	16	319	2 595	58	2 715	3-53	10 794	968	884
1955-56	15	332	2 673	49	2 733	3-45	10 624	979	877
1956-57	14	354	2 943	52	3 082	3-78	13 009	1 150	1 056
1957-58	13	371	3 298	63	3 388	3-50	13 234	1 266	1 199
1958-59	12	374	3 536	69	3 673	3-57	14 803	1 381	1 269
1959-60	11	375	3 494	67	3 834	3-44	15 241	1 461	1 354
1960-61	9	394	3 439	71	3 678	3-44	14 456	1 378	1 267
1961-62	9	425	3 532	76	3 830	3-56	15 635	1 440	1 368
1962-63	8	444	3 570	70	3 783	3-64	15 677	1 419	1 310
1963-64	8	450	3 600	83	3 868	3-47	15 425	1 458	1 353
1964-65	7	451	3 792	92	3 978	4-06	17 994	1 478	1 374
1965-66	n.a.	492	4 127	96	4 318	3-88	18 986	1 651	1 594
1966-67	7	522	4 321	86	4 517	3-88	19 574	1 688	1 574
1967-68	n.a.	564	4 428	87	4 572	3-34	17 376	1 779	1 522
1968-69	n.a.	586	4 395	95	4 632	4-09	21 299	1 736	1 561
1969-70	n.a.	646	4 560	111	4 792	4-05	21 861	1 831	1 715
1970-71	n.a.	733	4 517	113	4 806	3-99	21 671	1 889	1 705
1971-72	n.a.	829	4 237	104	4 607	4-03	21 063	1 805	1 617
1972-73	n.a.	900	3 824	85	4 251	3-76	18 154	1 604	1 369
1973-74(c)	n.a.	884	3 964	88	4 101	3-90	17 549	1 535	1 361
1974-75	n.a.	921	4 136	64	4 153	4-12	18 888	1 644	1 466
1975-76(c)	n.a.	909	4 239	70	4 352	4-13	19 951	1 677	1 515
1976-77(c)	n.a.	819	4 015	65	4 229	3-82	18 109	1 640	1 378
1977-78 r	n.a.	r 733	r 3 969	r 64	r 4 242	4-00	18 924	1 672	1 529
1978-79 p	n.a.	666	4 144	63	4 355	4-04	19 079	1 717	1 586

(a) Up to 1925-26 numbers recorded were at varying dates in the years shown; from 1926 to 1940 at 31 December; from 1941-42 at 31 March.  
 (b) All wool converted to equivalent greasy weight.  
 (c) Details not strictly compatible with data for earlier years due to changes in the definition of a 'rural establishment'.

(Chapter 7)

## Livestock Slaughtered (a) for Human Consumption, Tasmania

Year	Cattle and Calves				Sheep and Lambs			Pigs
	Bulls, bullocks & steers	Cows and heifers	Calves	Total	Sheep	Lambs	Total	
1924-25	21 068	12 544	2 542	36 154	212 983	63 134	276 117	55 229
1929-30	20 430	13 034	1 814	35 278	228 090	113 437	341 527	64 287
1939-40	32 685	12 110	3 633	48 428	248 372	212 585	460 957	73 398
1944-45	27 290	14 536	4 701	46 527	323 797	185 616	509 413	58 068
1949-50	29 331	23 736	4 580	57 647	245 691	262 360	508 051	50 861
1950-51	32 199	28 921	8 637	69 757	234 084	250 535	484 619	57 787
1951-52	33 352	29 506	8 729	71 587	226 377	256 116	482 493	65 893
1952-53	32 913	25 270	12 297	70 480	269 776	306 739	576 515	65 520
1953-54	22 630	25 188	13 955	61 773	286 665	307 326	593 991	59 473
1954-55	26 741	32 871	15 333	74 945	287 103	356 103	643 206	79 305
1955-56	32 259	36 370	19 786	88 415	256 188	388 802	644 990	87 609
1956-57	38 494	38 341	25 195	102 030	280 082	403 859	683 941	82 032
1957-58	42 028	45 294	30 534	117 856	283 242	451 214	734 456	90 593
1958-59	42 525	49 046	35 923	127 494	362 988	546 196	909 184	107 489
1959-60	47 147	56 885	40 548	144 580	504 961	661 470	1 166 431	114 538
1960-61	35 515	43 309	36 170	114 994	474 690	601 042	1 075 732	111 457
1961-62	42 614	48 638	44 230	135 482	510 626	649 306	1 159 932	120 450
1962-63	49 510	62 317	46 149	157 976	465 996	628 757	1 094 753	115 424
1963-64	51 518	70 885	53 823	176 226	544 945	582 113	1 127 058	123 502
1964-65	52 946	70 510	50 610	174 066	424 810	562 135	986 945	134 526
1965-66	47 066	60 664	46 514	154 244	566 671	597 197	1 163 868	146 266
1966-67	52 475	67 206	50 789	170 470	552 235	606 859	1 159 094	148 913
1967-68	57 871	66 016	47 872	171 759	600 124	524 850	1 124 974	142 986
1968-69	68 376	64 160	45 236	177 772	567 501	673 446	1 240 947	138 954
1969-70	78 618	66 473	32 765	177 856	608 311	688 664	1 296 975	160 112
1970-71	78 926	61 139	22 011	162 076	713 204	680 679	1 393 883	170 579
1971-72	96 255	69 186	19 346	184 787	812 960	662 193	1 475 153	165 007
1972-73	124 672	110 177	25 933	260 782	636 501	641 718	1 278 219	152 004
1973-74	126 251	103 552	29 554	259 357	335 566	489 697	825 263	115 625
1974-75	149 285	75 382	37 450	262 117	402 813	577 119	979 932	101 359
1975-76	164 059	119 418	64 536	348 013	454 912	613 611	1 068 532	94 090
1976-77	144 910	139 910	72 888	357 708	469 125	523 522	992 647	99 603
1977-78	160 977	132 802	68 686	362 465	386 772	650 067	1 036 839	92 474
1978-79	123 590	103 152	54 466	281 209	345 388	502 890	848 278	90 520

(a) Including livestock slaughtered on farms.

(Chapter 7)

Production of Meat, Tasmania  
(Tonnes: Carcass Weight)

Year	Beef and veal			Mutton and lamb			Pigmeat (a)	Total all meat
	Beef	Veal	Total	Mutton	Lamb	Total		
1924-25	8 233		8 233	4 154	888	5 042	2 561	15 836
1929-30	8 153		8 153	4 448	1 595	6 043	2 848	17 044
1939-40	10 626	165	10 791	4 845	2 989	7 834	3 560	22 185
1944-45	9 117	212	9 329	6 400	2 948	9 348	3 104	21 781
1949-50	12 299	169	12 468	4 896	4 173	9 069	2 597	24 134
1950-51	14 027	303	14 330	4 890	3 910	8 800	2 835	25 965
1951-52	14 405	216	14 621	4 808	4 311	9 119	3 159	26 899
1952-53	13 751	313	14 064	5 745	5 082	10 827	3 176	28 067
1953-54	10 888	292	11 180	6 100	5 150	11 250	2 736	25 166
1954-55	13 537	353	13 890	6 147	5 945	12 092	3 484	29 466
1955-56	15 133	530	15 663	5 260	6 707	11 967	3 693	31 323
1956-57	17 592	612	18 204	5 812	6 998	12 810	3 402	34 416
1957-58	19 635	726	20 361	5 694	7 739	13 433	4 284	38 078
1958-59	19 893	839	20 732	7 444	9 223	16 667	4 990	42 389
1959-60	22 610	906	23 516	10 267	10 846	21 113	5 438	50 067
1960-61	16 388	777	17 165	9 513	9 715	19 228	5 138	41 531
1961-62	19 076	910	19 989	10 228	10 326	20 554	5 515	46 058
1962-63	23 076	999	24 075	9 614	10 083	19 697	5 549	49 321
1963-64	24 988	1 337	26 325	11 101	9 300	20 401	6 022	52 748
1964-65	25 741	951	26 692	9 225	9 189	18 414	6 691	51 797
1965-66	22 429	951	23 380	11 697	9 739	21 436	7 136	51 952
1966-67	24 124	967	25 091	11 412	9 825	21 237	7 279	53 607
1967-68	24 509	977	25 486	11 666	8 497	20 163	7 001	52 650
1968-69	27 583	802	28 385	11 701	11 112	22 813	7 137	58 335
1969-70	30 909	599	31 509	12 767	11 282	24 049	8 007	63 564
1970-71	29 481	398	29 879	14 755	11 318	26 073	8 530	64 482
1971-72	34 422	374	34 796	16 314	10 875	27 189	8 266	70 251
1972-73	46 946	525	47 471	12 201	10 327	22 528	7 389	77 388
1973-74	45 669	613	46 282	6 672	8 096	14 768	5 477	66 527
1974-75	47 592	721	48 313	7 984	9 508	17 492	4 872	70 677
1975-76	57 924	1 242	59 166	8 997	9 849	18 846	4 516	82 529
1976-77	55 790	1 613	57 403	8 494	8 189	16 683	4 946	79 032
1977-78	59 779	1 556	61 335	7 035	9 849	16 884	4 785	83 004
1978-79	46 269	1 152	47 421	6 833	7 883	14 716	4 834	66 971

(a) Includes pork for manufacture into bacon and ham.

(Chapter 7)

Value of Agricultural Commodities Produced, Tasmania (\$'000)

Year	Crops (a)		Livestock slaughtering and other disposals		Livestock products		Total agriculture	
	Gross	Local	Gross	Local	Gross	Local	Gross	Local
1970-71	40 169	29 174	28 142	25 910	41 903	40 194	110 214	95 277
1971-72	33 748	24 043	31 468	28 956	46 980	45 133	112 196	98 132
1972-73	40 041	28 261	43 562	40 363	64 750	61 652	148 353	130 276
1973-74	46 649	36 969	58 019	54 000	59 995	57 262	164 663	148 231
1974-75	49 409	39 670	31 707	29 083	58 588	54 127	139 704	122 879
1975-76	44 101	36 237	34 052	31 042	63 880	61 033	142 033	128 312
1976-77	57 734	50 630	46 103	42 199	75 729	71 838	179 566	164 667
1977-78	56 431	50 318	57 982	51 058	80 696	75 706	195 109	177 082

(a) Excludes crops and pasture harvested for green feed or silage.

(Chapter 7)

Weighted Average Prices Paid To Farmers Per Unit of Selected Farm Products, Tasmania (\$)

Year	Cereals for grain		Hops	Orchard fruit		Small fruit		Potatoes	Hay	Wool greasy
	Wheat	Barley		Apples	Pears	Currants	Raspberries			
1929-30	18-37	14-99	198-42	17-32	22-54	0-04	0-04	13-28	8-37	0-22
1934-35	12-12	13-23	308-65	27-82	28-42	0-04	0-04	17-37	5-71	0-20
1939-40	12-49	16-75	330-69	22-57	24-50	0-07	0-07	18-20	5-91	0-26
1944-45	17-64	23-37	396-83	19-95	19-60	0-09	0-07	24-61	10-92	0-35
1949-50	49-97	32-19	771-62	64-04	73-01	0-13	0-13	30-31	12-30	1-32
1954-55	49-97	73-63	1 212-54	101-31	114-17	0-18	0-18	79-33	21-36	1-41
1959-60	50-70	58-64	1 388-91	98-68	100-45	0-22	0-20	38-93	18-73	1-15
1960-61	51-44	63-49	1 366-86	101-83	126-42	0-26	0-18	88-93	18-16	1-06
1961-62	58-78	63-93	1 433-00	104-46	87-22	0-26	0-22	51-65	16-15	1-08
1962-63	54-38	61-29	1 433-00	112-33	122-01	0-24	0-22	24-78	13-94	1-21
1963-64	52-54	63-05	1 433-00	107-08	110-74	0-26	0-22	63-86	15-75	1-48
1964-65	48-86	61-29	1 499-14	113-38	129-36	0-22	0-22	116-11	12-57	1-08
1965-66	50-70	57-76	1 565-28	100-26	67-62	0-20	0-22	36-80	15-27	1-23
1966-67	52-54	63-49	1 653-47	124-40	118-58	0-24	0-24	53-70	16-09	1-12
1967-68	53-64	65-69	1 697-56	110-23	101-92	0-29	0-31	47-54	20-35	0-97
1968-69	41-88	56-88	1 697-56	106-55	124-46	0-29	0-33	28-92	15-63	1-06
1969-70	52-91	52-47	1 697-56	110-23	136-22	0-31	0-33	45-56	11-48	0-88
1970-71	48-13	51-14	1 697-56	103-41	134-26	0-33	0-35	41-51	13-10	0-75
1971-72	54-01	47-18	1 873-93	103-41	117-11	0-33	0-35	37-32	12-84	1-90
1972-73	52-20	52-53	1 961-40	120-87	173-95	0-35	0-35	57-23	20-73	2-29
1973-74	103-97	77-00	1 648-54	120-46	117-11	0-39	0-41	86-92	20-00	1-92
1974-75	103-51	91-78	860-22	148-65	180-70	0-47	0-53	59-43	28-63	1-37
1975-76	97-31	98-83	1 395-00	172-99	171-42	0-50	0-50	78-76	17-64	1-57
1976-77	82-00	111-07	1 694-57	164-64	195-11	0-55	0-58	83-33	25-99	2-10
1977-78	84-17	120-54	2 731-50	201-90	223-20	0-70	0-74	82-80	24-96	2-09

(Chapter 8)

Assayed Contents of Metallic Minerals Produced: Coal Production, Tasmania

Year	Cadmium	Copper	Gold	Iron	Lead	Manganese
	tonnes	tonnes	kg	tonnes	tonnes	tonnes
1953	73	9 045	528	-	10 199	-
1955	50	8 529	525	-	11 448	-
1960	57	11 867	747	-	13 249	175
1961	63	12 947	836	-	12 450	188
1962	73	14 748	999	-	14 991	268
1963	75	17 075	1 133	-	15 222	262
1964	78	15 118	1 069	-	15 594	247
1965	71	15 411	1 023	-	14 466	237
1966	76	17 278	1 135	-	15 828	258
1967	74	17 540	1 167	-	15 375	247
1968	75	16 867	1 135	502 462	15 152	250
1969	77	18 983	1 252	1 388 328	15 145	258
1970	70	23 934	1 335	1 346 065	13 934	209
1971	84	25 525	1 793	1 497 486	16 617	509
1972	138	28 298	2 021	1 623 450	26 806	2 205
1973	178	25 821	1 511	1 678 146	20 236	2 399
1974	126	29 086	1 586	1 514 373	19 017	385
1975	167	26 460	1 668	1 431 041	19 552	265
1976	157	25 342	1 495	1 542 306	18 034	232
1977	199	22 002	1 891	1 413 476	22 800	427
1978	188	23 908	1 912	1 446 024	22 754	341

continued next page

(Chapter 8)

## Assayed Contents of Metallic Minerals Produced: Coal Production, Tasmania—continued

Year	Silver	Sulphur	Tin	Tungstic oxide (WO <sub>3</sub> )	Zinc	Coal production
	kg	tonnes	tonnes	tonnes	tonnes	tonnes
1953.....	38 599	42 516	801	1 069	30 247	237 370
1955.....	36 267	38 857	867	1 358	28 396	304 023
1960.....	43 483	55 636	898	1 115	35 069	302 448
1961.....	45 162	53 128	893	1 543	40 735	259 934
1962.....	52 876	37 145	1 075	1 052	48 687	276 713
1963.....	52 969	42 997	1 021	975	49 267	210 243
1964.....	55 364	57 004	1 006	1 009	50 960	153 587
1965.....	52 192	54 840	1 043	1 196	47 053	104 101
1966.....	57 013	63 804	1 047	1 327	50 651	83 990
1967.....	55 955	62 470	1 553	1 202	49 641	77 769
1968.....	54 400	53 926	3 154	1 425	48 919	92 389
1969.....	54 213	47 449	4 853	1 524	50 898	117 794
1970.....	53 343	84 502	5 018	1 434	46 922	113 529
1971.....	63 389	109 046	6 166	1 742	52 749	123 922
1972.....	99 251	164 884	6 825	1 918	85 580	132 242
1973.....	76 903	160 971	5 674	1 502	63 792	114 588
1974.....	80 180	153 767	5 950	1 304	65 311	127 460
1975.....	76 401	152 884	5 489	1 712	67 476	161 922
1976.....	71 310	154 008	6 853	2 202	62 004	189 489
1977.....	84 772	163 486	6 634	2 534	78 405	198 966
1978.....	86 193	148 966	7 270	2 630	77 388	223 957

(Chapter 8)

## Sea Fisheries, Tasmania

Year	Boats engaged (a)	Persons engaged (a)	Production (b)						Gross value of production (c)	
			Fish				Southern rock lobster	Scallops		Abalone
			Snoek (barracouta)	Salmon	Shark	Other				
no.	no.	'000 kg	'000 kg	'000 kg	'000 kg	'000 kg	'000 kg	'000 kg	'000	
1951-52.....	} n.a.	} n.a.	1 580	50	392	319	852	738	—	882
1952-53.....			1 819	61	1 010	231	1 222	1 465	—	1 210
1953-54.....			362	173	506	238	1 006	1 714	—	864
1954-55.....			673	195	301	243	1 313	2 452	—	1 112
1955-56.....			576	116	291	170	1 108	2 625	—	1 012
1956-57.....			472	958	1 100	33	235	180	954	2 664
1957-58.....	458	907	414	60	384	128	1 088	1 888	1 016	
1958-59.....	438	923	644	93	360	171	1 250	2 148	1 328	
1959-60.....	469	968	711	147	413	167	1 329	2 043	1 612	
1960-61.....	478	1 072	373	545	439	166	1 436	2 402	—	1 920
1961-62.....	514	1 122	935	1 325	451	128	1 554	2 164	—	2 294
1962-63.....	511	1 208	512	528	377	155	1 501	2 663	—	2 254
1963-64.....	507	1 191	639	385	370	160	1 620	1 932	49	2 203
1964-65.....	503	957	915	227	299	209	1 513	1 323	225	2 686
1965-66.....	596	1 154	1 362	196	493	212	1 787	394	726	3 300
1966-67.....	618	1 200	1 037	427	455	270	1 946	341	1 999	3 653
1967-68.....	585	1 118	1 624	343	685	300	1 752	225	2 786	4 473
1968-69.....	566	1 160	1 401	174	947	248	1 700	125	2 108	4 864
1969-70.....	553	1 123	1 578	67	801	219	1 390	50	2 608	4 043
1970-71.....	529	1 090	610	201	793	335	1 607	—	3 488	5 984
1971-72.....	588	1 207	581	507	859	433	1 469	52	2 971	6 808
1972-73.....	589	1 235	915	461	497	392	1 583	515	2 172	5 739
1973-74.....	594	1 268	598	371	1 187	7 728	1 514	1 158	2 060	7 014
1974-75.....	616	1 343	760	631	651	828	1 525	1 261	2 108	6 928
1975-76.....	607	1 347	143	473	1 238	375	1 229	690	2 429	8 511
1976-77.....	640	1 439	37	r 573	1 130	413	1 117	498	2 368	r 11 662
1977-78.....	655	1 466	194	611	1 710	590	1 192	400	2 525	12 609
1978-79.....	727	1 620	n.y.a.	n.y.a.	n.y.a.	n.y.a.	n.y.a.	n.y.a.	n.y.a.	n.y.a.

- (a) Year ended December of the first year named.  
 (b) Landed at Tasmanian ports; estimated live weight.  
 (c) Includes crabs, squid, oysters and seaweed.

(Chapter 9)

Principal Articles Produced in Factories, Tasmania

Year	Foodstuffs					Refined zinc
	Butter (a)	Cheese (factory and farm)	Bacon and ham (cured weight) (b)	Flour (incl.) wheatmeal for baking)	Aerated waters	
	tonnes	tonnes	tonnes	tonnes	'000 litres	tonnes
1939-40	5 380	1 470	1 313	17 137	1 650	74 012
1944-45	4 157	1 200	1 209	20 442	2 855	80 612
1949-50	5 614	428	1 007	24 714	4 510	85 122
1954-55	8 707	278	1 043	27 037	5 123	102 071
1955-56	10 378	338	1 057	25 272	5 623	105 572
1956-57	10 835	350	1 070	26 355	5 537	108 333
1957-58	11 019	382	1 073	25 981	6 346	116 977
1958-59	11 178	387	1 144	26 844	7 519	116 554
1959-60	12 079	372	1 162	28 007	8 356	119 785
1960-61	10 552	399	1 138	26 388	8 656	127 957
1961-62	12 376	641	1 149	26 356	8 828	131 140
1962-63	13 405	681	1 201	26 442	9 683	138 391
1963-64	13 984	1 358	1 185	24 868	9 938	140 835
1964-65	14 218	2 388	1 190	25 367	10 310	141 006
1965-66	14 229	2 989	1 079	25 022	11 111	146 221
1966-67	14 541	3 822	1 262	24 470	11 583	146 227
1967-68	13 999	4 724	1 302	23 957	12 029	131 872
1968-69	16 017	5 820	1 416	23 826	12 644	151 094
1969-70	16 343	5 407	1 403	21 947	13 354	170 931
1970-71	15 273	5 556	1 803	22 264	14 049	162 271
1971-72	15 318	5 923	1 984	22 488	14 402	175 798
1972-73	12 947	7 218	1 902	31 698	15 236	193 782
1973-74	12 398	8 475	1 931	34 643	15 751	182 749
1974-75	12 196	12 387	2 169	34 938	14 845	152 749
1975-76	10 762	13 332	2 356	30 691	16 219	137 637
1976-77	9 707	13 156	2 434	32 427	18 786	170 685
1977-78	r 7 910	13 903	2 505	32 780	r 20 082	161 173
1978-79	7 075	17 494	2 457	34 901	19 834	204 623

Principal Articles Produced in Factories, Tasmania—continued

Year	Chemicals, fertilisers, etc.			Sawn, peeled and sliced timber (c)	Miscellaneous	
	Sulphuric acid	Super-phosphate	Sulphate of ammonia		Newsprint	Electricity (d)
	tonnes	tonnes	tonnes	m <sup>3</sup>	tonnes	m kW h
1939-40	14 552	33 337	—	189 690	—	612
1944-45	15 124	28 519	—	197 687	24 373	796
1949-50	42 747	69 943	—	298 160	30 961	1 062
1954-55	70 676	77 034	—	331 270	74 789	1 589
1955-56	72 310	86 671	—	355 452	80 283	1 794
1956-57	96 432	83 263	39 833	320 320	80 878	2 210
1957-58	113 701	106 420	50 546	308 092	82 386	2 338
1958-59	127 759	108 616	56 924	344 529	84 404	2 456
1959-60	129 077	104 260	58 525	400 351	89 931	2 532
1960-61	137 178	106 285	62 574	388 257	89 452	2 632
1961-62	138 636	121 143	62 319	351 566	91 199	2 733
1962-63	142 227	127 426	53 274	377 237	91 693	3 213
1963-64	161 381	134 233	43 506	403 178	93 516	3 409
1964-65	184 936	132 445	60 772	420 204	94 637	3 780
1965-66	198 551	162 441	65 135	421 164	94 707	3 896
1966-67	211 201	166 757	58 422	411 524	98 816	4 116
1967-68	185 303	145 968	13 086	413 485	94 135	3 773
1968-69	206 474	140 340	40 324	414 391	125 924	4 738
1969-70	266 449	133 245	40 563	413 653	173 314	5 140
1970-71	387 193	105 323	40 252	406 104	178 683	5 451
1971-72	558 658	104 763	41 358	412 846	181 477	5 778
1972-73	652 513	177 192	48 654	416 290	199 053	5 902
1973-74	570 156	180 458	33 191	414 320	200 852	6 010
1974-75	517 052	103 253	54 701	410 150	196 240	6 095
1975-76	466 817	57 896	23 040	373 470	206 228	6 008
1976-77	506 338	101 281	12 291	368 160	206 590	6 842
1977-78	522 154	97 012	5 292	338 540	207 621	7 179
1978-79	414 644	151 489	6 045	n.y.a.	208 143	7 748

(a) Includes butter equivalent of butter oil and from 1965-66 excludes farm production.  
 (b) Includes non-factory production. From July 1970 all weights are on a bone-in basis; earlier figures include an element of unconverted bone-out weights.  
 (c) Includes hardwood and softwood.  
 (d) Mainly output of Hydro-Electric Commission.  
 (NOTE: Details of production of a number of important articles cannot be published because of confidentiality.)

(Chapter 9)

## Manufacturing, Tasmania

Year	Number of factories at end of year	Employment (a)			Salaries and wages paid (b) (\$'000)	Materials used (c) (\$'000)	Value of output (c) (\$'000)	Value of production (d) (\$'000)	Value of	
		Males	Females	Persons					Land and buildings (\$'000)	Plant and machinery (\$'000)
1910.....	635	8 277	1 703	9 980	n.a.	n.a.	n.a.	n.a.	2 044	2 092
1915.....	589	7 161	1 259	8 420	1 567	4 387	8 431	3 823	2 265	2 457
1920.....	616	8 746	1 479	10 225	2 960	8 469	14 304	5 525	1 963	3 863
1924-25.....	675	9 016	1 982	10 998	3 776	6 885	15 685	7 251	4 209	13 457
1929-30.....	845	8 547	2 273	10 820	4 056	8 025	17 121	7 124	5 994	13 894
1934-35.....	926	8 321	2 234	10 555	3 204	6 260	14 446	6 316	5 390	12 138
1939-40.....	980	11 754	2 916	14 670	5 372	10 821	25 987	12 506	7 551	13 576
1940-41.....	1 002	12 341	3 498	15 839	6 119	12 377	27 735	12 584	8 474	15 098
1941-42.....	994	13 389	4 167	17 556	7 442	14 922	32 622	14 429	8 769	15 226
1942-43.....	992	13 941	4 369	18 310	8 946	17 393	37 408	16 151	9 854	16 267
1943-44.....	994	14 697	5 094	19 791	10 387	19 144	41 696	18 091	10 586	16 129
1944-45.....	1 006	14 756	4 755	19 511	10 017	19 934	42 714	17 805	10 983	15 934
1945-46.....	1 082	15 105	4 130	19 235	10 013	20 616	44 239	18 391	10 609	16 461
1946-47.....	1 169	16 186	3 751	19 937	11 276	22 650	49 139	21 335	11 356	17 000
1947-48.....	1 225	17 208	3 965	21 173	13 731	27 311	57 569	24 489	12 543	19 832
1948-49.....	1 346	18 508	4 094	22 602	16 913	34 319	73 314	32 149	14 770	24 507
1949-50.....	1 456	19 302	4 204	23 506	19 293	43 468	90 166	38 671	17 299	27 456
1950-51.....	1 486	19 454	4 373	23 827	23 475	58 290	117 249	49 229	20 701	34 312
1951-52.....	1 512	19 934	4 093	24 027	29 407	71 804	143 853	59 588	24 999	41 181
1952-53.....	1 504	19 621	3 874	23 495	31 953	67 333	142 007	60 997	29 925	45 240
1953-54.....	1 545	20 249	4 340	24 589	34 763	74 851	155 822	66 129	53 993	54 984
1954-55.....	1 597	21 045	4 407	25 452	37 727	84 930	177 202	76 228	59 206	59 758
1955-56.....	1 594	22 128	4 934	27 062	43 196	95 882	207 558	91 862	93 158	80 849
1956-57.....	1 595	22 482	5 188	27 670	47 273	101 274	220 780	97 365	112 946	89 672
1957-58.....	1 655	23 081	5 003	28 084	50 641	100 582	227 651	103 660	118 906	93 719
1958-59.....	1 666	23 504	4 920	28 424	51 656	103 093	236 587	108 602	123 660	96 451
1959-60.....	1 683	24 408	5 254	29 662	57 573	119 822	268 050	120 392	144 024	107 315
1960-61.....	1 766	24 811	5 347	30 158	60 659	122 508	275 902	124 892	147 099	112 632
1961-62.....	1 760	24 742	5 328	30 070	61 440	126 128	283 547	127 874	159 149	121 589
1962-63.....	1 764	25 453	5 302	30 755	64 837	131 100	303 920	142 033	163 919	138 159
1963-64.....	1 746	26 221	5 612	31 833	70 582	154 613	341 065	152 571	168 403	141 651
1964-65.....	1 805	26 768	5 812	32 580	76 515	175 920	381 549	167 251	209 010	155 336
1965-66.....	1 792	28 041	6 274	34 315	82 963	188 678	404 581	175 606	211 923	158 672
1966-67.....	1 771	28 364	6 515	34 879	90 756	201 027	437 964	194 571	233 983	169 159
1967-68.....	1 797	28 550	6 628	35 178	96 236	203 084	445 076	198 019	263 364	184 683

(a) Commencing with 1927-28, the number of persons employed is the average over the whole year; prior to the date the number represents the average over the period of operation.

(b) Excludes amounts drawn by working proprietors.

(c) Value of goods manufactured and work done.

(d) Value of output less recorded costs of manufacture other than labour.

(Chapter 9)

## Economic Censuses: Manufacturing, Tasmania (a)

Year (b)	Establishments operating at 30 June	Employment (average over whole year) (c)			Wages and salaries	Turnover (d)	Purchases, transfers in and selected expenses (e)	Value added (f)	Fixed capital expenditure (g)
		Males	Females	Persons					
	no.	no.	no.	no.	\$'000	\$'000	\$'000	\$'000	\$'000
1968-69.....	951	24 892	6 182	31 074	95 065	487 109	301 739	197 464	35 080
1969-70.....	945	25 371	6 389	31 760	102 104	541 636	317 546	226 083	49 443
1971-72.....	933	24 856	6 151	31 007	119 411	595 612	359 300	245 068	25 944
1972-73.....	912	24 668	6 016	30 684	130 703	678 763	394 628	283 420	24 893
1973-74.....	935	25 203	6 324	31 527	161 386	818 049	494 785	340 250	24 798
1974-75(b).....	628	23 699	5 153	28 852	194 883	905 656	558 632	402 255	53 146
1975-76.....	667	22 827	4 926	27 753	211 327	1 029 579	577 393	456 029	43 936
1976-77.....	617	23 042	4 724	27 766	246 014	1 199 311	694 445	533 288	34 472
1977-78.....	585	21 907	4 827	26 734	257 032	1 235 157	734 293	494 738	47 030

(a) Details are not comparable with those contained in the preceding table.

(b) No census was conducted in 1970-71. From 1974-75 figures exclude details for single establishment enterprises with less than four persons employed.

(c) Includes working proprietors and employees at separately located administrative and ancillary units.

(d) Turnover plus increase (or less decrease) in the value of stocks less purchases, transfers in and selected expenses.

(e) Includes transfers in of goods from other establishments of the enterprise, charges for commission and sub-contract work, repair and maintenance expenses, outward freight and cartage, motor vehicle running expenses and sales commission payments.

(f) Comprises sales of goods, transfers out of goods to establishments of the same enterprise, bounties and subsidies on production, all other operating revenue from outside the enterprise and capital work done for own use, rental or lease.

(g) Outlay on fixed tangible assets less disposals.

(Chapter 9)

Hydro-Electric Commission, Tasmania

Year	Installed generator capacity	Number of retail consumers	Consumption per retail consumer	Gross revenue	Working expenses and other charges
	kW	no.	kWh	\$'000	\$'000
1929-30	49 000	n.a.	n.a.	692	636
1934-35	54 250	n.a.	n.a.	814	754
1939-40	104 500	n.a.	n.a.	1 212	1 172
1944-45	160 500	55 073	3 110	1 776	1 588
1949-50	184 500	75 927	4 201	2 938	2 926
1959-60	541 150	117 266	6 480	14 570	14 932
1964-65	856 550	131 593	7 779	25 009	23 500
1965-66	807 550	134 679	7 958	26 293	25 569
1966-67	849 150	135 941	8 571	28 299	27 058
1967-68	945 300	139 886	8 247	27 627	28 607
1968-69	1 005 600	143 551	8 712	33 638	31 824
1969-70	1 031 600	146 958	9 059	37 296	35 095
1970-71	1 281 200	149 911	9 252	40 151	40 070
1971-72	1 309 200	152 934	9 782	46 286	46 278
1972-73	1 352 400	156 570	9 876	49 511	49 297
1973-74	1 342 400	160 307	10 165	52 730	54 026
1974-75	1 462 400	163 479	10 864	62 295	61 870
1975-76	1 442 400	167 507	11 191	72 699	72 312
1976-77	1 492 400	171 847	12 071	80 372	80 292
1977-78	1 636 400	176 005	r 12 529	95 519	95 269
1978-79	1 782 390	179 861	12 878	109 130	108 930

(Chapter 10)

Value of Retail Sales by Commodity Groups, Tasmania  
(\$ Million)

Year	Groceries	Butchers' meat	Other food (a)	Beer, wine, spirits (b)	Clothing drapery piece-goods, footwear	Domestic hardware (c)	Electrical goods (d)	Furniture floor coverings	Other goods (e)	Total (excl. motor vehicles, etc.)
1952-53 (f)	17.3	9.1	11.9	10.7	25.7	3.1	4.6	4.9	16.3	103.6
1956-57 (f)	23.4	11.1	15.1	14.8	30.4	3.3	6.3	6.4	20.3	131.1
1961-62 (f)	28.6	13.9	20.0	17.0	35.3	4.1	10.7	7.2	29.3	166.1
1962-63	29.3	14.9	21.4	16.9	36.0	4.4	11.7	7.8	30.5	172.9
1963-64	31.6	15.5	20.6	18.5	38.4	4.4	11.5	7.9	31.8	180.2
1964-65	33.6	17.1	21.9	18.9	40.6	4.4	11.3	8.5	34.7	191.0
1965-66	35.2	17.8	22.7	20.3	41.6	4.5	11.2	8.7	36.3	198.3
1966-67	36.5	19.4	24.2	23.3	45.5	5.1	11.7	10.1	39.2	215.0
1967-68	37.3	19.9	26.1	25.0	48.9	5.5	12.4	11.2	41.6	227.9
1968-69 (f)	48.7	20.7	23.1	30.9	49.5	8.8	13.4	12.6	49.9	257.6
1969-70	41.7	21.0	30.7	28.7	62.2	6.1	13.3	12.9	49.4	256.0
1970-71	45.2	21.3	32.6	30.7	55.6	6.7	13.6	13.5	52.9	272.1
1971-72	50.0	22.2	33.9	32.4	59.7	7.5	15.4	14.4	55.8	291.3
1972-73	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	319.5
1973-74 (f)	63.8	26.2	35.8	47.8	76.1	14.4	24.5	21.4	64.6	374.5
1974-75	76.7	31.3	47.2	61.7	100.3	17.1	36.1	28.9	86.1	485.4
1975-76	87.3	31.2	49.7	68.8	101.6	22.1	48.3	31.7	91.6	532.3
1976-77	110.0	35.6	57.8	77.5	117.1	24.4	56.5	34.4	103.0	616.3
1977-78 r	120.7	37.7	63.8	91.7	133.3	29.0	53.0	37.7	118.2	685.1

- (a) Includes fresh fruit and vegetables, confectionery, soft drinks, ice cream, cakes, pastry, cooked provisions, fish, etc., but excludes some delivered milk and bread.
- (b) Excludes sales from licensed clubs.
- (c) Excludes basic building materials (e.g. timber, roofing tiles, etc.), builders' hardware and supplies.
- (d) Includes radios, televisions and accessories, musical instruments, domestic refrigerators, etc.
- (e) Includes tobacco, cigarettes, newspapers, books, stationery, chemists' goods, jewellery, etc.
- (f) Census figures.

(Chapter 10)

## Value of Trade by Sea and Air and Vessels Entered and Cleared Tasmanian Ports

Year	Imports				Exports				Vessels entered Tasmanian ports		
	By sea		By air	Total	By sea		By air	Total	Overseas and interstate (a)	no.	'000 net tons
	Overseas	Interstate	Interstate		Overseas	Interstate	Interstate				
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000				
1830.....	n.a.	n.a.		510	n.a.	n.a.		292	101	27	
1840.....	n.a.	n.a.		1 976	n.a.	n.a.		1 734	492	85	
1850.....	n.a.	n.a.		1 318	n.a.	n.a.		1 288	674	104	
1860.....	1 686	450		2 136	1 544	380		1 924	806	116	
1870.....	698	888		1 586	562	736		1 298	613	106	
1880.....	738	2 000		2 738	1 568	1 456		1 086	654	205	
1890.....	1 594	2 202		3 796	1 792	2 182		2 974	746	476	
1900.....	1 402	2 746		4 148	3 078	2 144		5 222	741	619	
1910.....	1 662	(b)		n.a.	1 040	(b)		n.a.	979	1 211	
1919-20.....	1 626	(b)		n.a.	4 022	(b)		n.a.	841	632	
1929-30.....	3 668	16 028		19 696	4 978	13 198		18 176	1 076	1 390	
1930-31.....	1 582	12 878		14 460	4 214	9 754		13 968	992	1 319	
1931-32.....	1 130	11 938		13 068	4 106	9 980		14 086	980	1 307	
1932-33.....	1 128	12 464		13 592	3 582	9 790		13 372	1 030	1 461	
1933-34.....	1 274	13 582	n.a.	14 856	4 766	10 254	n.a.	15 020	1 066	1 547	
1934-35.....	1 476	14 452		15 928	4 318	11 844		16 162	1 128	1 610	
1935-36.....	2 498	17 134		19 632	5 502	13 116		18 618	1 191	1 977	
1936-37.....	2 586	18 858		21 444	6 822	14 376		21 198	1 317	2 093	
1937-38.....	3 858	19 854		23 712	5 774	16 500		22 274	1 377	2 202	
1938-39.....	2 838	20 166		23 004	6 796	17 670		24 466	1 384	2 231	
1939-40.....	3 188	21 780		24 968	4 852	20 954		25 806	1 243	1 512	
1940-41.....	2 364	21 876		24 240	3 120	24 052		27 172	1 147	1 264	
1941-42.....	1 918	24 276		26 194	3 746	28 566		32 312	1 031	1 030	
1942-43.....	2 300	26 236		28 536	1 770	30 680		32 450	873	760	
1943-44.....	2 384	26 162		28 546	2 298	35 288		37 586	804	796	
1944-45.....	1 664	27 796		29 460	5 062	36 708		41 770	760	732	
1945-46.....	2 614	29 400		32 014	7 224	33 040		40 264	728	833	
1946-47.....	3 626	37 810		41 436	10 162	32 932		43 094	751	957	
1947-48.....	8 564	44 000		52 564	18 566	35 066		53 632	787	1 106	
1948-49.....	12 512	46 674		59 186	24 980	37 064		62 044	805	1 125	
1949-50.....	18 704	51 218	(c) 10 670	80 592	29 936	42 672	(c) 3 996	76 604	862	1 183	
1950-51.....	25 058	60 636	18 326	104 020	48 514	53 740	6 392	108 646	905	1 279	
1951-52.....	41 422	76 024	20 474	137 920	37 024	71 684	6 018	114 726	902	1 323	
1952-53.....	26 632	76 658	19 936	123 226	43 696	72 804	11 568	128 068	1 012	1 480	
1953-54.....	26 098	87 438	22 164	135 700	35 466	81 488	13 580	130 534	1 060	1 508	
1954-55.....	30 258	89 958	19 148	139 364	37 524	85 376	14 494	137 394	1 081	1 620	
1955-56.....	24 884	99 608	21 166	145 658	40 608	100 650	18 762	160 000	1 030	1 586	
1956-57.....	27 764	105 788	20 020	153 572	45 004	108 654	18 112	171 770	1 161	1 737	
1957-58.....	25 466	113 636	19 122	158 224	44 506	109 652	18 354	172 512	1 241	1 872	
1958-59.....	26 374	121 138	19 718	167 230	43 932	114 424	17 584	175 940	1 257	1 966	
1959-60.....	27 606	130 014	19 210	176 830	47 730	137 530	20 818	206 078	1 308	2 287	
1960-61.....	37 208	141 086	19 356	197 650	42 588	143 036	21 944	207 568	1 354	2 546	
1961-62.....	26 788	141 776	18 000	186 564	57 196	140 794	23 298	221 288	1 533	3 042	
1962-63.....	35 746	150 620	18 158	204 524	66 792	146 454	21 602	234 848	1 614	3 474	
1963-64.....	35 032	167 964	19 840	222 836	78 318	173 590	23 424	275 332	1 508	3 346	
1964-65.....	35 717	170 963	20 819	227 449	87 315	193 371	25 770	306 456	1 645	3 412	
1965-66.....	43 585	192 732	21 123	257 441	92 007	212 785	25 575	330 367	1 684	3 887	
1966-67.....	51 376	209 456	20 311	281 143	88 834	224 975	25 680	339 490	(d) 1 684	(d) 4 085	
1967-68.....	45 024	220 065	20 590	285 679	76 888	233 694	26 941	337 524	1 676	4 102	
1968-69.....	37 509	241 398	21 051	299 958	102 061	265 476	25 825	393 362	1 795	4 645	
1969-70.....	46 998	257 441	20 551	324 989	143 470	286 083	26 287	455 840	1 759	5 574	
1970-71.....	45 719	269 022	19 777	334 519	143 198	277 669	27 103	447 970	1 639	5 338	
1971-72.....	39 749	281 576	20 622	341 947	178 950	302 608	29 374	510 932	1 754	5 937	
1972-73.....	45 045	289 862	21 238	356 145	218 712	320 910	30 626	570 247	1 788	7 239	
1973-74.....	69 277	357 805	24 760	451 843	259 745	404 382	34 566	698 692	1 631	7 225	
1974-75.....	100 616	402 081	26 850	529 547	226 154	379 933	31 699	637 786	1 611	6 820	
1975-76.....	76 262	503 497	27 882	607 641	250 580	441 391	36 280	728 251	1 536	6 733	
1976-77.....	94 622	564 231	30 909	689 762	338 657	485 850	35 160	859 667	1 592	7 258	
1977-78.....	115 778	594 793	39 388	749 960	381 942	594 441	38 206	1 014 589	1 528	6 992	

(a) In this section each vessel is recorded as an entry at the first Tasmanian port of call only; intrastate movements are excluded.

(b) Collection discontinued until 1922-23.

(c) Not collected before 1949-50.

(d) From 1966-67 not comparable with previous years; details are now confined to vessels of over 200 registered net tons engaged solely in trade.



(Chapter 11) Overseas and Interstate Exports of Selected Commodities, Tasmania

Year	Butter (incl. butter oil)		Fresh fruit—apples and pears		Meat		Cheese		Wool, greasy (a)	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
	tonnes	\$'000	tonnes	\$'000	tonnes	\$'000	tonnes	\$'000	tonnes	\$'000
1945-46	1 293	406	66 820	1 894	186	34	612	112	4 113	1 438
1946-47	1 340	688	19 908	1 028	312	83	993	180	5 275	2 706
1947-48	1 926	798	55 565	4 204	282	44	273	66	4 446	4 206
1948-49	2 475	1 268	31 481	2 366	789	122	181	41	6 365	6 758
1949-50	2 179	1 278	56 911	4 348	1 151	369	113	29	4 128	6 202
1950-51	1 958	1 173	64 841	6 828	915	302	63	17	5 446	18 688
1951-52	2 239	1 266	56 627	7 410	1 103	475	120	44	6 689	9 366
1952-53	2 397	1 802	77 288	11 578	1 753	818	39	18	7 643	12 030
1953-54	2 043	1 600	77 652	10 135	658	349	39	18	7 018	11 314
1954-55	3 944	3 026	72 112	8 950	1 676	814	73	39	8 011	12 190
1955-56	4 988	3 463	92 569	11 498	2 470	1 076	36	23	9 387	16 198
1956-57	6 101	3 452	58 836	7 936	2 074	883	102	73	9 292	11 140
1957-58	5 939	3 420	96 260	14 664	2 996	1 190	101	45	10 731	14 260
1958-59	7 065	4 828	87 781	11 338	5 469	2 415	69	51	11 415	12 106
1959-60	7 864	5 390	80 683	9 490	9 225	3 801	90	64	12 689	15 254
1960-61	5 419	3 298	92 730	11 226	6 896	3 212	60	47	11 068	12 560
1961-62	7 572	3 942	122 417	15 572	7 754	3 250	121	50	12 341	14 206
1962-63	8 597	4 368	108 438	17 508	9 933	4 737	578	269	11 919	15 338
1963-64	8 315	4 372	135 205	19 454	11 018	5 505	895	328	11 378	17 604
1964-65	10 374	5 914	99 410	14 260	12 881	6 645	1 707	761	13 756	16 593
1965-66	8 878	5 214	134 482	20 651	12 749	7 038	2 887	1 493	15 442	20 155
1966-67	9 140	5 259	96 085	11 872	13 727	7 939	3 530	1 642	16 238	20 373
1967-68	8 992	5 107	115 873	14 647	11 345	7 042	4 190	1 854	13 994	15 041
1968-69	9 243	5 129	96 242	13 154	12 910	7 989	1 930	884	15 798	18 592
1969-70	12 611	6 950	109 382	14 905	17 084	11 774	7 267	2 957	16 512	17 821
1970-71	10 664	5 954	96 670	13 474	15 755	10 706	6 259	2 589	17 145	14 350
1971-72	9 829	8 067	74 848	11 092	21 463	14 161	6 816	3 875	20 413	17 180
1972-73	7 437	6 104	84 066	11 566	23 061	20 368	6 656	4 085	17 735	34 579
1973-74	8 269	6 441	92 116	16 458	22 167	22 507	7 730	5 930	16 963	38 319
1974-75	5 012	4 460	57 473	10 261	18 456	12 237	10 386	7 922	15 947	26 640
1975-76	9 720	7 527	47 114	8 756	20 883	17 192	9 026	7 633	17 435	31 232
1976-77	4 363	3 851	24 847	5 732	22 951	20 281	14 552	12 317	16 204	33 685
1977-78	6 248	5 941	42 257	11 092	21 056	21 659	15 222	14 409	10 805	24 048

(Chapter 11) Overseas and Interstate Exports of Selected Commodities, Tasmania—continued

Year	Sheep skins (with and without wool)		Textile yarn and fabrics	Refined zinc		Ores and concentrates	Timber (dressed and undressed)		Woodchips	
	Quantity	Value	Value	Quantity	Value	Value	Quantity	Value	Quantity	Value
	tonnes	\$'000	\$'000	tonnes	\$'000	\$'000	m <sup>3</sup>	\$'000	\$'000	\$'000
1945-46	1 890	326	4 599	75 454	4 214	1 668	73 206	1 132	—	—
1946-47	1 811	480	4 607	80 378	4 674	2 298	75 344	1 228	—	—
1947-48	963	452	5 681	66 431	4 906	3 074	96 188	1 584	—	—
1948-49	1 205	564	6 688	78 667	8 832	3 832	116 094	2 104	—	—
1949-50	1 500	816	5 580	81 999	9 964	4 076	146 625	2 930	—	—
1950-51	1 014	1 688	9 266	80 836	15 054	5 704	135 668	3 230	—	—
1951-52	1 434	1 232	7 498	77 090	18 606	11 714	134 604	4 428	—	—
1952-53	1 512	1 020	11 572	91 557	19 342	9 722	122 230	5 112	—	—
1953-54	1 333	1 098	13 552	97 593	17 222	8 544	135 751	6 700	—	—
1954-55	2 230	1 590	12 476	87 746	16 574	8 138	147 389	7 156	—	—
1955-56	1 873	1 356	14 674	100 611	19 888	10 836	140 938	6 570	—	—
1956-57	2 122	1 796	15 766	105 314	19 662	10 700	146 502	6 874	—	—
1957-58	2 138	1 674	16 112	105 541	18 190	8 088	132 242	4 616	—	—
1958-59	2 565	1 288	14 166	116 271	20 054	4 824	153 378	6 844	—	—
1959-60	3 216	2 078	17 524	115 680	22 922	5 952	177 931	8 952	—	—
1960-61	3 071	1 786	19 188	109 664	21 020	6 760	149 657	9 554	—	—
1961-62	3 050	1 892	21 278	133 012	23 680	6 030	134 033	8 588	—	—
1962-63	2 885	1 904	19 842	136 302	23 778	6 338	142 979	9 858	—	—
1963-64	3 359	2 844	21 918	134 201	27 910	9 102	168 480	11 176	—	—
1964-65	2 676	1 953	24 139	141 263	37 327	9 570	189 832	12 811	—	—
1965-66	3 268	2 465	24 077	137 257	38 331	11 302	174 297	12 145	—	—
1966-67	3 402	2 456	24 102	155 273	41 249	12 560	187 474	13 672	—	—
1967-68	2 722	2 348	25 487	120 312	33 106	17 816	183 817	13 492	—	—
1968-69	3 988	1 169	27 563	139 479	34 006	44 018	194 936	15 329	—	—
1969-70	3 236	1 790	27 784	163 847	42 625	63 478	207 242	16 238	—	—
1970-71	3 710	1 684	28 425	142 755	38 163	81 604	200 583	17 201	30	438
1971-72	3 765	1 799	29 938	194 259	55 149	88 777	202 331	17 385	301	4 354
1972-73	3 618	3 280	31 680	208 349	63 707	87 543	224 828	27 970	1 156	16 833
1973-74	2 303	2 926	41 174	190 293	77 143	94 381	270 248	22 556	2 138	31 019
1974-75	2 816	2 258	31 454	139 253	74 298	91 240	213 428	30 636	2 031	35 212
1975-76	2 943	2 413	41 656	138 243	74 926	92 588	238 440	25 867	1 734	35 524
1976-77	2 334	2 765	35 811	162 001	98 318	144 947	313 227	37 083	n.p.	n.p.
1977-78	2 565	3 565	33 285	167 870	87 129	164 014	260 738	38 282	n.p.	n.p.

(a) Excludes greasy wool on exported skins.

(Chapter 11)

## Motor Vehicle Registrations, Tasmania (a)

Year	Motor vehicles on the register at end of year					New motor vehicles registered during year			
	Motor cars and station wagons		Commercial vehicles ('000)	Motor cycles ('000)	Total ('000)	Motor cars and station wagons	Commercial vehicles	Motor cycles	Total
	Number ('000)	Persons per vehicle registered							
1924-25	5.8	36.9	(b) 0.8	2.7	9.3				
1929-30	12.5	17.6	(c) 2.2	4.8	19.5	n.a.	n.a.	n.a.	n.a.
1934-35	12.9	17.8	3.0	3.9	19.8	1 627	(c) 552	939	3 118
1939-40	17.6	13.6	5.2	3.4	26.2	982	422	171	1 575
1949-50	25.3	10.9	12.9	4.9	43.2	1 400	540	176	2 116
1950-51	28.8	9.9	15.1	5.3	49.2	3 311	1 565	886	5 762
1951-52	32.5	9.1	16.8	5.7	55.1	4 187	2 319	960	7 466
1952-53	35.4	8.6	19.4	5.7	60.5	4 267	2 073	938	7 278
1953-54	40.0	7.7	19.7	5.6	65.4	3 368	1 724	474	5 566
1954-55	44.9	7.0	21.5	5.3	71.7	4 178	1 896	450	7 064
1955-56	48.0	6.6	21.9	4.8	74.7	5 738	2 285	417	8 440
1956-57	51.7	6.3	22.6	4.4	78.6	5 457	2 179	332	7 968
1957-58	55.9	6.0	23.9	4.0	83.8	5 309	1 988	340	7 637
1958-59	59.1	5.7	25.0	3.6	87.7	5 337	1 944	225	7 506
1959-60	63.7	5.4	26.4	3.1	93.2	5 362	2 113	176	7 651
1960-61	68.1	5.1	26.7	2.6	97.4	6 527	2 115	96	8 738
1961-62	72.8	4.9	27.4	2.4	102.6	6 723	2 058	61	8 842
1962-63	77.9	4.6	27.5	1.9	107.3	6 931	1 778	59	8 768
1963-64	84.4	4.3	28.0	1.7	114.1	9 003	1 986	52	11 041
1964-65	91.3	4.0	28.9	1.5	121.7	10 268	2 343	53	12 664
1965-66	96.8	3.8	29.7	1.5	128.0	10 522	2 389	69	12 980
1966-67	101.7	3.7	30.2	1.6	133.5	10 133	2 878	207	13 218
1967-68	107.7	3.5	31.1	2.2	141.0	10 390	2 611	380	13 381
1968-69	113.7	3.4	32.2	2.8	148.7	11 738	2 412	751	14 901
1969-70	118.6	3.3	32.6	3.1	154.3	10 845	2 529	781	14 155
1970-71	124.9	3.1	32.9	3.5	161.3	11 399	2 456	799	14 654
1971-72	130.2	3.0	33.8	3.8	167.8	11 792	2 550	794	15 136
1972-73	135.4	2.9	34.6	4.5	174.5	11 961	2 492	978	15 431
1973-74	141.2	2.8	35.3	6.1	182.6	12 970	2 813	1 343	17 126
1974-75	150.3	2.7	36.6	7.4	194.3	13 674	2 846	2 600	19 120
1975-76	156.9	2.6	39.1	6.8	202.8	16 097	3 980	2 749	22 826
1976-77	162.7	2.5	40.5	6.2	209.4	14 410	3 971	1 831	20 212
1977-78	171.9	2.4	41.2	5.0	218.1	14 520	4 260	1 428	20 208
1978-79	178.8	2.3	42.9	4.8	226.6	13 884	4 170	972	19 026
						13 928	3 401	892	18 221

(a) Includes State Government and Commonwealth Government-owned vehicles but excludes those belonging to the Defence Services.

(b) Trucks only.

(c) From 1929-30 includes trucks, utilities, panel vans and omnibuses.

(Chapter 11)

## Motor Vehicles on Register and Traffic Accidents, Tasmania

Year	Motor vehicles on the register at end of year (a)		Traffic accidents involving casualties					
	Number ('000)	Persons per vehicle registered	Accidents		Persons			
			Number	Per 10 000 vehicles registered (b)	Killed		Injured	
					Number	Per 10 000 vehicles registered (b)	Number	Per 10 000 vehicles registered (b)
1949-50	43.2	6.4	969	242	64	16.0	1 154	288
1954-55	71.7	4.4	864	127	57	8.3	1 111	163
1959-60	93.2	3.7	743	82	79	8.7	1 004	111
1960-61	97.4	3.6	844	89	75	7.9	1 157	121
1961-62	102.6	3.5	872	87	72	7.2	1 207	121
1962-63	107.3	3.4	919	87	67	6.4	1 354	129
1963-64	114.1	3.2	1 118	101	80	7.2	1 656	150
1964-65	121.7	3.0	1 180	100	97	8.2	1 692	143
1965-66	128.0	2.9	1 291	103	88	7.0	1 955	157
1966-67	133.5	2.8	1 356	104	102	7.8	2 081	159
1967-68	141.0	2.7	1 268	92	112	8.2	1 990	145
1968-69	148.7	2.6	1 400	97	122	8.4	2 228	154
1969-70	154.3	2.5	1 413	93	122	8.0	2 268	150
1970-71	161.3	2.4	1 396	89	124	7.9	2 031	129
1971-72	167.8	2.3	1 371	83	118	7.2	1 984	120
1972-73	174.5	2.3	1 423	83	83	4.8	2 052	119
1973-74	182.6	2.2	1 454	81	126	7.0	2 046	114
1974-75	194.3	2.1	1 466	77	120	6.3	2 061	108
1975-76	202.8	2.0	1 502	74	107	5.3	2 160	107
1976-77	209.4	2.0	1 606	77	103	4.9	2 314	110
1977-78	218.1	1.9	1 674	78	118	5.5	2 402	112
1978-79	226.6	1.8	1 537	69	98	4.4	2 113	95

(a) Includes cars, commercial vehicles, motor cycles and Commonwealth-owned vehicles other than Defence Services' vehicles.

(b) Based on average number of motor vehicles (including motor cycles) on the register.

(Chapter 11)

Metropolitan Transport Trust Passenger Services, Tasmania

Year	Metropolitan Transport Trust (a)					Revenue (b)	Expenditure (c)
	Hobart and Launceston services						
	Route kilometres open for traffic	Hobart		Launceston			
		Vehicle kilometres	Passenger journeys	Vehicle kilometres	Passenger journeys		
		daily average	daily average	daily average	daily average	\$'000	\$'000
1955-56 .....	121	10 602	50 028	4 060	18 006	1 304	1 690
1960-61 .....	198	16 964	49 946	5 058	17 462	1 997	2 586
1961-62 .....	203	17 022	48 994	5 055	17 217	1 955	2 629
1962-63 .....	208	16 732	48 051	4 736	16 279	1 905	2 537
1963-64 .....	222	17 537	47 554	4 775	15 731	1 882	2 584
1964-65 .....	224	17 566	45 985	4 598	15 183	1 829	2 606
1965-66 .....	243	17 239	43 383	4 760	14 767	1 964	2 749
1966-67 .....	248	17 323	42 967	4 843	14 728	2 124	3 008
1967-68 .....	259	17 408	41 803	4 947	13 953	2 158	3 122
1968-69 .....	286	17 745	40 675	4 730	13 365	2 270	3 250
1969-70 .....	290	17 886	39 932	4 801	13 018	2 332	3 358
1970-71 .....	290	18 055	40 058	4 633	12 521	2 321	3 741
1971-72 .....	291	17 703	37 584	4 585	11 708	2 639	3 949
1972-73 .....	308	17 106	36 572	4 530	11 397	2 659	4 333
1973-74 .....	314	17 585	38 027	4 604	11 988	2 751	5 283
1974-75 .....	364	19 031	40 791	4 650	12 055	2 916	8 299
1975-76 .....	357	19 850	40 646	4 704	11 969	3 000	8 084
1976-77 .....	358	20 791	39 507	4 219	11 283	2 862	8 945
1977-78 .....	365	21 405	39 314	4 269	10 767	3 547	10 151
1978-79 .....	366	20 685	34 870	4 148	9 552	4 186	10 672

- (a) Includes tram, omnibus and trolley-bus services originally under Municipal control but taken over by Metropolitan Transport Trust on 1.7.55. Trams ceased operating: Hobart 21.10.60; Launceston 13.12.52.
- (b) Prior to 1955-56 includes government grants; see note (a) above.
- (c) Includes interest, redemption and depreciation.

(Chapter 11)

Government Railways, Tasmania

Year	Kilometres open	Revenue train kilometres run	Passenger journeys	Goods and livestock carried	Gross revenue (a)	Working expenses (b)
	km	'000 km	'000	'000 tonnes	\$'000	\$'000
1880 .....	72	180	103	21	48	34
1885 .....	138	278	159	29	62	72
1890 (c) .....	565	890	464	143	212	172
1895 .....	676	1 172	527	207	300	240
1900 .....	707	1 313	683	313	406	320
1904-05 .....	745	1 522	824	400	488	344
1909-10 .....	756	1 706	1 650	447	568	424
1914-15 .....	858	1 617	1 751	415	646	452
1919-20 .....	1 012	2 039	2 268	584	1 012	780
1924-25 .....	1 083	2 187	2 656	702	1 096	1 064
1929-30 .....	1 093	2 420	2 243	642	1 014	1 070
1034-35 .....	1 038	1 979	2 133	689	800	944
1939-40 .....	1 036	3 322	2 412	893	1 072	1 374
1944-45 .....	1 033	3 542	3 261	939	1 800	2 334
1949-50 .....	987	3 347	3 230	782	2 098	3 456
1959-60 .....	866	2 494	2 292	1 210	5 616	6 224
1964-65 .....	805	2 047	1 340	1 109	5 580	6 644
1965-66 .....	805	2 065	1 304	1 089	5 985	6 934
1966-67 .....	805	2 052	1 197	1 096	6 588	7 707
1967-68 .....	805	2 007	1 087	1 181	6 587	8 103
1968-69 .....	805	1 926	1 045	1 262	6 947	8 461
1969-70 .....	805	1 899	907	1 278	6 920	8 391
1970-71 .....	805	1 764	871	1 220	5 867	9 222
1971-72 .....	805	1 767	785	1 299	6 123	9 726
1972-73 .....	816	1 960	752	1 554	6 834	11 012
1973-74 .....	841	2 153	693	1 828	7 674	14 465
1974-75 .....	851	1 983	429	1 731	8 265	18 604
1975-76 (d) .....	849	1 748	151	1 610	8 048	20 611
1976-77 .....	851	1 667	140	1 644	8 780	21 812

- (a) Excludes government grants.
- (b) Excludes provision for depreciation and interest.
- (c) The Hobart-Launceston line was constructed and operated by the Tasmanian Main Line Railway Coy. Ltd. until 1890, when the line was taken over by the Tasmanian Government Railways.
- (d) The Tasmanian Government Railways were taken over by the Australian National Railways Commission from 1 July 1975.

(Chapter 11)

## Postal Services, Tasmania

Year	Mail posted in Tasmania or received from overseas				Money orders				Postal notes and postal orders (a)			
					Issued		Paid		Issued		Paid	
	Letters and post-cards	News-papers and packets	Parcels	Registered articles	Number	Value	Number	Value	Number	Value	Number	Value
	'000	'000	'000	'000	'000	\$'000	'000	\$'000	'000	\$'000	'000	\$'000
1929-30	39 956	7 128	198	307	124	1 104	106	954	452	314	2 730	2 098
1934-35	35 746	5 405	121	253	103	1 006	97	958	520	340	2 998	1 760
1939-40	33 874	5 525	132	314	126	1 372	113	1 278	582	418	3 236	1 970
1944-45	37 804	5 885	350	621	131	1 962	115	1 784	557	402	3 966	2 522
1949-50	50 038	8 440	368	674	167	2 428	151	2 218	670	514	6 967	4 270
1954-55	42 999	9 107	268	625	218	3 740	199	3 338	522	432	1 740	1 614
1955-56	43 329	9 531	266	655	231	3 800	305	5 342	534	440	1 475	1 450
1956-57	43 690	9 882	236	611	237	4 186	230	4 148	472	392	1 071	976
1957-58	44 306	9 564	258	556	253	4 338	217	3 862	459	396	755	680
1958-59	46 741	9 553	257	512	264	4 316	189	3 664	436	394	504	458
1959-60	43 020	9 629	233	456	264	4 358	198	3 744	433	402	335	292
1960-61	43 242	9 432	231	404	260	4 564	203	3 978	401	382	232	226
1961-62	42 603	9 714	242	390	(b) 284	(b) 6 792	(b) 221	(b) 6 160	390	376	218	216
1962-63	45 202	9 183	237	379	307	7 932	242	7 266	394	384	247	240
1963-64	47 452	9 340	232	371	342	8 548	353	7 852	388	390	208	212
1964-65	49 108	9 549	263	371	366	9 356	363	8 768	368	378	206	212
1965-66	51 710	10 309	288	375	353	11 576	274	10 902	356	384	206	213
1966-67	55 594	10 531	302	379	364	12 690	298	12 042	344	467	208	268
1967-68	55 273	10 141	303	349	322	13 468	266	12 727	350	599	201	351
1968-69	56 516	9 425	282	325	(c) 271	(c) 5 870	(c) 216	(c) 5 220	378	731	212	448
1969-70	58 824	8 953	300	312	265	5 229	211	4 516	428	871	223	512
1970-71	57 916	8 640	353	313	214	4 624	167	4 257	496	1 295	276	784
1971-72	54 780	6 773	352	268	166	4 335	128	3 722	498	1 514	263	942
1972-73	63 187		358	228	165	4 416	128	3 826	505	1 605	285	1 078
1973-74	63 272		289	203	149	4 629	115	3 960	507	1 824	288	1 188
1974-75	59 644		308	193	152	5 970	116	4 970	484	1 945	271	1 239
1975-76	44 829	5 528	220	132	129	6 418	100	5 489	334	1 504	178	877
1976-77	45 406	5 627	310	126	128	7 117	119	6 006	257	1 215	127	661
1977-78	48 690	7 569	342	124	n. y. a.	n. y. a.	n. y. a.	n. y. a.	n. y. a.	n. y. a.	n. y. a.	n. y. a.

(a) On 1 June 1966 Postal Notes were replaced by Postal Orders. Until September 1967 the highest denomination available was \$4. In October 1967 denominations of \$5, \$6, \$7 and \$8 were introduced, followed in October 1970 by denominations of \$9 and \$10. From 21/11/1977, postal orders and money orders were replaced by postal money orders. (b) From 1961-62 to 1967-68 includes official Money Orders used in bringing to account telephone account collections and War Service Homes repayments. (c) The practice referred to in note (b) above was discontinued towards the end of 1967-68.

(Chapter 11)

Telecommunication, Radiocommunication, Broadcasting and Television, Tasmania

Year	Telegrams		Telephones			Radiocommunication, broadcasting and television		
	Despatched to and received from other countries	Despatched to places within Australia	Telephone exchanges	Telephone services connected at end of period		Stations		
				Lines	Instruments	Radiocommunication	Broadcasting	Television
	'000	'000	no.	'000	'000	no.	no.	no.
1929-30	19	455	360	12	15	20	3	..
1934-35	18	387	342	12	15	40	4	..
1939-40	16	471	357	15	19	25	11	..
1944-45	30	826	354	17	22	22	11	..
1949-50	36	952	370	23	31	198	11	..
1954-55	41	648	390	34	46	434	12	..
1959-60	43	537	391	47	63	882	12	2
1960-61	42	528	383	49	67	1 107	12	2
1961-62	43	513	377	51	70	1 440	12	3
1962-63	42	515	371	54	75	1 768	12	3
1963-64	42	548	368	57	78	2 227	12	4
1964-65	52	550	365	59	82	2 574	12	4
1965-66	60	582	349	62	86	2 951	12	4
1966-67	53	621	331	65	89	3 561	12	4
1967-68	(a) 21	575	312	67	93	3 856	12	4
1968-69	24	562	288	70	98	4 377	12	4
1969-70	24	542	273	75	105	4 994	12	4
1970-71	36	499	257	78	114	5 499	12	4
1971-72	36	458	238	80	113	5 892	12	5
1972-73		473	230	85	118	6 390	12	5
1973-74		472	224	90	127	6 570	12	5
1974-75		424	212	96	133	7 347	12	5
1975-76		356	206	100	140	7 915	12	5
1976-77		298	198	105	146	8 687	15	5
1977-78		242	197	112	155	14 747	15	5
1978-79		178	196	118	164	13 936	15	5

(a) From 1967-68 excludes telegrams received, details of which are no longer available.

(b) Includes licensed Citizens Band Radio Service operators from 1977-78.

(Chapter 12)

Fire, Marine and General Insurance: Expenditure, Tasmania (\$'000)

Year	Net claims	Other expenditure				Total
		Contributions to fire brigades	Commission and agents' charges	Expenses of management	Taxation	
1939-40	357				33	755
1944-45	357	12	147	241	115	871
1949-50	942	21	324	437	127	1 852
1954-55	2 743	64	787	1 093	288	4 976
1959-60	5 404	144	1 192	1 828	470	9 038
1964-65	7 854	230	1 601	2 662	692	13 038
1965-66	9 153	250	1 617	2 840	623	14 484
1966-67	16 158	242	1 760	3 248	664	22 071
1967-68	16 890	298	1 863	3 497	749	23 297
1968-69	10 865	508	2 063	3 929	588	17 953
1969-70	12 285	521	2 118	4 407	424	19 757
1970-71	13 214	583	2 388	4 942	626	21 753
1971-72	15 279	815	2 696	5 856	738	25 384
1972-73	18 249	979	2 999	6 364	780	29 371
1973-74	23 507	1 069	3 330	6 875	1 041	35 822
1974-75	29 979	1 371	4 002	8 102	376	44 217
1975-76	29 952	1 529	4 509	8 100	336	44 238
1976-77	42 010	2 483	4 472	11 844	627	61 420

(Chapter 12)

Banking, Tasmania  
(\$'000)

Year	Trading banks (including Commonwealth Trading Bank) (a)			Savings banks (b)	Year	Trading banks (including Commonwealth Trading Bank) (a)			Savings banks (b)
	Deposits	Advances	Debits to customers' accounts (c)	Depositors balances at end of year		Deposits	Advances	Debits to customers' accounts (c)	Depositors' balances at end of year
1935-36				13 636	1957-58	73 736	41 360	25 800	80 482
1936-37				14 430	1958-59	75 218	44 828	27 600	84 924
1937-38				15 384	1959-60	79 574	45 948	31 000	92 712
1938-39				16 792	1960-61	76 454	48 010	32 600	94 776
1939-40					1961-62	78 952	49 340	32 080	102 460
1940-41	n.a.	n.a.	n.a.	17 036	1962-63	83 178	53 176	35 068	112 856
1941-42				18 882	1963-64	86 210	55 122	37 062	124 770
1942-43				22 348	1964-65	94 604	54 176	41 340	135 736
1943-44				28 426	1965-66	102 507	55 214	43 105	148 401
1944-45				33 828	1966-67	112 091	60 460	47 103	167 106
1945-46	34 560	7 346	5 778	40 894	1967-68	117 811	69 297	51 222	177 827
1946-47	35 504	10 168	6 748	41 712	1968-69	124 473	72 394	55 896	190 043
1947-48	37 360	14 954	7 894	43 144	1969-70	131 501	77 603	61 173	199 790
1948-49	39 620	20 084	9 398	44 826	1970-71	133 587	86 976	64 177	217 663
1949-50	44 114	22 834	11 210	48 544	1971-72	135 099	88 098	69 970	242 856
1950-51	53 444	26 636	14 740	54 310	1972-73	159 141	99 192	85 291	288 986
1951-52	61 474	33 378	17 712	60 238	1973-74	207 040	121 077	103 041	328 029
1952-53	58 270	33 440	17 700	64 156	1974-75	229 851	137 189	119 447	382 326
1953-54	62 286	37 800	19 876	67 894	1975-76	277 377	157 951	150 536	430 618
1954-55	65 826	43 670	21 432	71 618	1976-77	348 613	207 635	179 932	477 134
1955-56	68 562	44 582	23 242	74 422	1977-78	375 773	250 144	193 310	530 457
1956-57	72 976	40 406	25 200	77 518					

(a) Average of weekly figures.

(b) Commonwealth, trustee and private. Private savings commenced operations in Tasmania as follows: A.N.Z., September 1961; National, May 1962; C.B.A., July 1962; C.B.C., March 1963; and Bank of Adelaide, November 1970.

(c) Excludes debits to Government accounts at Hobart City branches.

(Chapter 12)

Instalment Credit for Retail Sales, Tasmania (a)  
(\$'000)

Year	Amount financed during period (b)						Balances outstanding at end of period (c)			
	Motor vehicles (d)		Household and personal goods		Total all goods		Type of business		Type of credit	
	Non-retail businesses	Retail businesses	Non-retail businesses	Retail businesses	Non-retail businesses	Retail businesses	Non-retail businesses (1)	Retail businesses (2)	Hire purchase (3)	Other instalment credit (4)
1965-66	18 017	400	11 126		29 543		37 495	7 645	37 915	7 225
1966-67	19 025	422	11 160		30 607		38 777	7 050	39 151	6 676
1967-68	21 909	430	12 058		34 397		43 141	6 457	42 311	7 287
1968-69	21 001	821	13 751		35 573		44 205	6 826		51 031
1969-70	23 353	925	13 816		38 094		46 537	7 317		53 854
1970-71	25 485	1 215	13 705		40 405		50 453	7 293		57 746
1971-72	28 240	1 117	13 511		42 868		54 463	7 097		61 560
1972-73	32 695	616	14 579		47 890		60 860	6 497		67 357
	Finance businesses	Other businesses	Finance businesses	Other businesses	Finance businesses	Other businesses	Finance businesses	Other businesses		
1973-74	32 278	457	3 394	5 489	35 672	5 946	51 512	5 621	35 289	6 329
1974-75	40 409	371	4 028	5 753	44 437	6 124	63 544	4 352	43 778	6 783
1975-76	45 612	282	6 819	5 752	52 431	6 034	78 038	4 371	52 087	6 378
1976-77	54 738	175	7 465	5 951	62 203	6 125	95 463	4 137	60 224	8 104
1977-78	54 967	-	6 163	5 063	61 130	5 063	104 029	3 117	57 443	8 750

(a) A break in continuity of the series occurs from 1973-74. The classification for the pre-1973-74 categories 'retail businesses' and 'non-retail businesses' differs from the subsequent categories 'finance businesses' and 'other businesses' mainly in the treatment of incorporated finance subsidiaries of retailers. These were formerly included in the category 'retail businesses' but are subsequently covered in 'finance businesses'.

(b) Includes time payment, budget account, and personal loan schemes associated primarily with financing of retail sales of goods. However, it excludes the hiring charges, interest and insurance costs associated with these types of contracts.

(c) In contrast with 'amount financed' (see note (b)) these statistics include hiring charges, interest and insurance. N.B. total balances outstanding at end of period = (1) + (2) = (3) + (4).

(d) Includes new and used cars, boats, caravans, trailers and motor parts and accessories but excludes commercial type vehicles.

(Chapter 13)

Summary of Dwellings at Census Dates, Tasmania

Particulars	Date of Census							
	April 1921	June 1933	June 1947	June 1954	June 1961	June 1966	June 1971	June 1976
Dwellings (including hotels, boarding houses, flats, etc.)—								
Occupied .....	45 818	52 484	62 484	78 789	91 258	99 366	110 483	122 573
Unoccupied .....	2 934	2 421	2 351	5 288	8 582	10 800	13 302	15 786
Total .....	48 752	54 905	64 835	84 077	99 840	110 166	123 785	138 359
Average inmates per occupied dwelling .....	4.65	4.32	4.10	3.91	3.83	3.74	3.15	2.91
Occupied private dwellings according to—								
Class of dwelling—								
Private house (including share) (a) .....	42 028	48 479	58 937	74 244	83 736	90 131	99 401	100 534
Flat (including apartment) .....	2 404	2 831	2 064	2 534	5 574	7 058	8 417	21 298
Other .....	44 432	51 310	61 462	77 647	90 198	98 282	109 603	121 832
Material of outer walls—								
Brick .....	8 050	9 860	12 491	15 083	18 749	23 664	34 668	44 884
Stone .....	1 786	1 651	1 768	1 555	1 335	1 194	1 355	1 524
Concrete .....	274	411	1 064	2 703	3 487	3 522	3 064	6 404
Wood .....	32 689	37 743	43 396	54 370	62 456	63 573	65 247	61 346
Asbestos-cement .....	27	138	1 134	2 655	2 922	3 346	3 682	4 114
All other (including not stated) .....	1 606	1 507	1 609	1 281	1 249	2 983	1 587	3 560
Nature of occupancy—								
Owner .....	16 851	20 404	28 377	38 436	42 896	67 685	73 267	38 852
Purchaser by instalments .....	4 364	3 986	4 140	9 810	19 006	25 597	30 583	44 432
Tenant .....	19 037	22 734	26 077	26 991	25 938	25 597	30 583	29 638
Other methods of occupancy (including not stated) .....	4 180	4 186	2 868	2 410	2 358	5 000	5 753	8 910

(a) Separate house for 1976.

Value of Building Approvals and Construction: All New Building, Tasmania (\$'000)

(Chapter 13)

Year	Building approvals	Building construction								
		Commenced			Completed			Under construction at 30 June		
		Dwellings	Other building	Total	Dwellings	Other building	Total	Dwellings	Other building	Total
1946-47	6 726	3 728	1 708	5 436	2 308	526	2 834	3 614	1 904	5 518
1947-48	8 358	5 256	1 958	7 214	3 492	1 066	4 558	5 532	2 760	8 292
1948-49	11 742	7 960	2 782	10 742	6 042	1 578	7 620	7 670	4 074	11 744
1949-50	16 740	11 702	5 056	16 758	8 426	2 258	10 684	11 368	6 612	17 980
1950-51	21 694	15 000	5 672	20 672	13 508	3 298	16 806	14 250	10 106	24 356
1951-52	20 042	15 360	6 766	22 126	16 414	4 608	21 022	14 504	13 036	27 540
1952-53	15 984	10 664	2 558	13 222	15 252	6 078	21 330	10 608	10 380	20 988
1953-54	21 646	13 552	4 896	18 448	13 520	5 864	19 384	11 532	12 032	23 564
1954-55	25 612	15 244	6 428	21 672	13 092	8 206	21 298	13 992	10 806	24 798
1955-56	25 074	13 842	5 936	19 778	15 138	10 458	25 596	13 230	6 498	19 728
1956-57	30 964	15 138	13 138	28 276	16 434	8 784	25 218	12 420	11 750	24 170
1957-58	27 232	14 980	10 486	25 466	15 844	9 836	25 680	11 866	12 026	23 892
1958-59	29 592	16 662	12 156	28 818	15 986	10 914	26 900	12 742	13 364	26 106
1959-60	37 159	15 834	20 652	36 486	16 570	15 036	31 606	12 026	19 156	31 182
1960-61	30 539	15 936	12 344	28 280	17 206	16 822	34 028	10 912	15 016	25 928
1961-62	37 804	17 026	18 360	35 386	16 630	16 824	33 454	11 136	16 640	27 776
1962-63	37 416	16 668	17 944	34 612	16 892	17 240	34 128	10 912	17 500	28 412
1963-64	34 521	18 944	15 720	34 664	18 070	15 906	33 976	11 764	17 330	29 094
1964-65	44 872	20 922	21 118	42 040	20 060	17 684	37 744	12 628	20 738	33 366
1965-66	48 870	19 200	24 589	43 789	19 010	20 670	39 680	12 761	24 651	37 412
1966-67	53 593	25 869	36 208	62 070	23 230	24 986	48 218	15 394	35 875	51 269
1967-68	72 021	29 791	33 359	63 153	30 078	31 805	61 881	15 095	37 411	52 504
1968-69	52 291	28 011	28 191	56 202	28 142	28 807	56 947	14 634	37 262	51 896
1969-70	59 534	32 326	29 805	62 131	32 170	34 282	66 452	14 675	36 347	51 022
1970-71	67 991	32 233	37 956	70 189	29 275	30 409	59 684	17 906	45 559	63 465
1971-72	70 083	32 219	32 100	64 319	31 699	38 018	69 717	19 262	42 374	61 636
1972-73	90 421	43 328	47 279	90 607	36 190	41 915	78 105	27 418	49 104	76 522
1973-74 (a)	100 719	58 098	49 027	107 125	48 606	40 340	88 946	38 636	58 727	97 363
1974-75	112 336	60 513	52 667	113 180	58 824	40 669	99 493	42 799	73 520	116 319
1975-76	160 390	96 465	60 376	156 840	78 814	66 295	145 109	65 774	74 721	140 494
1976-77	200 562	103 068	75 506	178 574	105 160	69 402	174 563	68 981	84 693	153 674
1977-78	187 729	100 600	91 655	192 255	109 953	83 067	193 019	62 976	98 337	161 316

(a) Alterations and additions to dwellings valued at \$10 000 and over are included with the value of dwellings up to 1972-73 but excluded thereafter; from 1973-74 the value of alterations and additions to dwellings valued at \$10 000 and over is included with 'other building'.

(Chapter 13) New Houses Completed and Value of Work Done on New Houses and Other New Building, Tasmania

Year	New houses completed according to material of outer walls (a)								Value of work done on—		
	Brick, concrete, etc. solid and veneer		Wood (weatherboard, etc.)		Asbestos-cement and other materials		Total new houses		New houses	Other new building	All building
	Number	Value (\$'000)	Number	Value (\$'000)	Number	Value (\$'000)	Number	Value (\$'000)	\$'000	\$'000	\$'000
1946-47	296	824	756	1 420	18	30	1 070	2 274	n.a.	n.a.	n.a.
1947-48	373	1 180	1 127	2 228	44	74	1 544	3 482	n.a.	n.a.	n.a.
1948-49	534	1 954	1 606	3 800	147	230	2 287	5 984	n.a.	n.a.	n.a.
1949-50	722	2 906	1 955	5 140	175	324	2 852	8 370	n.a.	n.a.	n.a.
1950-51	959	4 488	2 741	8 520	214	444	3 914	13 452	n.a.	n.a.	n.a.
1951-52	982	5 380	2 697	10 042	320	912	3 999	16 334	16 360	7 390	23 750
1952-53	876	5 350	2 189	9 012	249	818	3 314	15 180	14 096	6 428	20 524
1953-54	632	4 342	1 879	8 730	119	382	2 630	13 454	13 636	6 754	20 390
1954-55	515	3 452	1 898	9 152	67	220	2 480	12 824	14 040	7 564	21 604
1955-56	685	4 756	1 934	9 724	102	302	2 721	14 782	14 710	7 658	22 368
1956-57	703	5 066	1 975	10 384	81	264	2 759	15 714	14 570	10 696	25 266
1957-58	583	4 534	1 891	10 800	92	256	2 566	15 590	15 436	11 122	26 558
1958-59	674	5 132	1 807	9 856	96	310	2 577	15 298	15 512	12 572	28 084
1959-60	814	6 406	1 582	8 814	79	240	2 475	15 460	14 936	16 430	31 366
1960-61	845	6 772	1 562	9 232	80	250	2 487	16 254	15 658	18 170	33 828
1961-62	910	7 404	1 413	8 096	74	218	2 397	15 718	16 054	18 722	34 776
1962-63	1 006	8 016	1 426	8 252	72	216	2 504	16 484	16 310	17 826	34 136
1963-64	1 098	9 116	1 337	7 956	76	260	2 511	17 332	17 884	17 966	35 850
1964-65	1 352	11 746	1 142	7 158	85	312	2 579	19 216	19 510	18 846	38 356
1965-66	1 254	11 491	932	6 033	74	282	2 260	17 806	17 703	25 498	43 201
1966-67	1 326	12 635	1 073	6 987	366	2 443	2 765	22 065	22 734	30 364	53 098
1967-68	1 724	17 324	1 395	9 646	212	1 334	3 331	28 304	28 573	31 486	60 059
1968-69	1 724	18 345	755	5 365	225	1 813	2 704	25 523	25 587	33 198	58 785
1969-70	1 892	20 756	577	4 071	392	3 457	2 861	28 283	28 142	40 286	68 428
1970-71	1 711	19 848	350	2 978	202	1 633	2 263	24 459	26 831	38 616	65 446
1971-72	1 781	22 007	196	1 615	284	2 545	2 261	26 165	25 329	44 854	70 183
1972-73	2 018	26 800	204	1 705	162	1 143	2 384	29 648	32 568	45 575	78 143
1973-74 (a)	2 505	39 290	157	1 510	157	1 157	2 819	41 957	46 332	49 552	95 884
1974-75	2 327	45 440	116	1 471	207	1 863	2 650	48 775	48 757	68 222	116 979
1975-76	2 440	58 143	112	1 807	252	3 321	2 804	63 272	73 190	87 361	160 551
1976-77	2 635	74 912	148	2 894	354	7 071	3 137	84 877	85 669	92 007	177 676
1977-78	2 420	75 245	214	4 159	199	3 150	2 833	82 565	81 487	117 094	198 581

(a) Alterations and additions to houses valued at \$10 000 and over are included with the number and value of dwellings up to 1972-73 but excluded thereafter; from 1973-74, alterations and additions to houses valued at \$10 000 and over are included in 'other building'.



(Chapter 14)

Education: Post Secondary and Tertiary, Tasmania

Year	Technical colleges			College of Advanced Education		University	
	Number of colleges	Teaching staff	Students, aggregate enrolment	Teaching staff full-time	Students	Teaching staff full-time	Total students enrolled
1900.....	1	n.a.	(a) 41	..	..	9	51
1905.....	4	28	(b) 756	..	..	9	67
1910.....	4	34	(b) 614	..	..	10	147
1915.....	5	40	(b) 955	..	..	17	258
1920.....	4	63	1 152	..	..	23	179
1925.....	4	64	1 049	..	..	28	173
1930.....	4	67	1 950	..	..	29	449
1935.....	4	83	1 037	..	..	36	229
1940.....	6	169	2 015	..	..	47	(c) 452
1945.....	6	206	2 951	..	..	43	503
1950.....	9	287	5 092	..	..	80	670
1955.....	(d) 13	(d) 396	(d) 6 151	..	..	(e) 78	783
1960.....	11	524	7 565	..	..	108	1 332
1961.....	12	480	6 499	..	..	110	1 460
1962.....	11	509	6 946	..	..	120	1 572
1963.....	(f) 10	(f) 539	(f) 7 587	n.a.	n.a.	127	1 691
1964.....	9	590	7 692	n.a.	n.a.	131	1 863
1965.....	12	588	7 916	n.a.	n.a.	145	2 083
1966.....	11	745	7 962	n.a.	n.a.	163	2 346
1967.....	10	787	8 200	n.a.	n.a.	164	2 443
1968.....	(g) 7	(g) 845	(g) 8 159	52	1 052	169	2 592
1969.....	7	774	8 125	52	1 121	193	2 830
1970.....	7	739	8 069	53	1 134	202	3 119
1971.....	7	754	6 849	62	1 142	220	3 444
1972.....	7	566	7 234	115	1 811	248	3 371
1973.....	6	707	7 519	165	2 003	254	3 263
1974.....	7	911	9 826	184	2 261	270	3 414
1975.....	9	866	10 254	203	2 435	280	3 399
1976.....	10	1 070	11 155	206	2 642	r 293	3 536
1977.....	n.y.a.	n.y.a.	n.y.a.	201	2 586	298	3 525
1978.....	n.y.a.	n.y.a.	n.y.a.	210	2 796	309	3 517

(a) Average quarterly enrolments.

(b) Individual students.

(c) Gross enrolments from 1936 to 1949; individual enrolments thereafter.

(d) Includes schools at which Senior Technical Classes were held.

(e) Excludes part-time teaching staff from 1952.

(f) Includes School of Art from 1963 and Conservatorium of Music from 1964.

(g) Excludes School of Art, Conservatorium of Music and details of advanced education courses conducted at other institutions.

(Chapter 14)

## Education: Primary and Secondary, Tasmania

Year	Government schools			Non-government schools		
	Number of schools	Teaching staff	Students (a)	Number of schools	Teaching staff	Students (b)
1900	309	(c) 612	24 157	224	n.a.	9 749
1905	343	600	24 043	167	n.a.	8 323
1910	367	677	30 805	124	420	6 278
1915	457	968	35 812	92	322	5 944
1920	470	1 102	39 360	84	317	5 872
1925	515	1 315	39 910	75	312	6 103
1930	508	1 358	40 032	66	326	5 862
1935	516	1 282	39 332	65	324	5 794
1940	431	1 398	37 369	63	329	6 139
1945	356	1 511	35 925	59	321	6 987
1950	332	1 687	46 394	58	375	8 330
1955	291	2 277	60 779	57	424	10 454
1960	287	2 540	65 049	60	544	12 716
1961	289	2 479	66 624	66	570	13 435
1962	286	(d) 2 771	68 346	66	597	13 673
1963	288	2 955	69 633	66	595	14 194
1964	293	3 075	70 643	64	635	14 385
1965	296	3 243	71 615	64	666	14 688
1965	294	3 374	72 461	64	686	14 743
1967	297	3 531	74 265	65	695	14 913
1968	291	3 571	76 109	68	753	14 974
1969	295	3 666	78 339	67	760	14 740
1970	283	3 756	79 385	68	810	14 623
1971	283	3 796	80 092	68	775	14 415
1972	280	3 845	79 957	66	791	14 098
1973 (e)	280	3 937	79 705	65	684	14 237
1974 (e)	279	4 099	79 835	65	710	14 407
1975 (e)	285	4 310	80 917	66	736	14 597
1976 (e)	284	4 430	81 182	71	739	14 431
1977 (e)	r 284	4 511	80 872	r 70	r 756	14 446
1978 (e)	291	4 584	80 582	67	757	14 688

(a) Aggregate enrolment for whole year prior to 1960. From 1960 as at 1 August and excluding adult correspondence students.

(b) Aggregate enrolment for whole year to 1919. From 1920 to 1961 enrolment as at 31 December and thereafter at 1 August.

(c) Includes teachers, pupil-teachers and paid monitors; excludes training college staff, junior monitors, subsidised teachers, etc.

(d) Includes part-time teachers but excludes teachers at special schools from 1962.

(e) Full-time plus full-time equivalent of part-time teachers.

(Chapter 15)

## Commonwealth Social Service Benefits Paid in Tasmania

Year	Family allowances, total amount paid (a)	Maternity allowance		Unemployment benefit		Sickness benefit		Special benefit (b)	
		Claims admitted	Amount paid	Claims admitted	Amount paid	Claims admitted	Amount paid	Claims admitted	Amount paid
	\$'000	no.	\$'000	no.	\$'000	no.	\$'000	no.	\$'000
1912-13	-	3 611	n.a.	-	-	-	-	-	-
1944-45	1 057	5 582	n.a.	-	-	-	-	-	-
1949-50	2 483	7 408	n.a.	151	4	2 840	74	126	8
1954-55	(c) 4 065	7 940	255	471	(d) 32	1 943	(d) 103	106	24
1959-60	4 719	8 985	285	3 186	242	1 883	135	130	39
1960-61	5 484	9 007	296	3 995	229	1 893	134	102	39
1961-62	4 993	8 942	289	8 273	696	2 000	163	93	38
1962-63	5 045	8 560	277	7 141	783	2 099	203	111	44
1963-64	6 113	8 437	272	6 720	750	2 167	215	135	52
1964-65	6 306	7 821	251	5 255	583	2 238	201	122	52
1965-66	6 318	7 578	243	2 742	275	2 040	174	122	57
1966-67	6 912	7 606	243	3 166	228	2 147	190	160	47
1967-68	6 612	7 939	254	3 746	264	1 952	165	99	42
1968-69	6 710	8 373	267	3 984	297	2 070	166	403	55
1969-70	7 416	8 130	259	3 825	360	2 194	199	429	68
1970-71	6 686	8 594	274	4 388	366	2 687	327	388	71
1971-72	7 196	8 211	260	8 974	966	2 964	497	418	79
1972-73	8 185	7 615	241	12 536	2 095	3 295	792	459	128
1973-74	7 212	7 296	230	11 642	3 125	3 975	1 247	574	224
1974-75	6 610	7 225	229	22 088	7 746	4 144	1 692	800	443
1975-76	7 766	7 210	215	30 930	15 256	5 018	2 409	1 760	811
1976-77	31 197	6 729	215	23 981	17 963	4 662	2 380	1 827	979
1977-78	30 968	6 836	213	27 337	23 398	4 284	2 385	1 792	804
1978-79	n.y.a.	n.y.a.	n.y.a.	26 294	28 609	3 881	2 024	2 071	1 299

(a) Known as "child endowment" up to 1975-76; replaced by increased "family allowances" from 1 July 1976 in conjunction with abolition of tax rebates in respect of dependent children.

(b) Includes payments to migrants.

(c) Endowment extended to first child from 20 June 1950.

(d) Rates payable were doubled from 22 September 1952.

Statistical Summary

(Chapter 15)

Commonwealth Pensions: Tasmania

Year	Age and invalid pensions						War pensions (a)		Widows' pensions	
	Number of pensioners		Expenditure on pensions		Weekly rate (b)	Operative from	Number in force	Amount paid	Number in force	Amount paid
	Age	Invalid	Age	Invalid						
	no.	no.	\$'000	\$'000	\$	date	no.	\$'000	no.	\$'000
1909-10	3 245	-	159	-	1-00	1.7.1909	-	-	-	-
1914-15	4 528	1 349	223	68	1-00	..	-	-	-	-
1919-20	4 806	1 947	364	145	1-50	1.1.1920	9 551	524	-	-
1924-25	5 856	2 036	503	180	1-75	13.9.1923	10 770	590	-	-
1929-30	7 678	2 456	753	248	2-00	8.10.1925	12 321	695	-	-
1934-35	8 495	2 975	737	263	1-75	23.7.1931	12 523	724	-	-
1939-40	10 614	2 552	1 055	256	2-10	26.12.1940	11 729	808	-	-
1944-45	9 512	2 699	1 271	368	2-70	19.8.1943	12 081	1 103	1 564	207
1949-50	11 402	3 158	2 359	670	4-25	21.10.1948	19 168	2 036	1 384	314
1950-51	11 548	2 885	2 819	724	5-00	2.11.1950	21 407	2 595	1 366	323
1951-52	11 716	2 762	3 457	831	6-00	1.11.1951	22 863	3 121	1 358	376
1952-53	12 380	2 602	4 107	879	6-75	2.10.1952	23 966	3 429	1 380	441
1953-54	12 906	2 605	4 358	908	7-00	29.10.1953	24 935	3 641	1 371	461
1954-55	13 679	2 681	4 795	967	7-00	..	25 731	3 934	1 409	475
1955-56	14 074	2 596	5 605	1 063	8-00	27.10.1955	26 483	4 035	1 419	537
1956-57	14 847	2 812	5 887	1 183	8-00	..	26 751	4 054	1 476	607
1957-58	15 114	2 883	6 527	1 315	8-75	24.10.1957	27 238	4 424	1 581	677
1958-59	15 434	3 070	6 660	1 419	8-75	..	27 621	4 458	1 663	741
1959-60	15 835	3 206	7 471	1 605	9-50	8.10.1959	28 048	4 832	1 773	833
1960-61	16 552	3 338	(c) 10 101	..	10-00	6.10.1960	28 305	5 166	1 849	940
1961-62	17 522	3 299	11 404	..	10-50	5.10.1961	28 398	4 988	1 912	1 037
1962-63	17 760	3 343	11 717	..	10-50	..	28 214	5 668	1 977	1 084
1963-64	18 303	3 363	12 343	..	11-50	14.11.1963	27 913	6 158	2 109	1 467
1964-65	18 892	3 532	13 184	..	12-00	1.10.1964	27 109	6 214	2 248	1 699
1965-66	19 181	3 444	13 439	..	12-00	..	26 446	6 919	2 327	1 791
1966-67	19 590	3 530	14 574	..	13-00	13.10.1966	25 629	6 645	2 432	1 988
1967-68	20 411	3 548	15 414	..	13-00	..	25 015	6 790	2 588	2 125
1968-69	21 029	3 819	16 768	..	14-00	10.10.1968	24 485	7 622	2 678	2 465
1969-70	23 915	4 051	19 517	..	15-00	9.10.1969	23 807	7 835	2 958	2 927
1970-71	24 894	4 316	21 835	..	15-50	8.10.1970	23 254	8 230	3 138	3 327
1971-72	25 668	4 498	25 543	..	16-00	8.4.1971	..	..	..	..
1972-73	29 107	4 855	33 656	..	17-25	7.10.1971	22 512	9 094	3 205	3 842
1973-74	31 904	5 087	r 43 032	..	18-25	4.5.1972	..	..	..	..
1974-75	34 269	5 460	60 118	..	20-00	Aug. 1972	21 905	9 857	3 600	5 136
1975-76	35 594	6 091	77 976	..	21-50	Mar. 1973	..	..	..	..
1976-77	36 954	6 612	91 788	..	23-00	Aug. 1973	21 987	11 176	3 932	6 582
1977-78	r 38 204	r 6 205	107 203	..	26-00	Apr. 1974	21 474	13 697	4 103	8 521
1978-79	38 885	6 427	117 678	..	31-00	Aug. 1974	20 778	14 827	4 209	11 221
					36-00	Apr. 1975	20 062	16 637	r 4 572	12 455
					38-75	Aug. 1975	18 844	18 676	r 5 001	14 660
					41-25	Apr. 1976	..	..	..	..
					43-50	Aug. 1976	..	..	..	..
					47-10	Apr. 1977	..	..	..	..
					49-30	Nov. 1977	..	..	..	..
					51-45	May. 1978	..	..	..	..
					53-20	Nov. 1978	..	..	..	..

(a) Excludes pensions in respect of the Boer War which are paid by the United Kingdom.

(b) Maximum single rate payable; subject to Means Test.

(c) Separate figures for age and invalid pensions not available from 1960-61.

(Chapter 17)

## Employment; Unemployment; Wage Rates and Earnings, Tasmania

Year	Civilian employees at 30 June	Unemployment			Prescribed weekly wage rates, adult males, Hobart at 31 December		Average wage rates and earnings, Tasmania		
		Labour force surveys (a)	Persons registered with C'wealth employment service (b)	Persons receiving unemployment benefits (c)	Basic wage (d)	Minimum wage (e)	Weighted average minimum weekly wage rates, adult males at 31 December (f)	Average weekly earnings per employed male unit for June qtr.	
								Amount	Increase (g)
	('000)	('000)	no.	no.	\$	\$	\$	\$	per cent
1939			..	..	7-70	..	9-22		
1940			..	..	8-10	..	9-61		
1941			..	..	8-50	..	10-35		
1942			..	..	9-20	..	11-17		
1943			..	..	9-50	..	11-58	n.a.	n.a.
1944			..	..	9-40	..	11-53		
1945			..	..	9-40	..	11-56		
1946			n.a.	83	10-30	..	12-45		
1947			243	44	10-70	..	13-54		
1948			204	28	11-80	..	15-19		
1949			276	32	12-80	..	16-43	16-66	n.a.
1950			208	32	16-00	..	19-80	19-32	16-0
1951			169	10	19-90	..	23-82	23-74	22-9
1952			643	104	23-00	..	27-22	29-08	22-5
1953			812	323	24-20	..	28-33	30-86	6-1
1954			555	109	24-20	..	28-77	32-78	6-2
1955			560	45	24-20	..	29-36	35-86	9-4
1956			553	71	25-20	..	31-39	37-80	5-4
1957			1 585	410	26-20	..	31-85	39-20	3-7
1958			2 231	639	26-70	..	32-36	40-20	2-6
1959			2 109	670	28-20	..	34-71	40-30	0-3
1960			2 204	500	28-20	..	35-15	44-50	10-4
1961			3 213	1 336	29-40	..	36-27	44-70	0-4
1962			3 609	1 778	29-40	..	36-48	47-80	6-9
1963			3 427	1 777	29-40	..	37-29	48-30	1-0
1964			2 968	1 399	31-40	..	39-69	49-90	3-3
1965			2 235	926	31-40	..	40-73	52-70	5-6
1966	115-4		1 695	433	33-40	..	43-27	(h) 55-20	4-7
1967	118-7		2 116	526	34-40	38-15	45-31	60-10	8-9
1968	121-8		2 088	635	35-75	40-45	48-98	63-20	5-2
1969	124-6		2 120	600	36-80	43-00	52-00	67-70	7-1
1970	127-8		1 888	437	36-80	43-00	54-49	74-30	9-7
1971	125-5		2 682	782	39-00	47-00	60-86	84-80	14-1
1972	126-8		3 498	1 697	41-00	51-70	67-18	92-00	8-5
1973	129-2	3-5	3 718	2 330	43-50	60-70	76-80	102-00	10-9
1974	133-7	4-2	3 310	1 769	46-00	68-70	106-02	121-10	18-7
1975	137-3	4-4	6 190	4 439	50-00	83-50	117-27	151-40	25-0
1976	135-0	6-7	8 986	7 228	62-90	102-30	134-14	165-10	9-0
1977	137-1	8-5	8 786	7 078	72-40	114-00	147-58	185-50	12-4
1978	137-3	10-2	11 944	9 757	77-50	121-90	158-86	201-10	8-4
1979	138-9	11-1	12 791	10 420	(i) 80-00	(i) 125-80	n.y.a.	217-80	8-3

(a) At May each year except for June in 1978.

(b) Persons on register on Friday nearest the end of June who claimed, when registering with the Commonwealth Employment Service, that they were not employed and who were recorded as unplaced. Includes those referred to employers and those who may have obtained employment without notifying the Commonwealth Employment Service and also those receiving unemployment benefit. The Commonwealth Employment Service commenced operating in May 1946. (Source: Department of Employment and Youth Affairs.)

(c) Persons on benefit on last Saturday of June. Unemployment Benefit was first paid in July, 1945. (Source: Department of Employment and Youth Affairs.)

(d) The rates shown up to and including 1966 are those in Commonwealth awards. State Wages Boards awards are shown from 1967. The Commonwealth and State rates prior to 1967 were identical except between 1956 and 1959 when the States rates were slightly higher.

(e) The Tasmanian Wages Boards introduced the concept of the minimum wage in June 1967.

(f) Wage rates used to compile the index are the minimum rates prescribed for particular occupations in Commonwealth or State awards and in registered (and in some cases unregistered) agreements.

(g) Over June quarter of previous year.

(h) Earnings shown from 1967 are not strictly comparable with those for earlier years.

(i) Tasmanian decision of 13 July 1979 following National Wage Case decision of 27 June 1979.

(Chapter 17)

Consumer Price Index Numbers, Hobart (a)

Year	Food	Clothing	Housing	Household equipment and operation	Transportation	Tobacco and alcohol	Health and personal care	Recreation	All groups	
									Index no.	Increase, per cent (b)
1949-50	41.3	56.4	38.2	}	}	}	}	}	45.8	7.3
1954-55	74.9	84.8	57.9						74.3	4.9
1955-56	79.5	85.8	63.7	} n.a.	} n.a.	} n.a.	} n.a.	} n.a.	78.1	5.1
1956-57	82.9	88.2	69.7						82.8	6.0
1957-58	80.5	90.4	71.8						82.9	0.1
1958-59	81.7	91.3	73.8						84.1	1.4
1959-60	82.8	92.0	77.6						85.6	1.8
1960-61	92.4	93.5	81.9						90.3	5.5
1961-62	90.2	94.7	85.6	90.7	0.4					
1962-63	88.9	95.2	88.2	90.7	-					
1963-64	90.1	95.7	90.9	91.7	1.1					
1964-65	94.0	97.0	94.5	94.6	3.2					
1965-66	98.9	98.0	97.1	98.0	3.6					
1966-67	100.0	100.0	100.0	100.0	100.0	2.0				
1967-68	106.8	102.4	103.6	103.7	104.2	102.1	n.a.	104.6	4.6	
1968-69	105.3	104.5	108.4	105.8	108.1	105.0	} n.a.	106.1	1.4	
1969-70	106.4	107.9	112.6	107.4	111.2	107.3		108.5	2.3	
1970-71	109.6	111.9	117.4	110.9	116.2	115.6	103.2	112.6	3.8	
1971-72	112.9	118.5	124.2	119.3	126.6	124.7	119.8	119.9	6.5	
1972-73	120.0	125.6	131.8	123.8	132.1	134.7	125.8	126.7	5.7	
1973-74	141.4	142.4	146.9	132.8	139.6	152.7	141.0	142.6	12.5	
1974-75	158.6	171.8	180.9	156.4	165.3	169.4	174.1	166.7	16.9	
1975-76	177.5	200.9	216.4	183.9	196.7	206.3	138.5	100.0	190.0	14.0
1976-77	201.5	232.5	244.9	201.8	220.7	222.0	250.3	103.6	217.7	14.6
1977-78	224.3	257.1	264.6	220.0	241.6	232.2	302.6	110.2	239.1	9.8
1978-79	251.3	277.2	278.1	235.9	256.5	268.4	292.2	118.7	257.7	7.8

(a) Base of each index: year 1966-67 = 100.0 except 'Health and personal care' (December quarter 1968 = 100.0) and 'Recreation' (September quarter 1976 = 100.0)

(b) Over previous year.

Average Retail Prices (a) of Selected Items of Foodstuffs: Hobart (Cents)

(Chapter 17)

Year	Bread delivered	Flour (plain)	Tea	Sugar	Jam (plum) (b)	Potatoes	Butter (factory)	Eggs 1 doz	Bacon rashers	Beef rib without bone	Corned beef (brisket) (c)	Mutton (leg) (c)	Mutton chops (loin) (c)	Pork (leg)
	900 g	1 kg	250 g	2 kg	600 g	1 kg	500 g	55 g	250 g	1 kg	1 kg	1 kg	1 kg	1 kg
1901	2.3	2.4	6.8	9.3	4.5	1.4	12.5	10.6	9.3	11.2	9.3	9.0	10.4	11.7
1906	2.4	2.1	6.8	9.3	4.5	2.2	11.6	12.9	7.9	11.7	9.3	9.7	10.6	11.2
1911	2.6	2.8	6.8	9.7	4.7	4.7	12.1	12.1	11.9	11.7	9.3	8.6	10.6	11.2
1916	3.2	3.0	7.9	12.8	5.4	2.1	17.5	14.4	15.5	41.4	16.8	18.1	19.4	21.4
1921	5.4	5.3	9.6	22.0	9.0	1.9	23.7	18.8	19.4	22.0	18.1	17.6	20.1	28.0
1926	4.6	4.3	12.0	16.3	7.8	3.7	21.2	16.2	16.4	20.3	15.7	17.6	20.7	24.7
1931	3.4	2.5	12.8	16.8	7.1	1.9	17.1	12.0	13.0	16.5	13.0	10.8	14.8	17.9
1936	3.7	2.9	12.6	17.9	7.1	2.4	15.0	14.9	11.1	15.0	14.6	15.4	16.8	18.1
1941	4.6	3.7	16.8	17.9	6.4	2.4	18.4	15.9	16.0	19.8	16.5	15.9	17.2	23.1
1946	4.6	4.2	12.5	17.9	7.3	2.2	19.3	20.5	19.3	24.7	20.1	21.2	21.2	26.0
1951	7.8	6.4	21.3	21.2	14.0	7.6	27.9	40.8	21.8	42.3	38.1	42.1	40.1	67.2
1956	12.4	11.0	40.3	36.6	23.6	20.5	51.0	54.1	34.6	73.4	55.6	55.6	43.9	106.3
1957	12.8	11.0	39.1	38.4	26.5	11.1	50.5	54.8	35.4	72.1	52.9	54.0	42.1	104.1
1958	13.2	11.7	38.6	38.4	26.5	9.0	49.7	54.6	34.2	74.7	54.5	52.7	39.0	102.5
1959	13.6	12.0	38.4	38.4	25.8	12.0	50.0	55.0	34.4	79.4	59.3	49.2	33.7	103.8
1960	14.1	13.0	37.8	41.0	25.3	10.9	51.6	55.0	37.7	92.2	73.2	54.9	41.9	118.8
1961	14.5	13.3	38.3	42.3	25.0	20.2	52.4	57.1	39.5	98.3	85.8	56.2	45.9	119.5
1962	14.9	13.4	37.1	42.3	25.0	12.7	52.6	56.1	38.5	89.7	74.5	51.8	39.7	113.1
1963	15.2	13.8	36.5	42.3	24.7	9.3	53.2	57.6	39.5	95.2	76.9	54.7	41.0	123.5
1964	15.3	14.9	36.3	42.1	24.4	14.8	53.9	56.1	42.8	98.8	79.6	58.6	47.6	130.1
1965	15.7	15.0	36.3	41.8	24.1	20.5	54.7	60.2	49.6	111.3	87.3	65.7	55.8	136.5
1966	17.0	16.0	36.5	41.8	24.1	11.3	56.7	63.0	52.7	119.0	94.6	69.2	57.5	140.2
1967	18.0	16.6	36.6	46.0	24.4	15.5	57.3	65.7	54.9	125.9	100.5	71.4	62.2	145.1
1968	19.1	17.9	36.4	49.0	25.0	15.2	57.3	62.2	56.3	122.1	138.9	108.5	111.8	149.5
1969	20.1	18.5	35.2	49.2	25.9	13.4	59.7	68.3	54.6	116.0	135.8	106.3	108.0	147.5
1970	21.3	19.3	33.9	49.0	35.4	14.1	60.6	67.7	55.6	122.6	138.9	197.6	109.3	147.5
1971	23.5	19.2	35.3	48.0	36.8	14.5	62.0	64.4	55.2	127.4	144.4	107.4	107.6	148.8
1972	24.9	19.8	36.7	48.4	38.1	16.3	63.9	67.4	56.9	127.2	149.9	113.3	114.0	151.9
1973	27.0	20.7	35.6	47.9	40.0	20.5	63.9	75.2	57.6	145.3	175.0	148.8	149.3	171.3
1974	31.2	27.3	37.2	48.0	44.9	30.4	67.5	58.8	75.6	153.9	201.3	170.9	174.8	220.0
1975	39.2	32.6	49.7	52.4	52.1	19.6	77.0	93.7	91.9	136.7	180.8	171.5	173.1	256.6
1976	45.1	39.1	53.0	56.7	61.6	33.7	85.2	109.2	111.6	163.1	201.1	197.1	198.2	302.7
1977	49.2	n.a.	92.3	63.5	n.a.	26.6	91.5	123.4	123.0	181.4	218.7	238.9	240.0	326.1
1978	n.a.	n.a.	88.5	68.8	n.a.	35.8	91.3	128.5	126.5	202.3	247.5	269.8	277.8	344.5

(a) In almost all cases 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) From 1970 prices shown are for 'Apricot jam, 600 g'.

(c) From 1968 prices shown are for 'Silverside, lamb (leg), lamb chops (loin)', respectively.

## Appendix B

### METRIC CONVERSION FACTORS

Unit		Conversion factor	
Imperial	Metric	Imperial to metric (multiply imperial by)	Metric to imperial (multiply metric by)
<b>Length</b>			
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
<b>Area</b>			
square foot (ft <sup>2</sup> )	square metre (m <sup>2</sup> )	0.092 903 0	10.763 9
square yard (yd <sup>2</sup> )	square metre (m <sup>2</sup> )	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
<b>Mass</b>			
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
<b>Volume</b>			
pint	litre (L)	0.568 261	1.759 75
cubic foot (ft <sup>3</sup> )	cubic metre (m <sup>3</sup> )	0.028 316 8	35.314 7
cubic yard (yd <sup>3</sup> )	cubic metre (m <sup>3</sup> )	0.764 555	1.307 95
bushel (bush)	cubic metre (m <sup>3</sup> )	0.036 368 7	27.496 1
super foot true	cubic metre (m <sup>3</sup> )	0.002 359 74	423.776
super foot hoppus	cubic metre (m <sup>3</sup> )	0.003 004 51	332.833
ton measure (40 cubic ft)	cubic metre (m <sup>3</sup> )	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
<b>Energy</b>			
British thermal unit (Btu)	kilojoule (kJ)	1.055 06	0.947 813
<b>Power</b>			
horsepower (hp)	kilowatt (kW)	0.745 700	1.341 02
<b>Temperature</b>			
degree Fahrenheit (°F)	degree Celsius (°C)	$^{\circ}\text{C} = \frac{5}{9} (^{\circ}\text{F} - 32)$	$^{\circ}\text{F} = \frac{9}{5} ^{\circ}\text{C} + 32$

NOTE: 1 hectare (ha) = 10 000 square metres (m<sup>2</sup>)  
 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<sup>3</sup>) = 1 000 litres (L)

## Appendix C

### CHRONOLOGY AND LATER INFORMATION

#### Chronology: The Year 1979

##### *January*

A Czech migrant committed suicide outside the Hobart G.P.O. as a protest against the staging of the 1980 Olympic Games in Moscow. In cricket, Tasmania won the Gillette Cup Final after defeating Western Australia at the T.C.A. ground, Hobart. However, later in the month, the Australian Cricket Board rejected a move by Tasmania to gain full entry into the Sheffield Shield Competition. Subsequently Tasmania won its first Sheffield Shield game against Western Australia in Devonport. 'Job Search 1979'—a campaign to find 1 979 jobs in five weeks was launched by the Commonwealth Employment Service.

##### *February*

An inquiry was commenced into the initial choice and installation of boilers at St. Johns Park Hospital and their subsequent failure. In horse racing, Kubla Khan won the Hobart Cup and Jessephenie the Launceston Cup. Mr. N. C. K. Evers was appointed Director of Energy. Forestry Commission to produce hazelnuts for the local market. 117 workers retrenched at the North-West Acid plant at Burnie. 'Job Search 1979' concluded with a total of 2 554 jobs found—575 more than the target.

##### *March*

A joint Federal-State Government study recommended the go-ahead on a \$28m second Hobart Bridge. Renison Ltd announced an \$18m expansion program at its mine planned to boost its production of tin concentrate from 630 000 to 850 000 tonnes per year. Stronger demand by Japan for Tasmanian woodchips. The State Government to expand the South-West Conservation Area to more than 20 per cent of the State's total area with new boundaries in line with those recommended by the Cartland Committee of Inquiry. Supavynyl Products Pty Ltd of Bell Bay announced a \$350 000 expansion program which will double its employment and output. Two Victorian canoeists completed a circumnavigation of Tasmania in 66 days, taking the same course as Matthew Flinders. The State Government purchased a one-third share for \$1.5m in Electrona Carbide Industries to enable the Company to overcome financial difficulties. The Bell Bay Thermal Power Station to be converted from oil to coal. The conversion, expected to begin around 1981, was estimated to cost between \$20m and \$25m and to take three years to complete. The Electrolytic Zinc Co. announced plans for the construction of a \$20m sulphuric acid plant at its Risdon works.

##### *April*

Allegations of ill treatment at the Royal Derwent Hospital. An arsonist lit four separate fires in the Sandy Bay area in one hour and caused \$44 500 worth of damage. New domestic airfare structure announced which reduced fares by up to 40% during certain periods of the year.

##### *May*

Launceston magistrate, Mr B. H. Burkett, selected to head an independent inquiry into the Royal Derwent Hospital allegations made in April. Tasmanian oil poppy processors, Tasmanian Alkaloids Pty Ltd, told growers that their crops were not required because of continually declining market prices and restrictive international regulations. The growers stood to lose a crop worth several million dollars. Log truck drivers blocked timber supply to Tasmanian Pulp and Forest Holdings' woodchip plant at Triabunna for nine days in an endeavour to get more favourable contracts. Bizjets was given approval to operate a six-

month trial air service between Melbourne and Devonport. The two major airlines then matched Bizjets lower fares. The \$1.4m Kingborough Sports Centre was opened at Kingston. A \$10m contract signed for extensions to Goliath Portland Cement's Railton plant. The extensions were aimed at doubling output to one million tonnes per year by mid-1980. The Department of the Environment launched a State-wide tree planting scheme involving the supply of approximately 10 000 trees free of charge to municipal councils around the State. Former Labor MHA Mr Charles Batt, Mr Reg Hope and Mr Oliver Gregory won seats in the Legislative Council elections. MLC Assurance Co., owners of Eastlands shopping centre, announced a \$14m expansion plan for the centre including G.P. Fitzgerald and Co. and K Mart shops, a multi-level car park and an update of the existing building. Mr Charles Woodhouse appointed as the State's first Ombudsman. Less than a week after announcing lower fares, the two major airlines reduced the number of passenger services from Melbourne to the North West Coast. TAA's marketing manager, Mr K. M. G. Klennett, announced that Tasmania had become the top tourist destination in Australia replacing the previous leader, the Gold Coast.

### June

Launceston to have a central freight terminal as part of a \$20m program to revitalise the rail system in Tasmania. The Leader of the Opposition in the Senate, Senator Ken Wreidt, announced that he would seek endorsement for the House of Representatives' seat of Denison at the next Federal elections. Tasmania's Parliamentary Hansard in operation for the first time. A \$5.8m K Mart complex opened in Devonport. TAA and Ansett air fares to and from Tasmania rose by up to 12%. However, Ansett fares to and from Devonport did not increase; Bizjets announced a new low fare of \$29.75 for that route. The State Government extended its guarantee to the Electrona carbide works from \$6.5m to \$8.5m. The Chapman Report recommended that the Launceston City Council and seven surrounding councils be replaced by three larger councils. The State Government appointed Mr R. G. Shoobridge as a board of inquiry to investigate the operations of the Potato Industry Authority. As a result of the Premiers Conference and Loan Council meeting, overall Commonwealth payments to Tasmania (not including local government) were to rise by less than five per cent for 1979-80. Of the \$1.2m allowed in the State Budget of 1978-79 for assistance to the Mt Lyell Co., only \$200 000 had been drawn.

### July

The Premier, Mr Lowe, called a State election for 28 July, 18 months ahead of schedule. The *Mercury* newspaper had its 125th anniversary. A new energy policy involving investigation of fuel production from sugar beet was adopted by the State Labor Party. Fire gutted a 60 year old warehouse in Launceston causing \$500 000 damage. The Cranswick Inquiry Report into the St Johns Park boiler issue was released. The Inquiry found no evidence of 'kickbacks and corruption' but found that some individual officers of the Department of Housing and Construction were to blame for the bungle. Electrona Carbide Industries, still critically short of money, was taken over by White Industries, a Sydney-based company, in a \$1m deal. Cascade Brewery's new low alcohol beer went on sale in Southern Tasmanian hotels in draught form. The Port of Launceston Authority announced a \$2m five-year expansion program for the Australian National Line Wharf at Bell Bay. An Education Department study revealed a low level of numeracy in Tasmania's 14-year-olds. The ALP held a five seat majority after the State House of Assembly elections, 20 seats to 15. The Minister for Housing and Construction, Mr Chisholm, lost his seat and in close finishes Mr Cleary beat Mr McKinnon by 11 votes and Mr Baker beat Mr Haros by 13 votes for the seventh seat in Franklin and Denison, respectively. Southern Tasmania's record winter drought resulted in massive stock clearances and the possibility of disaster for hundreds of farms in the area.

### August

Tioxide Aust. Pty Ltd to spend more than \$3.5m at its Heybridge plant to lift the quality of its product and provide important environmental controls. The State Government ordered an inquiry into the marketing and financial operations of the Tasmanian Apple and Pear Marketing Authority (TAMA). This followed a seven to one vote of no confidence by fruit growers and Government authority members in the TAMA's executive director, Mr W. A.



Smith, who resigned later in the month. New ministers in the Labor Government Cabinet were Messrs Aulich, Field and Coughlan and Dr Amos who replaced Messrs Baldock, Lohrey, E. Barnard and Chisholm. Mr Geoff Pearsall was elected unopposed as the new Liberal Party leader. A \$13m retail development was proposed for Burnie. Extremely cold weather closed schools and highways in southern, central and western Tasmania. From the Commonwealth Budget, Tasmania was allocated \$1m as the first installment of \$32m for the second Derwent bridge. Aberfoyle Tin N.L. announced a \$16m expansion at its Que River operations and the E.Z. Co. announced a related mill expansion project at its West Coast mine to cost more than \$10m. Aberfoyle (Que River operations) announced that it would sell 2 000 000 tonnes of ore to the E.Z. Co. over a 10-year period. The North-West Acid Pty Ltd plant at Burnie closed down.

### September

Goliath Cement Holdings Ltd of Railton took over the Cornwall Coal Co. of Launceston in a \$1.6m deal. Two receiver-managers were appointed by the Tasmanian Government to manage the affairs of Air Express Ltd; previously the High Court dismissed a \$5.7m compensation claim by Air Express against Ansett. (The Tasmanian Government had a \$1m investment in Air Express Ltd.) The Bowen Park Visitor Centre at Risdon Cove opened to the public. Expansions worth \$3.6m completed at Myer's Launceston store. APPM completed a takeover deal worth \$30.6m for Tasmanian Pulp and Forest Holdings after offering \$6.05 per share, \$1 more per share than the amount offered by H. C. Sleigh Ltd. Mr Bill McKinnon (Labor), who lost his seat in the July 28 election, filed a petition in the Supreme Court claiming new Labor MHA in Franklin, Michael Aird, breached the *Electoral Act* by spending more than the statutory limit of \$1 500 on his election expenses. This began the so-called 'Electoral' or 'Constitutional Crisis' (see 'Later Information, Chapter 2' for a detailed account). The *Ombudsman Act* officially came into force. The Labor Caucus chose Mr Lohrey as its new nominee for the position of Speaker in the House of Assembly to replace Mr Eric Barnard. Mr Barnard, a former Cabinet Minister and speaker who had completed 20 years in Parliament, later resigned from State Parliament. Commitments for death duty and land tax relief were honoured in the State Government Budget for 1979-80. The Budget provided for an 11.8% increase in revenue spending, a 9% increase in the capital works program and a \$1.8m deficit. Ships over 25 metres in length were prohibited from sailing under the Tasman Bridge during peak traffic periods; in off-peak periods the passage of ships was to have priority and the bridge was to be closed to traffic. In Australian Rules football, Clarence won the T.F.L. Premiership, North Launceston the N.T.F.A. Premiership and Wynyard the N.W.F.U. Premiership. A number of major Government Departments were accused of mismanagement, unacceptable accounting and unexplained spending in the Auditor-General's report. Legislation brought the State Government's guarantee to Electrona Carbide Industries to \$10m. The H.E.C. announced a planned \$15m expansion to the Great Lake power scheme to increase water capacity as a buffer against prolonged dry spells. This was to involve increasing the height of the Miena Dam by almost 6 metres.

### October

A total of 23 Federal Government ministers came to Tasmania to attend the first Federal Cabinet meeting held in the State for 40 years. The Federal Cabinet announced the go-ahead for an \$8.1m Federal Courts centre in Davey Street, Hobart. The State Treasurer announced changes to the land tax system; no land tax would be payable on a person's principal residence regardless of its value. The Devonport Mall was opened. The State Government boosted its share holding in Carbide Electrona Industries to \$2.5m. The State Government took control of the Jolly Swagman Motel. Its total investment in the motel, valued at \$620 000, totalled \$780 000. Lee Cummins was crowned Miss Tasmania 1980. Hobart began increased permanent Saturday morning retail shopping with the opening of the new \$9.7m Centrepoint shopping and car park complex. The H.E.C. released a report which recommended a \$1.36 billion power development scheme involving the Lower Gordon, Franklin and King Rivers to meet the State's electricity needs until the year 2000. (See Chapter 9 for a summary of the H.E.C. Report.) The Minister for Education, Mr Holgate stated that one form of education would be given priority in each of the three regions of Tasmania. These were advanced education in the North, community education in the North-West and university education in

the South. State Emergency Service marksmen shot 630 pigs and 52 head of cattle on a Bridgenorth farm as a precaution against the spread of an unknown disease. It was later confirmed that the mystery disease was not foot and mouth disease although its exact identity was not determined. The Minister for Mines, Mr Polley, announced a three-year, \$3m program for re-opening the Beaconsfield gold mine including dewatering, rehabilitation, drilling and a feasibility study.

#### November

A new ballot system involving the rotation of names on the ballot papers used for House of Assembly elections became law. (This was the first time in 20 years that a bill introduced by a private member had been passed by Parliament.) The Potato Industry Authority and the Tasmanian Apple and Pear Marketing Authority were strongly criticised in reports tabled in State Parliament. The Government announced a major overhaul of these two bodies and also of the Dairy Industry Authority and the Egg Marketing Board. Nine joint feasibility fishing projects involving 68 foreign squid-fishing vessels were given approval to fish off Tasmania, Victoria and South Australia.

#### December

Wind gusts of up to 107 km.h<sup>-1</sup>, the highest recorded during December for 15 years, caused chaos on the roads and damage to many buildings. Woolworths closed its variety stores in Hobart, Launceston, Devonport and Ulverstone. The Tertiary Education Commission announced that teacher education courses should be offered by only one education body, either the University of Tasmania or the College of Advanced Education. However, the Commission delayed making a recommendation on which body this should be. Both bodies were called on to make further submissions on how they would run the courses if they had sole control. The ANRC announced that it had reduced the Tasmanian railways deficit by \$4.8m in the eight months after it took over the system in October 1978. In the 1977-78 financial year the railways lost \$17m. Air Tasmania began direct flights from Flinders Island to Sydney. The \$2.1m. Penny Royal Gunpowder Mill opened at Launceston. Hobart sloop *Charleston* was lost without trace on its way to the start of the Sydney-Hobart Yacht Race. Joint Russian-Australian fishing venture announced by the State Government. A cool-store fire in Burnie caused \$3m damage. Production at E.Z. Co. and Comalco severely affected by a Statewide power blackout. *Bumblebee IV* won line honours in the Sydney-Hobart Yacht Race; handicap winner was Tasmanian yacht *Screw Loose*. In the Melbourne-Hobart West Coaster Race, line honours went to *Nitro* and the handicap winner for the third year in succession was *Hot Prospect*. In the Queenscliff-Devonport Yacht Race line honours were taken by *Invincible* and the handicap winner was *Morning Mist*.

## LATER INFORMATION

### Chapter 2

#### *Electoral Crisis*

The Tasmanian 1979 'Electoral Crisis' began on 10 September 1979 when Mr Bill McKinnon (Labor) who lost his seat in Parliament in the 28 July election, filed a petition in the Supreme Court claiming that new Labor MHA in Franklin, Mr Michael Aird, had breached the *Electoral Act* by spending more than the statutory limit of \$1 500 on his election campaign. His petition claimed that the election should be declared void. On the advice of his solicitor, Mr Aird refrained from taking his seat in Parliament. At that stage only 22 of the 87 candidates had lodged statements of their campaign spending with the State Electoral Office. Technically, 16 of the 20 Labor members elected and 12 of the 15 Liberal members had breached the *Electoral Act*. The crisis escalated on 14 September when petitions were lodged in the Supreme Court by Mr Aird and four unsuccessful Labor candidates asking that the election of the 15 Liberal Members of the House of Assembly be declared invalid. On the same day State Government member Mr Eric Barnard resigned leaving a vacancy in the Franklin electorate.

The issue was complicated when the Australian Democrats filed petitions in the Supreme Court against nine Government and opposition MHAs in Denison and Franklin and the Opposition filed petitions in the Supreme Court against 19 members of the Government. The State Government considered and rejected the possibilities of retrospective legislation and a Royal Commission as means of solving the problem. Ironically, at the end of September Mr McKinnon easily won the recount for the Franklin seat vacated by Mr Eric Barnard.

On 8 October Mr Aird and his supporters announced that they would drop their Supreme Court actions against the Liberal members. The next day Mr McKinnon and the Democrats followed suit. Three days later the Liberal Party decided not to proceed with their petitions. However, two Liberal petitioners, Mr George Brookes and Mr Terry Bower decided to proceed with petitions. Subsequently, in a Supreme Court hearing on 19 October, Mr Justice Nettlefold dismissed petitions which had challenged the election to the House of Assembly of all Liberal and most Labor Government MHAs. Those remaining under challenge were the Labor members for Bass and Denison. On 23 October Mr Bower's barrister alleged that Messrs Devine, Amos and Green had spent more than \$1 500 on electoral expenses. The petition against Mr Batt was dismissed after the Court was told no evidence would be offered.

On 26 October the Crown Advocate, Mr W. J. D. Cox, charged 75 members and political candidates, including the Premier and the Leader of the Opposition, with having failed to file election expenses returns by the due date. On 19 November, 52 MPs and candidates were fined when they pleaded guilty to the charges.

On 28 November, the State Government introduced legislation into Parliament which provided for by-elections instead of recounts to fill vacancies when elections are declared void. The legislation was passed by the Legislative Council with a vote of 12 to 4. It amended the *Electoral Act* so that if the election of one member is declared void, a new election for that one vacancy must be held; if the election of more than one member is declared void, then an election for all seats in that electoral division is required. On 7 December, two ministers, Dr Amos and Mr Batt, were accused of using threats and abuse to Legislative Councillors, Mr Lowrie and Mr Coates, in relation to the issue.

The electoral crisis culminated on 18 December when Mr Justice Nettlefold declared void the election of Labor members Mr Batt, Dr Amos and Mr Green for exceeding the \$1 500 legal limit for campaign expenses. Consequently, under the State's new by-election laws the other four Denison seats automatically fell vacant. Mr Justice Nettlefold's decision came 99 days after Mr McKinnon lodged his petition. The by-election was scheduled for 16 February, 1980.

In the by-elections for Denison held on 16 February 1980, Dr Norman Sanders of the Australian Democrats won the seventh seat in Denison. Mr John Green (Labor) lost his seat but the other six seats were retained by those members elected originally on 28 July 1979.

## Chapter 10

### EXPORT FINANCE AND INSURANCE CORPORATION

The Export Finance and Insurance Corporation (EFIC) is a public instrumentality guaranteed by the Federal Government. EFIC's statutory function is the encouragement of trade with overseas countries by providing a specialised range of insurance, guarantees and financing facilities not normally obtainable from commercial insurers. It is required to operate on commercial lines and to be self-supporting. Australia-wide, EFIC has approximately 1 200 policyholders and insures approximately \$1 200 million worth of Australian exports each year.

#### *Range of EFIC Facilities*

Facilities provided by EFIC fall into five main categories:

- (i) Insurance of exporters against the risk of non-payment by overseas buyers for a variety of commercial, economic and political risks.
- (ii) Guaranteeing Australian banks and financial institutions in respect of finance they provide to Australian exporters.

- (iii) Financing, in special circumstances and at concessional rates of interest, Australian exports of capital goods and related services.
- (iv) Insuring Australian firms investing in enterprises in foreign countries against the risk of loss from expropriation, war damage or exchange transfer delays.
- (v) Assisting banks and insurance companies to provide the various types of bonding facilities.

*Credit Insurance Facilities:* This coverage is provided through a variety of policies designed to meet the needs of the Australian exporter. The policies include:

- (i) Comprehensive policies to cater for the exporter who has a continuing business with a variety of overseas customers. These provide cover in both the pre and post-shipment period.
- (ii) Specific and extended terms policies to protect the exporter against the risks associated with the manufacture of specialised equipment with a long delivery period and against the post-shipment risks where his buyer requires extended credit.
- (iii) Special policies to provide protection for services contracts, leasing contracts, external trade business, consignment stocks held overseas, goods processed overseas and construction works contracts.

*Direct Lending by EFIC:* Direct lending by EFIC is confined to companies exporting capital equipment and services associated with such equipment. Loans may be provided where the Australian exporter is confronted with competition from overseas which offers both extended credit terms and a lower interest rate to customers than is obtainable through Australian financing institutions. EFIC may finance sales by lending 85 per cent of the contract value to the overseas buyer. The funds for this finance are made available to EFIC by Australian trading banks at commercial interest rates. The difference between that rate and the concessional interest rate at which EFIC lends to the overseas buyer is reimbursed to EFIC by the Australian Government.

*Insurance Coverage for Australian Investment Overseas:* EFIC provides insurance cover for Australian firms investing in overseas countries. The cover offers protection against loss from: (i) expropriatory action against the insured foreign enterprise; (ii) exchange transfer blockages being imposed on the remittance of dividends and interest or repatriation of capital and loans; and (iii) war damage to the physical assets of the foreign enterprise.

*Facilities for Bonding Requirements:* For these facilities the underlying export contracts must be acceptable for support in conjunction with EFIC's other facilities. For 'bid' or 'tender' bonds the exporter must undertake to credit insure, under the appropriate facility, any insurable risk for the proposed contract if awarded to the company in question.

*Bond Indemnities:* EFIC can issue indemnities to banks, other financial institutions and insurers to support the issue of a bond or guarantee to an overseas party. This is known as the bond indemnity facility. Indemnities issued to bond givers are for 100 per cent of the portion of the bond value supported by EFIC and are expressed in Australian dollars. The issue of such bond indemnities is conditional upon the exporter entering into a recourse agreement with EFIC.

*Bond Insurance:* EFIC can insure Australian suppliers of goods and services against the unfair calling of such bonds or guarantees.

#### *Assistance with Finance*

EFIC does not provide finance for goods sold on relatively short payment terms. However, claims payable under EFIC's policies may be assigned to the bank or financial institution that is backing the policyholder. In this way, the EFIC policy can be used by the exporter as a form of collateral security to assist in financing his export trade.

#### *Cost of Cover*

Premium rates are based on the markets to which the exporter ships and the length of credit which he extends to his overseas customers. At present, the average rate over the whole range of EFIC short-term business is less than 50c per \$A100 of exports insured.

*Activities within Tasmania*

The EFIC Office serving the Victoria-Tasmania region is located in B.H.P. House, 140 William Street, Melbourne (Telephone (03) 67 5302). Contact can also be made through the Regional Director, Department of Trade and Resources, Continental Building, 162 Macquarie Street, Hobart. During 1978-79, 11 Tasmanian EFIC policyholders had total export cover of \$1.95 million. Other Tasmanian companies had export insurance cover with EFIC arranged through their mainland head offices. Principal Tasmanian exports covered were dairy produce, fresh fruit and vegetables, and timber.

## 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 the Information Officer on *Hobart 20 4495*; or by writing to the *Deputy Commonwealth Statistician, G.P.O. Box 66A, Hobart 7001*. Those requiring particular publications on a regular basis should ask to be placed on the publications mailing list.

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* (1103.6), *Tasmanian Office, 1980*, 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*.

The following table lists all recent publications issued by the Tasmanian Office. A similar table is included on the back cover of each issue of the *Monthly Summary of Statistics* and all annual bulletins, showing the latest available issues and their dates of publication.

Publications of the Tasmanian Office of the Australian Bureau of Statistics (a)

Cat. no.	Publication	Latest issue (b)	Date of issue
GENERAL			
1101-6	Index of Towns, Localities and Standard Area Codes <i>irr</i>	1975	17-9-1975
1103-6	Catalogue of Publications, Tasmanian Office <i>irr</i>	1977	Nov. 1977
1301-6	Tasmanian Year Book (\$8-00; \$9-00 Tas; \$10-30 interstate) <i>a</i>	1979	4-9-1979
1302-6	Pocket Year Book of Tasmania (\$0-60; \$0-95 posted) <i>a</i>	1979	4-10-1979
1303-6	Monthly Summary of Statistics <i>m</i> *	Jan. 1980	23-1-1980
1304-6	Compendium of Local Government Area Statistics <i>irr</i>	1979	10-7-1979
DEMOGRAPHY AND SOCIAL			
3101-6	Demography <i>a</i> *	1978	30-9-1979
3201-6	Estimated Population of Local Government Areas in Tasmania <i>a</i>	30 June 1979	21-11-1979
3202-6	Population and Vital Statistics <i>q</i>	Sept. qtr 1979	24-1-1980
3301-6	Death, Causes of <i>a</i> *	1978	14-8-1979
3401-6	Visitor Survey <i>Sole issue</i>	1978	23-4-1979
4201-6	Education <i>a</i> *	1978	8-10-1979
4301-6	Hospital Morbidity <i>a</i> *	1978	20-9-1979
4302-6	Mental Health Statistics <i>a</i>	1976-77, 77-78, 78-79	9-1-1980
4501-6	Public Justice <i>a</i> *	1978	28-9-1979
TRADE AND FINANCE			
5401-6	Trade and Shipping <i>a</i> *	1976-77	27-11-1978
5402-6	Trade, Overseas <i>a</i>	1978-79	22-10-1979
5501-6	Local Government Finance <i>a</i> *	1977-78	30-4-1979
5601-6	Private Finance <i>a</i> *	1976-77, 1977-78	22-5-1979
5603-6	Friendly Societies, Report on <i>a</i>	1977	27-4-1979
LABOUR, WAGES AND PRICES			
6101-6	Labour, Wages and Prices <i>a</i> *	1977-78	7-12-1978
6301-6	Industrial Accident Statistics <i>a</i> *	1977-78	7-11-1979
AGRICULTURE			
7101-6	Agricultural Industry <i>a</i> *	1977-78	21-6-1979
7102-6	Principal Agricultural Statistics (preliminary) <i>a</i>	1978-79	28-5-1979
7201-6	Livestock Statistics (final) <i>a</i>	1978-79	23-11-1979
7202-6	Meat Production <i>a</i>	1978-79	22-10-1979
7203-6	Dairying and Dairy Products <i>a</i>	1977-78	26-1-1979
7204-6	Poultry Production <i>a</i>	1978-79	6-11-1979
7205-6	Wool Production and Disposal <i>a</i>	1977-78	20-11-1978
7206-6	Bee Farming <i>a</i>	1978-79	1-11-1979
7301-6	Crops and Pastures <i>a</i>	1977-78	22-1-1979
7302-6	Apples and Pears in Cool Stores (seasonal) <i>m</i>	Nov. 1979	21-12-1979
7303-6	Fruit <i>a</i>	1977-78	14-3-1979
7304-6	Potato Production <i>a</i>	1977-78	6-3-1979
7305-6	Hops <i>a</i>	1978-79	25-7-1979
7401-6	Rural Establishments, Number of, Irrigation and Fertiliser Usage <i>a</i>	1977-78	8-1-1979
7501-6	Agricultural Commodities Produced, Value of <i>a</i>	1977-78	27-6-1979

## Publications of the Tasmanian Office of the Australian Bureau of Statistics (a)—continued

Cat. no.	Publication	Latest issue (b)	Date of issue
<b>MANUFACTURING, MINING AND BUILDING</b>			
8202-6	Census of Manufacturing Establishments, Details of Operations and Small Area Statistics <i>a</i> *	1976-77	2-7-1979
8203-6	Sawmilling, Woodchipping, etc. Statistics <i>m</i>	Oct. 1979	9-1-1980
8204-6	Survey of Household Energy Sources <i>irr</i>	June 1978	3-10-1978
8301-6	Productive Activity, Miscellaneous Indicators of <i>m</i>	Sept. 1979	4-1-1980
8401-6	Mining <i>a</i> *	1977-78	7-9-1979
8601-6	Retail and Selected Services Establishments (Economic Census) <i>irr</i> *	1973-74	2-10-1975
8602-6	Wholesale Establishments (Economic Census) <i>irr</i> *	1968-69	24-8-1973
8603-6	Tourist Accommodation <i>q</i>	Sept. qtr 1979	10-1-1980
8604-6	Tourist Accommodation Establishments, Census of <i>irr</i> *	1973-74	29-8-1975
8701-6	Building Industry <i>a</i> *	1978-79	9-11-1979
8702-6	Building Approvals <i>m</i>	Nov. 1979	16-1-1980
8703-6	Building Statistics <i>q</i>	Sept. qtr 1979	16-1-1980
<b>TRANSPORT</b>			
9301-6	Motor Vehicle Registrations <i>m</i>	Dec. 1979	8-2-1980
9302-6	Motor Vehicle Census <i>irr</i> *	30 Sept. 1976	22-12-1977
9401-6	Road Traffic Accidents Involving Casualties <i>q</i>	Sept. qtr 1979	17-1-1980
9402-6	Road Traffic Accidents Involving Casualties <i>half-yearly</i>	30 June 1978	24-10-1979

(a) Publications are free of charge unless a price is shown. The name of each publication is followed by a symbol indicating the frequency of publication as follows: *m*—monthly, *q*—quarterly, *a*—annual, *irr*—irregular.

(b) As at 8 February 1980.

\* Statistical bulletin. These are generally at least 20 pages in length compared with most other publications which are the shorter 'press releases'.

### 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 priced 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 publications for which a charge is made, there are other Central Office publications which may be obtained free of charge by phoning Canberra (062) 52 6627 or Hobart 20 4495 or by writing to Information Services, Australian Bureau of Statistics, P.O. Box 10, Belconnen, A.C.T. 2616.

#### Subject Matter of Central Office Publications

The fields of statistical inquiry covered in Central Office publications are very wide (about 270 different titles are issued annually) 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 (1101.0)*. 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.



## INDEX OF SPECIAL ARTICLES

Special articles are indexed to broad subject areas rather than to detailed items; e.g. those of an historical nature are indexed under the entry 'Historical Articles'. The index covers all *Year Books* up to and including this edition.

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- Archaeology (Study of the Tasmanian Aborigine) . . . . . 1969 (3), pp. 69-72
  - Tasmanian Aboriginal Rock Carvings . . . . . 1971 (5), pp. 78-81
  - The Aborigines . . . . . 1967 (1), pp. 6-10
  - Wybalenna, The Tasmanian Aboriginal Settlement on Flinders Island . . . . . 1973 (7), pp. 10-13
  - Agent-General for Tasmania in London . . . . . 1974 (8), pp. 89, 90
  - Apple Industry, Economic Aspects of the Tasmanian . . . . . 1973 (7), pp. 236-248
  - Astronomy in Tasmania . . . . . 1976 (10), pp. 561-568
  - Australian Broadcasting Commission . . . . . 1972 (6), pp. 399-404
- Beech Forest Distribution** . . . . . 1969 (3), pp. 60, 61
- Bridging the—**Derwent; Tasman Bridge . . . . . 1967 (1), pp. 594-598
- Tamar; Batman Bridge . . . . . 1968 (2), pp. 557-560
- Burnie, Town of** . . . . . 1970 (4), pp. 141, 142
- Butterflies of Tasmania, The** . . . . . 1977 (11), pp. 66-96
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- Consumers Protection Council** . . . . . 1972 (6), pp. 114, 115
- Convicts, The** . . . . . 1967 (1), pp. 10-13
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  - Goliath Portland Cement Company Ltd . . . . . 1971 (5), pp. 355, 356
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