# Chapter 12

# TRADE, TRANSPORT AND COMMUNICATIONS

# OVERSEA AND INTERSTATE TRADE

#### Historical

As an important source of government revenue, sea trade of Tasmania was recorded from almost the date of the first settlement. In the "Statistical Tables, Van Diemen's Land, 1804 to 1823" appears the following entry for 1822 (as recorded in  $f_1$  sterling):

"Imports valued at £22,214.5.2. No duties on British goods. There were duties levied on goods from India, Batavia and Mauritius.

Exports valued at  $f_{157,928.18.0.}$ 

Nature of Exports—61,072 bushels wheat, 724 tons oil, 3 tons whalefins, 4,370 seal skins, 3,106 kangaroo skins, 150 hides, 7 logs of pine, 2 logs of beefwood, 1,000 bushels of salt, 157,467 pounds wool, 1,500 horses.

Customs' Duties collected £,22,001.16.0".

The "Statistics of Van Diemen's Land for 1838-1841" included the following data:

				Impo	orts	Exports		
Country				1838	1839	1838	1839	
Great Britain British Colonies United States Foreign States	••• ••• ••	  	  	556,746 129,602 2,661 13.947	573,491 150,061 6,013 17,322	321,871 251,604 8,000	326,369 545,196 3,600	
Total			•••	702,956	746,887	581,475	875,165	

"Value of Imports into, and Exports from, Van Diemen's Land During the Years 1838 and 1839" (f.) (a)

(a) Unit is sterling currency.

There is, in fact, 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 oversea. (An annual statistical series dissecting total trade in terms of "oversea" and "interstate" was later compiled back to 1860 but obviously the latter term had little significance before Section 92 of the Constitution made interstate "trade, commerce, and intercourse absolutely free".)

From Federation to 1909, statistics were collected and compiled by the newly formed Commonwealth Customs Department for *all* sea trade, but since 1910 only direct *oversea* trade has been recorded by the Customs. In an island

State, it became apparent that statistics of oversea trade alone were inadequate to record economic activity and, from 1922-23, the Government Statistician collected and published details of interstate trade; the collection of these data, now undertaken by the State Office of the Bureau of Census and Statistics, is carried out independently of the Customs Department and depends primarily on documents made available by Tasmanian Marine Boards and Harbour Trusts. To summarise, there is a *total* trade series from 1824 to 1909, an *oversea* trade series from 1910 to 1921-22 and a *total* trade series from 1922-23 to the present day.

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 sections: (1) By Sea, Oversea; (2) By Sea, Interstate; (3) By Air, Interstate.

#### Value of Trade from 1824

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 associated with long-term money series (including devaluations of Australian currency in 1930 and 1949):

		Value of	Imports			Value of	Exports		
Year	By	By Sea			By Sea		By Air		
	Oversea	Interstate	Interstate	Total	Oversea	Interstate	Interstate	Total	
1824	(a)	(a)		124	(a)	(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	(b)		(a)	1,040	(b)		(a)	
1919-20	1,626	(b)		(a)	4,022	(b)		(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	(c) 10,670	80,592	29,936	42,672	(c) 3,996	76,604	
1959-60	27,606	130,014	19,210	176,830	47,730	137,530	20,818	206,078	
1964-65	35,717	169,523	20,819	226,059	87,315	193,371	25,770	306,456	

Total Value of Trade by Sea and Air—Historical Summary (\$'000)

(a) Not available.

(b) Collection discontinued for period 1910 to 1921-22.

(c) First collected in 1949-50.

#### Note on Currency

The pre-Federation details were recorded in sterling; subsequent details have been recorded in  $\pounds A$  which had parity with sterling until 1930 when devaluation made  $\pounds A$  1.25 equal to the  $\pounds$  sterling. In the tables in this section, recorded figures have been converted to \$A by simply doubling the originals, irrespective of their year of occurrence:

## Definition of Oversea and Interstate

Tasmanian goods destined for other countries may pass from Tasmanian ports direct or by transhipment through other Australian ports. Similarly, oversea goods may reach Tasmania direct or by transhipment through other

## 546

Australian ports. The following sets out the classifications used in describing direct shipments and transhipments:

Particulars	Route of Goods to and from Other Countries	Classification of Transaction	Classification by Place of Origin or Destination		
Tasmanian Exports	(1) Shipped Direct from Tasmanian ports	Oversea	Country of Destination		
	(2) Discharged in other Australian ports be- fore shipment oversea	Interstate	Australian State where discharged		
Tasmanian Imports	(1) Shipped Direct to Tasmanian Ports	Oversea	Country of Origin		
	(2) Discharged in other Australian ports be- fore shipment to Tasmania	Interstate	Australian State from which shipment made		

#### **Classification of Imports and Exports**

By way of example, a new Japanese car transhipped in Melbourne and discharged in Tasmania is classified as an item of interstate trade and Victoria, not Japan, is classified as the place of origin. (Victorian oversea imports will include the entry of the vehicle from Japan.)

# Effect of Motor Vehicles on Total Value of Imports and Exports

Import and export details of motor cars and commercial vehicles include tourists' vehicles entering and leaving the State. The inauguration of the vehicular ferry service by the "Princess of Tasmania" in October, 1959, resulted in a sharp increase in the transport of vehicles as suggested in the following table:

Motor Cars and Commercial Vehicles (a)—Value of Imports and Exports (\$'000)

Particulars		1958-59	1959-60	1960-61	1961-62	1962-63	1963-64	
Imports	••		19,258	29,148	31,542	31,634	36,202	39,496
Exports	••	••	3,654	13,100	14,496	15,404	16,288	17,050

(a) As well as new and used vehicles, includes business and tourists' vehicles moving to and from the State.

Since Tasmanians do not carry out motor vehicle assembly on any extensive scale (and certainly not for export), it follows that total import and export values for 1963-64 are both inflated by approximately \$17,000,000 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

Oversea trade statistics are compiled from documents obtained under the Customs Act 1901-1960 and are supplied to the Commonwealth Bureau of Census and Statistics by the Department of Customs and Excise. Interstate sea trade statistics are compiled from trade warrants required under the authority of the Marine Act 1921 and made available to the Tasmanian branch of the Bureau by the various Marine Boards and Harbour Trusts. Statistics of inter-

*state 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.

# Values

All values subsequently quoted will be in terms of \$A. Attention is called to changes in the purchasing power of money in the periods covered by tables that follow.

The cost of importing goods into any country will theoretically contain four elements:

- (1) The "original" price at door of factory, warehouse, &c.
- (2) The cost of delivering goods to the ship "free on board".
- (3) Sea freight and associated charges between ports.
- (4) Delivery cost from port to buyer.

Trade statistics base values on the first two elements but exclude the third and fourth, as set out in the following definitions:

The basis of value for oversea imports is "transaction value, actual (f.o.b.)" or "domestic value (f.o.b.)" if higher. Oversea exports are valued *f.o.b.* at the Australian port of shipment as follows: (i) for goods sold before export the price at which the goods were sold, or (ii) for goods shipped on consignment—the current price offering for similar goods of Australian origin in the principal markets of the country to which the goods were despatched. Interstate imports and exports are valued f.o.b. at the port of shipment.

#### Tasmanian Ports

Although there are nine port authorities (known as Marine Boards or Harbour Trusts) in Tasmania, oversea trade is restricted to the ports of Hobart, Launceston, Burnie and Devonport. The names of ports in subsequent tables refer to the towns in which the controlling marine boards are located. Thus "Hobart" includes Port Huon; "Launceston" includes Bell Bay and Beauty Point, &c. On 1st January, 1963, the port of Ulverstone came under the control of the Marine Board of Devonport.

# Total Trade of Tasmania

The following table shows Tasmanian total trade and its components in recent years:

Total	Trade
(\$'	000)

		Impo	orts		Exports				
Year	By	Sea	By Air	Total	By Sea		By Air	Total	
	Oversea	Interstate	Interstate	Imports	Oversea	Interstate	Interstate	Exports	
1954-55 1955-56 1956-57 1957-58 1958-59 1959-60 1960-61 1961-62 1962-63 1963-64 1964-65	30,258 24,884 27,764 25,466 26,374 27,606 37,208 26,788 35,746 35,032 35,717	89,958 99,608 105,788 113,636 121,138 130,014 141,086 141,776 150,620 167,964 169,523	19,148 21,166 20,020 19,122 19,718 19,210 19,356 18,000 18,158 19,840 20,819	139,364 145,658 153,572 158,224 167,230 176,830 197,650 186,564 204,524 222,836	37,524 40,608 45,004 44,506 43,932 47,730 42,588 57,196 66,792 78,318 87,315	85,376 100,630 108,654 109,652 114,424 137,530 143,036 140,794 146,454 173,590 193,371	14,494 18,762 18,112 18,354 17,584 20,818 21,944 23,298 21,602 23,424 25,770	137,394 160,000 171,770 172,512 175,940 206,078 207,568 221,288 234,848 275,332 306 456	

It will be observed that interstate trade is the major element both in imports and exports. The next table shows the balance of trade (excess of exports over imports):

		Balance of Tr Exp	ade (Excess of orts)		Balance of Trade (Excess of Exports)		
Year		Total (\$'000)	Per Head of Mean Popula- tion (\$)	Year	Total (\$'000)	Per Head of Mean Popula- tion (\$)	
1954-55          1955-56          1956-57          1957-58          1958-59          1959-60	• • • • • • • • • • • •		$\begin{array}{r} - \ 6.30 \\ 45.06 \\ 56.05 \\ 43.03 \\ 25.72 \\ 85.00 \end{array}$	1960-61 1961-62 1962-63 1963-64 1964-65	9,918 34,724 30,324 52,496 80,397	28.33 97.40 83.74 143.36 218.42	

#### Balance of Trade (Sea and Air)

Note: Minus sign (-) means excess of imports.

#### **Balance of Payments**

Estimates of Australia's balance of payments are prepared for the purpose of providing a systematic record in money terms of the economic transactions which take place over a period between Australia and all other countries. No official estimates are prepared for a Tasmanian balance of payments—i.e. for all economic transactions between Tasmania and "the rest of the world, including the other Australian States". If such estimates were compiled, then the favourable balance of trade shown above would be merely a single item in a complex calculation involving the net outflow of dividends and interest, freight and insurance charges, inter-governmental financial transactions, net inflow of funds from tourism, &c.

#### Oversea Trade by Sea

From the earliest days, the United Kingdom was Tasmania's main oversea market and source of oversea imports; even today, the United Kingdom is the principal country in the State's oversea trade. In the last decade, however, trade with foreign countries has begun to assume greater importance, as shown in the following table:

Total Value of Trade by Sea With Commonwealth and Foreign Countries (\$'000)

	Val	ue of Imp	orts Fror	n—	Value of Exports To-				
Year	Common	wealth Co	ountries		Common	wealth Co	ountries		
	United Kingdom	New Zealand	Other	Foreign Countries	United Kingdom	New Zealand	Other	Foreign Countries	
1954-55 1955-56 1955-56 1957-58 1958-59 1959-60 1960-61 1961-62 1962-63 1963-64 1964-65	13,050 10,978 11,368 10,780 8,686 8,272 12,960 8,998 8,840 7,738 7,777	2,024 1,630 2,120 2,074 2,328 1,750 2,346 2,354 3,190 2,846 3,071	5,420 2,442 3,720 3,906 4,606 5,048 6,246 4,700 5,660 5,346 4,169	9,764 9,834 10,556 8,706 10,754 12,536 15,656 10,736 18,056 19,102 20,700	16,600 18,110 17,780 18,688 20,090 19,880 14,422 20,536 22,590 25,816 30,872	466 914 700 562 854 736 976 558 756 1,158 2,034	5,432 5,844 7,132 5,722 6,346 6,138 8,446 6,694 7,524 9,298 15,387	15,026 15,740 19,392 19,534 16,642 20,976 18,744 29,408 35,922 42,046 39,022	

# Trade with Selected Countries

The principal countries of origin for oversea imports shipped direct to Tasmania in 1963-64 are shown, followed by the value in \$ million: U.K., 7.7; U.S.A., 5.9; N.Z., 2.8; Japan, 2.8; Sweden, 2.0; West Germany, 1.7; Canada, 1.4. The principal countries of destination for oversea exports shipped direct from Tasmania (value in \$ million) were: U.K., 25.8; U.S.A., 8.5; West Germany, 6.5; Japan, 4.8; France, 4.3; Italy, 4.3; India, 3.3; Thailand, 2.7; Hong Kong, 1.8; Netherlands, 1.6.

The next table shows the trade of Tasmania with selected oversea countries for the three years to 1963-64; countries selected are those for which imports or exports approached or exceeded \$500,000 in any one of the three years under review.

Country of		Imports			Exports	
Origin or Destination	1961-62	1962-63	1963-64	1961-62	1962-63	1963-64
Commonwealth						
Countries—						
United Kingdom	8,998	8,840	7,738	20,536	22,590	25,816
Canada	1,400	2.046	1.363	146	246	230
Hong Kong	94	296	194	1,164	1,236	1,818
India	440	484	194	2,738	2,984	3,359
Malaya	164	2		760	928	1,452
New Zealand	2,354	3,190	2,846	558	756	1,158
Singapore	32	2	181	1,178	1,214	1,599
Other	2,570	2,830	3,414	708	916	840
Total	16,052	17,690	15,930	27,788	30,870	36,272
Foreign Countries-						
Arabian States	342	154	260	26	24	40
Belgium-Luxem-						
bourg	168	114	379	736	1,970	2,809
China, Mainland	106	288	461	422	538	204
Finland	558	660	493	70	102	95
France	146	396	421	3,052	3,294	4,278
West Germany	810	2,074	1,717	4,002	4,718	6,521
Indonesia	372	398	108	20	34	40
Iran	436	208	624	58		• •
Italy	546	1,522	504	2,876	3,488	4,250
Japan	784	1,604	2,770	4,372	3,968	4,786
Netherlands	442	616	904	1,512	2,258	1,568
Norway	528	234	196	94	110	82
Philippines				886	1,220	1,285
South Africa	246	898	984	62	114	125
Sweden	1,440	1,740	2,048	818	1,040	1,071
Switzerland	222	454	313	26	18	10
Thailand				1,638	2,332	2,712
Turkey	284	178	183	174	536	226
U.S.A	2,548	5,708	5,933	5,600	6,910	8,499
U.S.S.R				348	728	436
Other	758	810	804	2,190	1,764	2,518
Total	10,736	18,056	19,102	28,982	35,166	41,555
"For Orders" (a)				426	756	491
Grand Total	26,788	35,746	35,032	57,196	66,792	78,318

#### Trade With Oversea Countries (\$'000)

(a) Country of consignment not determined at time of shipment.

#### 550

# Oversea and Interstate Trade

# Tasmanian and Australian Oversea Trade

Before comparing the values of the oversea trade of Tasmania and Australia, it is necessary to take into account the value of outside packages, containers, crates, &c. in which goods are ordinarily imported from overseas. Such values have been omitted from all import tables in this chapter (except in the following comparative table), but they are normally included in trade statistics published by the Commonwealth Statistician. Export values in this chapter include the value of outside packages.

The following table compares the value of the oversea trade of Tasmania and Australia:

Pa	rticulars	1959-60	1960-61	1961-62	1962-63	1963-64	
	<u> </u>	Імі	PORTS			·	
Australia—	Total (\$'000)	1,854,182	2,175,154	1,769,492	2,162,670	2,372,658	
	Per Head (\$)	182.42	209.34	166.84	200.04	215.18	
Tasmania (a)—Total (\$'000)		28,062	37,746	27,248	36,364	35,513	
Per Head (\$)		81.54	107.82	76.40	100.42	96.98	
		Ex	PORTS				
Australia—	Total (\$'000)	1,875,364	1,937,686	2,154,568	2,151,812	2,782,460	
	Per Head (\$)	184.52	186.48	203.14	199.04	252.34	
Tasmania—	Total (\$'000)	47,730	42,588	57,196	66,792	78,318	
	Per Head (\$)	138,70	121.66	160.36	184.44	213.87	

Value of Oversea Trade-Tasmania and Australia

(a) Value of outside packages included: 1959-60, \$455,960; 1960-61, \$538,616; 1961-62, \$459,700; 1962-63, \$618,420; 1963-64, \$481,324.

The relatively low value of oversea trade, particularly imports, per head of Tasmanian population is due in part to the transhipment of goods in other Australian ports. In the case of imports, an additional factor appears to be the dependence of most of the State's major industries on raw materials produced within 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 freights in connection with Tasmanian trade take off from or land in Victoria.

The value of interstate trade by air, since 1961-62, has been as follows: Imports: 1961-62, \$18,000,000; 1962-63, \$18,158,000; 1963-64, \$19,840,000. Exports: 1961-62, \$23,298,000; 1962-63, \$21,602,000; 1963-64, \$23,424,000.

#### Interstate Trade by Sea

As might be expected with Melbourne the major port closest to Tasmania, the bulk of the island's interstate trade is transacted with Victoria. In 1963-64, Victoria was the source of 67 per cent of Tasmania's interstate sea imports and the destination of 45 per cent of its interstate sea exports. The next table shows the value of interstate sea trade with the Australian States in the period 1961-62 to 1963-64. Imports include the value of goods imported into other States from oversea and transhipped to Tasmania; exports include the value of goods exported to other States for transhipment oversea.

Austra	Australian State			Imports		Exports			
of Origin or Destination		1961-62	1962-63	1963-64	1961-62	1962-63	1963-64		
N.S.W.			32,828	33,176	35,226	55,812	56,842	73,415	
Victoria	• •		96,012	104,254	111,781	63,500	66,516	77,237	
Queensla	nd	• •	1,490	1,508	1,985	9,046	10,270	9,386	
S.A	••		10,356	10,268	16,609	8,522	8,852	9,391	
W.A.	••	••	1,090	1,414	2,363	3,914	3,974	4,161	
	Total	•••	141,776	150,620	167,964	140,794	146,454	173,590	

Value of Interstate Sea Trade (\$'000)

# Sea Trade of Tasmanian Ports

In the following table, the value of total imports and exports by sea is shown for each port:

	(+ 000)											
Port		Imp	orts	Exp	orts	Total Sea Trade						
		1962-63	1963-64	1962-63	1963-64	1962-63	1963-64					
Burnie		23,182	28,478	39,975	46.736	63.157	75.214					
Devonport		42,471	49,627	34,856	38,686	77.327	88.313					
Hobart		64,085	61.530	92,716	105,085	156,801	166.615					
King Island (Cur	trie)	1,064	1.084	1.817	2,678	2.881	3,762					
Launceston.		53,428	60,486	35,584	47.647	89,012	108.133					
Smithton		64	40	6	5	70	45					
Stanley	• •	139	173	1.531	1.326	1.670	1.499					
Strahan	••	1,794	1,578	6,743	9,745	8,537	11,323					
Ulverstone	••	(a) 139		( <i>a</i> ) 18	ý	(a) 157						
Total	•••	186,366	202,996	213,246	251,908	399,612	454,904					

Total Value of Sea Trade Classified According to Port (\$'000)

(a) July to December, 1962, only; port taken over by Devonport Marine Board from 1st January, 1963.

The next table compares the proportion of total sea trade values attributed to each port:

Total Value of Sea Trade—Port Proportions (Per Cent)

Port	1958-59	1959-60	1960-61	1961-62	1962-63	1963-64
Burnie Devonport Hobart King Island (Currie) Launceston Smithton Stanley Ulverstone	$ \begin{array}{c} 15.3 \\ 5.6 \\ 50.8 \\ 0.5 \\ 23.5 \\ 0.1 \\ 0.6 \\ 2.4 \\ 1.2 \\ \end{array} $	14.4 16.2 46.5 0.7 19.1 0.1 0.5 2.1 0.4	15.4 20.0 45.1 0.9 15.6 0.0 0.8 1.8 0.4	15.2 19.6 41.4 0.9 20.2 0.0 0.3 2.4 0.0	15.8 19.4 39.2 0.8 22.3 0.0 0.4 2.1 0.0	16.6 19.4 36.6 0.8 23.8 0.0 0.3 2.5 0.0
Total	100.0	100.0	100.0	100.0	100.0	100.0

#### Oversea and Interstate Trade

The marked increase in the proportion of total sea trade attributed to Devonport was due to the introduction of a roll-on roll-off ferry service to Melbourne in October, 1959; the drop in the proportion of sea trade attributed to Hobart is related to the increasing use of "sea-road" facilities available through the ports of Devonport, Launceston and Burnie. The vessels involved in the "sea-road" service to northern and north-western ports are the "Princess of Tasmania" and the "Bass Trader". As from June, 1964, similar facilities became available at Hobart when the "Seaway Queen" began a "sea-road" service to Melbourne, followed by the "Seaway King" operating a Sydney service from September, 1964; roll-on roll-off ferry services, both to Hobart and northern ports, were augmented by the "Empress of Australia" in January, 1965.

#### Air Trade of Tasmanian Airports

Although Tasmania has a number of airports, only six are used on a regular basis for interstate trade; four are located near Hobart, Launceston, Burnie and Devonport respectively and the remaining two on King and Flinders Islands respectively.

The following table shows the value of interstate air trade passing through Tasmanian air-ports:

		Imports		Exp	orts	Total Air Trade	
Airport		1962-63	1963-64	1962-63	1963-64	1962-63	1963-64
Hobart Launceston Devonport Wynyard (a) King Island Flinders Island	••• •• •• ••	9,023 5,785 1,238 1,388 542 182	10,218 5,974 1,386 1,473 583 206	2,789 17,638 186 215 684 90	3,080 19,102 221 201 709 111	11,812 23,423 1,424 1,603 1,226 272	13,298 25,076 1,607 1,674 1,292 317
Total	••	18,158	19,840	21,602	23,424	39,760	43,264

Total Value of Interstate Air Trade Classified According to Airport (\$'000)

(a) Including Smithton.

The percentage of the total value of air trade passing through each Tasmanian airport in 1963-64 was: Hobart, 30.7; Launceston, 58.0; Devonport, 3.7; Wynyard, 3.9; King Island, 3.0; Flinders Island, 0.7.

#### Commodities Carried by Air

It will be observed that the value of trade by air approaches 10 per cent of the value of total trade by sea and air combined. With regard to exports by air (valued at \$23,424,000 in 1963-64), the major group was "Woollen Manufactures and Other Textiles" valued at \$21,470,000; exports of all foodstuffs (meat, crayfish, fruit, &c.) accounted for a further \$1,067,400. For imports, there is a much greater range of commodities involved, the chief group being "Apparel and Attire" valued at \$11,648,000; the other major group of commodities was "Metals, Metal Manufactures and Machinery" valued at \$3,403,400.

# **Imports of Principal Commodities**

The next table shows the value of the principal commodities imported into Tasmania by sea and air during each of the years 1961-62 to 1963-64:

#### Imports of Principal Commodities by Sea and Air-Values (\$'000)

Commodity				1961-62	1962-63	1963-64
Beer, Wine and Spirits				2,640	2,750	2,739
Grains Unprepared—Wheat				2,764	2,796	2,418
Sugar				4,106	4,260	4,453
Tobacco, Cigars and Cigarettes				10,376	10,898	11,980
Other Food and Drink				15,700	15.584	18,943
Chemicals, Drugs, Fertilisers				6.230	8,730	10.455
Drapery, Clothing and Texiles				20.382	21.764	24.446
Metals, Metal Manufactures and Mach	inerv					,
Galvanised Iron, Corrugated and Pl	ain			2,458	2.578	2.679
Machines and Machinery				13 878	13,806	12,603
Motor Cars and Commercial Vehicle	es(a)			31 634	36,202	39,496
Motor Vehicle Chassis and Parts	00 (4)	••		2,050	1 986	2,253
Tinned Metal Sheets and Wire	••	••	•••	2,194	2,172	2,292
Pipes and Tubes	••	••		1 662	2,236	1 491
Other	••			21,456	22,226	24 714
Ores and Concentrates	••	••		6 858	7 272	8 381
Motor Spirit (including Aviation Spirit	it)	••		5 484	5 568	6 234
Kerosene (including Aviation Turbine	- Fuel)	••		296	348	415
Other Petroleum Oils	/ 1 401)	••		4 186	4 918	7 688
Paper and Stationery (including Wood	1 Pulp)	••		9 340	13 090	12,066
Rubber Goods	r r urp)	••		3,178	3,256	3 526
Wool Greesev	••	••		3,222	4 232	4 299
Not Elsewhere Included	••	••		16,470	17,852	19,265
THOU ENSEWHELE MERUded	••	••	••	10,470	17,052	17,205
Total Imports				186,564	204,524	222,836
1				,		

(a) As well as new and used vehicles, item includes business and tourists' vehicles entering State.

The table that follows shows the quantities of the principal commodities imported and has been compiled, as far as this is practicable, to match the preceding table of values.

Commodity	Unit of Quantity	1961-62	1962-63	1963-64
Alcoholic Beverages—         Ale, Beer, Stout and Cider         Wines         Spirits—Oversea         Interstate         Grains Unprepared—Wheat         Sugar         Tobacco, Cigars and Cigarettes         Fertilizers         Metals and Metal Manufactures—         Galvanised Iron, Corrugated and Plain         Motor Cars and Commercial Vehicles (a)         Pipes and Tubes         Tinned Metal Shcets         Wire         Ores and Concentrates         Motor Spirit (including Aviation Spirit)         Kerosene (including Aviation Turbine Fuel)	gall gall. gall. ton '000 lb. ton cwt. no. cwt. cwt. cwt. cwt. ton '000 gall. '000 gall.	327,986 395,355 22,134 131,004 47,379 23,542 2,029 100,091 374,598 17,732 222,504 96,737 193,722 312,990 47,214 2,228 4 910	347,545 370,452 13,328 141,303 47,041 24,384 2,066 85,759 361,290 21,139 260,031 115,997 181,383 359,564 47,812 2,433 6 472	315,713 382,298 18,188 138,892 41,304 25,381 2,292 82,401 365,979 23,334 200,895 114,247 200,511 371,167 55,892 3,681 6 132
· ·				· ·

Imports of Principal Commodities by Sea and Air-Quantities

(a) As well as new and used vehicles, item includes business and tourists' vehicles entering State.

# Oversea and Interstate Trade

# **Exports of Principal Commodities**

The following table shows the value of the principal commodities exported from Tasmania by sea and air during each of the years 1961-62 to 1963-64. The largest item listed—"Commodities Not Available for Publication" comprises the total export value of aluminium, alumina, ferro-manganese, calcium carbide, cement, paper, paper pulp, stationery, hardboard and plywood.

Exports of Principal	Commodities	by Sea	and	Air—Values
• •	(\$'000)	•		

Commodity	1961-62	1962-63	1963-64
Butter <t< td=""><td>3,942</td><td>4,368</td><td>4,371</td></t<>	3,942	4,368	4,371
	1,792	1,812	1,488
	14,422	16,558	18,040
	1,150	950	1,414
	3,832	3,080	2,079
	1,914	1,606	1,357
	1,646	2,652	3,364
Inter-Dect       Lamb and Mutton          Other       Other          Potatoes (Fresh)           Preserved Vegetables (including Dried)           Other Food and Drink (including Confectionery)           Fertilizers            Metal Manufactures (including Machinery)           Metals, Refined—Cadmium           Zinc           Ores and Concentrates—Silver-Lead	958 674 2,212 5,026 18,146 2,666 2,312 7,564 684 6,706 23,680 2,810 1,740	1,100 1,002 1,192 6,678 2,526 8,044 848 6,200 23,778 3,192 1,902	1,225 1,089 1,539 8,190 21,770 2,138 3,461 8,572 1,669 9,451 27,909 4,302 2,585
Other           Motor Cars and Commercial Vehicles (a)           Pigments, Paints and Varnishes           Timber—Dressed           Undressed           Wool, Greasy           Woollen Manufactures           Commodities Not Available for Publication (b)          Not Elsewhere Included           Total Exports	1,734	1,244	2,215
	15,404	16,288	17,050
	6,500	5,992	7,675
	2,524	3,092	3,348
	6,064	6,766	7,827
	14,206	15,338	17,605
	21,278	19,842	21,918
	45,853	50,804	67,951
	3,849	3,550	3,730
	221,288	234,848	275,332

(a) As well as new and used vehicles, item includes business and tourists' vehicles leaving State.(b) Commodities comprising this item are: aluminium, alumina, ferro-manganese, calcium

carbide, cement, paper, paper pulp, stationery, hardboard, and plywood.

The next table shows the quantities of the principal commodities exported and has been compiled, as far as this is practicable, to match the table of values.

Comm	odity	(a)		-	Unit of Quantity	1961-62	1962-63	1963-64
Butter Fish—Crayfish Other Fruit—Apples Pears Preserved in L Pulped Dried Hops	    . iquid  	· · · · · · · · · · ·	· · · · · · · · · · ·	· · · · · · · · · · · · · · ·	cwt. cwt. '000 bush. '000 bush. '000 lb. '000 lb. '000 lb. '000 lb.	149,053 15,835 33,505 5,959 435 24,634 4,997 901 2,893	169,232 19,216 34,832 5,370 300 18,477 4,275 643 2,379	$\begin{array}{r} 163,676\\ 16,837\\ 22,180\\ 6,569\\ 493\\ 12,950\\ 4,226\\ 475\\ 2,025\\ \end{array}$

Exports of Principal Commodities by Sea and Air-Quantities

# Trade, Transport and Communications Exports of Principal Commodities by Sea and Air—Quantities—continued

$\begin{array}{c c c c c c c c c c c c c c c c c c c $					
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	Commodity (a)	Unit of Quantity	1961-62	1962-63	1963-64
	Meat—Beef          Lamb and Mutton          Pork          Potatoes (Fresh)          Preserved Vegetables (including Dried)          Fertilizers          Sheepskins—with Wool          without Wool          Other Hides and Skins (excluding Furred)         Metals, Refined—Cadmium          Copper          Zinc          Ores and Concentrates—Silver-Lead          Timber—Dressed          Undressed          Wool, Greasy	cwt. cwt. cwt. ton '000 lb. '000 lb. '000 lb. '000 lb. ton ton ton ton ton ton ton ton ton ton	67,498 62,366 15,952 36,558 23,403 45,634 45,634 6,539 185 2,431 237 10,576 130,911 24,324 1,241 9,573 11,382 45,418 27,209	$\begin{array}{c} 98,445\\ 63,591\\ 22,725\\ 28,794\\ 34,881\\ 59,321\\ 6,130\\ 231\\ 2,962\\ 250\\ 10,001\\ 134,149\\ 26,540\\ 1,362\\ 10,093\\ 13,726\\ 46,864\\ 26,278\end{array}$	$\begin{array}{c} 118,181\\ 67,305\\ 20,368\\ 33,515\\ 52,765\\ 34,218\\ 7,218\\ 7,218\\ 3,518\\ 350\\ 15,131\\ 132,081\\ 28,757\\ 1,943\\ 10,693\\ 14,736\\ 56,662\\ 25,086\end{array}$
		000 10.	21,209	20,270	23,000

(a) Principal commodities not available for publication comprise aluminium, alumina, ferromanganese, calcium carbide, cement, paper, paper pulp, stationery, hardboard, plywood, and confectionery.

(b) As well as new and used vehicles, item includes business and tourists' vehicles leaving State.

# **Exports of Selected Commodities**

The following table shows, in summary form, total exports of selected commodities since 1939-40:

			1	1	
Commodity	Unit of Quantity	1939-40	1949-50	1959-60	1964-65
	QuA	NTITY			
Butter Fresh Fruit Potatoes Hops Wool, Greasy Sheepskins Refined Copper Refined Zinc Timber (Dressed and Undresse	. cwt. '000 bush. ton '000 lb. '000 lb. '000 lb. ton ton ton VALUE	55,428 3,910 117,700 1,584 9,092 2,285 11,738 70,909 50,858	42,886 2,963 84,896 1,767 9,101 3,307 4,253 80,704 62,136	154,789 4,210 44,001 2,955 27,977 7,090 7,624 113,853 75,403	204,200 5,193 27,699 1,716 30,329 5,821 14,741 139,032 80,466
Butter	· · · · · · · · · · · · · · · · · · ·	742 2,270 1,558 236 1,376 186 2,674 1,416 2,856 2,144 1,238	1,278 4,348 3,302 610 6,202 816 5,540 1,478 9,964 4,076 2,930	5,390 9,490 1,656 1,928 15,254 2,078 17,524 5,022 22,922 5,952 8,952	5,914 14,260 3,230 1,166 16,593 1,945 24,139 9,541 37,327 10,257 12,811

Exports of Selected Commodities by Sea and Air

# Further Information on Trade Statistics

In this chapter, it is only possible to give a broad outline of Tasmania's trade. The following cover the subject in greater detail:

The "Trade and Shipping" part of the "Statistics of the State of Tasmania"—this annual publication of the Tasmanian Office of the Bureau of Census and Statistics deals in detail with the State's interstate trade and includes an integration of interstate and oversea trade.

"Oversea Trade"—this annual publication of the Commonwealth Statistician gives considerable detail on the State's oversea trade.

# **RETAIL TRADE IN TASMANIA**

#### Introduction

The statistics in this section have been obtained from the Australian Census of Retail Establishments (last conducted in 1961-62) and, for non-Census years, from the quarterly Australian Survey of Retail Establishments.

#### Census of Retail Establishments

Retail Censuses were taken in respect of the years ended 30th June, 1948, 1949, 1953, 1957 and 1962. The information collected in each Census is extensive and provides details of retail trading in local government areas, in statistical divisions, and in special "statistical retail" areas. The Census information is also used as a bench-mark for designing a sample representative of all retail establishments.

#### Survey of Retail Establishments

Quarterly estimates of the value of retail sales have been calculated from the September quarter 1950, inclusive, by means of sample surveys. The information collected quarterly in each Survey is much less detailed than in the Censuses and provides estimates only for the State as a whole.

#### Census of Retail Establishments, 1961-62

#### Sales by Type of Business

There are two ways in which the value of retail sales may be presented: either as totals for particular commodity groups, or as totals for particular types of business. For example, information from the Retail Census provides a total of the value of all *groceries* sold by all types of retail business, and also a total of the value of all commodity groups sold by *grocers*; the two totals will normally differ since the classification *grocer* is applied to an establishment in which *groceries* are the principal but not necessarily the only line of sale (e.g. a country *grocer* may also sell commodities such as petrol).

### Types of Business, 1961-62

The following table shows the number of retail establishments recorded at the Census of 1961-62; they are classified according to the type of business (determined by the value of the principal line, or lines, of goods sold). Also shown are the total retail sales during 1961-62, for the various types of business. Comparative figures are given of the results of the Census of 1956-57. In the table, the item "Grocers" is concerned with *grocers*' total sales of all commodity groups; in more general terms, the turnover figures relate to total sales by each type of business, and give no precise indication of total sales of any particular commodity group.

	-				
Type of Business	Num Retail Esta	Number of Retail Establishments		Value of Retail Sales	
· · · · · · · · · · · · · · · · · · ·	1956-57	1961-62	1956-57	1961-62	
	No.	No.	\$'000	\$'000	
Food Stores—				1 *	
Grocers	1,100	1,046	33,998	42,190	
Butchers	295	357	11,280	13,742	
Fruiterers	90	93	2,476	2,966	
Bakers	151	158	3,434	4,364	
Confectioners and Milk Bars	208	307	3,454	5,872	
Cafes	20	59	152	564	
Fishmongers and Poulterers	32	44	542	880	
Other Food Stores	30	53	806	1,404	
Hotels, Tobacconists, &c					
Hotels, Wine Saloons, &c.	308	311	15,622	18,382	
Tobacconists	23	21	762	456	
Tobacconists and Hairdressers	64	51	430	328	
Department Stores, Clothiers, Drapers, &c					
Department Stores	6	6	7,322	11,964	
Clothiers and Drapers	304	336	23,850	24,768	
Footwear Stores	61	78	2,980	3,712	
Hardware, Electrical Goods, Furniture			· ·		
Stores, &c.—				1	
Domestic Hardware Stores	57	43	2,284	2,328	
Electrical Goods, Radios and Musical					
Instruments Stores	130	157	5,416	8,976	
Furniture and Floor Coverings Stores	77	80	5,008	6,594	
Other Goods Stores—					
Chemists	96	124	3,398	5,894	
Newsagents and Booksellers	99	121	3,780	5,018	
Sports Goods Stores	20	23	640	984	
Watchmakers and Jewellers	56	54	1,182	1,252	
Cycle Stores	11	8	114	100	
Florists and Nurserymen	33	44	422	410	
Other Types of Business	77	120	1,742	2,770	
Total (excluding Motor Vehicle Dealers, Garages and Service Stations, &c.)	3,348	3,694	131,094	165,918	
Motor Vehicle Dealers, Garages and Service					
Stations, &c.—					
INCW Motor Vehicle Dealers, Garages and		17.0	20.024	40.007	
Service Stations	414	476	38,034	40,096	
Motor Dente en l'The Dellers	25	48	4,442	11,912	
motor Parts and Tyre Dealers	30	52	1,510	2,006	
Total Motor Vahiala Destar					
Gatages and Sorrige Stations	475	F74	13 004	54 014	
Galages and Service Stations, &c.	4/3	5/0	45,900	54,014	
Grand Total	3 872	4 270	175 080	219 932	
	5,025	7,210	13,000		
	1	1			

#### Number of Retail Establishments and Value of Retail Sales of Goods by Type of Business, 1956-57 and 1961-62

# Sales of Commodities in Statistical Divisions

The next table gives details of retail sales in each statistical division and in the auxiliary groupings, Hobart and Suburbs and Launceston and Suburbs. A further dissection is provided for a special area of Hobart, designated the "inner city" for the purpose of the Census, and defined as the blocks bounded by Campbell, Brisbane, Barrack and Macquarie Streets. In this table, the value totals for each area are based on commodity totals, i.e. the column for the motor vehicle commodity group relates exclusively to sales of motor vehicles, motor

# Retail Trade in Tasmania

parts, tyres, petrols, lubricants and other "motor commodities", irrespective of the type of business making the sale. This contrasts with the presentation in the previous table, where the turnover figures for the motor vehicle group of establishments related to their sales of *all* commodities, including soft drinks, cigarettes, detergents and other "non-motor commodities".

		Value of Retail Sales (\$'000)				
Area	Total Number of Retail Establish- ments	All Commodities Excluding Motor Vehicles, &c. (a)	Motor Vehicles, &c. (a)	All Commodities		
	STATISTICAL D	IVISIONS				
South Central— Hobart—Inner City Area Remainder of South Central	425 779	36,070 26,266	10,310 12,798	46,380 39,064		
TotalNorth CentralNorth WesternNorth EasternNorth MidlandNorth EasternSouth EasternSouthernWesternTotal Tasmania	1,204 728 995 344 160 131 246 336 126 4,270	62,336 34,592 33,676 7,790 3,668 3,098 6,398 9,464 5,038 166,060	23,108 14,494 11,804 1,082 542 404 888 1,076 474 53,872	85,444 49,086 45,480 8,872 4,210 3,502 7,286 10,540 5,512 219,932		
CITY	y and Suburba	N DISTRICTS				
Hobart and Suburbs Hobart—Inner City Area Remainder, Hobart and Suburbs	425 928	36,070 30,720	10,310 13,374	46,380 44,094		
Total Hobart and Suburbs Launceston and Suburbs Remainder of State	1,353 805 2,112	66,790 36,274 62,996	23,684 14,814 15,374	90,474 51,088 78,370		
Total Tasmania	4,270	166,060	53,872	219,932		

Value of Retail Sales	of Goods in Each Statistical Division and in City an	١đ				
Suburban Districts, 1961-62						

(a) Sales as commodity group totals; "motor vehicles, &c." includes petrol, lubricants, parts, tyres, &c. as well as new and used vehicles.

# **Quarterly Retail Sales Estimates**

Each quarter, returns of retail sales are collected from a fraction (or sample) of all the retail businesses recorded in the most recent Census of Retail Establishments, the fraction being selected to represent the field covered by the Census. This sample is varied from time to time to make provision for "new" establishments opening up, "old" establishments closing down and "old" establishments changing type ("old", in this context, relates to businesses as recorded at the most recent Census of Retail Establishments). From the returns made by the sample establishments, estimates are calculated quarterly of the total volume of retail sales, and also the total sales of broad groups of commodities. The following table presents, as annual totals, the results of the quarterly Surveys for a five-year period:

Commodity Group	1960-61	1961-62	1962-63	1963-64	1964-65
Groceries	27,960	28,550	29,260	31,340	33,100
Butchers' Meat	13,550	13,860	14,960	15,110	16,570
Other Food	19,840	20,050	21,420	20,960	22,910
Beer, Wine, Spirits	16,570	16,980	16,880	18,400	19,230
Clothing, Drapery, Piece Goods	29,690	30,120	30,660	32,280	34,460
Footwear	5.030	5,250	5,350	5,700	5,790
Domestic Hardware	4.110	4,080	4,420	4,360	4,470
Electrical Goods	10.820	10.650	11,730	11.280	11,440
Furniture, Floor Coverings	7.310	7,220	7,810	8,130	8,750
Chemists' Goods	6 760	7,480	7,680	8,310	9.630
Newspapers, Periodicals, &c	5.240	5,490	5,490	5,890	6.270
Other Goods (b)	16,550	16,330	17,210	17,390	19,130
Total (excluding Motor					
Vehicles, &c.)	163,430	166,060	172,870	179,150	191,750
Motor Vehicles, Parts, Petrol, &c.	53,490	53,872	63,130	70,220	74,880
			[		1

Estimated Value of Retail Sales of Goods by Commodity Groups (a) (\$'000)

(a) Survey results for all years except 1961-62, the year of the most recent Census of Retail Establishments.

(b) Includes sports goods, jewellery, cycles, flowers, plants, &c.

# MARINE BOARDS AND HARBOUR TRUSTS

#### Introduction

Tasmania has a number of ports for handling oversea vessels; they are sited on the Derwent and Huon rivers in the south (Hobart and Port Huon); on the Tamar in the north (Beauty Point, Inspection Head and Bell Bay); on the Mersey (Devonport) and in Emu Bay (Burnie), both on the north-west. All oversea ports provide approximately 30 feet or more of water at berths; the wooden Ocean Pier in Hobart gave an extreme depth of 63 feet but the structure was destroyed by fire in 1948 and has since been replaced by concrete wharves giving depths up to 39 feet.

Interstate and intrastate trade passes through the main ports and is carried on as well through ports at Launceston, Strahan, Stanley, Smithon, Ulverstone, Currie (on King Island) and Lady Barron (on Flinders Island).

This section deals primarily with the Marine Boards which control the harbours but a brief description is given of the four main ports.

Tasmania's two oldest ports date, in embryo at least, from 1804 when Lieutenant-Colonel Collins chose Sullivan's cove as the site for the Derwent settlement and, later in the same year, when Lieutenant-Colonel Paterson disembarked near George Town on the Tamar.

# 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 30 miles south-east from the city. The mouth of the Derwent, three and a half miles wide, lies 12 miles southeast of the port which is built upstream on the western bank in a U-shaped cove; the opposite bank lies one and a half miles away to the east at this point. The shores of the Derwent and the arms of the cove act as natural breakwaters.

# Marine Boards and Harbour Trusts

#### Historical

When Collins landed, the waters of the Derwent lapped just below the site of the present Franklin Square and the Wellington Rivulet discharged near Hunter Island which was rapidly converted into a peninsula by the construction of a causeway. (A food processing factory now stands on the site of Hunter Island.) The first wharves were built on the former island but ships still needed to anchor off shore and unload cargo into smaller craft. By the 1830's, more substantial wharves had been provided allowing large ships to berth alongside; the major construction was on the opposite side of Sullivan's Cove, sheltered by Battery Point, and is today known as Princes Wharf. The subsequent development of the main port has, to a large degree, been confined within these early limits, i.e. from land reclaimed seaward from Hunter Island and southward to the Battery Point foreshore.

#### Description

The present main port of Hobart is extremely compact, being U-shaped and with only 2,000 feet or less separating the two arms. The southern arm is devoted to Princes Wharf with berths numbered one to four; the centre contains Elizabeth, Kings and Queens Piers while the northern arm is made up of the Macquarie wharves with berths one to four and a special tanker berth. It is literally true that the port and the city are one, the principal buildings such as Parliament House, the Town Hall and the General Post Office all being only a stone's throw from the harbour; in fact, the Parliament assembles one hundred yards from the sea in what used to be the Customs House of an earlier era. Shoreward from Queens and Kings Piers are Victoria and Constitution Docks, enclosed harbours for smaller vessels; annually competitors in the Sydney-Hobart Yacht Race moor alongside the wharves in Constitution Dock within a few hundred yards of the finishing line.

All wharves and sheds in the main port are of concrete construction, the first step in this direction being the rebuilding of Elizabeth St. Pier in 1934, followed by the three-stage conversion of Princes Wharf. The urgency of this type of modernisation was emphasised in 1948 when fire destroyed the wooden Ocean Pier No. 2 shed and the outer 80 feet of berth.

The main recent development has been connected with roll-on roll-off type vessels for which special provision has had to be made. Princes Wharf No. 1 berth was converted into a specialised terminal with drive-on ramp and vehicle marshalling area, the "Seaway Queen" and "Seaway King" first berthing there in June and August, 1964, respectively. To accommodate the new Sydney-Hobart roll-on roll-off vessel "Empress of Australia", extensive land reclamation was carried out to the south of Princes Wharf No. 3 berth and the new facility, named No. 4 berth, involved a further wharf, a drive-on ramp, an extensive marshalling area and a terminal building. The "Empress" began the new service in January, 1965.

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 rise and fall being four feet at most, and no dredging of approach channels has ever been necessary. During World War II, the aircraft carrier "Saratoga" (33,000 tons) and the "Ile de France" (43,000 tons) berthed without tug assistance. All the essentials for a port were there before the first settlers arrived—subsequent development has concentrated on land reclamation and the construction of piers and wharves to take advantage of the deep water available close inshore.

#### 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. On the west bank of the Huon River near Geeveston is Port Huon, located in the centre of the principal

orcharding area and used mainly for fruit exports. In the Derwent itself, two and a half miles upstream from the main port, is a tanker berth at Selfs Point where bulk petrol and oil are stored; tankers pass under the 150 feet high navigation span of the Tasman Bridge on their way. A mile upstream from Selfs Point are the private wharves of the Electrolytic Zinc Company Ltd. at Risdon. Nearly twenty miles upstream from the main port is the plant of Australian Newsprint Mills Ltd. at Boyer from which newsprint rolls are carried downstream by barge and tug.

The authority controlling the main port and Port Huon is the Hobart Marine Board.

#### Port of Launceston

## Location

Launceston lies nearly forty miles upstream at the headwaters of the Tamar which discharges into Bass Strait between Low and West Heads; although the mouth of the Tamar is four miles wide, the river follows a sinuous course marked by many bends, and narrows to less than 300 yards in some stretches near the city. Tides are large, the rise and fall being from 10 feet to 12 feet according to location and silting occurs in the upper reaches which receive the discharge of the South Esk and North Esk Rivers.

Because of the limitations of the upper Tamar near Launceston, development of the port shows a pattern different from that of Hobart where all interstate and oversea berths are concentrated in the one area. In Launceston, the possibilities of the Tamar have been exploited by decentralisation, the present main outlets being:

- (i) Kings Wharf; interstate berths in Launceston itself immediately downstream from the junction of the North Esk and Tamar Rivers;
- Beauty Point Wharf; oversea berths on the western bank approximately eight miles upstream from the mouth of the Tamar;
- (iii) Inspection Head Wharf; oversea berths on the western bank approximately half a mile downstream from Beauty Point Wharf;
- (iv) Bell Bay Wharves; these include a tanker berth, a general cargo and passenger berth and the special cargo wharf serving Comalco Aluminium Ltd., operator of a nearby refinery. The Bell Bay site is on the eastern shore opposite Beauty Point.

The port has also had to make provision for the operation of roll-on roll-off ferry services and Bell Bay is the chosen terminal, the "Empress of Australia" making alternate Sydney-Tasmania voyages to Hobart and Bell Bay.

#### The Hunter Plan

Unlike the Hobart port approaches, the channels leading from the mouth of the Tamar were once difficult to navigate. In 1912, Mr. W. H. Hunter, consulting engineer for the Manchester Ship Canal, inspected the river and laid down a master plan for future development. He saw the need for carrying out work in two sections—for the oversea berths in the lower reaches, and for interstate berths at Launceston. Bell Bay and Beauty Point were his recommendations for oversea berths and he advised that work should be undertaken to remove obstructions known as Bombay Rock, Garrow Rock, and Porpoise Rock and to dredge Anchorage Shoal. He wrote: "If the work of removing obstructions is carried out as proposed, I believe that an approach will be provided to the new wharf which cannot be surpassed in any port of the world, as there are few ports indeed, in which an unobstructed channel from which

#### 562



Tapping ferro-manganese alloy at Bell Bay plant of Tasmanian Electro-Metallurgical Company Pty. Ltd. (The Mercury)

Hobart's Princes Wharf with roll-on roll-off facilities at each end. (Dept. of Film Production)





Tasman Bridge linking Hobart to its eastern suburbs. (Dept. of Film Production)

Portion of Port of Hobart. (Don Stephens)



# Marine Boards and Harbour Trusts

all dangerous eddies have been eliminated, with a depth of 30 feet at first and afterwards 36 feet at low water, and of from 40 to 46 feet at high water, and a minimum width of 1,200 feet can either be formed or maintained." For up-river navigation he also recommended the removal of Whirlpool Rock, the improvement of Whirlpool Reach and the formation of a new channel between Rosevears and Town Point.

The Hunter plan has been quoted in considerable detail because, in large degree, it has been the blue-print followed by the Launceston Marine Board over the last fifty years and its gradual implementation has produced a first class port on the Tamar. Dredging, however, both to maintain and improve existing channels, remains a continuous process. Much of the Hunter plan was carried out by "Ponrabell II", a bucket-type dredger able to deepen to 45 feet. ("Ponrabell I", sailing to Launceston in World War I from Glasgow, was sunk by the German raider, "Emden".)

### Port of Devonport

# Location

The Port of Devonport lies close inside the mouth of the Mersey River which, unlike the Derwent and the Tamar, is navigable for only a short distance. The Mersey has a rise and fall of tide approximating nine feet and recent hydrographic survey indicated a maximum tidal flow of 2.1 knots. The river was always a natural harbour for small craft but its development as an oversea port has required extensive dredging and engineering works, including elimination of the tidal bar.

#### Description

The original river mouth was approximately three-quarters of a mile wide but this has been narrowed to just over 400 yards by an anti-silting barrier thrown out into the sea from the eastern bank. The oversea berths are located on the western bank about a mile upstream from the river's artificial mouth while the special terminal for the roll-on roll-off vessel "Princess of Tasmania" lies opposite on the eastern bank. The "Princess" has maintained a Bass Strait service based on Devonport since 1959 and its berth includes a wharf, a sternloading drive-on ramp, an extensive vehicle marshalling area and a capacious terminal building. Thousands of tourists and their vehicles pass through this terminal each year.

The possibility of further development has not been exhausted; while the main berths have been made along the western bank, there is nearly a mile reserved on the opposite bank for the construction of future wharves. Reclamation of shallow reaches is a continuous process, much of the dredged silt being pumped ashore behind retaining walls; dredging is necessary for maintenance of depth at existing wharves, in channels and basins but there is sufficient operating capacity to undertake the development of new berths.

A new facility completed in 1964 was a cold store berth, the cold store being able to hold dairy produce, frozen meat and vegetables at  $0^{\circ}$ F to  $10^{\circ}$ F; included in this plant is a shock freezer with a daily capacity of 500 lamb carcasses or five tons of quarter beef. The four main freezing and holding rooms have 180,000 cubic feet of storage; in addition there is a chiller, a pre-freezing room for dairy products, a dairy products and meat holding room and an air-conditioned grading and inspection room.

The authority controlling the port, the Devonport Marine Board, assumed responsibility from 1st January, 1963 for operating the port at Ulverstone, previously administered by a local Harbour Trust.

# The 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; immediately to the west of the point is a beach on which breaks the short surf of Bass Strait which can produce very rough seas, the nearest land being the Victorian coast 200 miles to the north.

#### Description

The shelter necessary for all-weather use of the port was provided by a 1,250 foot breakwater anchored to Blackmans Point, and running out to sea with a south-east orientation. The wharves are thus protected by the point and by the breakwater from swells coming in from the west or north, the only 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, and other berths are provided by piers parallel to the breakwater and lying further south.

Future development of the port cannot be undertaken without the provision of further protection, and construction is now well under way on an island breakwater sited north-east from the end of Ocean Wharf. The breakwater, consisting of concrete caissons 1,600 feet long, is oriented south-east and is calculated to give ample protection for up to 2,000 feet of berthage south of existing piers. One interesting feature is the planned use of the lee of the island breakwater for a tanker berth, the products being pumped to land storage along a submarine pipeline.

In 1961, special facilities were provided to handle the roll-on roll-off vessel "Bass Trader" and the port is also used by the "Empress of Australia" which makes a return voyage to Sydney via Bell Bay and Burnie. (The alternate route worked by the "Empress" is Sydney-Hobart.)

# Port Latta (Under Construction)

Construction work on the Savage River iron ore project began in early 1966 and is programmed for complet on by the end of 1967. Work is proceeding simultaneously at two centres: (i) evelopment of the mines at the Savage River; (ii) development of Port La ta at Brickmakers Bay. The main construction programme requires a concentrating plant at the mines, a 51-mile pipeline to pump the watered concentrate to the coast, a pellet-making plant at *Port Latta* and an offshore terminal in deep water for exporting the pellets. The whole project will require an outlay of \$62m.

Cargo of this nature (pellets) is not loaded into small ships and provision has to be made for bulk ore carriers of 60,000 to 90,000 tons capacity; hence deep water is a major consideration. From the start of 1968, about 2.25m tons will be shipped annually.

The loading facility will consist of a four-foot wide conveyor belt which will carry pellets to two swivel loaders located a mile offshore; here vessels moored in 52 feet of water will take on pellets, the system having a discharge capacity of about 3,000 tons per hour.

As a preliminary measure, a shelter harbour has been built at the west end of Crayfish Creek beach to accommodate floating cranes, barges, work boats, personnel carriers and the like. A major item of equipment is a 200-ton lift capacity Pacific Atlas crane towed 10,000 miles from the U.S.A. The crane

# Marine Boards and Harbour Trusts

will position drill rigs for driving the steel piles carrying the conveyor belt structure 30 feet above water level. Port contractors are Pomeroy—Holland— Gerwick, an American Australian partnership.

# Constitution of Marine Boards and Harbour Trusts

# Introduction

Relatively early in Tasmania's history, it was decided that the control and operation of any port was best put in the hands of citizens who had a personal interest in its proper management, and, to this end, port administration was deliberately made a function of local government; the State Government, by legislation, defined the powers and duties of the new authorities it created but the detailed administration, including financial management, was then very much left to the Boards and Trusts. This is still the position today.

#### Establishment of Boards

Operation of Tasmania's chief ports ceased to be a direct function of the government of the colony in 1857 when legislation was passed to set up the marine boards of Hobart and Launceston. Each board consisted of five wardens; the Mayor and the Collector of Customs were *ex officio* wardens, the remaining three members being appointed as nominees of the respective Chambers of Commerce. In 1867, the Governor was empowered to create other Boards, such bodies to consist of three wardens appointed by the Governor; within a year, boards had been constituted under the titles Mersey, Circular Head and Table Cape.

#### Boards of Hobart and Launceston

The Marine Boards Act 1889 created a special electorate for the Hobart and Launceston boards, the nine wardens for each to be elected by ship-owners, importers and exporters. The respective Collectors of Customs were required to compile annually rolls of these users of the ports and the number of votes each elector could exercise was proportional to his financial interest; for example, an exporter of goods valued \$400 to \$3,999 had one vote, of \$4,000 to \$9,999 two votes, and of over \$10,000, three votes. Importers received similar voting powers in proportion to the wharfage paid while ship owners' votes were proportional to tonnage of their vessels. It was further provided that three wardens should retire annually and the Master Warden be elected by board members. By an amending Act in 1895, the voting powers of importers were placed on the same basis as those exercised by exporters and were divorced from wharfage paid.

The special electorate just described is still in existence today and continues to elect the wardens of the Hobart Marine Board; the scale of values affecting the number of votes to be exercised by importers and exporters remains unchanged also. However, in the case of Launceston Marine Board, the system of the special electorate was abolished in 1902 and all Launceston citizens on the rolls for the House of Assembly became eligible to cast single votes, a right extended in 1910 to citizens in the other municipalities bordering the Tamar. In 1916, with the adoption of the Hunter scheme for improvements affecting the whole length of the river, changes were made to increase the number of wardens by representatives from the bordering municipalities but the *Marine Act* 1921 reduced the number of wardens to five, restricted eligibility for standing as warden to citizens of Launceston and changed the voting qualification so that Marine Board electors had to be those qualified to vote at an election of aldermen for the City of Launceston. This system still operates today.

## Boards at Other Ports

Under the Act of 1889, the wardens of Marine Boards other than Hobart and Launceston had been appointed by the Governor but gradually systems of election were introduced: (i) Strahan, 1898—vote given to municipal electors of Strahan, Zeehan and Queenstown, each town selecting two wardens and a further four wardens being nominees of the Governor; in 1903, the elective principle was abolished and the Board was to consist of three nominees of the Governor, a principle re-iterated in the *Marine Act* 1921; (ii) Mersey (Devonport), 1903—nine wardens to be chosen by electors of three towns and nine road districts; (iii) Table Cape (Burnie), 1910—seven wardens chosen by electors of Emu Bay and Table Cape; (iv) Circular Head (Stanley), 1915—five wardens to be elected.

The present system of appointing or electing wardens is summarised as follows:

Authority		Number of Wardens	System of Election or Appointment of Wardens
Hobart Marine Board		9	Special electorate of ship-owners, importers and exporters
Launceston Marine Board	••	5	Electors of City of Launceston as for election of aldermen
Burnie Marine Board Devonport Marine Board Circular Head Marine Board King Island Marine Board Flinders Island Marine Board Strahan Marine Board Smithton Harbour Trust	   	8 9 5 3 3 5	<pre>Municipal electors within proclaimed areas Nominees of the Governor Municipal electors within proclaimed areas</pre>

**Election or Appointment of Port Authorities** 

#### Jurisdiction of Marine Boards and Harbour Trusts

The jurisdiction of the various Boards and Trusts is not confined to their immediate port area, and the whole Tasmanian coast is partitioned between the various authorities; for example, Hobart Marine Board's jurisdiction is defined as "from South-West Cape round the southern and eastern coasts to Cape Portland", i.e. the whole southern and eastern coastline.

The continuous jurisdiction of the remaining authorities, starting at Cape Portland in the far north-east, is as follows: (i) Launceston—on to Badger Head (west of Tamar); (ii) Devonport—on to west bank of Leven River; (iii) Burnie—on to east bank, Sisters Creek; (iv) Circular Head—on to  $41\frac{1}{2}$ °S. latitude on west coast; (v) Strahan—on to South-West Cape; (vi) King Island—the island coastline; (vii) Flinders Island—the coasts of the Furneaux and Kent groups of islands; (viii) Smithton—the entrance to Duck Bay with Circular Head jurisdiction extending east and west. (Smithton Harbour Trust area is an enclave within the Circular Head area.)

## Finances of Marine Boards and Harbour Trusts

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, &c.), the maintenance of the port (e.g. dredging, &c.) and the improvement of the port (e.g. new wharfs, new berths, &c.). To the degree that insufficient revenue is available to finance

#### 566

# Marine Boards and Harbour Trusts

port improvements, the authorities borrow money subject to State Treasury approval, the Treasury acting on behalf of the Australian Loan Council and implementing its annual agreement as to the approved level of new semigovernment authority loans.

The following table shows the combined revenue and loan account transactions for each authority during 1964-65:

				Au	thority	_				
Particulars	Hobart	Laun- ceston	Dev- onport	Burnie	Circ- ular Head	King Island	Strah- an	Flind- ers Island	Smith- ton	Total
Opening Balance	1,547	445	552	1,941	2	14	17	11	. 9	4,538
Receipts— Revenue Account— Wharfage Charges Hire of Plant and	740	595	561	566	14	26	27	12	1	2,542
Equipment	291	83	30	169	• :	1				574
Other Charges for Services (a)	231	255 111	103	36 119	3		6		••	401 579
Government Sub- sidy Other Receipts (b)	34 175	 562	 68	111	11 1	1	1	••	•••	45 919
Total	1,503	1,586	857	1,001	31	32	35	14	1	5,060
Loan Account— Loan Raisings Other Receipts		650 1	600 103	1,574	 	18	· · · · · · · · · · · · · · · · · · ·	· · ·	 	2,842 104
Total		651	703	1,574		18				2,946
Total Receipts	1,503	2,237	1,560	2,575	31	50	35	14	1	8,006
Expenditure— Revenue Account— Works and Ser- vices	859	484	511	371	2	6	14	6	2	2.255
Interest	123	134	184	338	7	4	2		••	792
Sinking Fund Administration Other (c)	166 158 179	85 62 686	129 81 118	110 71 58	11 9 1	3 12 3	3 11 4	2 3 1	 1 	509 408 1,050
Total	1,485	1,451	1,023	948	30	28	34	12	3	5,014
Loan Account— Capital Works	••	619	468	2,188		15	••		••	3,290
Total Expenditure	1,485	2,070	1,491	3,136	30	43	34	12	3	8,304
Closing Balance	1,565	612	621	1,380	3	21	18	13	7	4,240

# Marine Boards and Harbour Trusts Receipts and Expenditure—All Funds, 1964-65 (\$'000)

(a) Includes dues, tonnage rates, pilotage, mooring and slipway fees, weighbridge revenue and charges for light, power, telephone, water, storage and cleaning.

(b) Includes receipts from sales of assets, interest on investments, and the net receipts of deposit, stores and superannuation accounts.

(c) Includes expenditure on insurance, workers' compensation, superannuation contributions, payroll tax, rents and rates.

The next table summarises the transactions of all Marine Boards and Harbour Trusts for a five-year period:

Particulars			1960-61	1961-62	1962-63	1963-64	1964-65
Opening Balance	•••		1,908	2,440	3,868	5,485	(r) 4,538
Receipts— Revenue Account Loan Account— Loan Raisings Other Receipts	•••	•••	3,419 1,560 19	3,694 1,930 9	4,469 2,167 6	5,046 2,631 11	5,060 2,842 104
Total Receipts	••		4,998	5,633	6,642	7,688	8,006
Expenditure— Revenue Account— Works and Servit Interest Redemption & Si Administration Other Total Loan Account— Capital Works Total Expenditure	- ces    	 Fund   	1,662         692         315         364         3,033         1,433         4,466	1,492 810 352 427 3,081 1,124 4,205	1,485 939 365 777 3,566 1,459 5,025	$\left\{\begin{array}{c}1,294\\655\\590\\400\\1,311\\4,250\\4,364\\8,614\end{array}\right.$	2,255 792 509 408 1,050 5,014 3,290 8,304
Closing Balance	••		2,440	3,868	5,485	4,559	4,240
Expenditure— Revenue Account— Works and Servi Interest Redemption & Si Administration Other Total Loan Account— Capital Works Total Expenditur Closing Balance	ces nking   	Fund    	$\left.\begin{array}{c} 1,662\\ 692\\ 315\\ 364\\ \hline 3,033\\ 1,433\\ \hline 4,466\\ \hline 2,440\\ \end{array}\right.$	1,492 810 352 427 3,081 1,124 4,205 3,868	1,485 939 365 777 3,566 1,459 5,025 5,485	$\begin{cases} 1,294\\ 655\\ 590\\ 400\\ 1,311\\ 4,250\\ 4,364\\ 8,614\\ 4,559\\ \end{cases}$	

#### Marine Boards and Harbour Trusts Receipts and Expenditure—All Funds (\$'000)

(r) Revised.

#### Loan Debt and Borrowing

The loan debt of the Marine Boards and Harbour Trusts has increased by \$12,300,000 since 1954-55 when it stood at \$4,782,000. The following table shows the growth of this debt in total and gives individual details for the four principal authorities:

• • • • • • • • • • • • • • • • • • • •			1			1	1
Authority		1954-55	1960-61	1961-62	1962-63	1963-64	1964-65
Hobart Launceston Devonport Burnie Other	   	1,534 535 1,086 1,444 183	2,534 1,232 2,403 2,802 327	2,404 1,583 2,625 3,955 326	2,768 1,684 ( <i>a</i> ) 2,928 5,050 241	2,866 2,215 ( <i>a</i> ) 3,415 5,984 257	2,700 2,783 ( <i>a</i> ) 3,886 7,473 257
State Total	••	4,782	9,298	10,893	12,671	14,737	17,099

#### Marine Boards and Harbour Trusts Loan Debt of Principal Authorities At End of Year (\$'000)

(a) Includes debt of Ulverstone Harbour Trust, the port having been taken over by Devonport Marine Board from 1st January, 1963.

At 30th June, 1965, the loan debt of each authority was: Hobart, \$2,700,242; Launceston, \$2,783,490; Devonport, \$3,885,686; Burnie, \$7,473,020; Circular Head, \$142,848; King Island, \$80,594; Strahan, \$28,870; Flinders, \$4,478. Smithton Harbour Trust had no debt.

# Marine Boards and Harbour Trusts

The next table shows a summary from 1954-55 of annual borrowings and analyses the aggregate debt according to creditor; it will be observed that all debt to the State Government has now been redeemed.

	Loan F	Raisings D inancial Ye	ngs During Loan Debt at End of al Year Financial Year						
Year	From State Govt.	From Other Sources	Total	To State Govt.	To Other Creditors	Total	Funds at End of Financial Year (a)		
1954-55		500	500	134	4,648	4,782			
1955-56		516	516	108	5,029	5,137			
1956-57		524	524	87	5,334	5,421	28		
1957-58		648	648	68	5,806	5,874	27		
1958-59		1,125	1,125	22	6,723	6,745			
1959-60		1,552	1,552	20	8,019	8,039			
1960-61		1,560	1,560	18	9,280	9,298			
1961-62		1,930	1,930	16	10,877	10,893	7		
1962-63		2,167	2,167		12,671	12,671	24		
1963-64		2,631	2,631		14,737	14,737	53		
1964-65	••	2,842	2,842	••	17,099	17,099	85		

#### Marine Boards and Harbour Trusts Loan Raisings, Loan Debt and Sinking Funds (\$'000)

(a) Sinking funds maintained by Boards and Trusts for debt redemption purposes.

# SHIPPING AT TASMANIAN PORTS

#### System of Record

Vessels using Tasmanian ports can be thought of as oversea, interstate or intra-state but their inward and outward movement, in the tables that follow, is classified according to the type of voyage and not according to the type of vessel. The following shows the manner in which voyages are described (both arrivals, "entries", and departures, "clearances"):

Oversea Vessels	Interstate Vessels	Intra-state Vessels
<ul> <li>(i) Oversea Direct</li> <li>(ii) Oversea via Other State (a)</li> <li>(iii) Oversea via Ports in same State</li> <li>(iv) Interstate Direct (a)</li> <li>(v) Interstate via Ports in same State</li> </ul>	(iv) Interstate Direct (v) Interstate via	
(vi) Intra-state	Ports in same State (vi) Intra-state	(vi) Intra-state

Type of Voyage

(a) For definition of this term, see the table that follows.

To show the total entries and clearances for any individual port, it is necessary to add all categories from (i) to (vi) inclusive for each type of vessel. However, to show the total entries and clearances for a State, and for the result to reflect the volume of the State's shipping relations with other States and oversea countries, it is necessary to add only categories (i), (ii) and (iv) for oversea and interstate vessels. Finally, to show the entries and clearances affecting Australia's shipping relations with other countries, only category (i) need be taken into account.

In the tables that follow, the term "Oversea and Interstate" is used to indicate that the movements described are restricted to categories (i), (ii) and (iv) for oversea and interstate vessels. The classifications are applied in such a way that, in terms of categories (i), (ii) and (iv), ships are included as arrivals at the *first* Tasmanian port of call only, and departures only at the *last* port of call in Tasmania, i.e. the coastal movement of shipping is excluded.

# Categories Illustrated

The term 'interstate direct' is applied to the movements of oversea vessels in certain circumstances and the next table illustrates the system of classification, a hypothetical vessel being engaged on a London-Sydney-London voyage:

- · · · · · · · · · · · ·		Recorded as-		
London-Sydney- London Voyage	For State and for Australia (a)	For the States (a)		
Vessel with Sydney as final port of call— Enters Melbourne from U.K. Clears Melbourne for Hobart Enters Hobart from Melbourne Clears Hobart for Sydney Enters Sydney from Hobart Same vessel returning to U.K.— Clears Sydney for Hobart Enters Hobart from Sydney Clears Hobart for Melbourne Enters Melbourne from Hobart Clears Melbourne for U.K.	Oversea direct (V) Oversea direct (V)	Interstate direct (V) Interstate direct (T) Interstate direct (T) Interstate direct (V)	Oversea via other States (T) Oversea via other States (N.S.W.) Oversea via other States (N.S.W.) Oversea via other States (T)	

Itinerary of an Oversea Vessel on the Australian Coast

(a) Letters in brackets indicate the State recording the entry or clearance.

From the table, it will be seen that entries are classified according to the State or country of origin and that clearances are classified according to State or country of destination.

In the case of an interstate ship making a round voyage, Melbourne-Hobart-Launceston-Devonport-Melbourne, only the entrance into Hobart and the departure from Devonport would be classified in Tasmanian records as "Interstate Direct", the remaining movements being classified as "Interstate via Ports in same State".

#### Tonnage of Vessels

The size of a vessel may be expressed as: (i) gross tonnage, i.e. the total volume of enclosed space converted at one ton per 100 cubic feet; (ii) net tonnage, i.e. the enclosed volume of cargo or passenger space similarly converted at 100 cubic feet per ton; (iii) deadweight tonnage, i.e. the weight the vessel can carry, including bunkers and stores, expressed in tons of 2,240 lb. (or, more technically, the difference from the displacement light to the displacement when loaded to the summer deadline). *Net tonnage* is the concept

570

# Shipping at Tasmanian Ports

generally used in the tables in this section, but since it can give a misleading impression of the size of ships which have a function other than carrying passengers and cargo (e.g. a tug has no net tonnage), some figures are given for deadweight tons and tons gross also.

# **Oversea and Interstate Shipping**

The following table shows the total annual number of vessels entering Tasmanian ports, and their net tonnage, for the period commencing 1954-55. The figures are restricted to entries classified as "oversea and interstate" and exclude coastal movements.

		Vessels	Entered			Vessels Entered		
Yea	ar	Number Net Tons		Year		Number Net T		
1954-55 1955-56 1956-57 1957-58	•••	1,081 1,030 1,161 1,241	1,619,692 1,585,547 1,737,334 1,872,012	1960-61 1961-62 1962-63 1963-64	  	1,354 1,533 1,614 1,508	2,546,476 3,042,052 3,473,984 3,346,157	
1958-59 1959-60	 	1,257 1,308	1,966,301 2,287,182	1964-65	••	1,472	3,411,793	

# Shipping—Oversea and Interstate (a) Total Vessels Entering Tasmanian Ports

(a) For definition, see "System of Record" in introduction.

In the introduction, "System of Record", it was indicated that oversea and interstate shipping included three categories of voyages, namely oversea direct, oversea via other Australian States and interstate direct. The next table shows entries and clearances in terms of these three categories for a five-year period:

#### Shipping—Oversea and Interstate Total Vessels Entering and Clearing Tasmanian Ports

Classification of Entry	1959-60	1960-61	1961-62	1962-63	1963-64
	Enterei	D-Number			
Oversea Direct	50	60	72	83	81
States	185 1,073	194 1,100	238 1,223	331 1,200	296 1,131
Total	1,308	1,354	1,533	1,614	1,508

#### ENTERED-NET TONS ('000)

a							
Oversea Direct	 Austra	 lian	162	218	268	288	275
States Interstate Direct (a)		•••	868 1,257	856 1,472	1,099 1,675	1,447 1,739	1,352 1,719
Total			2,287	2,546	3,042	3,474	3,346

Classification of Entry	1959-60	1960-61	1961-62	1962-63	1963-64
	Clearei	D-NUMBER	1		
Oversea Direct	31 199 1,074	42 177 1,122	28 247 1,278	49 314 1,260	44 295 1,148
Total	1,304	1,341	1,553	1,623	1,487
	ClearedN	IET TONS ('O	000)	1	
Oversea Direct Oversea via Other Australian States Interstate Direct (a)	139 896 1,207	196 794 1,534	135 1,101 1,781	199 1,341 1,906	189 1,294 1,782
Total	2,242	2,524	3,017	3,446	3,265

#### Shipping—Oversea and Interstate Total Vessels Entering and Clearing Tasmanian Ports—continued

(a) Includes both oversea and interstate vessels proceeding "interstate direct".

The next table has been compiled to show the dissection of the previous arrivals according to individual Tasmanian ports. The figures for the ports do not include all arrivals but only such as are included in the categories appropriate to "oversea and interstate".

Port (a)		1959-60		1960-61		1961-62		1962-63		1963-64	
		No.	Net Tons ('000)								
Hobart		399	1,025	429	1,139	494	1,331	475	1,215	454	1,172
Launceston		246	434	204	359	307	583	368	786	307	762
Burnie		192	380	233	496	206	484	244	759	282	749
Currie		76	10	85	17	101	18	103	26	66	10
Devonport		246	380	260	468	330	572	327	631	316	598
Smithton		15	2	8	1	8	1	6	1	7	1
Stanley		38	9	41	15	13	9	22	12	19	11
Strahan		52	40	60	46	54	42	55	42	56	43
Ulverstone (b)		44	7	32	5	19	2	13	2		
Lady Barron	••			2	(0)	1	(1)	1	(c)	1	(6)
Total	••	1,308	2,287	1,354	2,546	1,533	3,042	1,614	3,474	1,508	3,346

Shipping—Oversea and Interstate Vessels Entering Each Tasmanian Port

(a) The names of the ports refer to the towns in which the controlling Marine Boards and Harbour Trusts were located.

(b) As from January, 1963, the port of Ulverstone came under control of Devonport Marine Board but its shipping was recorded separately for 1962-63.

(c) Under 500 tons.

The shipping movements shown in the previous table do not represent the total shipping entering each port; to obtain this total it is necessary to add in the movement of vessels engaged in coastal and in purely intra-state voyages. The following table, compiled on this expanded basis, shows total shipping entering each Tasmanian port for a five-year period:

		1959-60		1960-61		1961-62		1962-63		1963-64	
Port (a)		No.	Net Tons ('000)	No.	Net Tons ('000)	No.	Net Tons ('000)	No.	Net Tons ('000)	No.	Net Tons ('000)
Hobart Launceston Burnie Ourrie Devonport Smithton Stanley Strahan Ulverstone (b) Lady Barron	· · · · · · · · · · · · · ·	488 519 316 146 364 18 108 63 88 (c)	1,237 566 550 34 463 3 26 48 12 (¢)	481 490 330 238 352 8 98 65 73 107	$     \begin{array}{r}       1,303 \\       528 \\       641 \\       26 \\       556 \\       1 \\       28 \\       50 \\       9 \\       6     \end{array} $	577 604 365 214 428 10 94 57 61 123	$ \begin{array}{r} 1,520\\ 796\\ 686\\ 25\\ 668\\ 1\\ 50\\ 43\\ 6\\ 8 \end{array} $	591 580 393 185 403 10 106 60 57 150	1,382 987 980 32 720 1 44 46 5 13	546 512 402 134 401 14 81 62  146	1,362 904 929 21 688 1 36 48  15

# Shipping—Oversea, Interstate and Intra-State Vessels Entering Each Tasmanian Port

(a) Location of controlling Marine Board or Harbour Trust.

(b) As from January, 1963, the port of Ulverstone came under control of Devonport Marine Board but its shipping was recorded separately for 1962-63.

(c) Not available.

The next table compares vessels entering Tasmanian ports with those entering the ports of other States:

Shipping—Oversea and Interstate Vessels Entering Ports, Australian State Totals

	1959-60		1960-61		1961-62		1962-63		1963-64	
State	No.	Net Tons ('000)	No.	Net Tons ('000)	No.	Net Tons ('000)	No.	Net Tons ('000)	No.	Net Tons ('000)
N.S.W Victoria Queensland S.A W.A Tasmania Australia (a)	3,679 2,983 1,591 1,759 1,404 <b>1,308</b> 12,842	13,825 11,694 5,284 6,745 7,268 <b>2,287</b> 47,335	3,822 3,054 1,726 1,950 1,590 1,354 13,607	15,434 12,788 5,803 7,613 8,689 <b>2,546</b> 53,059	3,969 3,210 1,692 1,958 1,674 <b>1,533</b> 14,150	16,631 13,525 5,834 7,646 8,929 <b>3,042</b> 55,831	3,769 3,177 1,829 1,945 1,520 <b>1,614</b> 13,963	16,402 13,588 6,541 7,886 8,240 <b>3,474</b> 56,386	4,023 3,360 2,012 2,167 1,561 <b>1,508</b> 14,755	17,948 14,616 7,166 9,486 8,580 <b>3,346</b> 61,478

(a) Total includes Northern Territory not specified in the table.

Considering that Tasmania has only approximately 3.3 per cent of the Australian population, the proportion of shipping entering its ports is relatively high and serves to emphasise the dependence of an island State upon sea transport.

# Cargo Shipped and Discharged

Most of the cargo handled in the ports is recorded in terms of tons of 2,240 lbs. However, some additional cargo, mainly bulky commodities, is shipped and recorded on the basis of each 40 cubic feet of space used represent-

ing one ton measurement. As totals derived from conversion to a common weight, or alternatively, to a common volume, would not be accurate, entries in each of the two units are recorded and published separately.

The following table gives a summary of cargo discharged and shipped in oversea and interstate trade for a six-year period:

Year			Disch	arged		Shipped					
		Ove	ersea	Inter	rstate	Ove	ersea	Interstate			
		Tons Weight ('000)	Tons Measure- ment ('000)	Tons Weight ('000)	Tons Measure- ment ('000)	Tons Weight ('000)	Tons Measure- ment ('000)	Tons Weight ('000)	Tons Measure- ment ('000)		
1959-60 1960-61 1961-62 1962-63 1963-64 1964-65	   	293 367 252 301 326 389	38 26 29 46 43 72	665 769 721 1,015 1,033 1,015	401 501 511 439 449 597	151 105 163 204 154 195	129 138 180 141 253 198	458 383 401 583 630 662	399 569 466 468 384 518		

# Cargo Shipped and Discharged All Tasmanian Ports—Oversea and Interstate Shipping

In the next table, details are shown of the cargo handled at the individual ports in 1963-64. The classification "oversea" and "interstate" relate either to the origin or destination of the cargo.

Cargo Shipped and Discharged Individual Tasmanian Ports—Oversea and Interstate Shipping, 1963-64

			Ove	ersea	Inter	state	Total		
. 1	Port		Tons Weight ('000)	Tons Measure- ment ('000)	Tons Weight ('000)	Tons Measure- ment ('000)	Tons Weight ('000)	Tons Measure- ment ('000)	
				Disci	HARGED	· · · · · · · · · · · · · · · · · · ·			
Hobart Launcest Burnie Currie Devonpo Smithton Stanley Strahan	on  ort   Total	     	122 167 35  2   326	22 14 7    43	440 170 230 11 157 1 2 22 1,033	97 124 6 3 219    449	562 337 265 11 159 1 2 22 1,359	119 138 13 3 219   492	
				Shi	IPPED	· · · · · · · · · · · · · · · · · · ·		· <u></u>	
Hobart Launceste Burnie Currie Devonpo Smithton Stanley Strahan	on  ort	· · · · · · · · · · ·	80 29 42  3 	213 21 14  5  	176 85 100 5 169  19 76	96 91 63 2 132  	256 114 142 5 172  19 76	309 112 77 2 137 	
	Total		154	253	630	384	784	637	

574

# Shipping at Tasmanian Ports

# **Registration** of Shipping

The following table shows the country of registration of the vessels entering all Tasmanian ports over a five-year period:

	1959	9-60	1960	)-61	196	1-62	196	2-63	196	3-64
Vessels Registered At Ports In	No.	Net Tons ('000)	No.	Net Tons ('000)	No.	Net Tons ('000)	No.	Net Tons ('000)	No.	Net Tons ('000)
Commonwealth Countries— Australia United Kingdom Hong Kong New Zealand Other	958 154 13 34 33	836 864 47 45 39	996 163 10 29 14	960 879 31 43 25	1,122 187 8 18 11	1,177 1,005 30 26 44	1,097 221 9 22 9	1,235 1,168 39 36 28	1,051 231 4 29 6	1,287 1,227 18 56 22
Total	1,192	1,831	1,212	1,938	1,346	2,282	1,358	2,506	1,321	2,610
Foreign Countries- Denmark Netherlands France Germany, West Japan Liberia Norway Panama Sweden U.S.A Other	8 22  1 4 2 34 6 21 13 5 116	35 61  1 4 10 150 35 70 63 17 456	8 30 1 5 7 1 36 10 29 10 5 142	38 97 4 22 33 6 177 60 98 45 28 608	18 34 1 24 4 1 44 11 35 10 5 187	75 106 4 78 18 8 198 70 128 49 26 760	23 47 1 33 12 11 54 4 22 22 7 256	113 120 4 97 16 68 254 22 166 71 37 968	12 51 2 16 13 2 34 3 5 10 9 9	41 147 7 58 14 13 170 21 141 52 72 736
Grand Total	1,308	2,287	1,354	2,546	1,533	3,042	1,614	3,474	1,508	3,346

# Country of Registration of Shipping Vessels Entering All Tasmanian Ports—Oversea and Interstate

# Vessels on Tasmanian Registers

The Merchant Shipping Act 1894 (Imperial) under which vessels are registered in Australia, does not make it compulsory to register vessels under 15 tons burden if engaged in river or coastal trade.

The following table shows the number and tonnage of Tasmanian vessels on register:

Year Ended 31st		Steam		Motor (including Auxiliary)		Sailing		Dredges an Hulks, &c Not Self- Propelled		Total		
	ecembe	r.	No.	Net Tons	No.	Net Tons	No.	Net Tons	No.	Net Tons	No.	Net Tons
1960			22	1,125	134	13,995	42	693	3	690	201	16,503
1961		• •	23	2,122	135	14,004	42	693	3	690	203	17,509
1962	• •	••	23	2,122	138	14,037	42	693	3	690	206	17,542
1963		••	23	2,122	143	14,329	42	693	3	690	211	17,834
1964		•••	23	2,122	152	16,682	42	510	3	690	220	20,004
1965	••	•••	21	2,060	154	16,724	41	507	3	690	219	19,981

Total Vessels on Registers-Tasmania

# TRANSPORT COMMISSION

# Origin of Commission

The State railways were operating at a considerable loss in the period following World War I and this difficulty was accentuated by the increasing use of commercial road transport. The 1938 report of the Commonwealth Grants Commission contained the following comment: "A large State may conceivably stand the cost of duplicated transport, but it is obvious that Tasmania cannot. We believe that the Tasmanian Government appreciates this position and it can only be met by initiative and decision". At the time of this report, railways were controlled by a Minister, motor vehicle registration and licensing of drivers were Police Department functions and public vehicle licensing was administered by a Transport Committee drawn from several departments.

Following an enquiry, Parliament passed the *Transport Act* 1938 establishing a new authority headed by a Commissioner and two Associate Commissioners, the associates now being the General Manager of the Railways and the Administrator of Road Transport. This Act and subsequent amending legislation had the effect of creating an administrative authority unique in Australia because the management and control of all public transport, with minor exceptions, became the responsibility of one central authority (government omnibus services in Hobart, Launceston and Burnie and the privatelyowned Emu Bay Railway are the exceptions). The functions of the Commission are as follows:

- (i) the control and management of the Government railways;
- (ii) the regulation and licensing of commercial road transport (i.e. of "public vehicles");
- (iii) the registration and taxation of motor vehicles and the licensing of drivers;
- (iv) the control and operation of Government intra-state ferries and shipping services;
- (v) the control and operation of its own road transport services (passengers).
- (vi) the administration of regulations under the Traffic Act concerning road traffic control;
- (vii) the administration and control of State aerodromes;
- (viii) the licensing and control of intra-State air transport.

In brief, the Transport Commission emerges as a taxing authority, an administrative body and a business undertaking.

#### **Control of Commission**

The Commission, by Section 6 (2) of the Act, is free from political control but provision exists for the Minister for Transport to appeal to the Governor if dissatisfied with decisions of the Commission. Consultation with the Minister and the Government regarding major policy matters is close so that the appeal provision (Section 33) has very rarely been invoked. Section 34 allows the Governor to direct the Commission to reduce certain fares and freights but, to the extent that such direction causes a revenue loss, the Treasurer is obliged to re-imburse the Commission; the formula for re-imbursement 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 Commissioner's original charges be a matter of dispute.

# **Commission's Financial Operations**

The revenue of the Commission comes from three main sources:

- (1) own business undertakings—railways, road transport services, ferries and an engineering plant ("tool annexe");
- (2) taxation and licensing receipts—motor vehicle taxation and registration, drivers' licence fees and fees related to public vehicles control;
- (3) grants from Consolidated Revenue, including proceeds of State land tax.

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, secondly Taxation, Licensing, &c. 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 most of the proceeds from motor taxation, registration, licensing, &c. are passed to Consolidated Revenue, the Commission retaining only the costs of collecting such revenues and the costs and expenses incurred in connection with the control of, and the provision of facilities for, motor traffic. A distinction is drawn, however, between public vehicle fees and public vehicle licensing; the latter charges are taken into the Profit and Loss Account as an offset against net trading loss.

The amounts paid into Consolidated Revenue by the Commission are transferred by the Treasurer into the State Highway Trust Fund, thereby providing that taxes and charges levied on motorists and commercial road transport shall be devoted to road construction and road maintenance.

Pa	rticul	ars				1961-62	1962-63	1963-64
			RE	VENUE				
Railways Road Transport Services Marine Services Tool Annexe Public Vehicle Licensing Other Revenue Net Loss (a) Total	  (Trar 	    	   	··· ·· ·· ·· ··	··· ··· ··· ···	5,614 442 140 192 1,094 58 68 1,490 9,098	5,830 436 154 238 1,258 90 62 840 8,908	5,918 424 164 232 1,554 90 84 816 9,282
			Expen	DITURE	s (b)			
Railways Road Transport Services Marine Services Tool Annexe General, including Admin Interest Total	 nistra	  tion 	· · · · · · · · ·	· · · · · · · · ·	••• •• •• ••	7,084 418 218 178 232 968 9,098	6,900 398 198 214 236 962 8,908	7,190 394 204 218 286 990 9,282

Transport Commission—Trading and Profit and Loss Account (\$'000)

(a) To be charged against Consolidated Revenue in following year.

(b) Provisions for depreciation included in each item (excluding interest).

# The remaining transactions can be summarised as follows:

		÷ 000)				
Particulars				1961-62	1962-63	1963-64
	Rı	EVENUE			· · · · · · · · · · · · · · · · · · ·	I
Motor Tax Public Vehicle Licensing, Fees, &c. Registrations, Licences, &c. Refunds Total	•••	••• •• ••	  	2,152 322 624 - 20 3,078	2,480 330 666 - 26 3,450	2,662 344 723 - 24 3,705
	Expi	ENDITU	RE			
Profit and Loss Account (Transfer) (a) Paid to Consolidated Revenue (b) Administration, Traffic Control, &c.	 	•••	•••	58 2,508 512	90 2,832 528	90 3,019 596
Total	•••	••		3,078	3,450	3,705

# Transport Commission—Motor Taxation Collection, Licensing, &c.

(a) Receipts from Public Vehicle Licensing paid into Profit and Loss Account.

(b) For payment to State Highway Trust Fund.

## Annual Loss

In the Profit and Loss Account, State land tax is taken as a revenue item, thus reducing the net loss. In effect, the Commission receives annually two grants from the State, firstly all collections of land tax and secondly, reimbursement of the previous year's net loss. The actual burden on Consolidated Revenue, over the last three years, has been: 1961-62, \$2,583,012 (£1,291,506); 1962-63, \$2,097,904 (£1,048,952); 1963-64, \$2,369,422 (£1,184,711). The accounts reveal that the loss occurs principally in respect of railways but the case for continued subsidisation is argued on a number of grounds:

- (1) abandonment of all railway operations would still leave the State with liability for annual debt charges exceeding \$1,000,000 (£500,000);
- (2) heavy bulk freights now carried by rail would rapidly break up present road surfaces if they were transferred to road haulage; all the money saved by closing the railways and possibly other funds as well would have to be spent in increased road maintenance or road improvements;
- (3) for certain types of freight, rail transport is still considered more economical than road haulage; closing the railways might add appreciably to the costs of many primary and secondary producers.

Economic operation of the State railways in Tasmania is difficult for the following reasons: (i) low density of traffic; (ii) difficult physical conditions, due to hilly and mountainous country; (iii) small population; (iv) short hauls; (v) lack of rich hinterland, and the situation of most towns and large scale industries on the sea coast; (vi) general small scale production and diversity of products; (vii) high shipping and other marketing costs borne by Tasmanian industries, which limit the ability of the Commission to pass on increased railway costs to users; (viii) numerous ports and short distance between ports.
### Transport Commission

## **Public Vehicle Licensing**

The following types of licence are issued by the Commission to operators of public vehicles:

Aircraft- for aircraft used as public vehicles on intra-state journeys.

- Coach —for vehicles used for the carriage of passengers and goods between places along a specified route.
- Omnibus for vehicles seating more than eight passengers and operating within a specified area.
- Cab —for vehicles seating eight or less passengers and operating within a specified area (i.e. plying or standing for hire).
- Hire-Car-for vehicles seating eight or less passengers and operating between any places in the State; also for the same vehicles standing or plying for hire within a specified area.
- Carrier —for vehicles engaged in carriage of goods between places on a specified route.
- Cart —for vehicles engaged in the carriage of goods within a specified area. (Despite the word "cart", the licence applies to petrol driven vehicles.)
- Ancillary—for vehicles engaged in the carriage of goods in the course of the trade or business of the owner (excluding farmers, general "carters" and "carriers"). Such licences apply to operation within a specified area.

Licences are issued for three-year periods for all public vehicles except those classed as ancillary or hire-car, in which case annual renewal is required. The decision of the Commission to grant or refuse a licence, or to impose conditions or restrictions on a licence, is subject to appeal to the Public Vehicle Licensing Appeal Tribunal. The factors considered by the Commission in issuing a licence include:

- (1) suitability of the routes over which the applicant proposes to provide the service;
- (2) the extent to which the needs of the proposed routes, traffic areas, or districts, are already adequately served;
- (3) the extent to which the proposed service is necessary or desirable in the public interest;
- (4) the traffic needs of the district or traffic area, including provision of adequate and efficient services, the elimination of unnecessary and unremunerative services, and the co-ordination of all forms of transport with rail;
- (5) the condition of the roads over which the proposed service is to be provided;
- (6) the fitness of the applicant to hold the licence.

## **Public Vehicle Control**

For the purposes of transport control, Tasmania is divided into eight traffic areas so designed that competitive operations of vehicles licensed for one area only are confined to short hauls. From the earlier section on licensing, the following classification emerges:

- (1) licensed for one traffic area only: cabs, omnibuses, 'carts' and ancillary vehicles;
- (2) licensed for specified routes: coaches and carriers;
- (3) licensed for whole State: hire-cars.

In the section that follows, some charges are quoted as decimals of a penny. Despite the introduction of decimal currency, charges are still computed on this basis, the final conversion to dollar and cent units being made when the operator makes payment. (For 0.5d., equivalent is 0.4167 cents, for 0.4d., 0.3333 cents.)

Vehicles licensed for a specific traffic area cannot be used outside it without first obtaining a permit for which out-of-area fees are payable as determined by the Commission. The Traffic Act provides for maximum permit fees, in relation to goods vehicles, of 0.5d. per cwt. of unladen weight for each mile over which the goods are carried. However, the maximum charge determined by the Commission is 0.4d. per cwt. Thus, for a vehicle of an unladen weight of three tons engaged on an out-of-area journey of 120 miles, the permit fee would be \$24 or  $f_{12}$  (i.e. 0.4d. x 60 x 120). If goods are carried on the return journey, a further permit fee is payable. In the example quoted, the permit fee at 20 cents (2s.) per mile virtually doubles the cost of operating the vehicle; it is sufficiently high to prevent most licence holders from travelling outside their area in competition with the railways or with licensed carrier services.

## Rebates

In actual fact, it is not always necessary for operators to pay full permit fees as described in the previous paragraph since percentage rebates on full fees may be claimed. Such rebates have relation to the suitability of the goods for transport by rail or licensed carrier and are greatest for certain perishable goods; in general, the shorter the journey, the greater the rebate percentage.

#### Nominal Fees

The policy of the Commission is to avoid unnecessary duplication of transport, and full fees are charged if the goods in question can be handled as conveniently and efficiently by rail or by an existing licensed carrier service. The Commission grants permits at nominal fees of 1.00 (105.) per trip up to 50 miles and  $2.00 (f_1)$  per trip over 50 miles if it is satisfied that road transport is more suitable for any of the following reasons: (1) the dimensions of the load are outside railway clearance; (2) the perishable nature of the goods makes them unsuitable for rail transport; (3) time element; (4) shortage of rail waggons; (5) unreasonably high cost of rail transport compared with road transport, because of extra handling or other reasons; (6) special circumstances.

It is estimated that less than a third of out-of-area trips are at full fees, the balance being for nominal fees or at rebates from 30 to 80 per cent of the full fee.

#### Ancillary Vehicles

In the case of small vehicles used by tradesmen, and small service and delivery trucks, it would be poor administration to require the payment of out-of-area permit fees for every trip; accordingly, an annual permit fee is charged, once the degree of competition with rail and licensed carrier services has been determined. In the case of ancillary vehicles with a carrying capacity of more than one ton, normal out-of-area permit fees are payable, subject to rebate in the same way as if the owner held a cart licence.

### Passenger Vehicles

Commercial passenger vehicles operating out-of-area may be competing with existing rail or licensed coach services, in which case they can be charged fees at a maximum of 0.5d. per passenger seat per mile. If no such competition exists, out-of-area fees are charged at \$0.50 (5s.) for each 25 miles; in the case of round trips, the mileage is halved in applying the charge formula.

#### Transport Commission

## Percentage Fees—Coaches and Carriers

Coaches and carriers receiving licences to operate over routes which extend beyond one traffic area are required to pay a percentage tax on annual revenue, the extent of the tax being proportional to the assessed competition with rail services. The Commission's own road passenger services, by the provisions of the Act, are required to pay the same tax as any private operator on the same route. Charges vary from one to 22 per cent, depending on the degree of competition with rail services.

### Transport Commission Road Transport Services

The Commission operates road passenger and road freight services, on which it is obliged to make a profit. Should the Auditor General indicate that these services have been carried on at a loss in the previous financial year, the Act provides that parliamentary approval must be obtained for the Commission to continue the services. The Commission is also obliged to obtain parliamentary approval before initiating new services.

In 1963-64, the Commission's passenger bus services operated over 742 route miles, not only linking the principal towns but also providing interurban and special services for workers. The Commission's coaches ran more than one million vehicle-miles.

### RAILWAYS

#### Introduction

Tasmania has a three foot six inch gauge Government railway system based on a route mileage of a little under 500 miles. The capital indebtedness of the system at 30th June, 1964 was \$19,928,568 but this understates the position since the debt, in 1936-37, was written down by \$9,476,000; the annual debt charges associated with this latter amount were made a charge on Consolidated Revenue. The last year in which earnings exceeded working expenses was 1933-34 and this did not indicate profitable running since interest charges exceeded the small operational surplus. The peak year of operational loss was 1956-57 when working expenses, *excluding* interest and depreciation, exceeded earnings by \$1,364,924. In 1963-64, the operational loss had been drastically reduced to \$716,610 but interest and depreciation provisions together imposed an additional burden of \$1,441,384.

The Tasmanian experience of a Government railway system heavily dependent on State grants for its continued existence is by no means unique in Australia today. In 1963-64, all State systems received government grants to offset their operating losses or to enable them to meet depreciation, interest and sinking fund obligations; in terms of accepted accounting, the State systems have generally not been a source of profit for many years. The difficulties of the Tasmanian system are aggravated by a number of factors, the principal of which are: (i) operational disadvantage of short routes; (ii) no rail link with Victoria; even if a rail ferry were provided, gauge differences would impose an almost insuperable barrier; (iii) effectiveness of road transport in interstate trade with introduction of roll-on roll-off ferries; (iv) effectiveness of road and air transport in competition for passengers.

The railway system in Tasmania is frequently criticised for its failure to "pay its way". It can be established, however, that railway development, before the days of mechanised road transport, was an essential pioneering activity; without such development, the State would not have had a railway debt but neither would it have had many of its present farms and factories or even its present level of population. The section that follows traces out the origin of the present system.

### Historical

The first railway in Tasmania was opened for traffic in 1871 (construction having begun three years earlier on a 45-mile line from Deloraine to Launceston). It is significant that only one-ninth of the original capital was subscribed by the shareholders of the Launceston and Western Railway Company, the remainder, \$800,000 (£400,000), having been raised by the Government. The line was laid in broad gauge (five foot three inch) without regard for the fact that narrower gauge might be needed in the more mountainous parts of the island. Within a year of opening, the company was in financial difficulties and the line was taken over by the Government. At the date of starting construction, the island's population had not passed 100,000.

The second line was a more ambitious undertaking—123 miles of three foot six inch track from Hobart to Western Junction, linking there with the five foot three inch line—and involved considerable problems of contour survey because of the high plateau lying across the route. The Tasmanian Main Line Railway Company opened the line for traffic in 1876. The problem of differing gauges on the two systems was overcome by laying a third rail on the ten miles of the five foot three inch track from Western Junction to Launceston, the Main Line Company having running rights over this stretch. In 1890, the Government purchased the line for \$2,213,000 (f.1,106,500).

The next line to open for traffic (1884) was owned by the Emu Bay and Mount Bischoff Railway Company which converted an existing horse-tramway to three foot six inch gauge; the 48 mile line connected Waratah to the port of Burnie, the primary objective being to ship out freight from the rich Mount Bischoff tin mines.



Railway Systems in 1926 and 1964

### Railways

By 1890, the essential framework of the present railway system on three foot six inch gauge had been laid, and future growth involved track extensions mainly in directions already determined in the first twenty years of rapid construction. The following table shows the pattern of development in 1890 and compares it with that of the present system. Under "route" is shown firstly the terminals of individual tracks in 1890 and secondly, the present extent of the same tracks. Only construction dates before 1890 have been quoted since later extension of track was carried out in several stages.

			Mileage of I	Lines Open	
Route	Area Year Open 1st Jan., Served For Traffic 1890		1st Jan., 1890	30th June, 1964	
Launceston to Devonport Launceston to Smithton	North West """	1885 	(a) 82 	(a) 179	
Hobart to Western Junction	North-South link	1876	(b) 123	(a) 123	
Burnie to Waratah Burnie to Zeehan (c)	West Coast	1884	(b) 48 	(b) <sup></sup> 88	
Conara to St. Marys	Fingal Valley	1886	(a) 46	(a) 46	
Bridgewater to Glenora Bridgewater to Florentine	Derwent Valley	1888 	(a) 24 	(a) (44	
Launceston to Scottsdale Launceston to Herrick	North East ,, ,,	1889	(a) 47 	(a) <sup></sup> 85	
Other Branches	••	••	(a) 4	(a) 23	
Total Route Miles Open	••		374	588	
Government Private	•••	 	203 171	500 88	

Government and Private Railways Route Mileage of Lines Open—1890 and 1964

(a) Government.

(b) Private.

(c) Service to Zeehan ceased August, 1965, and terminal is now Rosebery.

### Growth and Decline

The main task of developing and maintaining railways fell to the Tasmanian Government after it purchased the Hobart-Western Junction line in October, 1890. The following table shows the mileage of Government-owned railways from 1895 to the present:

Government Railways-Route Mileage of Lines Open

Year	Route Miles	Year	Route Miles	Year	Route Miles
(a)	Open	(a)	Open	(a)	Open
1895            1900            1905            1910            1915	420 439 463 470 533	1920          1925          1930          1935          1940	629 673 679 645 644	1945 1950 1955 1960 1964	642 613 605 538 500

(a) 31st December, 1895 and 1900; 30th June for subsequent years.

The peak of development was reached in 1930 when 679 miles were open for traffic; since then, many branch lines have been closed down, the competition of road transport making their operation uneconomic. Route mileage has actually declined to what it was fifty years ago at the outbreak of World War I. Examples of lines now closed down are: Brighton to Apsley, 27 miles; Bellerive to Sorell, 15 miles; Zeehan to Strahan, 29 miles.

#### West Coast Lines

The discovery of tin at Mt. Bischoff in 1871 had given the stimulus needed for the Burnie-Waratah line completed in 1884. Further mineral discoveries silver-lead at Zeehan (1882), copper at Mt. Lyell (1883), silver-lead at Read-Rosebery, Farrell and Dundas—called attention to the isolation of the West Coast and made good transport to the sea a matter of urgency. Possible ports were Strahan and Burnie.

First in the field was the Tasmanian Government which opened a 29-mile line from Zeehan to Strahan in 1892. By 1899, a private line stretched 22 miles from Queenstown to Strahan, the owners being the Mt. Lyell Mining and Railway Company. Strahan, lying inside Macquarie Harbour, was not considered an ideal port because of the difficulties of entering "Hells Gates", the shallow entrance from the open sea, and attention shifted to the possibility of linking the mines direct to the port of Burnie. In this period of expansion set in motion by the West Coast mineral discoveries, even Hobart and Launceston were considered as possible terminals for lines from the Mt. Lyell fields and a large section of a Hobart-Queenstown track was actually surveyed. (The present road for cars is nearly 160 miles long and passes through formidable mountain country.) The initiative was finally taken by a private company which decided in favour of Burnie as the logical terminal.

In 1897, the newly formed Emu Bay Railway Company decided to lease the 48-mile Burnie-Waratah line and commenced construction at Guildford, ten miles east of Waratah. Within three years, a route of 88 miles between Burnie and Zeehan came into operation. It was then possible to make the trip Queenstown to Burnie, using the Mt. Lyell service to Strahan, the government service to Zeehan and the Emu Bay service to Burnie. The Mt. Lyell line ran over such prohibitive gradients that, for  $4\frac{1}{2}$  miles, locomotives employed the "Abt" cog-and-rack system; parts of the track had a gradient of one in 16.

The importance of Queenstown's rail link with Burnie depended on the fact that there was no road link with Hobart before 1932. Traffic slowly declined on the Zeehan-Strahan line and the Government decided to close it in 1960. In 1963, the Mt. Lyell Company ceased working the Queenstown-Strahan line, road transport to the port being a more economic proposition. The last private railway in the State—the Emu Bay—still operates between Burnie and Rosebery, and its main activity is concerned with the haulage of concentrates from the Electrolytic Zinc Company's mines. The recent opening of the Murchison Highway linking west and north-west coasts has robbed the Emu Bay line of one frequent type of freight—motor vehicles (motorists plus their vehicles had to travel by train).

An oddity of railway construction on the West Coast at the turn of the century was the attempt by two companies simultaneously to construct lines to Macquarie Harbour. The Mt. Lyell Mining and Railway Company's line to Strahan has already been described; its competitor, the North Mt. Lyell Mining Company, completed a line to the harbour a year later at Pillinger but was then absorbed by the Mt. Lyell Company, thus ending the absurdity of two tracks serving the same general area.

### Railways

### **Recent Developments**

The long-term problem of the State railways has been to reduce the annual operational loss and, in this connection, three major trends have become apparent in recent years:

### Introduction of Diesel Locomotives

The elimination of steam locomotives from the system has been almost completed; in 1963-64, for example, steam locomotive engine miles were less than 0.8 per cent of total engine miles. Three types of diesel are in operation: mechanical, hydraulic and electric but the bulk of running falls on the diesel electric locomotives. At 30th June, 1964, the system had in service the following locomotives: Steam 19, Diesel Mechanical 18, Diesel Hydraulic two, Diesel Electric 35, total 74. In addition, services were maintained using 16 selfcontained railcars.

### Reduction in Passenger Services

The peak of the system's effectiveness in carrying passengers was reached in 1945-46 when 3.4 million passenger journeys were made. Of recent years, a deliberate policy of eliminating uneconomic services has been pursued and passenger journeys in 1963-64 had fallen to 1.4 million.

#### Rail Ferry Service

This new service is somewhat ambiguously titled since, in other parts of the world, there are railway ferries actually moving rolling stock across water barriers. In the Tasmanian situation, there are roll-on roll-off ferries and container vessels, but there is no means of transferring rolling stock to the continental railways; in any case, the different gauges (three foot six inch as against four foot  $8\frac{1}{2}$  inch) present a major difficulty. The introduction of roll-on roll-off ferries and container vessels to the Bass Strait trade, commencing in 1959, was nevertheless accepted by the State railways as an opportunity to extend their existing freight services; the new facility was named "rail ferry service".

In essence, the rail ferry service aims at giving door to door transport between Tasmania and the continental States. At the Tasmanian end, transport to and from the sea terminals is handled by the railways and by local carriers commissioned by the railways. At the Victorian sea terminals, carriage is arranged through a road transport agency which acts in co-operation with the Tasmanian railways.

The service began with the evolution of the "railroader" container, a cargo-carrying unit which is adaptable to the carriage of almost any type of freight. The sides and ends of the "railroader" are removable for the carriage of long articles (e.g. packed timber), or for the nesting of the pallet-like trays, to enable their movement in parcels of up to six within the space of a single unit. Because these containers are of open design, the charges for cargo are based on actual cargo measurement only and the consignor is therefore not responsible for the cost of lost space, as would be the case with an enclosed type of container. Frozen meat, confectionery, and apples direct from cool store are insulated with blanket-type telescopic covers under the tarpaulins to prevent heat penetration. Carriage to Sydney and even Brisbane has been very satisfactory under such conditions. In addition to the general purpose "railroader", specialised types of container have been evolved, e.g. for livestock, bulk malt, refrigeration, &c.

Considerable ingenuity has gone into the design of the rail ferry service containers which need fittings to allow handling by fork-lift truck, railway gantry and ship's crane, as well as anchorages for securing to rolling stock on both Tasmanian and continental railways. The containers on a typical rail ferry service journey may cross Bass Strait in any of three ways: (1) on a road trailer; (2) on the upper deck of a combined trailer-container ship; (3) in the holds of converted container ships. The chief ports through which the service operates are Burnie, Bell Bay and Devonport.

The rail ferry service is now the largest single operator between Melbourne and northern Tasmanian ports and provides an interesting example of cooperation between State and private enterprise.

## **Operating Statistics**

The next table shows the principal operating statistics for the Tasmanian system:

Year		Route-Mileage Open (a) (Miles)	Revenue Train-Mileage ('000 Miles)	Passenger- Journeys ('000)	Goods and Livestock Carried ('000 Tons)
1954-55		605	2.066	3.114	1 041
1955-56		585	2,105	2,977	1.075
1956-57		579	1.855	2.813	1,061
1957-58		565	1,568	2,444	1 096
1958-59		567	1.539	2,344	1 1 38
1959-60		538	1.550	2,292	1 191
1960-61		517	1,516	2.103	1,192
1961-62		516	1.415	1.816	1.096
1962-63		516	1,322	1.558	1,165
1963-64		500	1.322	1.426	1,155
1964-65		500	1,272	1.340	1.091

#### Tasmanian Government Railways Operating Statistics

(a) At end of period.

## **Financial Operations**

The following table gives details of gross earnings and working expenses:

Year		Gross	Earnings	Working	Expenses (a)	Net E	Net Earnings (b)		
		Total	Per Revenue Train Mile	Total	Per Revenue Train Mile	Total	Per Revenue Train Mile		
		\$'000	\$	\$'000	\$	\$'000	\$		
1954-55 1955-56 1956-57 1957-58 1958-59 1959-60 1960-61 1961-62 1962-63 1962-63	· · · · · · · · · · ·	4,644 5,070 5,068 5,138 5,414 5,616 5,464 5,406 5,598 5,668	2.25 2.41 2.73 3.28 3.52 3.62 3.60 3.82 4.23 4.23	6,154 6,524 6,894 6,436 6,430 6,726 7,090 6,878 6,670 6,878	2.98 3.10 3.72 4.10 4.18 4.34 4.68 4.86 5.04 5.24	$\begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$	$\begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$		
1964-65	••	5,581	4.38	7,233	5.68	- 1,652	- 1.30		

#### Tasmanian Government Railways Financial Operations

(a) Includes provision for depreciation but excludes interest.

(b) Excess of gross earnings over working expenses.

586

## Railways

### **Employment and Wages**

In the table that follows, details are given of the number of employees, and of wages and salaries paid over a ten-year period:

	Average 1 Emplo	Number of yees (a)	Salaries and	Salaries and Year		Average Number of Employees (a)		
Year	Salaried	On Wages	Wages Paid (\$'000)		Salaried	On Wages	Wages Paid (\$'000)	
1954-55 1955-56 1956-57 1957-58 1958-59	355 375 359 353 351	2,294 2,251 2,316 2,081 2,066	4,570 4,790 5,030 4,612 4,660	1959-60 1960-61 1961-62 1962-63 1963-64	366 367 354 357 366	2,028 2,052 1,994 1,891 1,895	4,932 5,136 4,990 4,868 5,220	

#### Tasmanian Government Railways Number of Employees and Wages and Salaries Paid

(a) Excludes construction staff.

## **Comparison with Other Australian Systems**

The Tasmanian system of Government railways is the smallest in Australia and the following table, showing principal operational details, allows a comparison to be made:

System		Average Route Mileage (Miles)	Revenue Train-Mileage ('000 Miles)	Passenger- Journeys ('000)	Goods and Live- stock Carried ('000 Tons)
N.S.W	· · · · · · · · ·	6,055 4,242 6,058 2,514 3,677 <b>504</b> 2,252	39,078 20,113 19,161 6,666 7,506 <b>1,322</b> 2,668	240,677 153,396 25,903 15,227 10,814 <b>1,426</b> 338	25,814 12,132 9,796 5,179 5,187 1,155 2,478
Total Australia		25,302	96,514	447,781	61,741

#### Australia—Government Railway Systems, 1963-64 Operating Statistics

(a) Includes Queensland portion of Uniform Gauge Railway.

#### Financial Comparison

In comparing the financial results of the Tasmanian system with those of other authorities, certain difficulties arise from the treatment of depreciation. In the table that follows, working expenses for the systems in Tasmania, S.A. and W.A. include provision of reserves for depreciation. A further complication arises from the fact that interest is not charged against the railways accounts in the Victorian and Commonwealth systems.

To the extent that there is differing treatment of interest and of depreciation provisions in the various systems, the "net profit or loss" shown in the next table is not a good basis for making comparisons; however, if due allowance is made for interest charges in the case of the Victorian and the Commonwealth systems, it will be seen that loss, rather than profit, is characteristic of most Australian systems.

### Trade, Transport and Communications

(\$ million) (a)										
System		Gross Earnings (b)	Working Expenses (c)	Net Earnings	Interest (Including Exchange) on Loan Expenditure	Net Profit or Loss				
N.S.W Victoria Queensland S.A W.A <b>Tasmania</b> Commonwealth	· · · · · · · · ·	202.5 92.8 84.3 29.5 34.6 <b>5.7</b> 15.2	177.4 91.5 78.3 30.9 35.8 <b>6.9</b> 14.3	$ \begin{array}{r} 25.1 \\ 1.3 \\ 6.0 \\ - 1.4 \\ - 1.2 \\ - 1.3 \\ 0.9 \\ \end{array} $	22.6 (d) 9.6 4.8 5.6 <b>0.9</b> (d)	$\begin{array}{r} 2.5 \\ 1.3 \\ - 3.7 \\ - 6.2 \\ - 6.8 \\ - 2.2 \\ 0.9 \end{array}$				
Total Austral	lia	464.5	435.1	29.3	43.5	- 14.1				

#### Australia—Government Railways, 1963-64 Financial Operations (\$ million) (a)

(a) Figures have been rounded to nearest \$100,000 without adjustment to add to totals.

(b) Excludes Government grants, e.g. N.S.W., \$3,200,000; S.A., \$8,000,000, &c.

(c) Includes provision for depreciation in S.A., W.A., and Tasmania.

(d) Interest not charged against railway accounts.

## GOVERNMENT TRAMWAY, TROLLEY-BUS AND OMNIBUS SERVICES

### Scope

The details that follow refer to services provided by the Metropolitan Transport Trust and by the Tasmanian Transport Commission. At 30th June, 1964, the Metropolitan Transport Trust was operating omnibus services in Hobart, Launceston and Burnie; in Hobart and Launceston, it was also operating on some routes with trolley-buses. The Transport Commission was operating omnibuses on long-distance intra-state routes.

## Metropolitan Transport Trust

Until 1955, tramway, trolley-bus and omnibus services were operated in Hobart and Launceston by the municipal authority in each city. The Hobart system had operated without subsidy but the Launceston system received, as one item of revenue, the annual proceeds from a special tramways rate.

The *Metropolitan Transport* Act 1954 empowered the State to enter into agreements for the acquisition of the two systems and to vest them in the newly constituted semi-government authority named in the Act. After negotiation with the two municipal authorities, the Trust arranged to take over the Hobart system from 28th February, 1955, and the Launceston system from 1st July, 1955. It was part of the agreement that the Trust should re-imburse to the municipal authorities the annual charges relating to the loan debt of each system. Future capital requirements were to be met by advances from the State loan fund.

During 1959-60, the Trust commenced the operation of omnibus services in Burnie. In October, 1960, trams ceased running in Hobart, the system now relying entirely on omnibuses and trolley-buses (the Launceston system had dispensed with trams before it was taken over by the Trust).

## Financial Operations of Trust

The following table shows the income and expenditure of the Metropolitan Transport Trust for a five-year period:

(\$1000)									
Particulars	1959-60	1960-61	1961-62	1962-63	1963-64				
Income— Traffic Operations Other Earnings Subsidy—State Government	1,874 24 470	1,967 30 598	1,922 33 720	1,876 29 600	1,855 27 680				
Total	2,368	2,595	2,675	2,505	2,562				
Expenditure— Traffic Operations Maintenance Power and Fuel Workshop and Stores Administration and General . Debt Charges Depreciation Charges	1,152 452 202 34 251 204 83	1,236 440 224 39 299 211 137	1,220 412 212 71 313 214 187	1,157 418 208 53 322 186 193	1,221 433 211 34 306 172 207				
Total	2,378	2,586	2,629	2,537	2,584				

#### Metropolitan Transport Trust Income and Expenditure (\$'000)

## Loan Debt of Trust

The loan debt of the Trust is partly in respect of debentures and inscribed stock originally issued by Hobart and Launceston Corporations. At 30th June, 1964, loans of this nature stood at \$305,722 (£152,861); net advances from the State loan fund stood at \$2,782,908 (£1,391,454).

## **Transport Commission—Omnibus Services**

The financial operations of the Transport Commission are described in the section of this chapter headed "Transport Commission"; omnibus services are included in the financial details of this authority under "road transport services".

## **Operating Statistics**

The tables that follow combine the operations of the Metropolitan Transport Trust and of the omnibus services provided by the Transport Commission.

Government Tramway, Trolley-bus and Omnibus Services Operating Statistics (a)

Particulars	1954-55	1959-60	1960-61	1961-62	1962-63	1963-64
Route-miles (b)— Tramway Trolley-bus Omnibus	9 21 564	5 27 785	27 813	28 813	28 808	28 910
Vehicle-miles—('000) Tramway Trolley-bus Omnibus	906 1,438 1,738	592 1,597 3,934	83 1,550 4,707	1,397 4,946	1,353 4,863	1,340 5,094
Passenger-journeys(e) ('000)	24,927	27,979	26,256	25,576	25,145	24,756

(a) Operation of fleets owned by Metropolitan Transport Trust and Transport Commission.

(b) At end of period.

(c) Passenger-journeys on trams, trolley-buses and omnibuses.

#### **Financial Details**

The following table shows the gross revenue (excluding Government grants) and the working expenses associated with the transport systems of the two authorities:

Particulars	1954-55	1959-60	1960-61	1961-62	1962-63	1963-64
Gross Revenue (b)	1,632	2,312	2,402	2,356	2,302	2,278
Working Expenses (c)	1,706	2,714	2,832	2,858	2,760	2,824
Net Revenue	- 74	- 402	- 430	- 502	- 458	- 546

#### Government Tramway, Trolley-bus and Omnibus Services Gross Revenue and Working Expenses (a) (\$'000)

(a) Operation of fleets owned by Metropolitan Transport Trust and Transport Commission.

(b) Excludes government grants.

(c) Includes depreciation.

### Comparison with Other States

The services under the two authorities, when their financial details are combined, obviously run at a loss; the losses are met, in the main, from State Government grants. The necessity for subsidising similar government transport systems in other parts of Australia is suggested by the following table:

Australia—Government and Municipal Tramway, Trolley-bus and Omnibus Services, 1963-64 Net Revenue

State		Total	Per Passenger- Journey	Per Route- Mile	Per Vehicle- Mile
		\$'000	cents	\$	cents
N.S.W Victoria Queensland S.A W.A Tasmania	· · · · · · · · ·	2,882 370 56 280 378 546	$\begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$	5,126 1,330 154 1,900 100 616	6.49 1.44 0.39 2.43 2.14 <b>8.48</b>
Total (a)		- 4,202	- 0.60	- 686	- 3.44

(a) Includes Northern Territory and the Australian Capital Territory not specified above.

The previous table dealing with net revenue in all States is not a complete account of the losses since interest has not been taken into the calculation. In 1963-64, interest payments were as follows (in \$'000): N.S.W., 1,472; Victoria, 944; Queensland, 416; S.A., 516; W.A., 382; Tasmania, 156.

## **ROADS AND BRIDGES IN TASMANIA**

#### Scope

The details in the following section refer to: (i) "classified" roads; (ii) roads of local government authorities; (iii) roads of other government authorities. A further qualification is that the roads are those normally open to traffic.

### Roads and Bridges in Tasmania

## Definitions and Mileages

(i) Classified Roads: These are roads for which the State Government accepts direct responsibility, the construction and maintenance authority being the Public Works Department. The mileage of classified (or State) roads at 30th June, 1965, was as follows: State highways, 1,171 miles; main roads, 662 miles; secondary roads, 196 miles; tourist roads, 46 miles; and other roads, 169 miles; total State roads, 2,244 miles.

(*ii*) Roads of Local Government Authorities: The roads for which the local government authorities accepted responsibility at 30th June, 1965, included: town and city streets, 1,424 miles; other municipal roads, 7,198 miles; total, 8,622 miles.

(*iii*) Roads of Other Government Authorities: The roads for which other government authorities accepted responsibility at 30th June, 1965, included: roads of the Hydro-Electric Commission, 160 miles; Forestry Commission, 1,452 miles; Closer Settlement Board, 60 miles; total, 1,672 miles.

### Surface of Roads

The following table shows mileages of all roads normally open to traffic, classified according to road surface, and according to the level of government which accepts responsibility for construction and maintenance. The most striking feature is the increase, over the last ten years, in the percentage of State (or classified) roads with sealed surfaces; as the table indicates, the sealed surface mileage has increased from 37.4 per cent (30th June, 1955) to 63.9 per cent (30th June, 1965).

Type of Surface	1955	1961	1962	1963	1964	1965
		Classifi	ed Roads			
Sealed (a) (miles) Unsealed (b) (miles)	818 1,370	1,090 1,129	1,177 1,024	1,266 947	1,336 874	1,435 809
Total (miles)	2,188	2,219	2,201	2,213	2,210	2,244
Sealed Ratio (c) (%)	37.4	49.1	53.5	57.2	60.5	63.9
	Roads of	LOCAL GOV	vernment A	UTHORITIES		
Sealed (a) (miles) Unsealed (b) (miles) Formed or Cleared	(d) (d)	768 6,170	848 6,126	967 6,086	1,072 6,168	1,184 6,124
Only (miles)	<i>(d)</i>	1,432	1,495	1,488	1,342	1,314
Total (miles)	( <i>d</i> )	8,370	8,469	8,541	8,582	8,622
Sealed Ratio (c) (%)	<i>(d)</i>	11.1	12.2	13.7	14.8	16.2
· · · · · · · · · · · · · · · · · · ·	ROADS OF	Other Gov	VERNMENT A	UTHORITIES	·	I
Sealed (a) (miles) Unsealed (b) (miles)	(d) (d)	22 1,104	27 1,196	27 1,259	27 1,442	47 1,625
Total (miles)	( <i>d</i> )	1,126	1,223	1,286	1,469	1,672
Sealed Ratio (?) (%)	<i>(d)</i>	2.0	2.2	2.1	1.8	2.8

Length of Roads According to Nature of Surface at 30th June

Trade, Transport and Communications

Type of Surface	1955	1961	1962	1963	1964	1965
· · · · · · · · · · · · · · · · · · ·		All	Roads			
Sealed (a) (miles) Unsealed (b) (miles)	(d) (d)	1,880 8,403	2,052 8,346	2,260 8,292	2,435 8,484	2,666 8,558
Only (miles)	( <i>d</i> )	1,432	1,495	1,488	1,342	1,314
Total (miles)	( <i>d</i> )	11,715	11,893	12,040	12,261	12,538
Sealed Ratio (c) (%)	(d)	18.3	19.7	21.4	22.4	23.8

Length of Roads According to Nature of Surface at 30th June-continued

(a) Bitumen or concrete.

(b) Gravel or stone.

(c) Sealed as a proportion of sealed and unsealed (excluding formed and cleared only).

(d) Not available on comparable basis.

### Classified (or State) Roads

The next table analyses the mileage of classified roads according to their description, and also according to their surface. The principal State highways include the following: (i) *Arthur* (46 miles), from Sorell to Port Arthur; (ii) *Bass* (177 miles), from Launceston to Marrawah in the north-west; (iii) *Channel* (59 miles), from Hobart to Huonville, via D'Entrecasteaux area; (iv) *East Tamar* (27 miles), from Launceston to Bell Bay; (v) *Huon* (59 miles), from Hobart to Huonville, via D'Entrecasteaux area; (iv) *East Tamar* (27 miles), from Launceston to Bell Bay; (v) *Huon* (59 miles), from Hobart to Hythe via Dover; (vi) *Lake* (93 miles), from Deloraine via Great Lake to Melton Mowbray; (vii) *Lyell* (171 miles), from Granton, near Hobart, to Strahan; (viii) *Marlborough* (20 miles), from Bronte to Lake Highway near Miena; (ix) *Midland* (114 miles), from Glenorchy to Launceston; (x) *Murchison* (48 miles), from Zeehan highway to Waratah area; (xi) *Tasman* (263 miles), from Hobart to Launceston, via East Coast and St. Helens; (xii) *Waratah* (44 miles), from Somerset to Waratah area; (xiii) *West Tamar* (28 miles), from Launceston to Inspection Head.

### Classified (or State) Roads Description and Length at 30th June, 1965 (Miles)

			Nature o		
Description	n	-	Sealed (a)	Unsealed (b)	Total
Highways			873.33	298.14	1,171.47
Main Roads			436.48	225.26	661.74
Secondary Roads			77.12	118.58	195.70
Tourist Roads	•		3.74	42.01	45.75
Subsidised Roads			10.33	122.70	133.03
Developmental Roads	••	•••	34.44	1.50	35.94
Total			1,435.44	808.19	2,243.63

(a) Bitumen or concrete.

(b) Gravel or stone.

### Roads and Bridges in Tasmania

## **Expenditure on Roads**

As indicated in the preface to this section, the responsibility for road construction and maintenance is placed upon the State Government, and upon local government and semi-government authorities. The financial details which follow relate only to funds available to the State Government.

The following table shows, for a five-year period, details of the main source of funds available to the State Government for road construction and maintenance:

Principal Funds Available to Sta	te Government for Roads
<b>^</b> (\$'000)	1

Particulars	1960-61	1961-62	1962-63	1963-64	1964-65
Motor Vehicle Registration, Taxation, Licences, Fines, &c. Commonwealth Aid Roads Grants State Loan Fund	2,326 4,600 4,923	2,509 5,000 4,125	2,833 5,400 3,854	3,019 5,800 3,165	3,153 6,500 3,468

### Receipts and Expenditure, 1964-65

The next table gives a detailed analysis of funds available to the State Government during 1964-65, and their expenditure:

	\$								
Receipts—									
State—								_	
Motor Vehicle	Regis	tration,	Taxa	tion,	Licences,	Rer	iewal	Fees,	0 450 004
Fines, &c.					••	••	••	••	3,152,984
Consolidated Re	venue,	n.e.i.			• •	• •			23,992
Loan Fund		••			• •	••	••	•••	3,467,914
Commonwealth—									
Commonwealth	Aid R	oads A	ct Gra	ints	••				6,500,000
Special Works (a	z)	••	• •	• •					1,085,500
Special Grants	·						• • •		14,946
Local Government									
Repayment of A	dvanc	es							16,114
Miscellaneous-									
Sale of Plant									61,588
Sale of Materials	3								1,790
Other									97,882
		Total	•••	••	••	••	••		14,422,710
Expenditure—									
Construction and 2	Recons	structio	n, Roa	ads an	d Bridges				11,419,650
Maintenance, Road	ds and	Bridge	ร่			••			2,552,440
Purchase of Road	Consti	ruction	Plant	and S	imilar Ass	ets			604,088
Hire and Maintena	ince of	Road	Plant (	(Net)					- 531,692
Purchase of Mater	ials			`́	• •		· · .		- 9,096
Other Works conr	nected	with Co	ommo	nweal	th Aid Ro	ads 1	Act		76,284
Grants in Aid to I	Local (	Governi	ment /	Autho	rities				15,144
Other Expenditure	9	••	••	••	••	••			383,188
		Total	••		••	••	•••		14,510,006

State Road Funds (Combined Funds), 1964-65

## (a) Gordon River Road.

### Receipts and Expenditure, Local Government Authorities

Some of the expenditure appearing in the previous table consists of grants from the State Government to local government authorities, although such grants are not specifically dissected. In Chapter 4, "Local Government", details will be found of: (i) grants from the State to local government authorities for road purposes; (ii) road rates collected by local government authorities; (iii) expenditure on road construction and maintenance by local government authorities from revenue, and from loan funds.

## Bridging the Derwent

#### Introduction

From Hobart, on the west bank of the Derwent, the open sea lies only twelve miles to the south and the estuary near the city is both wide and deep. It was not surprising, therefore, that the eastern shore opposite Hobart was very thinly settled before the construction of a unique floating bridge in 1943. Prior to this date, the dwellers in the eastern suburbs relied upon vehicular and passenger ferry services for travel to and from the city. (The Derwent had been bridged well upstream at Bridgewater in the convict era, but use of this route to the city involved a journey of about thirty miles, some of it over very poor roads.)

## The Hobart Bridge

In 1943, the eastern suburbs were linked directly to Hobart by a floating arch bridge with a lift span near the western shore; the centre of the curved floating structure lay upstream from the line between the shore approaches. The western approach to the bridge was only a little over a mile from the heart of the city while the eastern approach lay between the two suburbs of Bellerive and Lindisfarne. The arch of the bridge floated in the horizontal plane, the essence of the structure being 24 curved concrete pontoons connected end to end to form a rigid entity; since the estuary is tidal beyond the bridge site, provision existed at the eastern and western attachments for the whole floating volume to rise or fall vertically. Although the bridge lay above the main port of Hobart, the lift span had to provide for the passage of cargovessels going upstream to the Electrolytic Zinc Company's plant at Risdon and for barge traffic bringing newsprint from the A.N.M. plant at Boyer. In the post-war period, major oil storage facilities were built upstream from the bridge and the lift span accommodated the passage of tankers. The bridge was designed by a Tasmanian, Mr. A. W. Knight, later to become Commissioner of the State Hydro-Electric Commission.

The installation of the floating arch bridge, spanning about 3,300 feet of water, led to very rapid development of the eastern suburbs and, by 1955, it became obvious that road traffic was becoming congested. Although the pontoon highway could support three lanes of traffic, the bridge was constricted at the lift span to two lanes. Quite apart from the increasing volume of traffic, some doubt existed as to the possible life of the bridge because of damage inflicted in fierce storms in December, 1943 and November, 1953. The opinion of consulting engineers was obtained in 1956, the object being to replace the floating arch bridge with a structure which would allow unhindered navigation of the river and relieve road traffic congestion.

As early as 1952, a plan had been considered for a straight low-level viaduct bridge supported on piers; this structure would have replaced the floating arch but the original lift span was to remain part of the carriageway. Among later possible designs, the suspension type was rejected on the score of high capital and maintenance costs. The design finally adopted came from G. Maunsell and Partners of London and, in recommending a high level viaduct bridge, the consulting engineers could promise a clear passage at all times for both shipping and road traffic.



An apple orchard in blossom. (Tourist Bureau)



Fine paper mill of Associated Pulp and Paper Mills Ltd. at Burnie. (Dept. of Industrial Development) Newsprint plant of Austtralian Newsprint Mills Ltd. at Boyer on the Derwent. (Dept. of Industrial Development)



Vehicular ferry "Princes of Tasmania" at berth in Devonport. (Dept of Film Production)



### Roads and Bridges in Tasmania

#### The Tasman Bridge

On 17th August, 1964, traffic began flowing over the new pre-stressed concrete Tasman Bridge, built downstream from the floating bridge; the departure points on either bank for the two bridges were little more than 50 yards apart. On the following two days, the floating bridge weighing 24,000 tons, was disconnected in the centre and towed upstream in two sections to an anchorage on the eastern shore.

The new high-level bridge has four 11 foot traffic lanes and is designed to cope with a peak capacity of 4,000 vehicles per hour, i.e. about double the capacity of its predecessor. Two four foot footpaths provide for pedestrian traffic. The previous bridge had been bounded on both ends by traffic roundabouts. To obtain maximum results from the capacity of the new bridge, each end terminates in three-level interchanges providing complete separation of the different streams of traffic; on the western end, the interchange is an integral part of the main bridge, on the eastern end, a separate structure.

The Tasman Bridge is built on piles and slopes upward from eastern and western approaches to reach its maximum height in the fixed navigation span which gives a minimum clearance of 150 feet to shipping passing underneath. (The corresponding clearance of Sydney Harbour Bridge is 172 feet six inches.) Although the length of the navigation span is 310 feet, the clear waterway underneath is only 240 feet since the two main piers supporting the span are protected by massive fenders. The navigation span is not in the centre of the waterway, being positioned closer to the eastern shore.

The dimensions of the bridge, between the shore abutments, are as follows: From the Western Shore feet

rom the Western Shore				reet
Abutment to Pier 13	13 spans of 140 feet each	••		1,820
Piers 13, 14	1 anchor span	••	••	197
Piers 14, 15	1 navigation span	• •	• •	310
Piers 15, 16	1 anchor span	••	••	197
Pier 16 to Abutment	6 spans of 140 feet each	• •	••	840
	Total			3.364

By way of contrast, the single span of Sydney Harbour Bridge, between shore abutments, is 1,630 feet.

The eastern approach to the shore abutment is by a short viaduct of twelve 70 foot spans (840 feet); the western approach is by grade separation viaducts approximately 400 feet long. The interchanges on both banks are primarily concerned with the distribution of traffic flowing north or south, to or from the crossing.

# Transition from "Old" to "New"

An interesting feature of the change-over from the old to the new bridge was the need to delay the construction of the western second pier to the very last moment. This was essential because the natural approach for a cargo vessel to the old upstream lift span was between piers one and three of the new structure; a large vessel could have passed through the new bridge's completed navigation span but would have had no hope of negotiating the confined waters between the two bridges or of approaching the lift span on the correct bearing. Once work began on pier two, all upstream navigation by vessels of any size had to be halted and could not be resumed until the floating bridge was removed; on the other hand, the floating bridge could not be removed until a carriage-way had been created between piers one and three of the new bridge. Pier two therefore had to be constructed with great speed and three weeks were allowed for pile-driving, the upper Derwent being temporarily barred to navigation. As soon as the piles were driven, temporary steel framework stagings were floated into position, closing the gaps between piers one and two and piers two and three. Over this framework, a temporary two-lane carriageway was erected and the diversion of road traffic to the new bridge allowed the removal of the old bridge and the resumption of upstream navigation. Pier two at this stage merely consisted of pile tops as a base for the temporary steel staging, and the next task was capping the piles, erecting support columns and installing the longitudinal beams for the permanent carriage-way. The temporary carriage-way was positioned on the upstream half and permanent construction commenced on the downstream half; the final stage consisted of shifting traffic to the two permanent downstream lanes and completing the permanent upstream carriage-way, thus providing a four-lane flow.

## Construction Details

*Foundations:* The nature of the river bed explains, in part, the original choice of a floating arch pontoon design for the earlier bridging of the Derwent in 1943. The underlying rock formation suitable for foundations was either basalt or dolerite, according to location, but it was covered with massive deposits of silt, sand, conglomerate and clay; the establishment of foundations therefore presented a formidable problem which the design of the earlier bridge ingeniously avoided. The design of the new high-level bridge called for the establishment of piers just above water level, the erection of columns on the piers and the spanning of the columns to form the carriage-way. Conditions at selected piers are as follows:

*Piers* 4 to 8: The dolerite is as much as 300 feet below water surface with an overlay of stiff clays, coarse gravel, sandy loam and conglomerate.

Pier 18: The water reaches its greatest depth—123 feet.

Under these conditions, the Tasman Bridge, rising more than 150 feet above the sea, resembles an iceberg with much more hidden below the water than appears above it.

In the piling programme, it was planned to base each ordinary pier on eight piles, the main navigation channel piers on 24 and the anchor span piers on 12. To afford greater resistance to horizontal forces, the majority of the piles were to have a one in 12 rake (i.e. to be slanted nearly  $5^{\circ}$  from the vertical). The programme went according to plan at most piers, the piles generally extending to the underlying basalt or dolerite. At piers four and five, however, the piles are founded in very stiff clays approximately 200 feet below water surface and at piers six, seven and eight they are founded in either a stiff sandy loam or conglomerate, at depths from approximately 180 feet to a maximum depth of 263 feet. On pier seven, a pile of 267 feet is the longest in the whole structure. Where initial tests of load bearing capacity were unsatisfactory (e.g. at piers four and five), the number of piles was increased from eight to 12; successive loadings were applied to consolidate the clay at the toe of the piles and to reduce settlement to an acceptable limit.

*Pile Formation:* Each pile was formed within a 54 inch diameter tube of three-eighths inch mild steel plate. The tube was sunk to founding level by the combination of grabbing spoil from within the tube and twisting the tube itself by means of a hydraulically-operated oscillator gripping the outside of the casing. Due to the great depths of pile, the tube was not de-watered as otherwise it would be crushed by the external water pressure. The steel tube was left in place but not considered part of the pile for design purposes. Once

### Roads and Bridges in Tasmania

the pile had been taken to a suitable foundation, the bottom was cleaned by an airlift and then plugged with concrete. A re-inforcing cage and two grout pipes were placed in the pile for its full length. Stone was then placed in the tube and the voids were grouted by the Colcrete process; placing concrete under water was not practicable in the great depths of water encountered. The grout tubes were withdrawn in stages as the grout level rose within the pile; since the specific gravity of grout is 2.6, the sea water was displaced from the tube by the rising level of grout.

The 54 inch tube was supplied in 30 foot sections which were spliced by welding as the tube sunk into the river bed. The cutting edge at the bottom of the tube was made of thicker plate, to avoid damage and squeezing-in of the tube. When founding on rock, a four-ton star chisel was used to cut into the surface of the rock and so key the toe of the pile.

A floating template positioned and held the piles at the correct rake and braced the group together until the first layer of the pilecap concrete was completed. By arranging the buoyancy tanks of the template pontoon to be below water level, and by tying the pontoon down to large anchor blocks on the river bed, any inconvenience from the tidal rise and fall was avoided. The pile casing was held at the top by the oscillator frame and, below the template pontoon, by guides held between structural steel towers extending 40 feet below deck level.

Pile caps were formed above all but the highest tides to minimise interference from the tide. They were of heavily re-inforced concrete construction formed in three pours. The deck of the template pontoon formed the supporting mould for the first layer of the pilecap. Once this first pour of concrete had strengthened, the template was lowered and withdrawn by opening special gates that enclosed each of the piles. Pre-cast concrete skirting units were then fitted to extend below lowest low water and to mask the top of the piles exposed at low tide; they provide additional fendering in the case of a ship colliding with any pier.

The two main piers on either side of the main navigation span are protected by massive gravity fenders. These fenders comprise a complete concrete ring suspended around each pilecap on flexible links at each corner. The impact of a ship striking these fenders causes them to swing and be lifted on their supports. These gravity fenders have been designed to absorb a glancing blow from a ship of 20,000 tons travelling at nine knots; the complete fender for each pier on the navigation span weighs 1,680 tons.

Superstructure: Above the piers rise columns supporting the bridge deck of six longitudinal beams, the distance between shore abutments being 3,364 feet broken into 22 spans (i.e. requiring 21 piers). With regard to longitudinal stability, the bridge is virtually in three segments. The eastern and western parts gain their longitudinal stability from ties to their respective shore abutments, all expansion and contraction being accommodated in expansion joints at the outer ends of the anchor spans. Thus the remaining part—the navigation and anchor spans—is isolated from the abutments and is therefore supported on rigid columns. Except for the rigid columns under the navigation and anchor spans, the remaining columns are designed to be flexible and accommodate movements of the bridge deck due to the shrinkage and creep of the concrete and variations in temperature and humidity.

A further expansion joint is provided in the navigation span, construction being of the "comb" type in spheroidal graphite cast iron, set flush with the road surface. Thus allowance is made for contraction and expansion at three separate points, the maximum designed movement at these expansion joints being 16 inches. 598 Cost

In the report of the Auditor General for 1965-66, the aggregate cost to 30th June, 1966 was stated as \$m14.4.

### Construction Time

From the pouring of the first concrete to the first passage of traffic over the temporary two lane carriage-way centred on pier two, the period was four years and two weeks.

## MOTOR VEHICLE REGISTRATIONS

## General

Statistics in this section deal with: (i) motor vehicles "on the register" at specific dates; (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 Commonwealth 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. Commonwealth Government-owned vehicles, except those belonging to the Defence Services, are recorded on a separate Commonwealth register. "On the register", in this section, refers to both the State and Commonwealth 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, trucks and omnibuses. Tractors, trailers, and mobile plant and equipment are excluded.

### 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 also been expressed as annual averages for each decade.

					All Vehicles			
At	30th Ju	ne	Cars and Station Wagons	Com- mercial Vehicles	Motor Cycles	Total	Per 1,000 of Population	Average Annual Increase (b)
1910			210	(a)	223	433	2	
1920			2,404	(a)	1.699	4.103	20	367
1930			12,533	2.198	4.814	19,545	89	1.544
1940			17,598	5.235	3,351	26.184	109	664
1950			25,291	12,928	4,941	43,160	156	1.698
1960			63,748	26,352	3.098	93,198	271	5,004
1965			91,529	29,451	1,527	122,507	335	(c) 5,862

#### Motor Vehicles on Register from 1910

(a) Included with cars and station wagons.

(b) For decade ending in year shown.

(c) For five years ended 30th June, 1965.

## Motor Vehicle Registrations

The next table gives details of motor vehicles on the register from 1960 and annual increases are shown to allow comparison with the average annual rates for each decade appearing in the previous historical table.

d Com- mercial Vehicles	Motor Cycles	Total	Per 1,000 of Population	Annual
	4		r op ministr	************
26 667	2 763	95 570	268	4 551
27,177	2,537	100,064	275	4,494
27,275	2,101	105.073	284	5,009
28,125	1.856	111,623	299	6,550
29,005	1,586	118,675	316	7,052
29,823	1,441	125,303	331	6,628
	26,667 27,177 27,275 28,125 29,005 29,823	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$

### Motor Vehicles on Register

## Motor Vehicles on Register in Australia

Whilst different concepts of what constitutes a "motor vehicle on register" at a particular point in time may be appropriate for different purposes, to obtain uniform statistics for all States and Territories it is necessary to adopt a common definition of Motor Vehicles on Register at a particular date. In the table that follows, the concept of Motor Vehicles on Register at a particular date, say 30th June, is as follows:

- (i) vehicles with fees paid up for any period including 30th June;
- (ii) vehicles for which fees were retrospectively paid for any period including 30th June.

This concept excludes vehicles for which payments were not subsequently made in respect of a period including 30th June, even though at that date their registrations may not have been formally terminated.

The table that follows shows details of motor vehicles on the register for all States and Territories at 30th June, 1965:

								All Vehicles		
	State or Territory				Cars and Station Wagons	Commercial Vehicles	Moto <del>r</del> Cycles	Total	Per 1,000 of Population	
					°000	'000	<b>'</b> 000	<b>,000</b>	No.	
N.S.W.					1,005	289	18	1,313	313	
Victoria	••				818	219	13	1,050	327	
Queensl	and	• •			372	153	12	537	334	
S.A.					285	85	13	383	363	
W.A.					203	79	9	291	362	
Tasmar	nia				92	29	2	123	335	
N.T.					8	6	(b)	14	404	
A.C.T.	••	• •	••	••	27	5	(b)	32	363	
	Total	••			2,810	865	68	3,743	329	

Australia-Motor Vehicles on Register, 30th June, 1965 (a)

(a) Figures rounded to nearest 1,000 without adjustment to add to totals.

(b) Under 500.

## **Registration of New Motor Vehicles**

In the next table, details are shown of new motor vehicles registered over a five-year period:

Part	icula	rs		1961	1962	1963	1964	1965
Cars				4,574	6,837	7,470	7,919	8,507
Station Wagons	5			1,208	1,934	2,012	2,204	1,936
Utilities		• •		830	983	1,103	1,191	1,170
Panel Vans				320	367	372	382	424
Trucks				472	544	717	787	864
Motor Cycles	••	• • •		69	49	62	45	122
Other $(a)$ .	••	••		60	50	79	66	106
Total	••	••	•••	7,533	10,764	11,815	12,594	13,129

Annual Registrations of New Motor Vehicles

(a) Includes omnibuses, ambulances and hearses.

## New Registrations According to Make

The table that follows analyses registrations of new cars and new station wagons during the twelve months ended 31st December, 1965, according to the make, and illustrates the present popularity of Holden, Ford, Morris and Chrysler.

				C	ars	Station	Wagons
Σ	Make			Number	Proportion of Total Cars (Per Cent)	Number	Proportion of Total Station Wagons (Per Cent)
Austin	•••	••		72	0.8	4	0.2
Chrysler	• •	••		.687	8.1	.210	10.8
Datsun	••	••		154	1.8	38	2.0
Dodge	••	••		17	0.2		
Fiat	••	••		97	1.1	1	0.1
Ford	••	••		1,427	. 16.8	318	16.4
Hillman				181	2.1	21	1.1
Holden	••			2,737	32.2	1,162	60.0
Humber				106	1.2	·	
Isuzu				172	2.0		
Land Rover						6	0.3
Mazda				24	0.3	24	1.2
Mercedes Benz		••		31	0.4		
Morris	••	••		1 223	14.4		01
Nissan	••	••		25	0.3	â	0.4
Peugeot	••	••	•••	50	0.5	7	0.4
Tovota	••	••	••	340	4.0	58	3.0
Triumph	••	••	•••	540	4.0	50	5.0
Vauxhall	••	••	•••	222	2.0		0.1
Vallan	••	••	••	552	5.9	56	2.0
Wolcolor	••	••	••	515	0.1	50	2.9
Wolseley	• •	••	••	68	0.8		1.0
Other	••	••	••	195	2.3	20	1.0
Total	••	••	•••	8,507	100.0	1,936	100.0
			1		1		

## Registrations of New Cars and New Station Wagons, 1965 Classified to Predominant Make

# Motor Vehicle Registrations

## "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

Particulars	1961	1962	1963	1964	1965
New Motor Vehicles Registered (a)	7,533	10,764	11,815	12,594	13,129
Annual Increase, Motor Vehicles on Register (b)	4,494	5,009	6,550	7,052	6,628

(a) During year ended 31st December.

(b) Annual increase measured at 31st 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 purely scrapped vehicles; 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 there has been some increase in the annual scrapping of motor vehicles.

## **ROAD TRAFFIC ACCIDENTS IN TASMANIA**

## **Scope of Statistics**

With the rapid development of road transport, there has come 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 some accidents resulting only in vehicle damage are not 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 \$20 or \$50 for repairs in 1950 is not comparable with \$20 or \$50 for repairs in 1966.

For these and other reasons, the statistics in this section are restricted to details of those road traffic accidents which involved casualties and which were recorded by the police.

### 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 Bureau of Census and Statistics; at the Bureau, monthly 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.

### Trade, Transport and Communications

## Responsibility for, and Cause of, Accidents

For the purposes 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 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 Australian States are classified, for statistical purposes, in accordance with a standard list of 76 prime causes (although, in this section, only the most frequent causes will be 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, the influence of intoxicating liquor, discourtesy, impatience or other driving faults (e.g. "intoxication" is listed as a possible prime cause but where evidence of intoxication is inconclusive, the reporting police officer usually shows some more immediately apparent cause).

#### Summary from 1950-51

The following table summarises the principal statistics of road traffic accidents involving casualties from 1950-51:

			Acci	dents		Pers	sons	
					Ki	lled	Inju	ured
P	eriod	-	Number	Per 10,000 Vehicles Registered (a)	Number	Per 10,000 Vehicles Registered (a)	Number	Per 10,000 Vehicles Registered (a)
1950-51			1,013	220	57	12.4	1,212	263
1951-52			1,027	197	87	16.7	1,215	233
1952-53			1,028	179	56	9.7	1,246	217
1953-54			982	156	67	10.7	1,156	184
1954-55			864	127	57	8.3	1,111	163
1955-56			874	120	72	9.9	1,046	143
1956-57			852	111	65	8.5	1,107	144
1957-58			780	96	70	8.6	1,002	123
1958-59	• •		791	92	68	7.9	990	115
1959-60			743	82	79	8.7	1,004	111
1960-61	·		844	89	75	7.9	1,157	121
1961-62			872	87	72	7.2	1,207	121
1962-63			919	87	67	6.4	1,354	129
1963-64	• •		1,118	101	80	7.2	1,656	149
1964-65			1,180	99	97	8.2	1,692	142
1965 (b)	••	••	1,206	98	93	7.6	1,815	148

Road Traffic Accidents Involving Casualties from 1950-	-5	5	1	1	l	1	1	ć	5	ļ	-	ļ.	)	C	l	ĺ	j	5	5	j	j	j	j	j	j	Ś	5	,	ĺ	Į	l	l	C	J	J	)	)	)	)	)	)	)	)	)	)	)	)	)	)	J	C	C	l	l	l	l	l	,	5	5	5	õ	2	Į	Į	).	)	)	9	ç	9	1	1	L	1	1	1	1			I,	1	a	r	٥	1	5	С	¢	•	r	ù	f	•	;	s	5	2	6	i	i	t	t	ŀ	d	ı	J	Ľ	u	ι	s	L	a	2	С	C		ø	12	n	i	i	v	١	1	D.	o	7 (	v	٦	ľ	1	r	1	[1	ľ	Í	]	Ĵ		;	3	ε	h	t	1
--	----	---	---	---	---	---	---	---	---	---	---	----	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	----	---	---	---	---	---	---	---	---	---	---	---	---	--	--	----	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	--	---	----	---	---	---	---	---	---	----	---	-----	---	---	---	---	---	---	----	---	---	---	---	--	---	---	---	---	---	---

(a) Based on average number of motor vehicles on register during period. "Vehicles on register" is defined in earlier section headed "Motor Vehicle Registrations".

(b) Year ended 31st December, 1965.

The immediate inference to be drawn from the above table is that the annual totals of accidents involving casualties, and of persons killed and injured, have increased at a much slower rate than have motor vehicles on the register. In 1950, there were 43,160 motor vehicles on the register at 30th June, the corresponding figure for 1965 being 122,507; in the period covered by the table, the registration figure has almost tripled, whereas accident and casualty totals have not doubled.

## Road Traffic Accidents

## Road Traffic Accidents, 1964-65

The tables that follow deal with road traffic accidents in 1964-65.

Location of Accidents

The first table shows the location of accidents in the State, dissected between Hobart, Hobart Suburbs and the remainder of Tasmania:

## Road Traffic Accidents and Casualties by Location, 1964-65

Particulars	City of Hobart	Suburbs of Hobart	Remainder of State	Whole State
Accidents Involving Casualties	276	247	657	1,180
Persons Killed	20	15	62	97
Persons Injured	371	355	966	1,692

## Types of Road Users Killed or Injured

The following table analyses casualties to show the types and sex of road user killed or injured:

		Killed			Injured	
User Involved	Males	Females	Persons	Males	Females	Persons
Drivers of Motor Vehicles Motor Cyclists Pedal Cyclists Passengers (all types) Pedestrians Other Classes	35 2  10 23	2  1 15 9	37 2 1 25 32	585 41 48 340 125 1	87  4 386 74 1	672 41 52 726 199 2
Total	70	27	97	1,140	552	1,692

Type of Road User Killed or Injured, 1964-65

## Responsibility for Road Accidents

Earlier mention was made of a standard list of 76 prime causes of accidents. The table that follows, without specifying cause in terms of thisdetailed list, shows the agency or type of road user believed responsible for accidents and casualties during 1964-65:

Responsibility for Road Traffic Accidents, 1964-65

Responsibility Attributed to	Accidents Involving Casualties	Persons Killed	Persons Injured
Drivers of Motor Vehicles	814	64	1,267
Riders of Motor Cycles	19		21
Pedal Cyclists	30		31
Pedestrians	186	27	164
Passengers	9		15
Motor Vehicle Defects	49	1	77
Motor Cycle Defects	1		1
Pedal Cycle Defects	4		4
Animals	7		12
Road Conditions	37	3	67
Weather	7	1	10
Parties not Involved (a)	16		23
Other Causes	1	1	
Total	1,180	97	1,692

(a) e.g. a car collides with another, after swerving to avoid a pedestrian who is not struck.

## Cause of Accidents (Drivers of Motor Vehicles Responsible)

It will be seen from the previous table that the responsibility for most road traffic accidents is attributed to drivers of motor vehicles. The next table analyses these particular accidents in terms of the standard list of causes:

Principal Causes of Accidents for which Drivers of Motor Vehicles (excluding Motor Cycles) were Responsible	Accidents Involving Casualties	Persons Killed	Persons Injured
Excessive speed having regard to conditions	181	26	319
Not keeping to the left	85	9	164
Not giving right of way to other vehicles at intersection	174	9	260
Failing to make right-hand turn at intersection with		-	200
due care	41		57
Intoxicated	34	4	47
Inexperienced, including inexperience with type of	51	•	• *
vehicle in use at time of accident	16		22
Inattentive driving	145	7	219
Reversing without care	7	'	7
Overtaking on near-side or in the face of oncoming	'	••	1
vehicle(s) or without enough clearance	34	А	41
Following other vehicle too closely	13	т	23
Infirmity of driver	15	••	2.5
Driver asleep or drowey	10		20
Develop by lights of an annual in a subjet	19	1	20
Eailing to signal intention of the second se	15	1	15
raining to signal intention of turning or stopping, or			
giving incorrect signal	4		6
Pulling or swinging out from kerb suddenly or with-			_
out warning	4		7
Disregarding, misunderstanding or failing to observe			
traffic sign or signal of other driver	15	2	19
Crossing railway level crossing without due care	3		3
Hit-run drivers (n.e.i.)	3		3
Other causes	17	1	22
Total	814	64	1,267

Road Traffic Accidents, Drivers of Motor Vehicles Responsible, 1964-65 Classification According to Cause

## Causes of Accidents (Pedestrians Responsible)

The table that follows analyses road traffic accidents for which pedestrians were held responsible, in terms of the standard list of causes (after drivers of motor vehicles, pedestrians were considered responsible for the next most numerous group of accidents):

Road	Traffic	Accidents,	<b>Pedestrians</b>	Responsible,	1964-65
	C	lassificatio	n According	to Ĉause	

Principal Causes of Accidents for which Pedestrians were Responsible	Accidents Involving Casualties	Persons Killed	Persons Injured
Walking across roadway without due care	79	16	66
Running across roadway	28	1	28
Passing behind or in front of moving or stationary			
vehicle or object	6	1	5
Stepping off kerb without due care	ğ	3	6
Intoxicated	7		Ř
Children under 7 verre of age not under or broching	1	••	0
Condiciant didder / years of age not under, or breaking	54		477
away from, the supervision of an elder person	51	4	4/
Other causes	6	2	4
Total	196		164
101a1	100		104
	1		1

### Road Traffic Accidents in Tasmania

### Days of the Week on Which Accidents Occurred

The following table shows the day of the week on which accidents and casualties occurred:

D	ay of	the We	ek		Accidents Involving Casualties	Persons Killed	Persons Injured
Monday	••				120	10	174
Tuesday					100	4	129
Wednesdav					137	9	178
Thursday			••		146	15	167
Friday					202	22	288
Saturday					306	21	454
Sunday	••	••	•••	••	169	16	302
Te	otal			-	1,180	97	1,692

#### Road Traffic Accidents, 1964-65 Day of Week of Occurrence

### Accidents and Holidays

The behaviour of traffic on the roads can be related to public holidays, and to holiday weekends. The next table analyses accidents in terms of this relationship (and calls attention, by an "annual equivalent" column, to the difference in apparent risk associated with holidays):

`	Acch	uentes mi iver		londays		
			Person	s Killed	Persons	Injured
Day of Occurrence	Days in 1964-65	Accidents Involving Casualties	Number	Annual Equivalent (a)	Number	Annual Equivalent (a)
Public Holidays (not Saturdays or Sun- days) Days during Holiday Week-ends (Sat-	11	44	7	234	64	2,124
days and Sundays Only) Days before Holidays	12	51	3	91	82	2,493
(or Holiday Week- ends) Days after Holidays	9	29	4	161	44	1,785
ends) Other Days	9 324	17 1,039	3 80	120 91	24 1,478	975 1,664
Total	365	1,180	97	97	1,692	1,692

#### Road Traffic Accidents, 1964-65 Accidents in Relation to Holidays

(a) The daily average rate has been assumed to persist for a year.

#### Age and Responsibility

As shown in a previous table, drivers of motor vehicles (excluding motor cycles) were believed responsible for 814 out of the 1,180 accidents involving casualties which were reported to the police during 1964-65. The following table analyses the age and sex of the drivers responsible for these 814 accidents, and also shows the casualties associated with the accidents.

# Trade, Transport and Communications

			]	Male Driver		Fe	male Drive	r
Age G Drivers F (in 1	roup Respo Years)	of nsible )	Accidents Involving Casualties	Persons Killed (a)	Persons Injured (a)	Accidents Involving Casualties	Persons Killed (a)	Persons Injured (a)
Under 21 21-29 30-39 40-49 50-59 60 and ov	   er	· · · · · · · · ·	204 221 104 92 52 30	20 13 13 6 7 3	324 362 146 150 71 44	12 17 15 10 5 5	 1  1 	18 27 23 10 7 8
Not State	d Tot	 al	42 745	62	1,169	69	2	5 98

## Road Traffic Accidents, 1964-65 Age and Sex of Drivers of Motor Vehicles Responsible

(a) The age groups relate to the driver, not to those killed or injured.

# Age and Sex of Road Users Killed

The next table shows the age and sex of the various types of road user killed in 1964-65:

## Road Traffic Accidents, 1964-65 Age and Sex of Road Users Killed

			Type of F	Road User K	Cilled		
Age Group (in Years)		Drivers of Motor Vehicles	Motor Cyclists	Pedal Cyclists	Passengers (All Types)	Pedestrians	All Road Users
			М	ALES			
Under 7 7-16 17-20 30-39 40-49 50-59 60 and over Not Stated Total	· · · · · · · · · · · · · · · · · · ·	 10 6 9 3 3 4  35	··· 1 1 ··· ··· ·· 2	··· ·· ·· ·· ·· ·· ··	1 3 2 3  1  10	4 2 1 2 4 9  23	5 5 14 10 10 5 7 14  70
			Fem	IALES			
Under 7 7-16 17-20 21-29 30-39 40-49 50-59 60 and over Not Stated Total	· · · · · · · · · · · · · · · · · · ·	··· ·· ·· ·· ·· ·· ·· ·· ·· ··	··· ·· ·· ·· ··	··· ·· ·· ·· ·· ·· ·· ·· ·· ·· ·· ·· ··	 3 3  1 3 3 1 1 1 15	1  1   5  9	1 3 4 2 1 4 4 7 1 27

## MOTOR VEHICLE USAGE IN TASMANIA

### Introduction

A special sample survey was conducted throughout Australia by the Bureau of Census and Statistics in November, 1963, for the purpose of gathering statistical information on the usage of motor vehicles. This section deals with estimates for Tasmania produced from the survey.

The survey was conducted by means of a postal questionnaire sent during November, 1963, to owners of a sample of the vehicles currently registered. Two questionnaires were used, one applicable to cars and station wagons, the other to all goods-carrying vehicles, i.e. utilities, panel vans, trucks and truck-type vehicles. Information was sought relating to the type and present use of the vehicle, fuel consumption and mileage.

For the purpose of selecting the sample, the vehicles registered in each State were divided into seven categories as follows: (i) cars and station wagons; (ii) utilities and panel vans; then trucks and truck-type vehicles grouped in carrying capacities as indicated: (iii) of less than two tons; (iv) of two but less than three tons; (v) of three but less than five tons; (vi) of five tons and over, rigid; and (vii) of five tons and over, articulated. The sampling fractions, which differed for each category, were chosen to give approximately the same degree of precision in the estimates of the mileages run by vehicles of each category.

At the time of the survey, a small proportion of the sample vehicles was owned by dealers. No particulars of mileage or other usage could be obtained for such vehicles. It was assumed, however, that this proportion could be used to represent the average proportion of vehicles over the year which are in dealers' ownership and hence not contributing to active mileage.

Whilst it is not possible to make precise comparisons, total fuel consumption estimated from the survey appears to fall short of other estimates made on the evidence of statistics of sales. A tendency to overestimate mileage per gallon, particularly among car owners, is a possible explanation of this deficiency which appears to be of the order of 15 to 20 per cent.

The timing of the collection and the specification of the form were such that the annual mileage rate may be interpreted as representative of usage in the calendar year 1963. The numbers of vehicles to which the data should be related are the average of the monthly numbers on the register for the same calendar year; where "number on register" appears in subsequent tables, this concept has been employed.

Many figures in the tables have been rounded, but averages were calculated from the figures before rounding.

It is realised that information obtained from the survey relates to 1963 and variations in usage will have occurred since that year. It is expected that further surveys will be conducted from time to time to provide more up-to-date information.

## Cars and Station Wagons

The following table analyses the usage characteristics of Tasmanian cars and station wagons. These vehicles have been treated separately from all others on the basis that they are not goods-carrying vehicles in the accepted sense.

# Trade, Transport and Communications

# Survey of Motor Vehicle Usage, 1963 Cars and Station Wagons—Numbers and Characteristics

Particulars	Unit	State Total
All Cars and Station Wagons on Register (a)—         Number          Average Annual Mileage per Vehicle          Business Mileage, Proportion of all Mileage          Fuel Consumption	No. Miles Per Cent M.P.G.	78,400 8,460 31.4 24.7
Cars and Station Wagons, by Business Mileage (b)— With no Business Mileage	Per Cent Per Cent	70.2 29.8
Cars and Station Wagons, by Use for Travel to and from Work (b)         Not Used          Used on Most Working Days          Used on Occasional Working Days	Per Cent Per Cent Per Cent	23.0 62.4 14.6
Whether Second Car or Station Wagon is Owned (b) (c)—           Second Car Owned            No Second Car Owned            Not Applicable (d)	Per Cent Per Cent Per Cent	11.6 76.4 12.0
Cars and Station Wagons in Metropolitan and Non-Metropolitan         Areas (e)—         Proportion of Total—         Metropolitan         Non-Metropolitan            Non-Metropolitan	Per Cent Per Cent	38.8 61.2
Average Annual Mileage Per Vehicle— Metropolitan	Miles Miles	8,930 8,390
Business Mileage, Proportion of all Mileage         Metropolitan         Non-Metropolitan	Per Cent Per Cent	38.3 26.8

(a) Includes vehicles in dealers' ownership. (b) Excludes vehicles in dealers' ownership.

(c) By owner or spouse. (d) Companies, Government Departments, &c.

(e) Classification as metropolitan or non-metropolitan based upon registration address. "Metropolitan" means Hobart and Suburbs.

## **Goods-Carrying Vehicles**

The next table excludes cars and station wagons, and is restricted to goodscarrying vehicles arranged in six categories.

Sur	vey of Motor Vehicle Usage, 1963	
<b>Goods Carrying Vehicl</b>	es (a) by Category—Numbers and	l Characteristics

		Trucks with Carrying Capacity—						
Particulars	Utilities and Panel Vans	Less than 2 Tons	2 but less than 3 Tons	3 but less than 5 Tons	5 Tons and over, Rigid	5 Tons and over, Articulated		
On Register (No.) Average Annual Mile-	17,800	1,250	700	2,400	3,900	650		
age Per Vehicle (Miles) Business Mileage—	7,850	5,510	5,550	6,010	10,870	16,740		
Proportion of Total (Per Cent) Fuel Consumption	57.1	94.9	95.9	94.9	98.3	99.7		
(M.P.G.)	21.5	12.2	11.1	9.5	8.3	6.4		

(a) Includes vehicles in dealers' ownership.

## Goods-Carrying Vehicles with Business Mileage

### Definition

The previous table includes vehicles owned by dealers and also vehicles used only privately (e.g. utilities are commonly used for purely private purposes). It would be wrong in principle to further analyse the characteristics of *all* goods-carrying vehicles, because averages compiled on this basis would be affected by the inclusion of vehicles which were not used for any commercial or business purpose, or for which no details of previous usage could be obtained. Accordingly all tables that follow refer to *residual* goods-carrying vehicles, following on the elimination of those reporting nil mileage (e.g. on blocks), those with private mileage only, and those in dealers' ownership.

### Analyses (Business Mileage Reported)

The tables that follow are concerned with the characteristics of goodscarrying vehicles with business mileage (either fractional or total). Characteristics such as annual mileage, average load, &c. are analysed in the following manner: (i) by category, i.e. in accordance with the description of the vehicle; (ii) by main area of operation of the vehicle; (iii) by main use of vehicle (for others or in own business); (iv) by type of goods mainly carried; and (v) by main kind of business in which vehicle used. In general, the tables attempt to describe the principal characteristics of goods-carrying vehicles which were used for any industrial, commercial or business purpose.

Analysis by Category: The following table analyses the principal characteristics of goods-carrying vehicles according to category, i.e. in terms of the six classifications of vehicles established for the purpose of the survey:

		All Goods-				
Utilities and Panel Vans	Less than 2 Tons	2 but less than 3 Tons	3 but less than 5 Tons	5 Tons and over, Rigid	5 Tons and over, Articulated	Carrying Vehicles with Business Mileage
	Proportio	ONS OF ALL V	EHICLES (a)	(PER CENT)		
59.8	93.1	95.0	93.9	98.2	99.2	71.9
8,640	Average A 5,730	nnual Mile 5,700	age Per Vi 6,280	EHICLE (MILI 11,040	es) 16,880	8,850
Busr 86.7	ness Mileage 97.9	AS PROPORT 98.2	'ION OF ALL 96.6	Mileage (p 98.6	er cent) 99.7	92.0
	]	FUEL CONSUM	APTION (M.P.	G.)		
20.2	12.1	11.0	9.4	8.3	6.4	12.3
Mileag 61.1	e With Load 68.6	-Proportic 65.7	ON OF BUSIN 65.0	ess Mileag 60.0	e (per cent) 59.0	61.4
0.35	Average Lo. 1.18	ad Per Vehi 1.98	icle While 3.19	Loaded (to 5.10	омs) 11.53	2.69
Av	erage Annu	L TON-MILE	EAGE PER VI	EHICLE (TON	-miles)	
1,610	4,560	7,270	12,590	32,690	114,390	13,430

#### Analysis by Category, 1963

(a) Vehicles in each category with business mileage as a proportion of all goods-carrying vehicles.

Analysis by Main Area of Operation: The table that follows deals again with goods-carrying vehicles and analyses their main characteristics according to the area of operation ("metropolitan" in the context of the table refers to Hobart and Suburbs). "Other areas mostly within (or beyond) 35 miles of base" refers to town and country districts outside the metropolitan area.

Interstate	Within Metro- politan Area	To and from Metro- politan Area	Other Areas Mostly Within 35 Miles of Base	Other Areas Mostly Beyond 35 Miles of Base	All Goods- Carrying Vehicles with Business Mileage
	Proportio	N OF ALL VEH	ICLES (PER CEN	ит)	
<i>(a)</i>	14.3	11.8	67.3	6.3	100.0
	Average A	ANNUAL MILEA	GE PER VEHIC	E (MILES)	
<i>(a)</i>	9,510	9,190	8,090	14,210	8,850
BUSIN	ess Mileage—	PROPORTION C	F ALL MILEAG	e (per cent)	
<i>(a)</i>	91.3	93.7	91.3	94.6	92.0
	Fue	L CONSUMPTIC	N (M.P.G.)		
<i>(a)</i>	15.1	11.7	12.8	8.9	12.3
Mileage V	With Load—I	ROPORTION OF	BUSINESS MII	EAGE (PER CE	NT)
<i>(a)</i>	59.9	59.4	63.1	55.1	61.4
A	verage Load	Per Vehicle	While Loade	d (tons)	
<i>(a)</i>	1.34	3.40	2.37	5.49	2.69
Aver	AGE ANNUAL 7	ON-MILEAGE	Per Vehicle (	TON-MILES)	
<i>(a)</i>	6,980	17,380	11,070	40,640	13,430

Analysis by Main Area of Operation, 1963

(a) Not calculated separately.

Analysis by Main Use of Vehicle: The next table analyses the characteristics of goods-carrying vehicles according to the way in which they are mainly used, the distinction being between those used by owners in their own business (excluding general carrying) and those used by their owners in carrying for clients.

Analysis	by	Main	Use	of	Vehicle,	1963
----------	----	------	-----	----	----------	------

In Carr	ying for Hire or Rev		All Goods-	
Mainly for One Client	For More Than One Client	Total	In Own Business	Carrying Vehicles with Business Mileage
	PROPORTION	OF ALL VEHICLE	s (per cent)	
5.9	9.4	15.3	84.7	100.0
	Average Annua	AL MILEAGE PER	Vehicle (miles)	
13,190	14,260	13,850	7,890	8,850
Bu	USINESS MILEAGE—P	ROPORTION OF AL	l Mileage (per c	ENT)
97.1	98.5	98.0	90.1	92.0
	Fuel	CONSUMPTION (M		
7.4	8.6	8.1	14.8	12.3
Milea	GE WITH LOAD—PR	OPORTION OF BUS	INESS MILEAGE (P	er cent)
57.1	62.1	60.3	61.8	61.4
	Average Load P	er Vehicle Whi	LE LOADED (TONS)	,
6.74	5.62	6.01	1.57	2.69
А	VERAGE ANNUAL TO	N-MILEAGE PER	Vehicle (Ton-Mi	les)
49,280	48,990	49,100	6,900	13,430

## Motor Vehicle Usage in Tasmania

Analysis by Type of Goods Mainly Carried: The following table analyses the characteristics of goods-carrying vehicles according to the types of goods mainly carried:

Fresh Fruit and Vege- tables	Farm Produce n.e.i. and Farm Supplies	Food, n.e.i.	Timber	Mine and Quarry Products	Building and Construc- tion Materials and Hardware	Tools of Trade, Servicing and Mainten- ance Equip- ment, Towing	No Particular Type of Goods	All Goods Carrying Vehicles with Business Mileage
		Pr	OPORTION (	of all Vef	HICLES (PER	CENT)		
( <i>a</i> )	30.2	8.3	6.4	6.5	3.6	22.0	8.2	100.0
		Avera	ge Annuai	l Mileage	Per Vehic	CLE (MILES)		
( <i>a</i> )	5,410	10,540	9,970	13,930	7,380	9,630	12,470	8,850
	В	JSINESS MI	leagePr	OPORTION (	of all Mil	EAGE (PER	cent)	
<i>(a)</i>	84.2	96.5	91.1	97.7	98.1	88.7	96.1	92.0
	MILE	GE WITH	Load-Pro	OPORTION O	F BUSINESS	MILEAGE	(per cent)	
( <i>a</i> )	54.8	73.9	50.9	57.0	65.6	67.0	61.6	61.4
		Average	e Load Pe	r Vehicle	WHILE LO	ADED (TON	s)	
(1)	1.26	1.57	8.79	5.49	2.86	0.42	5.65	2.69
	А	VERAGE A	NNUAL TON	-Mileage	Per Vehic	LE (TON-M	files)	
(a)	3,140	11,810	40,640	42,560	13,570	2,380	41,710	13,430

Analysis by Type of Goods Mainly Carried, 1963

(a) Not calculated separately.

Analysis by Kind of Business: The last table analyses vehicles according to the type of business in which they are used:

Rural Industries		Manufac- turing	Building and Construc- tion	Retail Trade n.e.i. including Amuse- ments and Personal Service	Finance and Property, Wholesale Trade	Carrying for Hire or Reward	All Goods- Carrying Vehicles with Business Mileage
		Propor	TION OF ALL	Vehicles (	PER CENT)		
32.7		8.3	15.8	11.6	7.8	9.4	100.0
		Average A	NNUAL MILI	eage Per Vi	EHICLE (MILI	ES)	
5,410	••	10,860	9,930	9,600	9,880	14,030	8,850
	Busin	ESS MILEAG	e—Proport	ION OF ALL	Mileage (pi	er cent)	
84.6	••	94.4	90.5	91.6	91.7	98.4	92.0
Мп	EAGE	WITH LOAD	-Proporti	on of Busin	ess Mileag	E (PER CENT	:)
55.6		54.0	66.9	69.9	65.1	61.9	61.4
	А	verage Lo.	ad Per Veh	ICLE WHILE	LOADED (T	ons)	
1.29		4.64	2.45	0.50	2.40	5.61	2.69
	Aver	age Annua	L TON-MILI	age Per Vi	EHICLE (TON	-Miles)	
3,290		25,720	14,750	3,050	14,190	47,960	13,430

Analysis by Kind of Business, 1963

### Trade, Transport and Communications

## CIVIL AVIATION IN TASMANIA

## Historical

## Early Flights

A significant event in the history of aviation in Tasmania occurred on 16th December, 1919, when Lieut. Arthur Long of the Army Flying Corps crossed Bass Strait, from Stanley to Port Melbourne, a distance of 200 miles. He flew a Boulton Paul aircraft and, after making an emergency landing at the Victorian seaside town of Torquay, reached Melbourne six hours after leaving Launceston. Today's airliners make the trip in under an hour.

Arthur Long continued his interest in commercial aviation, and shortly after his Bass Strait crossing, commenced an aerial newspaper carrying business between Launceston and Hobart. In this venture he was assisted by his Army Flying Corps colleague, Mr. E. Cumming.

Mr. L. Johnson began a Launceston-Flinders Is. service in 1932 using a Desoutter monoplane and, in the same year, Victor and Ivan Holyman began a similar service with a De Havilland Fox Moth.

### Melbourne Service

The Holyman brothers were grandsons of William Holyman who had pioneered shipping in Tasmania from 1850. The Holyman brothers were farsighted and entered into partnership with Johnson under the name of Tasmanian Aerial Services Pty. Ltd. Services were extended to Smithton and King Island and, in 1933, a De Havilland 6-passenger Dragon was purchased to extend the services to Melbourne.

The trip to Victoria was by today's standards a hazardous one. There were no special meteorological services to aid pilots, and aircraft flew at altitudes of three or four thousand feet compared with altitudes of 18,000 to 25,000 feet used on today's flights.

Tasmanian Aerial Services Pty. Ltd. became Holyman Airways Pty. Ltd. in 1933 and, a year later, commenced a Bass Strait service with DH86 Dragon aircraft.

Only 18 days after the start of the service, one aircraft, the "Miss Hobart", disappeared off Wilson's Promontory with ten passengers and the pilot, Victor Holyman. A year later another aircraft, the "Loina", crashed off Flinders Island with the loss of three passengers and both pilots.

Ivan Holyman sought better aircraft and, in 1936, the "Bungana", a DC2, arrived in Australia to enter the Bass Strait service. It was the first modern airliner by today's standards and proved to be a milestone in Australia's aviation history.

### Formation of A.N.A.

In 1936, Holyman Airways and Adelaide Airways Ltd. merged to become Australian National Airways Ltd. and operated services between all States. During the war years 1939-1945, operations of the company included extensive troop movement to all parts of Australia and New Guinea.

## Formation of T.A.A.

In 1946, T.A.A. was established by the Commonwealth Government and immediately started services to Tasmania in competition with Australian National Airways.
#### Formation of Ansett|A.N.A.

Australian National Airways and Ansett amalgamated in 1957 to form Ansett/A.N.A. The new company took over Australian National Airways' routes and, with T.A.A., continued to provide regular passenger and freight services between Smithton, Wynyard, Devonport, Launceston, Hobart, Flinders Island, King Island and Melbourne.

#### Intra-State Services

Because of its geographical position and its topography, Tasmania has gained considerable benefits from air transport. These benefits will continue as more modern aircraft provide improved communications between Tasmania and the continental States. Supplemental intra-state services using Beechcraft twin engine aircraft were commenced in Tasmania during May, 1964. As a result, regular air service connections are provided between Hobart, Launceston, St. Helens, Devonport, Wynyard, Smithton and Strahan, thereby reducing travel time between these centres. When the Queenstown aerodrome was completed towards the end of 1964, Queenstown was also included on this intra-state airline network.

### Administration of The Air Navigation Act and Regulations in Tasmania

The Air Navigation Act 1920-60 and Air Navigation Regulations made under the Act are administered in respect of Tasmania by the Department of Civil Aviation through the Regional Director, Victoria-Tasmania region.

### Functions of the Department of Civil Aviation

The functions of the Department include: (a) registration and marking of aircraft; (b) determination of airworthiness requirements, issue of certificates of airworthiness and of type approval, and supervision of aircraft design; (c) licensing of pilots, flight navigators, flight radio operators, flight engineers and aircraft maintenance engineers, and supervision of the work of such licensed personnel; (d) licensing of airline, aerial work and charter operators and supervision of their operations; (e) provision and maintenance of aeronautical communications, navigational aids, government aerodromes and landing grounds and the licensing of non-government owned aerodromes; (f) operation of air traffic control, communications, aeronautical information, search and rescue and fire fighting services; (g) investigation of aircraft accidents, incidents and defects; and (b) prescription of operational standards for all classes of operation and all types of aircraft.

### Classification of Flying Activities

Flying activities are classified by Regulation into the following well defined categories:

(a) Private Operations: Private operations are classified as operations where aircraft are employed for the personal use of the owner. A passenger may be carried on a private operation but, if this is done, no remuneration may be received by the pilot or the owner of the aircraft. The extent of private operations within Tasmania may be gauged by the fact that there were 150 licensed private pilots in the State in 1964.

(b) Aerial Work Operations: Aerial work operations are classified as commercial operations in which an aircraft is used for aerial survey, aerial spotting, aerial agriculture, aerial advertising, flying training, aerial ambulance functions, police or customs functions and the carriage of goods owned by the pilot, the owner or hirer of the aircraft for purposes of trade. Within Tasmania there were three licensed flying training organisations and three aerial agricultural organisations which carried out most of the aerial work activities within the State in 1964.

(c) Charter Operations: Charter operations are classified as operations where aircraft are used for the carriage of passengers or cargo, for hire or reward, but not according to fixed schedules, or to and from fixed terminals. There were four licensed charter operators based in Tasmania in 1964.

(d) Regular Public Transport: Regular public transport operations are defined as air services in which aircraft are available for the transport of members of the public or for the transport of their cargo for hire or reward, and which are conducted in accordance with fixed schedules to and from fixed terminals over specified routes. T.A.A. and Ansett/A.N.A. provide all of the regular public transport services which are operated to or within Tasmania.

#### **Tasmanian Aerodromes**

At the end of 1965, Tasmania was served by the following licensed or Government aerodromes ("Government" in this context means Commonwealth):

## Hobart

Hobart Airport is a Government aerodrome situated eleven miles east of the capital. It was completed in 1956 and consists of a sealed gravel runway 5,800 feet by 200 feet, with sealed gravel taxiways 50 feet wide, and a sufficient area of sealed apron space for passenger and freight traffic.

An imposing terminal building was completed in 1958 at a cost of \$200,000. Airport buildings necessary for the maintenance of the airport, and radio navigation and radio communication equipment associated with the airport, have been recently completed. Extension and strengthening of the runway, taxiway and aprons to take Electra and DC9 aircraft at full weight will be completed in 1966. (Boeing 727 aircraft used the airport in 1966 on a few occasions.)

The airport is provided with runway lighting, high intensity approach lighting, an instrument landing system, distance measuring equipment, visualaural radio range, a non-directional beacon, and most comprehensive radio communications equipment.

#### Launceston

Situated 10 miles south-east of Launceston, this Government airport has the eighth greatest volume of passengers at airports in the Commonwealth (Hobart having moved into seventh place in 1963-64). It has recently undergone extensive aircraft movement area developmental works, including lengthening of the runway at a cost in excess of \$2,000,000. Work commenced in 1965 on a new terminal building and maintenance depot to be completed in 1966.

Developed in the early 1930's, the 'drome was the base from which Holyman and Johnson operated their various Bass Strait services. It served as an R.A.A.F. training base in World War II, and thereafter was altered to meet the demands of civil operations.

In addition to regular airline operations, the airport serves the interests of flying training and other light aircraft charter and aerial work operations. An all-over grassed area is available for these activities.

Launceston airport is provided with an instrument landing system, a visual-aural range, a non-directional beacon, distance measuring equipment, runway lighting and high intensity approach lighting and radio communica-

tions equipment. With the completion of runway works and construction of the terminal, Launceston airport will be one of the most up-to-date airports in the Commonwealth.

#### Devonport

The Devonport Government aerodrome was originally constructed in the early 1930's. In 1950 it was developed to handle DC3, DC4 and Viscount type aircraft and is now active with regular public transport, aerial work, charter, flying training and private operations. It is proposed to provide a new operations building at Devonport in the near future.

The aerodrome is equipped with night lighting, a non-directional beacon, a visual-aural range and distance measuring equipment, whilst aircraft communications are provided by the aeradio station on the aerodrome.

### Wynyard

The Wynyard Government aerodrome is adjacent to the southern side of the town. Two sealed runways 4,400 feet and 3,900 feet long respectively provide for regular public transport operations, charter, aerial work and private operations.

Aircraft communications equipment is provided on the aerodrome and radio navigation equipment consists of a non-directional beacon and distance measuring equipment.

### King Island

King Island airport is a Government aerodrome situated four miles northeast of Currie. It consists of an area of 230 acres within which three gravel runways have been constructed.

Radio navigational equipment includes distance measuring equipment and a non-directional beacon, whilst radio communications with aircraft and other communications centres are maintained through the aeradio station which is situated on the aerodrome.

#### Flinders Island

Flinders Island aerodrome is situated three miles north of Whitemark. It consists of an area of 331 acres within which three grassed landing strips strengthened with some gravel have been constructed.

The aerodrome is equipped with a non-directional beacon and distance measuring equipment to provide for aircraft navigation, whilst communications with aircraft and other communications centres are maintained through the aeradio station constructed on the aerodrome.

#### Smithton

Situated two miles west of Smithton, this licensed aerodrome, which was originally developed in the 1930's for Bass Strait services, has a sealed gravel runway 5,300 feet long and 150 feet wide. It is owned by the Tasmanian Transport Commission and is used for regular public transport operations and itinerant charter and private flights. Smithton is not equipped with radio navigation aids or aircraft communications facilities.

#### Bridport

The Bridport licensed aerodrome was developed for the purpose of air-freighting local produce, mainly fish, direct to Victoria. The landing strip consists of a grassed area 4,000 feet long by 400 feet wide. It is owned by the North Eastern Aerodrome Company Pty. Ltd. and currently serves itinerant charter, aerial work and private operations.

### St. Helens

St. Helens is a licensed aerodrome owned and operated by the Municipality of Portland. It was the first aerodrome constructed in Tasmania under the Commonwealth Aerodrome Local Ownership Plan and was officially opened in April, 1963. A grassed strip 3,900 feet long and 300 feet wide is of sufficient dimension to permit operations by DC3 and F27 type aircraft. The aerodrome currently serves the regular public transport, charter, aerial work and private operation requirements for the area.

#### Queenstown

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. With the completion of this aerodrome, Queenstown was included in the intra-state services provided by T.A.A. Beechcraft aircraft.

### Strahan

The port of Strahan serves the West Coast of Tasmania and, in particular, the Queenstown and Zeehan areas. The aerodrome at Strahan was constructed under the Commonwealth Aerodrome Local Ownership Plan and is owned by the Municipality of Strahan. It was opened for regular public transport operations by the Premier of Tasmania in May, 1964 since when T.A.A. have provided Strahan with a regular public transport service using Beechcraft aircraft.

### Cambridge

This Government aerodrome was constructed during the early days of aviation and comprised four runways. After World War II, it was used extensively for DC3, DC4 and Convair regular passenger services. However, with hills in the near vicinity the site could not be developed and, following construction of the new Hobart Airport, it was retained for flying training activities and light aircraft operations.

#### Authorised Landing Grounds

In addition to the foregoing licensed and Government aerodromes, there are many other landing grounds which are classed by the Department of Civil Aviation as Authorised Landing Grounds.

This classification is accorded to landing grounds other than Government or licensed aerodromes which are of adequate size for the type of aircraft which it is proposed will land there. These fields must generally be further than 5 miles from an established aerodrome, the pilot must obtain permission for its use from the owner of the land, and the aircraft must not pass over a populated area at a height below 1,500 feet in landing at or taking off from the landing ground in question.

#### Passenger, Freight and Aircraft Movements

The following table has been compiled to show the volume of activity at the State's principal airports; the following definitions apply:

*Passengers:* The figures for fare-paying passengers at each airport are the sum of embarkations and disembarkations.

*Freight*: The figures are the sum (in tons of 2,000 lbs.) of freight (including mail) loaded and unloaded at each airport.

# 616

Aircraft Movements: A take-off is one movement, a landing another.

<u> </u>		r	assengers	, Freight and	u Alferant N	Tovements	(4)	
Ŋ	lear	- 	Hobart	Launceston	Devonport	Wynyard	King Is.	Flinders Is.
				Passeng	ers ('000)		·····	
1962-63 1963-64 1964-65	•••	••• ••	128 143 158	131 142 152	36 39 45	30 32 35	14 15 15	9 9 11
-				Freight (S	SHORT TONS	)		
1962-63 1963-64 1964-65	  	•••	4,958 4,996 5,800	7,354 7,934 8,486	598 532 734	630 532 601	502 422 446	337 921 784
		`		Aircraft	MOVEMENTS		•	
1962-63 1963-64 1964-65	•••	•••	6,278 7,366 8,303	11,062 11,536 12,600	2,014 2,774 3,436	2,102 2,580 3,627	1,314 1,422 1,384	746 932 1,060

	Principal	Airports	3	
Passengers,	Freight and	Aircraft	Movements	(a)

(a) See definitions prefacing table.

# **Comparison with Principal Australian Airports**

The next table shows the volume of activity at the principal Australian airports in terms of the number of passengers, freight and aircraft movements. Details of international services have been excluded so that comparisons are purely in terms of domestic traffic (international services are centred on Melbourne, Sydney, Brisbane and Perth).

Australia—Principal Airports Passengers, Freight and Aircraft Movements (a), 1964-65

	Ai	rport		Passengers	Freight (Short Tons)	Aircraft Movements
Svdnev			 	2,086,571	28,432	58,960
Melbourne			 	1,587,833	33,774	46,461
Brisbane			 	754,296	13,719	25,636
Adelaide			 	618,101	8,197	18,138
Perth			 	209,972	4,770	7,023
Canberra				318.882	1,975	15,408
Hobart				158,287	5,800	8,303
Launcestor	1		 	152,175	8,486	12,600

(a) See definitions prefacing this section.

# POSTS, TELEGRAPHS AND TELEPHONES Development of Communication Services

### General

The web of communications provided by the Post Office has played an important role in the development that has taken place in Tasmania's primary and secondary industries. Particularly during the past 10 years, Tasmania has passed through a period of remarkable growth and change. Population growth, the expansion of commerce and industry, and the initiation of large developmental projects, all have led to an increasing demand for a high standard of communication services.

In the decade ending June, 1965, the number of telephone calls in Tasmania increased from 28 million to 71 million annually. TRESS, the automatic telegraph switching system which was introduced in 1959, has streamlined the public telegraph services and TELEX, which had one Tasmanian subscriber in 1957, now has 72. On 27th June, 1966, the TELEX (teleprinter exchange) service became fully automatic and subscribers are now able to contact each other without the aid of an exchange operator. In the same decade, National T.V. was introduced and the Post Office in Tasmania maintains and operates two national transmitters—one on Mt. Wellington and the other on Mt. Barrow. Additionally, translator stations have been established to bring T.V. to the populated areas of the west and far north-west. The postal service has been progressively mechanised and nearly 60 million postal articles are handled in Tasmania annually.

### The Postal Service

Relatively "organised" postal services commenced in Van Diemen's Land in 1812, when John Beamont was gazetted as the first postmaster of Hobart Town, and, in 1816, the first long distance overland mail service in Australia was begun when Robert Taylor contracted to carry mails on foot once a fortnight from Hobart Town to Port Dalrymple (Launceston).

A steady improvement of administration and services occurred and on the 1st June, 1832, the Post Office became a Government Department. Twenty post offices were established and mails were carried largely by convicts. This use of convict mail staff was abolished in 1841, resulting in greater efficiency in the delivery of letters.

Stamps were introduced in 1853, and to meet the increasingly complex needs of commerce and private citizens, money order facilities were introduced at all post offices in 1865. The penny post was adopted, at first for town areas only, in 1870. In 1882, street letter receivers were installed at Hobart and savings bank facilities were included in post offices. Other facilities introduced before 1901 were: oversea parcels post, 1887; postal notes, 1889; and letter cards, 1898.

Since Federation in 1901, when the Post Office became a Commonwealth Department, the Australian Post Office has had the responsibility of carrying out reforms and improvements in services and facilities on a Commonwealthwide basis, and in this Tasmania has shared. New developments in transport, such as the railways in the 1870's and aircraft in the 1920's, have ensured greater regularity and speed in delivery of mails. Operation "Post Haste" was introduced in 1959 for the carriage by air of letters below a specified size, without extra charge, to any centre in Australia.

All letter class mail to and from Tasmania is carried by air, whilst the bulk of "Other Article" mail is received and despatched on a near daily basis on the ships "Princess of Tasmania" and "Bass Trader". In the year ended June, 1965, 50 million items of letter class mail were carried by air across Bass Strait and 10 million postal articles were transported by ship. Within the State, mail is distributed daily to 500 post offices.

#### **Telecommunications**

The first *telegraph* line between Hobart and Launceston was laid in 1857 and, two years later, Victoria and Tasmania were joined by a submarine cable. However, in 1861 it failed through wearing on rocks and shoals. A second

## Posts, Telegraphs and Telephones

and more successful cable was laid in 1869 by the Eastern Extension Telegraph Company. Communication by telegraph with oversea countries followed the completion of the Overland Telegraph between Adelaide and Darwin in 1872.

The first telephone line constructed in Tasmania was between the Hobart Telegraph Office and Mt. Nelson Signal Station in 1880. By 1883, telephone exchanges had appeared in Hobart and Launceston and the first country trunk telephone exchange in Australia was opened at New Norfolk in 1888.

It was not until 1936 that a submarine *telephone* cable linking Tasmania with Victoria was opened, enabling Tasmanians to speak by telephone with subscribers in other States and oversea countries. At the time, it was the longest submarine telephone cable of its type in the world and its technical specifications set new standards. It was designed to carry simultaneously, over a single conductor, a large number of separate telephone conversations, and an even greater number of telegraph messages. In addition, it provided a high quality channel for the transmission of broadcast programmes in both directions.

Since the cessation of hostilities in 1945, there has been a strong demand for better and expanded communication services, and each year, as industries expand and population increases, the Post Office must meet this demand.

Present policy places increased emphasis on the extension of automatic operation in the Australian telephone system. The ultimate objective is a system which will permit any telephone user to dial any subscriber in Australia. This is consistent with world-wide trends and a great deal of progress has been made with the provision of automatic exchanges (using the new "Crossbar" equipment), the provision of high capacity trunk routes, and the introduction of subscriber trunk dialling.

High capacity cables already connect Australia with the populated areas of the world and, throughout the Commonwealth, a revolution has been taking place to transform the major trunk routes into giant telecommunications super-highways. These great new trunk systems, known to the Post Office as the Broadband Network, are marked only by isolated repeater or booster stations along the side of highways or on mountain tops. They will carry previously unthought of volumes of telecommunications traffic and, by the end of 1966, this huge national network—involving a cost of \$64 million will cover 6,300 miles throughout the eastern half of Australia and 400 miles in Western Australia. By 1971 the main spine will reach from Cairns in the far north of Queensland, through Brisbane, Sydney, Canberra and Melbourne to Hobart and from Melbourne across to Adelaide, Perth and north to Port Hedland, W.A. Spurs will lead out to virtually every major centre of population in all States and between the *Seacom* and *Compac* cables connecting Australia with oversea countries.

Tasmania is being "joined" to Victoria by a microwave radio link with its terminal at Launceston. On the hill tops of Mounts Dismal and Waterhouse in the north-east and on Mt. Tanner, Flinders Island, are the huge towers and parabolic reflectors that will beam telephone, telegraph and telex messages, picturegrams, and radio and television programmes to and from Tasmania.

Micro-wave systems require *line of sight* between repeater stations set on hilltops about 35 miles apart. Across Bass Strait are two long overwater hops, with the earth's curvature presenting a *line of sight* problem. The over-water span from Victoria to Flinders Island covers a distance of 99 miles and the *line of sight* is only a few feet higher than a line making a tangent with the earth's curvature. There is also a span of 69 miles from Mt. Tanner to the Tasmanian coast. These "long hops" were achieved by using giant-sized transmitting and receiving "dishes" and a lower than usual frequency signal. Tasmania's internal communication system is being geared to cater for Subscriber Trunk Dialling. Burnie and Launceston have been linked by coaxial cable and a microwave radio link is at present being installed between Launceston and Hobart. Repeater stations for this link are at Cleveland and on Mt. Seymour. The Hobart terminal will be on Chimney Pot Hill (near Fern Tree). Both the coaxial cable and the microwave links will provide hundreds of telecommunication channels, and the way will be open for subscriber trunk dialling between Tasmania and other Australian States.

Subscriber Trunk Dialling has a number of advantages. For the customer, it means a speedier and cheaper service; speedier, because there is no need to book calls through a telephone operator, and cheaper, because subscribers pay only for the time they are engaged on the telephone line (and not for three-minute minimums). It is estimated that, within the next ten years, over 70 per cent of all trunk calls made in Australia, including Tasmania, will be dialled direct by subscribers.

### Employment

The next table analyses the total number employed by the Department in Tasmania at 30th June, 1964, and also gives the total number employed over a ten-year period. Employment categories are:

*Temporary Staff:* These are engaged by the Public Service Board and their employment by the Department beyond the period of one year requires the Board's further approval.

*Exempt Staff:* These are persons exempt from the provisions of the *Public Service Act.* The Department is not required to obtain the approval of the Commonwealth Public Service Board before employing them, or to seek Board approval to continue their employment beyond one year. The Public Service Board's approval for the creation of positions is, of course, still necessary (the Board approves the "offices" but the Department engages the "officers").

Permanent Staff: These are members of the Commonwealth Public Service.

Particulars	Number at 30th June, 1964	Year	Total Number at 30th June
Full-time Employees (a)—    Permanent Officers    Temporary and Exempt Officers (b)    Total    Total    Others—    Non-official Postmasters and Staff    Telephone Office Keepers    Mail Contractors (c)    Part-time Employees    Total    Total	2,556 813 3,369 485 19 198 113 815	1955     1956     1957     1958     1959     1960     1961     1963     1964	3,677 3,783 3,942 3,957 4,012 3,995 4,066 4,077 4,144 4,184

Postmaster-General's Department-Persons Employed

(a) Full-time employees are those directly under the control of the Department. The remainder shown as "Others" provide services, which may or may not occupy their full time, under contract or in return for payments appropriate to work performed.

(b) Exempt staff are persons exempt from the provisions of the Public Service Act.

(c) Includes persons employed to drive vehicles.

# Posts, Telegraphs and Telephones

### **Revenue and Expenditure**

The table that follows gives details of the financial operations of the Department in Tasmania. Three points of explanation are necessary: (i) financial statistics are compiled with a dissection between operations in the six States and in the Central Office (located in Melbourne); an adequate picture of the financial results of a year's trading can be obtained only from the combined Australian accounts of the Department; (ii) in the expenditure table appear items of a capital nature but the source of funds for this work is not included in the revenue table; (iii) the Department is administered as a business undertaking and pays interest to the Commonwealth Treasury on all capital; interest is not brought to account in the table.

Postmaster-General's	Department—Financial	<b>Operations</b> i	n Tasmania
	(\$'000)	•	

Particulars	1959-60	1960-61	1961-62	1962-63	1963-64
	Rev	VENUE		·	1
Postal Telegraph Telephone Other	1,850 406 3,988 298	2,184 460 4,576 40	2,198 370 4,806 10	2,342 362 5,210 14	2,466 388 5,688 24
Total	6,542	7,260	7,384	7,928	8,566
-	Expe	NDITURE	<u></u>		
From Ordinary Votes— Salaries and Payments in Nat- ure of Salary Administration Stores and Material Mail Services Engineering Services (Other than Capital Works) Total	3,504 312 264 254 2,966 7,300	3,510 382 232 262 2,832 7,218	3,538 412 208 264 3,132 7,554	3,606 382 134 266 2,570 6,958	3,718 492 112 266 2,896 7,484
Rent, Repairs and Maintenance Capital Works and Services (a) Other	102 2,720 4	66 2,780 4	126 3,600 4	118 4,628	92 5,084 
Grand Total	10,126	10,068	11,284	11,704	12,660

(a) Source of funds for this expenditure not shown under "Revenue".

# **Operations of the Department**

Apart from its obvious role of providing communication facilities through various media, the Department also acts as an agent for a number of other instrumentalities in transactions which include: savings bank deposits and withdrawals; child endowment payments; soldiers', sailors' and airmen's allotments; payment of age, invalid and widows' pensions; War Service Homes repayments; sale of State duty stamps, &c.

The next section deals with the principal activities of the Department in Tasmania:

# Money Orders and Postal Notes

The money order method of transmitting money through post offices is more popular than the use of postal notes (Australian figures for payments, in 1963-64, were  $m_{339}$  in respect of money orders, and  $m_{18}$  in respect of postal notes). The use of these media, through Tasmanian post offices, is described in the next table:

Particulars		1959-60	1960-61	1961-62	1962-63	1963-64	
•			Money	Orders		· .	<u> </u>
Issued—							
Number		('000)	264	260	284	307	342
Value	••	(\$'000)	4,358	4,564	6,796	7,932	8,548
Paid-		(1000)	400		001	0.10	050
Number	••	(1000)	198	203	221	242	253
value	••	(\$1000)	3,/44	3,978	6,160	/,200	7,852
			Posta	l Notes			
Paid—		(10.00)					
Number	••	(2000)	335	232	218	247	208
value	••	(\$1000)	292	226	216	240	. 212
				1			

### Money Orders and Postal Notes Issued and Paid in Tasmania

### Mail Services

In the following table, some measure is given of the volume of mail handled in Tasmania by the Department. These definitions are applicable to the articles handled: (i) "letters, post-cards and letter-cards"—includes letters, cards and other postal articles (including certified mail) enclosed in envelopes and sorted with letters; (ii) "newspapers and packets"—includes postal articles (including certified mail) not included in the letter mail; (iii) "parcels" includes registered, cash on delivery, duty parcels and certified mail parcels; (iv) "registered articles, other than parcels"—excludes certified mail.

The item "Posted in Tasmania" combines two items: (i) posted for delivery within Australia; (ii) posted for delivery overseas.

Mail Services-Operating Statistics

Particulars	1959-60	1960-61	1961-62	1962-63	1963-64
Letters	, Postcards A	and Letter-	-cards ('000	)	
Posted in Tasmania Received from Overseas (a) .	. 41,200 . 1,820	41,588 1,654	40,673 1,930	43,096 2,107	45,738 1,714
Ν	JEWSPAPERS AN	ND PACKETS	('000)	4	
Posted in Tasmania Received from Overseas (a) .	. 7,529 2,100	7,561 1,871	7,518 2,196	6,897 2,285	7,328 2,012

#### 622

### Posts, Telegraphs and Telephones

Particulars	1959-60	1960-61	1961-62	1962-63	196 <b>3</b> -64
	Parce	ELS ('000)	<u>.</u>	I	I
Posted in Tasmania Received from Overseas (a)	216 17	216 15	224 18	213 24	214 18
Registered	Articles, O	THER THAN	PARCELS ('	)00)	I
Posted in Tasmania	452 4	399 5	385 5	375 4	367 4

### Mail Services—Operating Statistics—continued

(a) For delivery in Tasmania.

#### Telegrams

At 30th June, 1964, there were 500 telegraph offices in Tasmania (excluding multi-coin public telephones from which telegrams can be sent). The use made of this communication medium is described in the following table:

#### Telegrams Dispatched ('000)

Particulars	1959-50	1960-61	1961-62	1962-63	1963-64
Dispatched in Tasmania— To Places within Australia To Other Countries	537 21	528 19	513 21	515 21	548 21

# Telephone Services

At 30th June, 1964, there were 78,041 telephone instruments in operation in Tasmania; 74,746 were subscribers' instruments, 1,086 were public telephones and 2,209 were other local instruments. The total number of instruments per 100 of population approximated 21.4.

The next table shows the extension of this facility in Tasmania over a five-year period. "Services in operation", an item appearing in the table, is a composite figure made up as follows: (i) the number of ordinary exchange services, i.e. telephone services with sole use of an exchange line; and (ii) the unduplicated number of additional services provided by use of the duplex system, i.e. telephone services on which individual calling, separate metering and secrecy provisions are provided for two subscribers using a single exchange line.

### Telephone Services at 30th June-Operating Statistics

Particulars	1960	1961	1962	1963	1964
Exchanges in Operation(a) (No.)	391	383	377	371	368
Services in Operation (b) ('000)	47	49	51	54	57
Instruments in Operation ('000)	63	67	70	75	78

(a) Offices with one or more subscribers' lines connected.

(b) See explanation prefacing table.

### Trade, Transport and Communications

## Post Offices

The following table shows the types of post office in operation in Tasmania at 30th June, 1964 and also the total number of post offices over a five-year period:

	1050	Omees	
Туре	Number at 30th June, 1964	Year	Total Number at 30th June, (¢)
Official	54	1960	511
Non-Official (a)	446	1961	512
Telephone Offices(b)	19	1962	506
· · · · · /  -		– 1963	502
Total	519	1964	500

(a) Smaller types of post offices, conducted by suitable persons for payment of an allowance based upon business transacted. Staff are not members of the Commonwealth Public Service.

(b) Offices from which trunk line and local calls may be made, and telegrams lodged, but which do not provide other postal facilities. Multi-coin telephones are not included (although trunk call and telegram services are provided by such instruments).

(c) Excluding telephone offices.

# RADIOCOMMUNICATION

#### General

The section which follows relates to radiocommunication (radio telegraph and radio telephone) stations only; particulars of broadcasting stations and of broadcast listeners' licences are specifically excluded and are dealt with in a subsequent section.

To operate a radio transmitter as previously described, it is necessary to obtain a licence from the Radio Branch of the Postmaster General's Department which is responsible for frequency allocation and for certain inspectorial functions. In the table that follows, the term "authorised" refers to equipment licensed by this authority.

# Stations in Tasmania

The table gives a classification of the radiocommunication stations operating in Tasmania over a five-year period. Some examples of the use to which this form of communication is put, include:

- (i) Police networks for intra-state signals and for link with police cars.
- (ii) Coastal radio service to ships at sea. (The same service provides links with outpost transmitters in the State's remote areas, e.g. Port Davey.)
- (iii) Army network with direct link to Melbourne.
- (iv) Fire Brigade network operating in area controlled by each authority.
- (v) Special fishermen's network with base stations at Triabunna, Dunalley, Bicheno, St. Helens, Lady Barron, Currie, and Strahan.
- (vi) Lighthouse network (the source of weather reports at remote coastal stations).
- (vii) Special purpose networks of various authorities, e.g. Hydro-Electric Commission, Forestry Commission, ambulance services, &c.

#### **Radiocommunication**

- (viii) Marine Boards' V.H.F. networks (on single international frequency) for ship-to-shore link with oversea vessels.
- (ix) The "mutton birders" network—operating from Whitemark on Flinders Island when the "birders", in the season, inhabit the deserted Straits Islands.
- (x) Mine networks, e.g. central control linked to outposts engaged in blasting.
- (xi) Taxi networks.

# Number of Radiocommunication Stations Authorised at 30th June Stations Able to Transmit and Receive

Particulars		1961	1962	1963	1964	1965
Fixed Stations (a)—    Aeronautical    Outpost (b)    Other	••• •••	7 16 30	7 13 27	7 16 30	9 15 36	9 17 38
Total		53	47	53	60	64
Land Stations (c)— Aeronautical		7	7	7	8	8
Land Mobile Services Harbour Mobile Services		134 4	146 7	164 9	202 5	243 6
Coast Special Experimental		20 7	20 11	21 11	21 12	21 16
Total	[	172	191	212	248	294
Mobile Stations— Aeronautical Land Mobile Services Harbour Mobile Services Outpost	 	(d) 717 15 (d)	26 800 16 34	28 1,037 38 37	29 1,404 41 45	32 1,650 50 35
Ships	-	( <i>d</i> )	176	210		279
Total		( <i>d</i> )	1,052	1,350	1,759	2,046
Amateur Stations	••	149	149	152	160	170
Total		<i>(d)</i>	1,439	1,767	2,227	2,574

(a) For exchange of radio messages with other stations similarly established.

(b) An "outback" station communicating with control stations operated by such organisations as the Royal Flying Doctor Service.

(c) For exchange of radio messages with mobile stations.

(d) Not available.

# **BROADCASTING AND TELEVISION**

#### General

In Australia, broadcasting and television services are provided both from commercial and Commonwealth Government transmitters; the Federal *Broadcasting and Television Act* 1942-64 governs the operation of services designated the National Broadcasting Service, the National Television Service, the Commercial Broadcasting Service and the Commercial Television Service.

#### Trade, Transport and Communications

### The National Services

The National Services (both broadcasting and television) are provided by the Australian Broadcasting Commission which has sole responsibility for programme material; the actual transmitters are operated by the Postmaster-General's Department. Owners of broadcast and television receivers are required to pay annual licence fees to the Postmaster-General's Department, and this revenue is used to help pay the cost of operating the National Services.

### The Commercial Services

The Commercial Services (both broadcasting and television) are operated under licences granted by the Postmaster-General, who, in exercising his licensing powers, takes into consideration recommendations made by the Australian Broadcasting Control Board. The revenue of the Commercial Services is obtained from advertising.

#### The Australian Broadcasting Control Board

This authority is responsible for the planning of the broadcasting and television services, and operates under the ministerial jurisdiction of the Postmaster-General. Its duties, with regard to the commercial services, require it: (i) to establish and maintain standards so that adequate and comprehensive programmes are provided by commercial stations; (ii) to advise the Minister in licensing matters; (iii) to hold public enquiries on licensing applications; (iv) to determine conditions subject to which advertisements may be broadcast or televised. Other duties of a more general character require it: (i) to ensure the provision of services according to plans which it prepares and the Minister approves; (ii) to establish and supervise operational standards; (iii) to detect sources of interference, and to give advice and assistance in the prevention of interference; (iv) to determine, subject to any Ministerial direction, the situation, operating power and operating frequencies of stations; (v) to determine hours of operation; and (vi) to regulate the establishment and operation of networks of stations.

The Act requires the Board to consult representatives of commercial broadcasting stations and commercial television stations in exercising its powers and functions in relation to these stations.

The Board has an office in each State, the main responsibilities of which are liaison with the managements of all commercial broadcasting and television stations, monitoring programmes (in relation to observance of Board standards) and undertaking technical work associated with the administration of the services.

#### Commercial Licences

Until November, 1964, the licence fee for a broadcasting station was \$50 plus one per cent of gross earnings from the sale of station time during the previous financial year. In November, 1964, the charges were amended in accordance with the following scale: gross earnings from advertising under \$m1, one per cent rate applicable; from over \$m1 to \$m2, two per cent; from over \$m2 to \$m4, three per cent; over \$m4, four per cent.

Television stations, up to November, 1964, paid a licence fee of \$200plus one per cent of the gross earnings from the sale of station time. As from November, 1964, the schedule of charges levied on broadcasting stations wasalso applied to television stations.

#### Broadcasting and Television

### Hours of Service

At 30th June, 1964, eight commercial broadcasting stations in Tasmania were operating; two in the Hobart area averaging 131 hours weekly; six elsewhere in the State averaging 116 hours weekly. The corresponding figures for the two commercial television stations were 55.25 hours weekly in the Hobart area, and 44.25 hours in the Launceston area.

#### Programme Standards, Commercial Stations

### Broadcasting Standards

Licensees are required to provide programmes in accordance with the standards determined by the Australian Broadcasting Control Board. These standards contain special provisions dealing with family and children's programmes, and with advertisements. During periods when large numbers of children or young persons are likely to be listening, programmes must comprise either "family programmes" which are suitable for people of all ages, or programmes specially designed for children.

There are standards governing the number, duration and suitability of advertisements, e.g. in a sponsored programme, advertising per 15 minutes of programme is limited to 2.5 minutes.

Also under the *Broadcasting and Television Act* 1942-64, licensees are required to broadcast religious services, or other matter of a religious nature during such periods as the Board determines. The minimum time set by the Board is one hour per week but stations are providing, free of charge, as much as two hours weekly for religious broadcasts. The Act also provides that licensees shall, as far as possible, use the services of Australians in the production and presentation of programmes, and that not less than five per cent of the time occupied by the programmes of stations in the broadcasting of music shall be devoted to the broadcasting of works of Australian composers.

### Television Standards

The Board's standards provide that, on weekdays between 5.30 p.m. and 7.30 p.m. and at all times before 7.30 p.m. on weekends, the only types of programmes that may be televised are family programmes suitable for all ages, or children's programmes. There are standards governing the number, duration and suitability of advertisements, e.g. in a sponsored programme, the advertising time per 15 minutes of programme is limited to 1.5 minutes. The requirement to transmit religious programmes is contained in the Act, the Board setting the minimum time at 30 minutes weekly. As from January, 1965, the Postmaster General required that the minimum proportion of transmission time to be occupied by Australian programmes should be 50 per cent, and that programmes which are distinctively Australian in content and character should be televised between the hours of 7.30 p.m. and 9.30 p.m. at least two hours weekly; limited "Australian credit" could be obtained for televising programmes produced in British Commonwealth countries. (These requirements relating to Australian content of programmes applied only to metropolitan stations.)

The Commonwealth Film Censorship Board examines all films imported into Australia and, for television purposes, uses these classifications: "G", unrestricted; "A", not suitable for children; "AO", suitable only for adults. Programmes classified as "A" are those not complying with the standards for family and children's programmes; "AO" programmes may be televised only after 8.30 p.m. on any day, or between 1.00 and 3.00 p.m. on school days. Film classifications "A" and "AO" are published in the press and are also screened before each film is televised.

- A.

# Category of Television Programmes

The following table shows, as varying proportions of transmission time, the types of programme televised in 1963-64 in the Hobart area:

Programme Category	Hobart Commercial Programmes	Hobart National and Commercial Pro- grammes Combined
- Andrewski stanistický staložiteľku staložiteľku staložiteľku staložiteľku staložiteľku staložiteľku staložite Na staložiteľka staložiteľka staložiteľka staložiteľka staložiteľka staložiteľka staložiteľka staložiteľka stalož	Per Cent	Per Cent
Drama	53.3 15.9 6.5 4.4 14.1 1.4 4.1 0.3 0.0	40.4 12.2 9.0 6.0 12.2 5.6 7.0 3.1 4.5
Total	100.0	100.0

Category of Television Programmes—Hobart, 1963-64 (a) Proportion of Transmission Time

(a) Source: Australian Broadcasting Control Board.

### **Television Stations in Operation**

The next table gives details of the television stations in operation at 30th June, 1964:

Television Stations in Operation, 30th June, 1964

<u></u>		a para de la construction de la construcción de la construcción de la construcción de la construcción de la cons		경험에 많이 되는 <u>그런 분</u> 이야.
Call Sign and Channel	nagonagan angarfa Area nagan ang Paler	Transmitter Location	Height Above Sea Level— Top of Aerial (ft.)	Hours of Service (Weckly)
and the second s	nte processo de la composición de la co	National	land a site dan t. Abt old waar a	i his in a apr di sa li mare
ABT 2 ABNT 3 (a)	Hobart N. E. Tasmania	Mt. Wellington Mt. Barrow	4,410 4,780	60.50 60.50
		Commercial	itija od stanica Rojenska konst	
TVT 6 TNT 9	Hobart N. E. Tasmania	Mt. Wellington Mt. Barrow	4,340 4,654	55.25 44.25

(a) Transmits programmes originating from ABT 2 (by line-of-sight link).

# Relay of Television Programmes from Other States

Viewers in Tasmania do not normally see events in other Australian States as they happen; usually the event is filmed, and the film then flown across Bass Strait. However, the distance across Bass Strait is no longer a barrier to relaying of programmes direct to the transmitters at Mt. Barrow and Mt. Wellington. The 1965 Davis Cup, staged in Sydney, was seen by Tasmanian viewers through a relay system; co-axial cable carried the transmission to Victoria and the signal was beamed to Mt. Barrow via a relay operating on Flinders Island. The final link in the chain was the beaming of the signal from Mt. Barrow to Mt. Wellington.

#### Broadcasting and Television

### Television Translator Stations

Tasmania, due to its terrain, has areas where television reception direct from the Mount Wellington or Mount Barrow transmitters is either difficult or impossible. To provide good reception in such areas, translator stations are being installed, the position in April, 1966 being as follows:

Area Served	Local Channel	Source of Original Transmission	Classification of Service	
	In Ope	ERATION		
Queenstown Rosebery (a) Bicheno-Swansea Stanley Gowrie Park	8 10 8 6 1	TVT 6 (a) TVT 6 TNT 9 TNT 9 TNT 9	Commercial Commercial Commercial Commercial	
	SHORTLY 1	TO OPERATE		
Queenstown Rosebery Stanley	4 1 1	ABT 2 ABT 2 ABNT 3	National National National	

<b>Television Translator</b>	Stations—Progress	of Installation,	April, 1966
------------------------------	-------------------	------------------	-------------

(a) The Rosebery translator takes its transmission from the Queenstown translator.

In the above table, ABNT<sub>3</sub>, transmitting from Mt. Barrow, has been excluded although it receives its programmes by line-of-sight link from ABT<sub>2</sub>. The northern transmitter is high-powered and serves a large region whereas the translator stations listed in the table are low-powered and designed to serve small areas.

#### Microwave Links

The prime sources of programmes in Hobart are the commercial and national studios which are linked to their Mt. Wellington transmitters (TVT6 and ABT2) by micro-wave links; the commercial studio in Launceston feeds programmes 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 programmes picked up direct from Mt. Wellington. Whilst no equipment is permanently installed for the purpose, programmes of the commercial stations may also be relayed by establishing a Mt. Wellington-Mt. Barrow link, or vice-versa.

#### De-icing

In view of the temperature and weather conditions existing at Mt. Wellington and Mt. Barrow, precautions have been necessary to prevent the formation of ice on the aerial elements. The presence of ice would cause changes in the performance of the aerial and the associated transmitter, and spoil the quality of the pictures.

In the case of the aerial at the Hobart national station ABT<sub>2</sub> (Mt. Wellington), the aerial elements are heated by mains power which is switched on automatically by means of a thermostat when the temperature falls below freezing point. In the case of the Hobart commercial station (TVT6, Mt. Wellington), the junctions between the coaxial feeder lines and the aerial elements, are protected by small plastic covers. In the case of the Launceston (Mt. Barrow) commercial station TNT9 and national station ABNT3, the whole of the aerial is covered by a plastic cylinder. The lower part of the ABNT3 mast is metal-sheathed to ward off ice which falls from the plastic cylinder and which could damage the mast.

## **Broadcasting Stations in Operation**

The following table gives details of the broadcasting stations in operation at 30th June, 1964:

Call Sign	Classification	Location	Hours of Service (weekly)
7ZL      7ZR      7NT (a)      7QN (a)      7HO      7HT      7AD      7BU      7EX      7LA      7SD	National National National Commercial Commercial Commercial Commercial Commercial Commercial Commercial Commercial	Hobart Hobart Launceston Queenstown Hobart Devonport Burnie Launceston Queenstown Scottsdale	$\begin{array}{c} 126.25\\ 125.50\\ 126.25\\ 126.25\\ 133.00\\ 129.50\\ 111.50\\ 111.50\\ 112.50\\ 163.00\\ 126.00\\ 83.50\\ 98.00\\ \end{array}$

Broadcasting Stations in Operation at 30th June, 1964

(a) Transmits, in the main, programmes originating from 7ZL and 7ZR.

# Listeners' and Viewers' Licences

#### Revenue from Licences

The revenue from licensing is shown in couplets with listeners' fees first and viewers' fees second (in 0000: 1959-60, 392 and 42; 1960-61, 382 and 182; 1961-62, 370 and 276; 1962-63, 358 and 426; 1963-64, 356 and 510. The combined revenue from both types of licence and from combined licences in 1964-65 was \$1,005,000.

#### Details of Rates

In general, all persons owning a radio or television set (or both) are required to pay an annual licence fee. Terms used in the next table are defined as follows:

*Pensioner Rate:* While concession rates apply to certain classes of pensioners, licences free of charge may be granted to blind persons over 16 years of age, or to a school.

Zones: Two zones are prescribed, the first when the listener lives within 250 miles of specified broadcasting stations, and the second, when the listener lives anywhere else in Australia. There are no "Zone 2" areas in Tasmania.

*Hirer's Licence:* Each broadcast or television receiver let out on hire, except those under hire purchase contracts, must be covered by a hirer's licence held by the person or firm from whom the receiver is hired.

Lodging House Licence: Owners of hotels, motels, guest houses, &c. are required to hold a licence for every broadcast or television receiver provided for the use of guests and lodgers.

630

### Broadcasting and Television

Broadcast Listeners' and Television V	'iewers' Licences-Kate	es at December, 1905
Licence	Ordinary Rate (\$)	Pensioner Rate (\$)
For Broa	dcast Receiver	
Listener's or Hirer's Licence (Zone (Zone Lodging House Licence (Zone (Zone	1) 5.50 2) 2.80 1) 5.50 2) 2.80	1.00 0.70 
For Tele	VISION RECEIVER	
Viewer's or Hirer's Licence Lodging House Licence	12.00 12.00	3.00
Combined Licence (For Bro	DADCAST AND TELEVISION	RECEIVER)
Combined Receiving Licence	17.00	4.00

#### Broadcast Listeners' and Television Viewers' Licences-Rates at December, 196

The schedule of fees is as follows:

# Licences in Force

The following table shows the number of listeners' and viewers' licences in force in Tasmania from 1925:

Date	Broadcast Listeners'	Television Viewers'	Combined (a)
30th June, 1925	567	••	••
1930	6,048		••
1940	42,191		
1950	64,369		
1960	78,900	4,662	••
1961	77,420	18,985	
1962	75,014	29,003	
1963	73,760	45,503	
1964	74,159	55,305	
1965(a).	62,299	47,779	10,718
31st Dec. 1965 (a).	35,518	19,483	44,454

Licences in Force-Listeners' and Viewers' Licences from 1925

(a) The Combined Receiving Licence was introduced in April, 1965, to be held by those persons owning both a broadcast and a television receiver at the same address. Separate licences are still available for persons owning only one type of receiver.

### Licences and Receivers

The number of receivers in use, both for broadcasting and television, exceeds the number of licences, since the householder may operate any number of receivers under the cover of a single licence made out for a specific address. (This concession does not apply to those required to hold lodging house licences.)

Although television transmission did not begin in Tasmania before the first half of 1960 (with ABT2 and TVT6 in Hobart), a few licences were held in the northern areas of the State as early as 1957; the owners of these receivers were able to tune to programmes originating in Victoria but the quality of reception was very variable due to the distance.