

## CHAPTER XV.

## LOCAL GOVERNMENT.

## § 1. Introduction.

1. **General.**—The statistics on Local Government operations are not entirely satisfactory, as they are incomplete, and not sufficiently comparable and up to date. Those on Local Government financial operations were improved, prior to the 1939-45 War, through the use by the State Statisticians of standard forms in supplying information on their respective States to the Commonwealth Statistician. The presentation of the statistics thus made available was only being developed when the war made it necessary to discontinue the returns. However, since the war these returns have been recommenced, and efforts are being made, as opportunity and circumstances permit, to widen the range of information presented on local government activities beyond the purely, or primarily, financial.

2. **Local Government Authorities.**—In each State of the Commonwealth there exists a system of local government whose powers and responsibilities are in general similar, and which covers such matters as the upkeep and construction of roads, streets and bridges, water, sewerage and drainage systems and health and sanitary services, the supervision of building and the administration of regulations relating to items such as weights and measures, slaughtering, the registration of dogs, etc. In addition to these obligatory functions there are also a large number which may be performed by local government authority either with or without the consent of the ratepayers or the Governor-in-Council. These include transport facilities, electricity, gas and other business undertakings, hospitals, charitable institutions, recreation grounds, parks, baths, libraries, museums, etc.

The system is based on the principle of a grant of specific powers by the State legislatures to the local authorities, their autonomy, however, being more or less limited by the provision for general supervision by a department of the central government or by the Governor-in-Council. Otherwise, within the scope of the Acts under which they are constituted or which they have to administer, they are responsible only to the ratepayers.

While the broad pattern of local government throughout the States of Australia is similar, the range of activities, election of officers, methods of valuation and rating powers, etc., differ considerably.

The areas over which local government bodies exercise general control, numbering 915, are known in New South Wales as cities, municipalities and shires; in Victoria as cities, towns, boroughs and shires; in Queensland as cities, towns and shires; in South Australia as municipal corporation areas and district council areas; in Western Australia as municipalities and road districts; and in Tasmania as municipalities. In New South Wales some local government authorities in an area have combined to provide services such as electricity supply and water, sewerage and drainage—e.g., the county councils. Within shires there are also some municipal units known as urban areas. In Western Australia there are local health boards, whose personnel in most cases coincides with those of municipalities and road boards. Apart from the more thinly populated parts of New South Wales and South Australia and the Federal Territories, practically the whole of Australia comes within local government jurisdiction.

The financial statistics in § 2 following are classified under the headings of Ordinary Services and Business Undertakings. The former covers the obligatory and general functions referred to above. Business Undertakings include public utilities such as water supply, sewerage, electricity, gas, transport and hydraulic power undertakings, and other miscellaneous works such as abattoirs, quarries, ice works, cinemas, etc.

3. **Semi-Governmental Authorities.**—In addition to local government authorities, there is a large number of authorities set up to control specific activities, whose forms of activity are often identical with some of those performed by either, or both, of the other classes of public authority—central government and local government—and a complete picture of any field of activity for a State or Australia as a whole cannot be obtained without reference to each class operating in that particular field. These semi-governmental authorities differ primarily from local government authorities in that their operations are restricted to the specific activity for which they were constituted—e.g. roads and bridges, or water and sewerage, or electricity and irrigation, or harbours, or tramways, etc.—i.e. each dispenses a specific service throughout an area as distinct from the general services of the local authority.

Sections 4 to 7 following, dealing with roads and bridges, water supply and sewerage, harbours and fire brigades, include particulars of the more important of these authorities which operate within the range covered by this chapter.

4. **Roads, Bridges, etc.**—The construction and maintenance of roads, bridges and ferries are generally part of the functions of local authorities, but in each State there exists a central road authority or a Government department whose duties relate to the construction and maintenance of “main” and “developmental” roads, the distribution of funds to local bodies, and the supervision and co-ordination of road construction and policy throughout the State. Although roads and bridges constructed and maintained directly by the Government or by the central road authority do not properly come under the heading of “Local Government”, they have been included in this chapter for the sake of convenience. Owing to difficulty in obtaining complete particulars of receipts and expenditure by the various local governing bodies in regard to roads under their control, the details of receipts and expenditure given in § 4 are those of the Government only, relating either to the supervisory board or commissioner in the State or to direct activities of a department. In § 2 some information is given of the revenue and expenditure of Local Government Authorities in respect of roads.

5. **Water Supply and Sewerage.**—In the cities of Sydney and Melbourne the control of water supply and sewerage is in the hands of special Boards, while in Adelaide and Perth these services are under the direct supervision of Government departments. In most of the other cities and towns, the municipal councils, or, in some cases, water trusts, are the controlling bodies which either construct the works out of their own resources or take them over after they have been constructed by the Government.

6. **Harbours.**—The majority of the harbours in Australia are managed by Boards, the members of which are either elected by persons interested, or are appointed by the Government. In a few instances, however, they are directly controlled by the Government.

7. **Fire Brigades.**—In all the States, the management of fire brigades is undertaken by Boards. These Boards usually comprise members elected by the councils of municipalities and insurance companies within the districts placed under their jurisdiction, and one or more members appointed by the Government. Occasionally volunteer or country fire brigades are represented.

8. **Other Local or Semi-Governmental Activity.**—The activities referred to above are not the only forms of local or semi-governmental undertakings. There are others, the most important being tramways and omnibus services and electricity and gas undertakings, which are not dealt with in this chapter, except to the extent that they are represented in the finances as shown in the following section. Chapter V.—Transport and Communication contains information on municipal transport services, and Chapter XXV.—Electric Power Generation and Distribution deals with the various types of electricity undertakings in each State. In addition, particulars of municipal electricity and gas undertakings, although not shown separately, are included in the relevant sections in Chapter XXIV.—Manufacturing Industry.

## § 2. Local Government Authorities.

1. **Area, Population, Dwellings and Value of Ratable Property.**—(i) *New South Wales.* For purposes of local government the whole of the Eastern and Central land divisions and a small portion of the sparsely populated Western division have been divided into cities, municipalities (most principal towns) and shires (mainly large rural areas, some of which embrace important towns). At the end of 1950 the area incorporated was 184,000 square miles, or nearly three-fifths of the total area of the State.

The Local Government (Areas) Act 1948 repealed the Sydney Corporation Act 1932 which had regulated the operations of the Capital City. It unites the City of Sydney and certain areas, constituting the united area as a city; unites certain other areas or areas and parts of areas, constituting them as municipalities; and reconstitutes the Sydney County Council. All local government authorities in the State are now subject to the general provisions of the Local Government Act.

Municipalities and shires may combine to form county councils for the establishment and conduct of services of joint benefit, e.g., electricity, water, sewerage. There were 33 county councils and the Grafton and South Grafton Water Board at 31st December, 1950.

The area, population, dwellings and value of ratable property in the incorporated areas for the year ended 31st December, 1950 are shown in the table below. The valuations relate to ratable property only and exclude Government and other non-ratable property, whose value is not inconsiderable in the aggregate. In this table, particulars of dwellings are in accordance with the definition used in the 1947 Census, and are the results of information collected on the Census Schedules. Occupied dwellings include individual private houses, flats and tenements, and dwellings other than private (boarding houses, hotels, caretakers' quarters, hospitals, educational establishments, etc.). Also included are portions of shared private houses in respect of which portions separate Householders' Schedules were furnished. Unoccupied dwellings include "week-end" and holiday dwellings and other dwellings temporarily unoccupied on the night of the Census. Dwellings being built are not included.

### LOCAL GOVERNMENT AUTHORITIES, NEW SOUTH WALES : AREA, POPULATION, DWELLINGS AND VALUE OF RATABLE PROPERTY, 1950.

Local Bodies.	Number.	Area.	Popu- lation.	Dwellings.(a)		Value of Ratable Property.		
				Occu- pied.	Unoccu- pied.	Unim- proved Capital Value.	Im- proved Capital Value.	Assessed Annual Value. (b)
		'000. acres.	'000.	No.	No.	£'000.	£'000.	£'000.
Metropolitan— Capital City	1	7	211	51,934	539	69,155	236,392	12,289
Other	26	148	1,357	324,120	2,229	124,626	440,532	32,344
Total	27	155	1,568	376,054	2,768	193,781	676,924	44,633
Outside Metropolitan Area	217	117,622	1,688	366,883	14,387	242,763	(c)	(c)
Grand Total	244	117,777	3,256	742,937	17,155	436,544	(c)	(c)

(a) As at Census, 30th June, 1947.

(b) Nine-tenths annual rental value of land with improvements thereon.

(c) Not available.

(ii) *Victoria.* Local Government is established throughout the State, the various divisions being termed cities, towns, boroughs, or shires. The only unincorporated areas are French Island (42,000 acres) in Westernport Bay, Julia Percy Island (650 acres) off Port Fairy, and Tower Hill (1,350 acres) adjacent to the Borough of Koroit. Melbourne and Geelong were incorporated under special statutes prior to the establishment of a

general system of local government, but are now subject to several provisions of the Local Government Act. The law relating to local government was consolidated by the Local Government Act 1946.

As from 1st January, 1947, the metropolitan area for statistical and health purposes was redefined by the inclusion of the cities of Nunawading and Sunshine, the borough of Ringwood, the Broadmeadows and Campbellfield ridings of the shire of Broadmeadows, the Doutta Galla riding of the shire of Keilor and the shire of Mulgrave.

The area, population, dwellings and estimated value of ratable property in the incorporated areas for the year ended 30th September, 1951 are shown below.

**LOCAL GOVERNMENT AUTHORITIES, VICTORIA : AREA, POPULATION, DWELLINGS AND VALUE OF RATABLE PROPERTY, 1950-51.**

Local Bodies.	Number.	Area.	Popu- lation.	Dwellings.(a)		Value of Ratable Property.	
				Occupied.	Un- occupied.	Improved Capital Value.	Net Annual Value.
		'000. acres.	'000.	No.	No.	£'000.	£'000.
Metropolitan— Capital City .. ..	1	8	101	24,105	4	113,151	5,658
Other(b) .. ..	33	333	1,267	326,505	2	477,147	24,543
Total .. ..	34	341	1,368	350,610	6	590,298	30,201
Outside Metropolitan Area(c)	164	55,852	912	245,274	108	450,494	22,632
Grand Total .. ..	198	56,193	2,280	595,884	114	1,040,792	52,833

(a) Particulars of occupied and unoccupied dwellings are based on returns furnished by municipalities. These figures refer to number of units in all habitable buildings. (b) Includes the whole of the cities of Heidelberg and Sunshine, the borough of Ringwood, and the whole of the shires of Broadmeadows, Keilor and Mulgrave, whose parts do not all lie within the Metropolitan Area. (c) Excludes Yallourn area under the jurisdiction of the State Electricity Commission of Victoria.

Particulars of the unimproved capital value are not available.

(iii) *Queensland.* The whole of the State (except certain islands along the coast, the Dawson Valley Irrigation Area and the Somerset Dam Area) is incorporated into cities, towns and shires under the Local Authorities Act 1902 and its amendments. In June, 1949, the State Government rearranged the boundaries of the local authorities to the south of Brisbane, reducing their number by ten. The towns of Coolangatta and Southport were absorbed by the new town of South Coast; two new shires were created and eleven were abolished, being absorbed by the new shires and existing cities, towns and shires. The following table shows particulars of the area, population, dwellings and value of ratable property in the incorporated areas for the year ended 30th June, 1951 :—

**LOCAL GOVERNMENT AUTHORITIES, QUEENSLAND : AREA, POPULATION, DWELLINGS AND VALUE OF RATABLE PROPERTY, 1950-51.**

Local Bodies.	Number.	Area.	Population. (a)	Dwellings.(a)		Un- improved Capital Value of Ratable Property.
				Occupied.	Un- occupied.	
		'000 acres.	'000.	No.	No.	£'000.
Capital City(b) .. ..	1	246	402	99,771	1,475	25,333
Outside Metropolitan Area .. ..	133	428,874	697	171,400	8,071	72,721
Total .. ..	134	429,120	1,099	271,171	9,546	98,054

(a) As at Census, 30th June, 1947. (b) City of Greater Brisbane.

Particulars of improved capital value and annual value are not available.

(iv) *South Australia.* The settled portion of South Australia is incorporated, being mostly under municipal corporations in the larger cities and towns, and district councils in the agricultural areas.

The following table shows the area, population, dwellings and value of ratable property in incorporated areas for the year ended 30th June, 1951.

**LOCAL GOVERNMENT AUTHORITIES, SOUTH AUSTRALIA : AREA, POPULATION, DWELLINGS AND VALUE OF RATABLE PROPERTY, 1950-51.**

Local Bodies.	Number.	Area.	Popu- lation.	Occu- pied Dwell- ings.	Value of Ratable Property.		
					Unim- proved Capital Value.	Im- proved Capital Value.	Annual Value.
		'000. acres.	'000.	No.	£'000.	£'000.	£'000.
Metropolitan— Capital City .. .. .	1	4	35	8,200	12,084	39,000	1,964
Other .. .. .	20	99	401	106,700	(a)	116,000	5,791
Total .. .. .	21	103	436	114,900	(a)	155,000	7,755
Outside Metropolitan Area .. .. .	122	34,402	268	70,390	(a)	128,000	6,377
Grand Total .. .. .	143	34,505	704	185,290	(a)	283,000	14,132

(a) Not available.

(v) *Western Australia.* In this State, Local Government is carried on by means of municipalities and district road boards. Certain functions are delegated to health boards, whose personnel, in most cases, coincides with those of the municipalities and district road boards. The following table shows particulars of the area, population, dwellings and value of ratable property in incorporated areas for the year ended 31st October, 1951 for municipalities, and the year ended 30th June, 1951 for district road boards.

**LOCAL GOVERNMENT AUTHORITIES, WESTERN AUSTRALIA : AREA, POPULATION, DWELLINGS AND VALUE OF RATABLE PROPERTY, 1950-51.**

Local Bodies.	Number.	Area.	Popu- lation.	Dwell- ings.(a)	Value of Ratable Property.		
					Unim- proved Capital Value.	Im- proved Capital Value.	Annual Value.
		'000. acres.	'000.	No.	£'000.	£'000.	£'000.
Municipalities— Metropolitan— Capital City .. .. .	1	14	106	25,037	(b)	46,250	1,958
Other .. .. .	8	12	77	19,272	(b)	17,352	927
Total .. .. .	9	26	183	44,309	(b)	63,602	2,885
Outside Metropolitan Area .. .. .	10	41	54	12,918	(b)	11,594	649
Total .. .. .	19	67	237	57,257	(b)	75,496	3,534
District Road Boards— Other Metropolitan(c) .. .. .	11	96	137	33,213	6,552	(b)	13
Outside Metropolitan Area .. .. .	117	624,427	197	51,898	21,352	(b)	589
Total .. .. .	128	624,523	334	85,111	27,904	(b)	602
All Authorities— Metropolitan— Capital City .. .. .	1	14	106	25,037	(b)	46,250	1,958
Other .. .. .	19	108	214	52,485	(b)	(b)	940
Total .. .. .	20	122	320	77,522	(b)	(b)	2,898
Outside Metropolitan Area .. .. .	127	624,468	251	64,846	(b)	(b)	1,238
Grand Total .. .. .	147	624,590	571	142,368	(b)	(b)	4,136

(a) Particulars of unoccupied dwellings are not available separately. (b) Not available.  
(c) Includes part only (8.064 acres) of Swan River District situated in Metropolitan Area.

The method of valuation is not identical in the case of all district road boards, as in some the assessment is based on the unimproved capital value and in others partly on the unimproved capital value and partly on the annual value. The amounts shown are the totals for the areas rated on each valuation, and are not a function of each other.

(vi) *Tasmania.* The whole State is divided into municipal districts, Hobart and Launceston being incorporated under separate Acts. The following table shows particulars of the area, population, dwellings and value of ratable property in incorporated areas for the year ended 30th June, 1951.

**LOCAL GOVERNMENT AUTHORITIES, TASMANIA : AREA, POPULATION,  
DWELLINGS AND VALUE OF RATABLE PROPERTY, 1950-51.**

Local Bodies.	Number.	Area.	Popu- lation.	Dwellings.(a)		Value of Ratable Property.		
				Occu- pied.	Unoccu- pied.	Unim- proved Capital Value.	Im- proved Capital Value.	Annual Value.
		'000. acres.	'000.	No.	No.	£'000.	£'000.	£'000.
Metropolitan— Capital City .. ..	1	18	59	13,597	56	5,611	18,555	1,325
Other(b) .. ..	2	99	27	4,560	331	2,435	9,299	538
<b>Total .. ..</b>	<b>3</b>	<b>117</b>	<b>86</b>	<b>18,157</b>	<b>387</b>	<b>8,046</b>	<b>27,854</b>	<b>1,863</b>
Outside Metropolitan Area	46	16,661	202	44,327	1,964	19,884	49,823	3,258
<b>Grand Total .. ..</b>	<b>49</b>	<b>16,778</b>	<b>288</b>	<b>62,484</b>	<b>2,351</b>	<b>27,930</b>	<b>77,677</b>	<b>5,121</b>

(a) As at Census, 30th June, 1947.

(b) Comprises the whole of the Municipalities of Clarence and Glenorchy.

2. *Finances.*—(i) *General.* The following tables show the latest available financial statistics for Local Government Authorities. The figures relate to the year 1950-51 except for New South Wales where they relate to the year 1950.

(ii) *Ordinary Services.* In the returns of revenue and expenditure for 1950-51 in the following table, the proceeds from loans and expenditure thereof have been excluded, as have the operations of business undertakings controlled by the various Local Government Authorities. The profits resulting from the working of these undertakings, where taken into general revenue, have been included.

LOCAL GOVERNMENT AUTHORITIES: ORDINARY SERVICES—REVENUE AND EXPENDITURE, 1950-51.

Particulars.	N.S.W. (a)	Vic. (b)	Q'land. (c)	S. Aust. (c)	W. Aust. (d)	Tas. (e)	Total.
Number of Local Government Authorities ..	244	198	134	143	147	49	915

REVENUE (EXCLUDING LOAN RECEIPTS). (£.)

Taxation—							
Rates (net) ..	10,969,905	7,698,269	5,824,968	1,879,260	1,293,133	737,296	28,491,760
Penalties ..	58,830	29,662					
Licences ..	259,002	67,047					
Total ..	11,287,737	7,794,978	5,880,715	1,914,752	1,325,992	747,446	28,951,620
Public Works and Services—							
Sanitary and Garbage Services ..	1,330,348	498,824	1,049,438	45,358	222,574	49,990	3,196,532
Council Properties ..	1,133,849	798,447	1,012,749	175,130	129,986	111,866	3,362,027
Street Construction ..	451,928	399,100	93,407	158,152	73,095	7,267	1,182,949
Other ..	1,955,574	(g) 772,213	51,400	61,885	315,986	32,743	2,289,801
Total ..	3,971,699	2,468,584	2,206,994	440,525	741,641	201,866	10,031,309
Government Grants—							
Roads ..	1,951,288	113,351	941,093	967,758	503,597	163,526	4,640,613
Other ..	1,381,076	272,491	(h) 537,726	13,501	111,027	11,430	2,327,251
Total ..	3,332,364	385,842	1,478,819	981,259	614,624	174,956	6,967,864
Profits from Business Undertakings ..	..	236,074	5,199	..	62,140	..	303,413
Fees and Fines ..	..	31,932	610,400	51,145	714,231	90,162	1,821,132
All Other ..	..	127,110	..	73,066	123,081	..	..
Total Revenue	18,591,800	11,044,520	10,182,127	3,460,747	3,581,714	1,214,436	48,075,338

EXPENDITURE (EXCLUDING LOAN EXPENDITURE). (£.)

General Administration ..	1,448,558	1,715,876	788,477	337,808	431,251	144,576	4,866,546
Debt Services (excluding Business Undertakings)—							
Interest ..	732,739	403,508	725,992	28,467	77,378	37,158	2,005,242
Redemption ..	1,455,932	593,864	1,108,694	205,078	190,488	72,909	3,626,965
Exchange ..	21,560	..	176,956	..	..	508	199,024
Other ..	..	7,582	7,380	..	..	..	14,962
Total ..	2,210,231	1,004,954	2,019,022	233,545	267,866	110,575	5,846,193
Public Works and Services—							
Roads, Streets and Bridges ..	8,189,215	3,905,436	3,865,158	2,043,458	1,129,062	542,809	19,675,138
Health Administration ..	373,332	433,191	151,392	75,164	96,019	32,401	1,161,499
Sanitary and Garbage Services ..	1,823,592	962,913	869,701	202,663	295,651	61,670	4,216,190
Street Lighting ..	525,634	258,028	148,444	86,139	61,325	39,474	1,119,044
Council Properties ..	2,760,616	1,739,241	1,192,813	304,865	576,970	149,884	6,724,389
Other ..	753,808	806,738	(l) 648,560	47,905	418,406	22,958	2,698,375
Total ..	14,426,197	8,105,547	6,876,068	2,760,194	2,577,433	849,196	35,594,635
Grants—							
Fire Brigades ..	134,741	177,339	93,908	55,837	39,872	21,455	523,152
Hospitals and Ambulances ..	..	..	..	..	..	..	..
Other Charities ..	52,298	65,647	1,498	92,580	4,209	315	233,351
Other ..	(j) 288,859	(k) 523,736	93,913	5,720	6,939	3,128	914,808
Total ..	475,898	766,722	190,336	159,901	51,020	27,434	1,671,311
All Other ..	473,691	65,786	121,673	..	97,274	105,336	863,760
Total Expenditure	19,034,575 less (l) 514,081	11,658,885	9,995,576	3,491,448	3,424,844	1,237,117	48,842,445 less 514,081
	18,520,494	11,658,885	9,995,576	3,491,448	3,424,844	1,237,117	48,328,364

(a) Figures for New South Wales relate to the year ended 31st December, 1950, and are on an income and expenditure basis as distinct from those of other States, which are on a cash basis. (b) Year ended 30th September, 1951. (c) Year ended 30th June, 1951. (d) Municipalities—Year ended 31st October, 1951; Road Districts—Year ended 30th June, 1951. (e) Includes £31,326 reimbursement from Highways Department for work done. (f) Includes interest from sinking fund investments for debt redemption, £164,232. (g) Includes £487,972 plant hire. (h) Includes £171,450 for sewerage and drainage. (i) Includes £223,872 for sewerage, mosquito control and drainage. (j) To Main Roads Department. (k) Includes £220,530 to Country Roads Board. (l) This deduction offsets duplications caused by the inclusion above of particulars of expenditure on (i) the purchase from revenue of assets and the depreciation of those assets, and (ii) the depreciation of assets purchased from loans and the repayment of those loans. The amount deducted cannot be apportioned according to the various headings.

The following table shows the revenue and expenditure (excluding loan) of local government authority ordinary services for the years 1938-39 and 1946-47 to 1950-51 :—

**LOCAL GOVERNMENT AUTHORITIES : ORDINARY SERVICES—REVENUE AND EXPENDITURE.**

(£.)

Year.	N.S.W.(a)	Victoria.(b)	Q'land.(c)	S. Aust.(e)	W. Aust.(d)	Tas.(e)	Total.
<b>REVENUE (EXCLUDING LOAN RECEIPTS).</b>							
1938-39 ..	10,657,409	6,070,551	4,177,632	1,578,688	1,447,154	518,755	24,450,189
1946-47 ..	10,562,205	6,476,264	5,480,877	1,835,326	1,720,290	680,549	26,755,511
1947-48 ..	11,537,287	7,270,196	6,399,888	2,162,229	2,066,424	766,819	30,252,843
1948-49 ..	13,524,992	8,190,347	7,035,155	2,526,530	2,436,790	895,920	34,609,734
1949-50 ..	16,293,311	9,454,755	8,291,960	2,917,606	2,858,147	1,050,939	40,866,718
1950-51 ..	18,591,800	11,044,520	10,182,127	3,460,747	3,581,714	1,214,430	48,075,338
<b>EXPENDITURE (EXCLUDING LOAN EXPENDITURE).</b>							
1938-39 ..	10,790,273	6,192,859	4,334,634	1,558,169	1,489,079	506,976	24,871,990
1946-47 ..	11,095,211	6,986,748	5,839,506	2,015,592	1,832,800	722,074	28,491,931
1947-48 ..	12,372,821	7,792,221	6,884,567	2,174,857	2,099,953	817,365	32,141,784
1948-49 ..	13,815,846	8,548,147	7,579,954	2,525,528	2,420,541	910,926	35,800,942
1949-50 ..	15,923,965	9,737,254	8,379,575	2,965,857	2,808,053	1,049,961	40,864,665
1950-51 ..	18,520,494	11,658,885	9,999,576	3,491,448	3,424,844	1,237,117	48,328,364

(a) Years ended previous 31st December. (b) Years ended 30th September. (c) Years ended 30th June. (d) Municipalities—Years ended 31st October; Road Districts—Years ended 30th June.

(iii) *Business Undertakings.* The table hereunder shows, for 1950-51, particulars of the revenue and expenditure, other than loan, of business undertakings under the control of local government authorities. These particulars are not included in the foregoing tables.

**LOCAL GOVERNMENT AUTHORITIES : BUSINESS UNDERTAKINGS—REVENUE AND EXPENDITURE, 1950-51.**

(£.)

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
<b>REVENUE (EXCLUDING LOAN RECEIPTS).</b>							
Water Supply and Sewerage—							
Rates .. .. .	899,994	..	14,954	..	7,660	263,758	1,186,366
Charges for Services and Sales of Products .. .. .	229,094	60,023	1,833,967	1,176	2,842	68,658	2,195,760
Other (including Grants) .. .. .	(a)256,327	56,551	584,116	..	..	21,735	918,729
Total .. .. .	1,385,415	116,574	2,433,037	1,176	10,502	354,151	4,300,855
Electricity and Gas—							
Rates .. .. .	117,106	..	9,350	608	..	..	127,064
Charges for Services and Sales of Products .. .. .	17,821,706	4,619,486	3,042,981	284,908	509,859	..	26,278,940
Other (including Grants) .. .. .	402,044	66,118	106,173	25,391	9,809	..	609,535
Total .. .. .	18,340,856	4,685,604	3,158,504	310,907	519,668	..	27,015,539
Railways, Tramways and Omnibuses—							
Rates .. .. .	..	..	..	..	..	35,190	35,190
Charges for Services and Sales of Products .. .. .	..	8,448	2,227,681	..	..	488,087	2,724,216
Other (including Grants) .. .. .	..	119	50,193	..	..	17,449	67,761
Total .. .. .	..	8,567	2,277,874	..	..	540,726	2,827,167
Other—							
Rates .. .. .	(b)	(c)	(d)	(e)	(f)	(g)	
Charges for Services and Sales of Products .. .. .	1,042,465	272,467	39,661	15,298	19,983	31,489	1,421,363
Other (including Grants) .. .. .	4,958	10,915	14,588	1,459	..	838	32,758
Total .. .. .	1,047,423	283,382	54,249	16,757	20,368	32,380	1,454,559
Grand Total .. .. .	20,773,694	5,094,127	7,923,664	328,840	550,538	927,257	35,598,120

NOTE.—See next page for footnotes.



LOCAL GOVERNMENT AUTHORITIES: BUSINESS UNDERTAKINGS—  
REVENUE AND EXPENDITURE, 1950-51—*continued.*

( £. )

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
<b>EXPENDITURE (EXCLUDING LOAN EXPENDITURE).</b>							
Water Supply and Sewerage—							
Working Expenses ..	681,936	71,103	910,327	1,168	8,242	145,426	1,818,202
Depreciation ..	(h)-40,035	..	..	..	..	..	-40,035
Debt Charges ..	503,600	11,470	892,067	8	6,518	157,717	1,571,380
Other (including Transfers to General Revenue and Construction) ..	..	58,963	579,983	..	..	49,894	688,840
<b>Total .. ..</b>	<b>1,145,501</b>	<b>141,536</b>	<b>2,382,377</b>	<b>1,176</b>	<b>14,760</b>	<b>353,037</b>	<b>4,038,387</b>
Electricity and Gas—							
Working Expenses ..	15,598,726	4,030,289	2,538,776	286,996	428,957	..	22,883,744
Depreciation ..	(h)918,692	206,917	..	..	29,340	..	1,154,949
Debt Charges ..	1,851,908	231,038	360,652	11,895	29,132	..	2,484,625
Other (including Transfers to General Revenue and Construction) ..	..	262,501	177,729	23,586	60,838	..	524,654
<b>Total .. ..</b>	<b>18,369,326</b>	<b>4,730,745</b>	<b>3,077,157</b>	<b>322,477</b>	<b>548,267</b>	<b>..</b>	<b>27,047,972</b>
Railways, Tramways and Omnibuses—							
Working Expenses ..	..	12,789	2,028,631	..	..	420,764	2,462,184
Depreciation ..	..	..	..	..	..	..	..
Debt Charges ..	..	252	337,775	..	..	77,843	415,870
Other (including Transfers to General Revenue and Construction) ..	..	..	40,788	..	..	44,213	85,001
<b>Total .. ..</b>	<b>..</b>	<b>13,041</b>	<b>2,407,194</b>	<b>..</b>	<b>..</b>	<b>542,820</b>	<b>2,963,055</b>
Other—	(b)	(c)	(d)	(e)	(f)	(g)	
Working Expenses ..	1,020,068	278,319	44,265	15,903	22,797	21,474	1,402,826
Depreciation ..	(h) 2,037	13,594	..	..	..	..	15,631
Debt Charges ..	20,049	29,882	1,004	..	114	5,735	56,784
Other (including Transfers to General Revenue and Construction) ..	..	12,844	5,052	..	..	3,270	21,166
<b>Total .. ..</b>	<b>1,042,154</b>	<b>334,639</b>	<b>50,321</b>	<b>15,903</b>	<b>22,911</b>	<b>30,479</b>	<b>1,496,407</b>
<b>Grand Total .. ..</b>	<b>20,556,981</b>	<b>5,219,961</b>	<b>7,917,049</b>	<b>339,556</b>	<b>585,938</b>	<b>926,336</b>	<b>35,545,821</b>

(a) Includes Government grant, £174,032, for part of cost of new works borne by Government.  
 (b) Abattoirs and ice-works. (c) Abattoirs and/or hydraulic power undertaking. (d) Municipal markets, ice-works, amusement parks, hostels, and cinemas. (e) Quarries. (f) Quarries, ice-works and abattoirs. (g) Abattoirs. (h) Net balance after deducting charge for debt redemption. The full amount of charge for debt redemption is included under debt charges.

NOTE.—For years to which particulars relate, *see* preceding table. Minus sign (—) indicates an excess of credits.

The next table shows the revenue and expenditure, other than loan, of local government business undertakings for the years 1938-39 and 1946-47 to 1950-51

**LOCAL GOVERNMENT AUTHORITIES : BUSINESS UNDERTAKINGS—REVENUE AND EXPENDITURE.**

( £. )

Year.	N.S.W.(a)	Victoria.(b)	Q'land.(c)	S. Aust.(c)	W. Aust.(d)	Tas.(c)	Total.
<b>REVENUE (EXCLUDING LOAN RECEIPTS).</b>							
1938-39 ..	6,405,010	1,813,796	3,373,966	113,132	962,470	528,461	13,196,835
1946-47 ..	10,328,170	2,797,375	4,310,666	196,279	1,382,813	621,597	19,636,930
1947-48 ..	11,929,432	3,270,875	4,604,268	207,830	1,495,123	663,411	22,260,939
1948-49 ..	14,294,306	3,667,200	5,658,198	229,896	(e) 733,538	750,963	25,334,191
1949-50 ..	16,337,869	4,520,756	6,608,609	272,369	523,654	795,929	29,059,186
1950-51 ..	20,773,694	5,094,127	7,923,664	328,840	550,538	927,257	35,598,120
<b>EXPENDITURE (EXCLUDING LOAN EXPENDITURE).</b>							
1938-39 ..	5,556,123	1,802,972	3,256,263	123,356	935,052	513,666	12,187,432
1946-47 ..	9,846,851	2,734,143	4,327,861	198,325	1,327,648	634,890	19,069,718
1947-48 ..	11,704,990	3,272,629	4,869,383	229,604	1,452,802	698,264	22,227,672
1948-49 ..	14,394,453	3,597,041	5,701,314	258,702	(e) 755,793	736,647	25,443,950
1949-50 ..	16,659,960	4,494,128	6,655,637	292,237	535,287	797,887	29,433,136
1950-51 ..	20,556,981	5,219,961	7,917,049	339,556	585,938	926,336	35,543,821

(a)-(d) See notes to corresponding table on Ordinary Services. (e) Electricity undertaking taken over by State Electricity Commission on 20th December, 1948. Includes trading from 1st November, 1948 to 19th December, 1948.

(iv) *Loan Expenditure.* The table below shows particulars for 1950-51 of loan expenditure on works connected with the ordinary services and the business undertakings of local government authorities.

**LOCAL GOVERNMENT AUTHORITIES : LOAN EXPENDITURE ON WORKS, 1950-51.**

( £. )

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
<b>ORDINARY SERVICES.</b>							
Roads, Bridges, Streets, Footpaths, Drainage and Sewerage .. .. .	1,255,575	470,836	2,073,326	252,984	292,341	347,347	9,198,271
Council Properties .. .. .	1,070,514	213,355	431,212	26,373	60,166		
Parks, Gardens and Recrea- tional Reserves .. .. .	244,510	108,665		..	22,658		
Other .. .. .	(a)672,075	401,867	1,041,899	1,347	211,221		
<b>Total .. .. .</b>	<b>3,242,674</b>	<b>1,194,723</b>	<b>3,546,437</b>	<b>280,704</b>	<b>586,386</b>	<b>347,347</b>	<b>9,198,271</b>
<b>BUSINESS UNDERTAKINGS.</b>							
Water Supply .. .. .	747,680	..	901,537	..	..	449,703	14,035,058
Sewerage .. .. .	247,838	..	428,309	..	..		
Electricity and Gas .. .. .	7,621,356	1,163,136	1,536,826	72,696	64,087		
Railways, Tramways and Omnibuses .. .. .	..	..	444,456	..	..		
Abattoirs .. .. .	333,185	21,986	..	..	..	449,703	14,035,058
Other .. .. .	..	..	95	2,168	..		
<b>Total .. .. .</b>	<b>8,950,059</b>	<b>1,185,122</b>	<b>3,311,223</b>	<b>74,864</b>	<b>64,087</b>	<b>449,703</b>	<b>14,035,058</b>
<b>Grand Total .. .. .</b>	<b>12,192,733</b>	<b>2,379,845</b>	<b>6,857,660</b>	<b>355,568</b>	<b>650,473</b>	<b>797,050</b>	<b>23,233,329</b>

(a) Includes advances for homes, £122,824.

NOTE.—For years to which particulars relate, see next table.

The following table shows the loan expenditure on works connected with local government ordinary services and business undertakings during the years 1938-39 and 1946-47 to 1950-51 :—

**LOCAL GOVERNMENT AUTHORITIES : LOAN EXPENDITURE ON WORKS.**  
(£.)

Year.	N.S.W.(a)	Victoria.(b)	Q'land.(c)	S. Aust.(e)	W. Aust.(d)	Tas.(e)	Total.
<b>ORDINARY SERVICES.</b>							
1938-39 ..	1,757,704	662,986	1,316,651	43,479	117,172	39,481	3,937,473
1946-47 ..	646,887	286,135	1,027,810	104,890	124,661	84,548	2,274,931
1947-48 ..	1,911,795	522,443	1,609,617	185,095	278,638	79,046	4,646,634
1948-49 ..	2,614,670	712,378	2,326,484	189,792	356,977	189,497	6,389,798
1949-50 ..	2,769,996	924,630	2,737,791	331,047	509,905	315,439	7,579,808
1950-51 ..	3,242,674	1,194,723	3,546,437	280,704	586,386	347,347	9,198,271
<b>BUSINESS UNDERTAKINGS.</b>							
1938-39 ..	1,481,484	452,374	941,911	9,542	76,280	232,687	3,194,278
1946-47 ..	961,005	228,263	974,396	..	47,050	117,815	2,328,529
1947-48 ..	1,842,304	418,186	1,327,630	..	58,782	95,664	3,742,566
1948-49 ..	4,038,922	654,619	2,109,248	16,900	36,794	196,499	7,052,982
1949-50 ..	6,356,107	680,481	2,811,709	8,044	71,005	396,297	10,323,643
1950-51 ..	8,950,059	1,185,122	3,311,223	74,864	64,087	449,703	14,035,053

(a) Years ended previous 31st December. (b) Years ended 30th September. (c) Years ended 30th June. (d) Municipalities—Years ended 31st October; Road Districts—Years ended 30th June.

### § 3. Local and Semi-Governmental Authorities' Debt.

1. **General.**—Statistics of Local and Semi-Governmental Debt for the years 1938-39 and 1947-48 to 1950-51 are given in the following paragraph. The information covers all Local Government authorities and those Semi-Governmental authorities responsible for the provision of the following services :—

*New South Wales.* Water Supply, Sewerage and Drainage, Electricity Supply, Fire Brigades, Banking, County Councils are included among these authorities.

*Victoria.* Water Supply and Sewerage, Irrigation and Drainage, Harbours, Tramways, Electricity Supply, Fire Brigades, Marketing (Buying and Selling), Grain Elevators, Banking, Housing.

*Queensland.* Water Supply and Sewerage, Irrigation and Drainage, Harbours, Electricity Supply, Roads and Bridges, Trading Activities, n.e.i., Fire Brigades, Universities, Hospitals and Ambulances, Marketing (Buying and Selling and Agency), Industry Improvement, Miscellaneous.

*South Australia.* Irrigation and Drainage, Tramways, Electricity Supply, Fire Brigades, Hospitals and Ambulances, Marketing (Agency), Industry Improvement, Banking, Housing, Miscellaneous.

*Western Australia.* Water Supply and Sewerage, Irrigation and Drainage, Harbours, Tramways, Electricity Supply, Fire Brigades, Hospitals and Ambulances, Marketing (Agency), Housing.

*Tasmania.* Harbours.

A detailed list of the authorities included is shown in *Finance Bulletin* No. 43, 1951-52.

2. **Local and Semi-Governmental Authorities' Debt.**—The following table provides a summary of new money loan raisings, provisions for the redemption of debt, debt outstanding and interest payable of local and semi-governmental authorities for the year ended 30th June, 1951. For greater detail see *Finance Bulletin* No. 43, 1951-52, published by this Bureau.

**LOCAL AND SEMI-GOVERNMENTAL AUTHORITIES : NEW MONEY LOAN  
RAISINGS, REDEMPTION, DEBT AND INTEREST PAYABLE, 1950-51.**

( £'000.)

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
<b>LOCAL GOVERNMENT AUTHORITIES.</b>							
New Money Loan Raisings—							
From Government ..	326	43	1,344	223	34	..	1,970
From Public ..	6,447	2,113	6,249	165	598	930	16,502
Total ..	6,773	2,156	7,593	388	632	930	18,472
Funds Provided for Redemp- tion—							
Government Loans ..	26	29	536	149	1	7	748
Loans due to Public ..	1,977	793	1,432	61	226	288	4,777
Total ..	2,003	822	1,968	210	227	295	5,525
Accumulated Sinking Fund Balance ..	5,845	1,582	1,777	..	245	377	9,826
Debt—							
Due to Government ..	1,040	261	8,994	635	65	115	11,110
Due to Banks (Net Over- draft) ..	124	451	508	42	4	34	1,163
Due to Public Creditor (a) ..	38,998	14,607	36,086	657	2,534	4,156	97,038
Total(a) ..	40,162	15,319	45,588	1,334	2,603	4,305	109,311
Maturing Overseas(a)(b) ..	1,812	..	2,417	..	..	200	4,429
Annual Interest Payable (a) ..	(c)	555	1,616	31	96	153	(c)

**SEMI-GOVERNMENTAL AND OTHER PUBLIC AUTHORITIES.**

New Money Loan Raisings—							
From Government ..	18	9,057	1,818	8,196	4,116	..	23,205
From Public ..	13,902	37,259	2,679	5	27	268	54,140
Total ..	13,920	46,316	4,497	8,201	4,143	268	77,345
Funds Provided for Redemp- tion—							
Government Loans ..	259	287	363	217	204	12	1,342
Loans due to Public ..	2,285	2,403	523	135	44	25	5,415
Total ..	2,544	2,690	886	352	248	37	6,757
Accumulated Sinking Fund Balance ..	9,219	5,085	..	265	10	4	14,583
Debt—							
Due to Government ..	20,135	36,531	14,066	25,273	14,711	112	110,828
Due to Banks (Net Over- draft) ..	1,982	2,174	510	35	17	..	4,718
Due to Public Creditor(a) ..	106,298	120,951	13,025	11,218	375	1,302	253,169
Total(a) ..	128,415	159,656	27,601	36,526	15,103	1,414	368,715
Maturing Overseas(a)(b) ..	8,628	3,528	..	767	..	..	12,923
Annual Interest Payable(a) ..	(c)	5,227	974	1,199	553	51	(c)

(a) Includes debt or interest payable in London and New York. The former is expressed in United Kingdom currency, the latter is payable in dollars which have been converted at the rate of 4.8665 dollars to £1. (b) Included in debt figures above. (c) Not available.

In this and the following tables, debt includes all liabilities for which arrangements have been made for repayment over a period of one year or more, and net overdrafts. Interest capitalized and amounts due for the capital cost of assets or for services rendered which are to be repaid over a period of one year or more are included. Current liabilities, such as interest accrued (but not capitalized), trade creditors, amounts held in trust and other debts which are to be repaid in less than one year are not included. Net overdraft is the gross overdraft of all funds less all bank credit balances (including fixed deposits) which do not form part of a sinking fund to repay a loan. New loans raised during the year include new loan liabilities incurred during the year, loans raised to repay indebtedness to the Government, and interest capitalized. Loans raised and redeemed within the year, increases in overdrafts and loans raised for conversion or redemption

of existing debt are excluded. Funds provided for redemption include instalments of principal repaid and amounts credited to sinking funds established for the purpose of repaying the debt on maturity. Amounts provided for redemption from loans raised for that purpose are excluded.

In the following table a summary is given of new money loan raisings, provisions for the redemption of debt and debt outstanding of local and semi-governmental authorities for the years 1938-39 and 1947-48 to 1950-51.

**LOCAL AND SEMI-GOVERNMENTAL AUTHORITIES, AUSTRALIA: NEW MONEY LOAN RAISINGS, REDEMPTION AND DEBT.**

(£'000.)

Particulars.	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.
<b>LOCAL GOVERNMENT AUTHORITIES.</b>					
New Money Loan Raisings—					
From Government .. .. .	371	680	841	1,498	1,970
From Public .. .. .	7,060	8,502	11,242	13,843	16,502
Total .. .. .	7,431	9,182	12,083	15,341	18,472
Funds provided for Redemption—					
Government Loans .. .. .	2,141	499	675	506	748
Loans due to Public .. .. .	2,995	3,514	3,749	4,163	4,777
Total .. .. .	5,136	4,013	4,424	4,669	5,525
Accumulated Sinking Fund Balance .. .. .	(a)	10,376	9,950	9,334	9,826
Debt—					
Due to Government .. .. .	13,207	9,029	9,051	10,032	11,110
Due to Banks (Net Overdraft) .. .. .	1,544	337	435	537	1,163
Due to Public Creditor(b) .. .. .	76,582	66,734	73,766	83,908	97,038
Total(b) .. .. .	91,333	76,100	83,252	94,477	109,311
Maturing Overseas(b)(c) .. .. .	17,893	7,326	6,775	4,838	4,429
<b>SEMI-GOVERNMENTAL AND OTHER PUBLIC AUTHORITIES.</b>					
New Money Loan Raisings—					
From Government .. .. .	1,524	8,084	10,740	15,749	23,205
From Public .. .. .	7,038	11,118	18,046	32,674	54,140
Total .. .. .	8,562	19,202	28,786	48,423	77,345
Funds provided for Redemption—					
Government Loans .. .. .	699	1,934	1,239	1,075	1,342
Loans due to Public .. .. .	1,146	2,437	5,101	5,466	5,415
Total .. .. .	1,845	3,471	6,340	6,571	6,757
Accumulated Sinking Fund Balance .. .. .	(a)	12,755	13,139	13,462	14,583
Debt—					
Due to Government .. .. .	(d)44,817	64,747	76,055	89,919	110,828
Due to Banks (Net Overdraft) .. .. .	2,006	1,495	2,793	3,423	4,718
Due to Public Creditor(b) .. .. .	118,506	159,895	173,768	203,199	253,169
Total(b) .. .. .	165,329	226,137	252,616	296,541	368,715
Maturing Overseas(b)(c) .. .. .	12,088	16,665	14,655	12,991	12,923

(a) Not available. (b) Includes debt in London and New York. The former is expressed in United Kingdom currency, the latter is payable in dollars which have been converted at the rate of 4.8665 dollars to £1. (c) Included in debt figures above. (d) Approximate only.

### § 4. Roads and Bridges.

1. **Commonwealth Government Grants.**—The following table shows particulars of allocations to the several States from the Commonwealth Consolidated Revenue Fund under the several Commonwealth Aid Roads and Works Acts, for road construction, maintenance, repair and other works connected with transport during the years 1938–39 and 1946–47 to 1951–52. Allocations for the construction and maintenance of strategic roads and for the promotion of road safety practices made in the years 1947–48 to 1951–52 are excluded. The aggregate amounts payable under the relevant Acts from 1922–23 to 1951–52 for the purposes outlined above are also shown. Further particulars of these grants appear in Chapter XVII.—Public Finance.

#### ROAD CONSTRUCTION, MAINTENANCE, ETC. : GRANTS BY COMMONWEALTH GOVERNMENT. (£'000.)

Year ended 30th June—	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
1939 (a) .. .. .	1,199	747	815	474	819	213	4,267
1947 (a) .. .. .	1,350	841	918	533	923	240	4,805
1948 (b) .. .. .	2,017	998	1,102	631	1,102	287	6,137
1949 (b) .. .. .	2,003	1,236	1,303	781	1,363	355	7,101
1950 (b) .. .. .	2,472	1,526	1,683	965	1,683	438	8,767
1951 (c) .. .. .	3,819	2,357	2,600	1,490	2,600	677	13,543
1952 (c) .. .. .	4,131	2,549	2,812	1,611	2,812	732	14,647
Aggregate, years 1922–23 to 1951–52 .. .. .	30,291	18,994	20,615	12,025	20,751	5,404	108,080

(a) Under Federal Aid Roads and Works Act 1937. (b) Under Commonwealth Aid Roads and Works Act 1947–1949, except for £398,830 to New South Wales in 1947–48 under Federal Aid Roads and Works Act 1937, representing amounts not drawn by that State during 1943–44. (c) Under the Commonwealth Aid Roads Act 1950.

In addition to the foregoing amounts, financial assistance from loan fund has been granted by the Commonwealth Government to the States for road construction. Such assistance has not been granted in recent years. At 30th June, 1952 the aggregate amount was £249,686.

2. **New South Wales.**—(i) *General.* A central road authority was created by legislation early in 1925 for the purpose of providing improved and uniform standards of construction and maintenance of the principal roads, and to administer Governmental subsidies for work on those roads. This authority (now organized as the Department of Main Roads) exercises control over Governmental activities in connexion with road works, these activities embracing works on main and developmental roads throughout the State, all roads in the unincorporated portion of the Western Division, and proclaimed national works, principally bridges and vehicular ferries, constructed from Government funds. The department co-operates with the municipal and shire councils in the work of constructing and maintaining a well-organized system of main highways.

In the metropolitan district the whole cost of the construction and maintenance of main roads is paid from the funds of the Main Roads Department, while in the country districts assistance in respect of road works may be granted for any area through which a main road passes. The cost of constructing developmental roads and works is borne in full by the Main Roads Department, but local councils are required to maintain them in satisfactory condition. For other roads the cost of both construction and maintenance work is generally chargeable to the revenue of local authorities, although Governmental assistance is not infrequently granted for works of construction and re-construction. In the Western Division the full cost of all roads and bridges is met by the Department of Main Roads.

The New South Wales Transport and Highways Commission, which was constituted in 1950 and included the Commissioner for Main Roads as one of its members, was disbanded in September, 1952.

The general system of road communication throughout the State is made up of main roads classified into State highways, trunk roads and ordinary main roads. There are also secondary roads (metropolitan area) and developmental roads.

Public roads, except those within the City of Sydney, may be proclaimed as main roads on the recommendation of the Commissioner for Main Roads, who takes into consideration representations made by councils concerned, availability of funds for construction and maintenance purposes, and the value as connecting links between centres of population or business.

(ii) *Length of Roads.* (a) *Proclaimed Roads.* The following table shows lengths of proclaimed roads at 30th June, 1951, according to class of road :—

PROCLAIMED ROADS, NEW SOUTH WALES : LENGTHS, 30TH JUNE, 1951.  
(Miles.)

Division.	Main Roads.				Secondary Roads.	Developmental Roads.	Total.
	State Highways.	Trunk Roads.	Ordinary Main Roads.	Total.			
Eastern and Central	5,205	2,730	9,762	17,697	(a) 59	2,859	20,615
Western ..	1,328	1,359	2,936	5,623	..	..	(b) 5,623
Total ..	6,533	4,089	12,698	23,320	59	2,859	26,238

(a) Metropolitan area. (b) Excludes 2,705 miles of unclassified roads, the responsibility of the Department.

During 1950-51 the following roads were proclaimed or declared :—123 miles of new main roads and extensions of existing main roads, and 70 miles of new developmental roads.

The length of main and secondary roads maintained by the Department of Main Roads at 30th June, 1951 (excluding the Western Division) was 2,578 miles (15 per cent.), while the length maintained by Councils was 15,178 miles (85 per cent.). The proportions of the several classes of main roads maintained by the Department and Councils respectively were :—State highways, 38 per cent., 62 per cent.; trunk roads, 2 per cent., 98 per cent.; ordinary main roads, 6 per cent., 94 per cent. Secondary roads were wholly maintained by Councils. In the County of Cumberland (the metropolis and adjoining areas) the Department maintained 56 per cent. of the roads (504 miles).

(b) *Composition of Roads.* In 1951 the total length of all roads in New South Wales was estimated at 126,624 miles, including 7,911 miles in the Western Division. The lengths of roads, according to their composition or nature, were as follows :—cement concrete, 390 miles; asphaltic concrete, 197 miles; tar or bituminous macadam, 4,187 miles; surface water-bound macadam, 4,679 miles; water-bound macadam, 2,068 miles; gravel or crushed rock, 35,076 miles; formed only, 27,390 miles; cleared or natural surface only, 52,637 miles.

(iii) *Main Roads Department.* (a) *General.* Progress has continued with the implementation of the Main Roads Department plan for main road development in the metropolis and the balance of the County of Cumberland. This plan is now incorporated in the County of Cumberland Planning Scheme approved by Parliament under the Local Government (Amendment) Act 1951. Surveys and designs have been advanced, and the acquisition of land is proceeding, in connexion with the planned Newcastle and District Arterial Road System and Wollongong-Port Kembla District Main Roads System.

An investigation into the extent and classification of country main roads in the light of present and future traffic needs was completed during 1949-50.

In addition to its construction and maintenance work on roads, the Main Roads Department is engaged on a scheme for widening metropolitan roads. The acquisition of land required to implement approved schemes has been proceeding.

During 1950-51, 32 new bridges were completed on main roads by the Department and Councils. Piers and abutments have been constructed for the steel and concrete bridge over Iron Cove between Balmain and Drummoyne, Sydney (length 1,536 feet) while work on the reinforced concrete bridge over a division of Cook's River (length 566 feet) has been completed.

(b) *Receipts and Payments.* The funds of the Department of Main Roads are derived principally from taxation of motor vehicles, contributions by the Commonwealth Government under the Commonwealth Aid Roads and Works Acts (see Chapter XVII.—Public Finance, for some particulars of the basis and distribution of grants under these Acts and para. 1 of this section for particulars of the amounts paid in recent years), contributions by municipal and shire councils, and special (not statutory) assistance by the State Government by way of loan moneys or special grants from revenue funds. Receipts and payments for the four years 1947-48 to 1950-51 compared with the income and expenditure for 1938-39 are shown below.

DEPARTMENT OF MAIN ROADS, NEW SOUTH WALES: RECEIPTS AND PAYMENTS.

(£.)

Item.	1938-39. (a)	1947-48.	1948-49.	1949-50.	1950-51.
RECEIPTS.					
Motor Vehicle Taxation, and Registration and Licence Fees	2,018,556	2,266,351	2,516,423	2,744,617	3,586,260
Commonwealth Aid Roads and Works Acts .. .. .	1,176,039	1,851,324	1,445,245	1,777,500	2,560,447
Councils' Contributions .. .. .	250,679	249,674	237,598	285,478	328,983
Consolidated Revenue (State) .. .. .	..	..	10,000	..	350,000
Loans from State Government .. .. .	302,643	300,000	..	..	215,000
Grants and Contributions from State Government and Departments, etc. .. .. .	13,549	53,095	63,295	9,909	26,471
Commonwealth Funds for Special Works .. .. .	..	38,633	37,606	142,000	133,140
Hire of Plant and Motor Vehicles .. .. .	..	269,018	314,006	340,016	393,224
Suspense Accounts .. .. .	..	3,574	62,826	1,080	..
Other .. .. .	54,782	107,570	120,958	149,415	149,679
<b>Total .. .. .</b>	<b>3,816,248</b>	<b>5,139,239</b>	<b>4,808,047</b>	<b>6,545,015</b>	<b>7,743,204</b>
PAYMENTS.					
Roads and Bridges in New South Wales—					
Construction .. .. .	1,736,898	1,402,546	1,851,985	2,303,637	2,276,057
Maintenance .. .. .	1,519,929	2,483,366	2,371,632	2,856,508	3,787,059
Roads and Bridges outside New South Wales .. .. .	..	2,232	—57	..	..
Other Works .. .. .	..	14,708	13,087	9,134	..
Debt Charges—					
Interest, Exchange, etc. .. .. .	152,469	138,124	126,964	121,895	120,704
Sinking Fund and Repayments .. .. .	200,591	(d) 776,444	95,697	40,861	25,876
Repairs and Expenses, Plant and Motor Vehicles .. .. .	..	122,077	183,004	220,007	253,405
Purchase of Assets .. .. .	..	148,059	98,538	292,084	435,885
Suspense Accounts .. .. .	..	108,359	2	19,538	98,259
Administration, etc. .. .. .	100,583	185,179	220,939	246,226	279,622
Other .. .. .	914	38,670	37,613	97,600	97,177
<b>Total .. .. .</b>	<b>3,711,384</b>	<b>5,419,764</b>	<b>4,999,404</b>	<b>6,207,490</b>	<b>7,374,044</b>

(a) Income and expenditure. (b) Includes £398,830 not drawn by State during 1943-44.  
(c) Excludes £500,000 transferred from the County of Cumberland Main Roads Fund to the Country Main Roads Fund. (d) Includes £696,096 to liquidate certain outstanding liabilities before due dates.

The figures shown above represent the aggregate receipts and payments of three funds—the County of Cumberland Main Roads Fund, the Country Main Roads Fund and the Developmental Roads Fund. From 1st January, 1925 to 30th June, 1951



receipts amounted to £104,870,470 and payments to £102,993,086. Particulars of the individual funds are—County of Cumberland, receipts £28,677,717, payments £27,516,637, Country, £72,310,681, £71,888,857; Developmental, £3,882,072, £3,587,592.

The total expenditure on roads, streets and bridges in the State by all authorities during the years 1938–39 and 1947–48 to 1950–51 was, respectively, £8,894,099, £8,934,403, £10,479,716, £12,394,814 and £15,063,845. These figures are approximate and they include expenditure on construction, maintenance and direct administration, but not on debt charges. Expenditure on the Sydney Harbour Bridge is not included.

(c) *Sydney Harbour Bridge.* The Sydney Harbour Bridge was opened for traffic on 19th March, 1932. The main span is 1,650 feet and the clearance for shipping 170 feet from high water level. The deck, 160 feet wide, carries a roadway, two railway tracks and two tramway tracks, and there is also a footway on each side. The capital cost of the bridge to the 30th June, 1951, was £9,742,256, but this amount will be reduced by approximately £273,000 on the disposal of all surplus resumed property. The portion met from repayable loan funds, over £8,000,000, is to be repaid over a period of 53 years ending approximately in 1985. The accumulated balance of the Bridge Account to 30th June, 1951, showed a surplus of £104,831. Annual income, after a decline to less than £300,000 during the 1939–45 War, has risen from about £400,000 in 1938–39 to a little less than £700,000 in 1950–51; expenditure over the same period has remained around the £400,000 level. In 1950–51 income amounted to £697,022, and included road tolls £526,309, railway passenger tolls £129,678, and tram and omnibus passenger tolls £27,273. Expenditure amounted to £440,743, including interest, exchange, etc. £258,611, sinking fund £67,372 and maintenance and improvement £60,437. During 1950–51, 23,399,000 rail travellers, 24,873,000 tram and omnibus travellers, and 24,034,000 road travellers in 14,266,000 road vehicles crossed the bridge, contributing respectively, 19 per cent., 4 per cent., and 77 per cent. of the total toll revenue.

3. *Victoria.*—(i) *General.* With the object of improving the main roads of the State the Country Roads Board was established by legislation passed in 1912. The principal duties of the Board are to determine the main roads, State highways, tourists' roads, etc., to inquire into the State's resources in road materials and the most effective methods of road construction and maintenance, and to recommend deviations in existing roads or the construction of new roads in order to facilitate communication or to improve the conditions of traffic.

(ii) *Length of Roads.* (a) *Declared Roads.* The total length of declared roads in Victoria at 30th June, 1951, was 14,457 miles, classified as follows:—State highways, 3,850 miles; main roads, 9,800 miles; tourists' roads, 432 miles; forest roads, 375 miles. The total length of the surface treated (black) system included in the foregoing totals was 6,932 miles or 47.9 per cent.

(b) *Composition of Roads.* It is estimated that, in addition to the 14,457 miles of classified roads as above, there were 90,200 miles of unclassified roads at 30th June, 1951. The latest detailed estimate of the length of roads and streets in Victoria (as at 30th September, 1948) provides the following information:—Wood or stone, 62 miles; portland cement concrete, 150 miles; asphaltic concrete and sheet asphalt, 202 miles; tar or bitumen surface seal, 10,241 miles; water-bound macadam, gravel, sand and hard loam pavements, 28,418 miles; formed only, 23,901 miles; surveyed only, 38,437 miles; total 101,411 miles.

(iii) *Country Roads Board.* (a) *General.* During 1950–51 823 miles of declared roads under the Board's control were treated with bitumen. In addition, 121 miles of undeclared roads, for which the Board contributed funds, were similarly treated. Work for other authorities carried out by the Board's plant amounted to 65 miles. The total length of bitumen treatment carried out in 1950–51 was 1,009 miles. Of the work on the roads under the Board's control, 288 miles related to State highways.

During 1950–51, 153 bridge projects with a total value of £388,164 were initiated. Of these new projects, 40 with a total value of £232,147 were supervised by the Board and 113 with a total value of £156,017, were supervised by municipalities.

Despite delays occasioned by labour difficulties progress was maintained during the year on the Swan Street Bridge, Melbourne, for which the Country Roads Board is the constructing authority.

(b) *Receipts and Payments.* Funds created under the Act were the Country Roads Board Fund, the Loan Account and the Developmental Roads Loan Account. Particulars of the operations of these funds, together with those of the Commonwealth Aid Roads and Works Accounts, are given hereunder :—

*Country Roads Board Fund.* Fees and fines under the Motor Car Act, and all registration fees and fines for traction engines, less cost of collection of such fees and fines, are credited to this Fund. In 1949-50 drivers' licence fees, which were formerly paid into Consolidated Revenue Fund, were paid into the Country Roads Board Fund. In 1950-51, 68 per cent. of these fees was credited to the Country Roads Board Fund while 32 per cent. was credited to the Municipalities Assistance Fund. Particulars of receipts and payments connected with the Commonwealth Aid Roads and Works Acts, Commonwealth Defence Works and several other funds are not included therein (*see* next page for particulars). Receipts and payments for the years 1938-39 and 1947-48 to 1950-51 were as follows :—

COUNTRY ROADS BOARD FUND, VICTORIA : RECEIPTS AND PAYMENTS.

(£.)

Item.	1938-39.	1947-48.	1948-49.	1949-50. (a)	1950-51. (a)
<b>RECEIPTS.</b>					
Motor Vehicle Registration Fees	1,690,962	1,963,555	2,133,717	2,555,812	3,015,820
Drivers' Licence Fees .. ..	.. ..	.. ..	.. ..	131,678	143,291
Municipalities' Payments .. ..	318,878	302,905	336,470	189,788	187,109
Stores and Materials .. ..	233,104	598,080	376,696	.. ..	.. ..
Hire of Plant .. ..	53,724	230,982	230,976	.. ..	.. ..
Other .. ..	117,341	241,210	277,475	10,929	3,521
<b>Total .. ..</b>	<b>2,414,009</b>	<b>3,336,732</b>	<b>3,355,334</b>	<b>2,888,207</b>	<b>3,349,741</b>
<b>PAYMENTS.</b>					
Maintenance of Roads and Murray River Bridges and Punts .. ..	1,205,069	1,770,918	927,718	1,845,947	1,754,578
Relief to Municipalities .. ..	240,170	220,682	210,579	.. ..	.. ..
Interest, Sinking Fund, etc.—					
Recoup to Consolidated Revenue—					
Interest, etc. .. ..	282,484	296,076	296,964	531,213	526,845
Sinking Fund .. ..	25,794	25,262	24,489		
Municipalities' Repayments, etc.	119,167	104,295	103,290		
Plant, Stores and Materials .. ..	310,332	1,043,506	797,377	211,661	578,273
Other (including Administration)	230,125	520,811	598,539	495,577	721,559
<b>Total .. ..</b>	<b>2,413,141</b>	<b>3,981,550</b>	<b>2,958,946</b>	<b>2,994,398</b>	<b>3,581,255</b>

(a) Figures for 1949-50 and 1950-51 are not directly comparable with those of previous years owing to a change in the method of compilation adopted by the Country Roads Board.

*Country Roads Board Loan Account.* Loans have been authorized from time to time under the Country Roads Acts for permanent works on main roads and State highways. During the year ended 30th June, 1951, receipts amounted to £715,956 and payments to £790,956. The total expenditure to 30th June, 1951 was £6,614,495.

*Developmental Roads Loan Account.* This fund was created for the purpose of constructing and maintaining subsidiary or developmental roads. Loan moneys raised were exhausted at 30th June, 1937, the total expenditure at that date being £6,425,758.

*Commonwealth Aid Roads and Works Accounts.* Revenue and expenditure in respect of the Commonwealth Aid Roads and Works Accounts, particulars of which are not included above, were as follows:—

(£.)

Item.	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.
Revenue .. .. .	716,019.	993,144	1,201,971	1,540,233	2,004,080
Expenditure(a) .. .	767,767	1,338,301	1,300,818	994,400	2,815,779

(a) Excludes amounts spent on maintenance and repairs of public roads adjoining, or of approach to, Commonwealth properties in Victoria (see table following).

*Total Expenditure.* The total expenditure by the Board on road construction and maintenance during each of the five years 1938-39 and 1947-48 to 1950-51 was as follows:—

## COUNTRY ROADS BOARD, VICTORIA: EXPENDITURE ON ROADS.

(£.)

Item.	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.
State Highways—Maintenance, etc.(a) .. .. .	453,708	1,181,382	894,600	1,340,588	2,077,175
Main Roads—Construction(a) ..	224,290	75,743	12,304	5,801	2,029,795
Maintenance(a) ..	802,920	1,283,619	1,087,120	1,217,829	
Tourists' Roads—Construction, etc.(a) .. .. .	77,694	98,662	117,477	149,841	212,398
Forest Roads—Maintenance, etc.	..	29,342	22,150	44,174	63,333
Developmental and other Roads—Maintenance, etc.(a) ..	468,122	436,467	458,473	378,179	937,692
Murray River Bridges and Punts—Maintenance .. .. .	4,067	4,004	5,946	6,022	11,641
Roads adjoining Commonwealth Areas—Maintenance, etc. ..	13,321	3,407	3,247	735	709
Unemployment Relief Works ..	54,662	..	..	..	..
Swan Street Bridge .. .. .	..	15,178	37,769	41,867	29,280
Total .. .. .	2,098,784	3,127,804	2,639,086	3,185,036	5,362,023

(a) Includes amounts contributed by the Commonwealth Government under the provisions of the Commonwealth Aid Roads and Works Acts.

4. Queensland.—(i) *General.* Under the Main Roads Act 1920 a Main Roads Board was constituted, consisting of three members appointed by the Governor-in-Council. In 1925 the Board was abolished and its powers conferred upon a single Commissioner. The duties of the Commissioner are to carry out surveys and investigations necessary to determine State highways, main, developmental, secondary, mining access, farmers' and tourist roads and tourist tracks, and the responsibility for building and maintaining these declared roads is largely that of the Commissioner. Roads of purely local importance are constructed and maintained by local authorities. In many cases construction is subsidized by the State Government by means of Treasury loans. Other roads are built by the Public Estate Improvement Branch of the Lands Department in order to open up areas of previously inaccessible or undeveloped country.

(ii) *Length of Roads.* (a) *Declared Roads.* The total length of declared roads in Queensland at 30th June, 1951 was 20,916 miles, comprising State highways, 7,781 miles; main roads, 10,973 miles; developmental roads, 245 miles; secondary roads, 627 miles; mining access roads, 697 miles; farmers' roads, 290 miles; tourist roads, 301 miles; tourist tracks, 2 miles. During 1950-51, 309 miles were added to the list. The length of roads improved in Queensland from the date of commencement of work under the Main Roads Acts 1920-1943 to 30th June, 1951 was 10,446 miles (50 per cent.). At that date, also, 1,152 miles of new road construction and 931 miles of stage construction work were proceeding.

(b) *Composition of Roads.* The total length of roads and streets in Queensland at 30th June, 1951 was:—Concrete, 83 miles; bitumen, 4,326 miles; macadam, 9,430 miles; other formed, 44,102 miles; unconstructed, 73,895 miles; total, 131,836 miles.

(iii) *Main Roads Commission.* (a) *General.* During 1950-51 the Commission completed 506 miles of roads including new construction and stage construction. Bridges of all types to a length of 1,964 linear feet were constructed, bringing the total

constructed by the Commission at 30th June, 1951 to 153,337 feet. In addition, at 30th June, 1951, 1,152 feet were under construction. These figures exclude particulars of the Fitzroy River and Burdekin River bridges which are special projects.

The first of these projects is a joint operation being carried out by the Main Roads Commission and the Rockhampton City Council. The design provides for a bridge 1,210 feet long, at an original estimated cost, including approaches, of approximately £426,000, one half being financed under the terms of the Main Roads Act. The total expenditure to 30th June, 1951 was £454,159. The second project is a combined road and rail bridge over the Burdekin River, with an overall length, including approaches, of 3,620 feet, estimated to cost about £1,900,000. During 1950-51, construction was again seriously impeded by heavy rains and floods; this affected costs which at the end of the financial year totalled approximately £918,000.

(b) *Receipts and Payments.* The funds of the Main Roads Commission are obtained chiefly from motor vehicle registration and collections, fees, etc., under the Transport Acts, contributions under the Commonwealth Aid Roads and Works Acts, and loans, grants and advances from the State Government. The total receipts and payments, including amounts for defence works, during each of the years 1938-39 and 1947-48 to 1950-51 are shown below:—

MAIN ROADS COMMISSION, QUEENSLAND : RECEIPTS AND PAYMENTS.

(£.)

Item.	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.
<b>RECEIPTS.</b>					
Motor Vehicle Registration, Transport Acts Collections, Fees, etc.	938,227	967,817	1,056,813	1,165,888	1,936,656
Loans from State Government ..	392,225	300,000	600,000	700,000	587,500
Grants, Advances, Refunds, etc. from State Government	579,775	590,708	687,630	594,471	553,768
Commonwealth Aid Roads and Works Acts ..	806,218	1,088,756	1,331,863	1,693,567	2,458,763
Maintenance Repayments—Local Authorities ..	98,154	189,010	184,853	258,673	258,709
Hire, Rent, Sales of Plant, etc. ..	288,330	58,169	65,320	81,169	84,840
Other ..		114,317	96,657	125,469	130,999
<b>Total ..</b>	<b>3,102,929</b>	<b>3,308,777</b>	<b>4,023,136</b>	<b>4,619,237</b>	<b>6,011,235</b>
<b>PAYMENTS.</b>					
Permanent Road Works and Surveys ..	2,045,900	1,972,304	1,719,632	2,146,692	2,943,923
Maintenance of Roads ..	331,734	1,066,543	986,667	1,063,255	1,434,319
Port Development Works ..	..	4,885	..	..	..
Plant, Machinery, Buildings, etc. (including Plant Maintenance)	73,632	509,203	350,679	402,744	576,845
Loans—Interest ..	38,861	178,518	182,377	189,836	200,258
Redemption ..	78,153	165,553	169,447	183,406	201,151
Payments to State Consolidated Revenue ..	340,244	..	..	..	..
Payments to Local Authorities ..	27,418	..	1,807	1,769	1,625
Commonwealth and Allied Works and Services ..	..	16,943	32,930	12,313	..
Other Works and Services ..	..	654	19,516	4,000	22,293
Administration, etc. ..	149,950	342,768	417,733	458,730	505,544
Other ..	1,750	19,560	16,178	25,173	..
<b>Total ..</b>	<b>3,087,642</b>	<b>4,243,045</b>	<b>3,896,966</b>	<b>4,487,918</b>	<b>5,885,958</b>

5. **South Australia.**—(i) *General.* The Highways Act 1926–1949 created a Commissioner of Highways and provided for a Highways Fund. The Commissioner is virtually empowered to determine upon which main roads he will spend the moneys available; in doing which he has to take into account the availability of funds for main roads, the service the road is intended to render, and the present or future adequacy of railway facilities in the area through which it passes.

The Highways Fund is credited with the receipts from State motor taxation, fees, fines and licences, after deduction of the costs of collection, and all loans raised and appropriated for roads. All moneys received by the State from the Commonwealth under the Commonwealth Aid Roads and Works Acts are also expended by the Commissioner of Highways under the general provisions of the Highways Act.

(ii) *Length of Roads.* The total length of roads in use for general traffic at 30th June, 1948 (the latest date for which this information is available), was as follows:—Within District Council and Corporation Boundaries.—Blocks (wood or stone), 8 miles; bituminous concrete (asphalt and premix), 393 miles; cement concrete and cement penetration, 2 miles; penetration or surface dressed (bitumen or tar), 4,283 miles; metalled (gravelled or rubble), 13,429 miles; formed, but little or no metal, 8,742 miles; surveyed, used by traffic, but little or no improvement, 25,220 miles; total, 52,077 miles; Outside Districts (main roads only), 565 miles; Grand total, 52,642 miles. Lengths of main roads within district council and corporation boundaries aggregated 7,556 miles.

(iii) *State Highways and Local Government Department.* (a) *General.* The Department's programme for the acquisition of land for road improvement in the metropolitan and rural areas was continued during 1950–51 when approximately 23,000 linear feet of frontages in the metropolitan area were acquired and set back. This brought the total acquisition since the inception of the metropolitan widening scheme to 64,000 linear feet. In rural areas the policy of widening roads and improving the alignments was continued in order to provide for an expected future increase in the volume of traffic.

Construction and reconstruction works on main roads were carried out in the following areas:—Northern and Eyre Peninsula, Mid-Northern, Central, Metropolitan, Murray Lands, Upper South-Eastern and Lower South-Eastern. In other areas local authorities carried out the works under departmental supervision.

(b) *Receipts and Payments.* The following table shows particulars of receipts and payments, during the years 1938–39 and 1947–48 to 1950–51, of funds controlled by the Highways and Local Government Department. Wholly comparable figures for 1938–39 are not available.

**HIGHWAYS AND LOCAL GOVERNMENT DEPARTMENT, SOUTH AUSTRALIA :  
RECEIPTS AND PAYMENTS.**

(£.)

Item.	1938–39. (a)	1947–48.	1948–49.	1949–50.	1950–51.
<b>RECEIPTS.</b>					
Motor Vehicle Registration, Licences, Fees, Fines, etc. ..	690,849	718,951	1,010,539	1,144,454	1,286,677
Commonwealth Aid Roads and Works Acts .. .. .	479,922	637,520	769,807	1,009,574	1,448,845
Loans from State Government ..	200,000	100,000	..	..	100,000
Recoups—Local and Semi- governmental Authorities ..	1,531	19,779	11,642	4,646	33,398
Other .. .. .		32,434	68,261	115,386	149,013
<b>Total .. .. .</b>	<b>1,372,302</b>	<b>1,508,684</b>	<b>1,860,249</b>	<b>2,274,060</b>	<b>3,017,933</b>

HIGHWAYS AND LOCAL GOVERNMENT DEPARTMENT, SOUTH AUSTRALIA: RECEIPTS AND PAYMENTS—*continued.*

(£.)

Item.	1938-39. (a)	1947-48.	1948-49.	1949-50.	1950-51.
PAYMENTS.					
Construction and Reconstruction of Roads and Bridges	61,150,082	524,507 168,003	606,615 221,730	1,018,157 298,550	1,142,010 384,939
Maintenance .. .. .					
Recoups to Consolidated Revenue Fund—Interest, Sinking Fund and Exchange .. .. .	(c)178,273	167,376	158,803	141,783	139,796
Grants and Advances to Local and Semi-governmental Authorities Administration .. .. .	(d)	621,553 69,848	670,686 90,810	750,043 100,938	646,903 141,614
Stores, Plant, Machinery, Suspense Accounts, etc. . . . .	45,753	145,179 3,951	120,155 2,261	198,148 12,960	175,063 18,126
Other .. .. .					
Total .. .. .	1,374,108	1,700,417	1,871,060	2,520,579	2,648,451

(a) Figures for 1938-39 are not completely comparable with those for following years. (b) Roads, plant, etc. (c) Interest and sinking fund payments. (d) Not separately available; included elsewhere.

The total expenditure, both revenue and loan, by State and local governments on roads, streets and bridges in South Australia during the years 1938-39 and 1947-48 to 1950-51 was, respectively, £1,966,000, £2,341,000, £2,605,000, £3,166,000 and £3,384,000.

6. Western Australia.—(i) *General.* Under the Main Roads Act 1930-1939 the Main Roads Board previously existing was abolished and a Commissioner of Main Roads was appointed. His duties relate to the determination of main roads after consideration of the funds available and the services to be rendered by the roads, the declaration and provision of developmental roads, the construction and maintenance of main roads, and the carrying out of surveys, investigations and experiments connected with roads and road materials. The Act authorizes two trust accounts (Main Roads Trust Account and Main Roads Contribution Trust Account) to record the moneys prescribed as available to the Commissioner for expenditure associated with roads, etc. In addition, the Commissioner operates on those Trust Accounts which are used for funds made available under the Commonwealth Aid Roads and Works Acts.

(ii) *Length of Roads and Streets.* The total known lengths of roads and streets in existence in the various municipalities at 31st October, 1951 and in road districts at 30th June, 1951, were as follows:—Bituminous, 3,966 miles; gravel water-bound, 9,912 miles; other constructed surfaces, 3,833 miles; formed only, 28,680 miles; unprepared, 30,317 miles (incomplete); total 76,708 miles.

The lengths of declared roads at 30th June, 1951, were:—Main roads, 3,154 miles; developmental roads, 13,749 miles; other classified roads, 24 miles; total, 16,927 miles. No new main roads were declared during the year 1950-51.

(iii) *Main Roads Department.* During the year 1950-51 the activities of the Department included:—clearing, 1,174 miles; forming, 1,423 miles; gravelling, 799 miles; metalling, 5 miles; reconditioning, 2,291 miles; sanding, 94 miles; side drains, 101 miles. In addition, lengths of tar and bitumen work performed aggregated 258 miles. Bridges constructed numbered 25. Work progressed on the causeway over the Swan River which involves the construction of two bridges. The expenditure during the year on this structure was £196,510. At the eastern end the pier system was completed and the pile foundation system for the piers was laid at the western end of the bridge. Construction of the Marble Bar-Port Hedland and the Wyndham-Ord River-Nicholson Roads was continued during 1950-51.

(iv) *Receipts and Payments—Combined Road Funds.* The following table shows the combined transactions of the Main Roads Trust Account, the Main Roads Contributions Trust Account, the Metropolitan Traffic Trust Account, the Transport Co-ordination Trust Account in 1938-39 and the Commonwealth Aid Roads and Works Trust Accounts during the years ended 30th June, 1939 and 1948 to 1951.

## ROAD FUNDS, WESTERN AUSTRALIA : RECEIPTS AND PAYMENTS.

(£.)

Item.	1938-39. (a)	1947-48. (b)	1948-49. (b)	1949-50. (b)	1950-51. (b)
<b>RECEIPTS.</b>					
Motor Vehicle Registration, Licences, Fees, Fines, etc. . .	218,962	354,946	303,838	346,246	394,887
Commonwealth Aid Roads and Works Acts . . . . .	823,162	1,098,758	1,404,448	1,740,482	2,476,903
Recoups from Local Authorities, etc. . . . .	} 1,958	{ 15,529	18,810	110,370	82,467
Other . . . . .					
Total . . . . .	1,044,082	1,520,548	1,727,102	2,197,127	2,956,653
<b>PAYMENTS.</b>					
Construction and Reconstruction of Roads and Bridges . . . . .	} 922,756	{ 1,014,916	1,256,351	1,507,873	2,203,645
Maintenance . . . . .					
Grants to Local Authorities, etc. . .	143,544	142,000	220,246	230,492	243,492
Transfer to State Consolidated Revenue . . . . .	..	67,003	59,234	67,711	76,337
Interest, Sinking Fund and Exchange—State Consolidated Revenue . . . . .	7,616	7,391	5,555	8,842	7,396
Administration, Plant, etc. . . . .	52,176	36,469	31,178	38,380	41,951
Other . . . . .	19,181	..	..	..	..
Total . . . . .	1,145,273	1,377,715	1,709,625	1,986,772	2,753,817

(a) Figures not completely comparable with those for following years.

(b) Excludes Transport Co-ordination Trust Account.

7. *Tasmania.*—(i) *General.* Under the Transport Act 1938, which came into operation on 1st July, 1939, the Transport Commission was constituted to co-ordinate, regulate, control, and improve the means of, and facilities for, transport by road, rail or air within the State. Revenues at its disposal for road and motor traffic purposes are the Commonwealth Aid Roads and Works grants, motor vehicle registration fees and tax, and licensing fees for drivers and public motor vehicles. Under the Roads and Jetties Act 1944, which provides for the classification of the whole of the roads of the State so that they will be adequately and efficiently maintained, the cost of maintenance of roads classified as State highways, tourist roads and developmental roads is borne by the Transport Commission. It is also responsible for a proportion of the cost of maintenance of main and secondary roads. Except in special cases, municipal councils bear the cost of maintaining country roads and a proportion of the cost of main and secondary roads. The cost of construction of roads and bridges in Tasmania is borne almost entirely by the State Government. The expenditure of the Public Works Department (the construction and maintenance authority for the Transport Commission) during 1950-51 on roads, tracks and bridges amounted to £1,191,154, of which £824,853 was charged to road funds, £46,175 to revenue, £320,000 to loan and £126 to Crown lands funds. The principal construction work carried out during 1950-51 consisted of reconstruction work on the Bass Highway, the Sheffield main road and the Northern Outlet Road.

As from 1st July, 1951 certain functions with respect to the construction and maintenance of roads and the vesting and control of certain plant were transferred from the Transport Commission to the Minister for Lands and Works. The existing Road Account and Commonwealth Aid Roads and Works Account in the books of the Transport Commission were closed and a new Fund—the State Highways Trust Fund—was opened in the Treasury books.

(ii) *Length of Roads.* (a) *Classified Roads.* The mileages of classified roads in Tasmania at 30th June, 1951 were as follows:—State highways, 1,165 miles; main roads, 660 miles; secondary roads, 189 miles; tourist roads, 46 miles; developmental roads, 49 miles; subsidized roads, 78 miles; total 2,187 miles. Country roads totalled more than 10,000 miles. The mileages of sealed roads, and their proportions to the respective totals, were:—State highways, 550 miles (47 per cent.); main roads, 154 miles (23 per cent.); secondary roads, 10 miles (5 per cent.); total, 714 miles (33 per cent. of all classified roads, and 6 per cent. of all roads, in Tasmania).

(b) *Composition of Roads.* The length of all roads in Tasmania, including those with surfaces of lower grade, at 30th June, 1951 was as follows:—Sheet asphalt on concrete base, 1 mile; other bituminous, 914 miles; concrete, 8 miles; granite, limestone, etc., water-bound, 8,559 miles; surfaces of lower grade, 2,787 miles; total, 12,269 miles.

(iii) *Receipts and Payments—Combined Road Funds.* The table hereunder shows particulars of the receipts and payments of combined Road Funds and Commonwealth Aid Roads and Works Funds under the control of the Transport Commission for the years 1939-40 and 1947-48 to 1950-51:—

## ROAD FUNDS, TASMANIA : RECEIPTS AND PAYMENTS.

(£.)

Item.	1939-40. (a)	1947-48.	1948-49.	1949-50.	1950-51.
RECEIPTS.					
Motor Vehicle Taxation and Registration, Licences, Fees, Fines, etc. . . . .	193,165	264,780	297,503	327,475	364,708
Commonwealth Aid Roads and Works Acts . . . . .	220,241	286,158	348,733	450,930	640,824
Recoups from Local Authorities, etc. . . . .	..	8,660	9,636	8,966	9,176
State Loan Fund . . . . .	..	28,795	66,399	60,689	495,914
Other . . . . .	719	37,470	110,716	(b)417,380	(b)457,578
<b>Total . . . . .</b>	<b>414,125</b>	<b>625,863</b>	<b>832,987</b>	<b>1,265,440</b>	<b>1,968,200</b>
PAYMENTS.					
Construction and Reconstruction of Roads and Bridges . . . . .	130,924	402,774	322,263	219,118	621,905
Maintenance . . . . .	113,199	254,056	270,102	549,241	620,288
Jetties, etc. . . . .	22,467	4,682	10,415	..	..
Other works connected with Transport . . . . .	5,748	13,163	18,060	20,988	29,928
Grants to Local Authorities, etc. . . . .	..	258	325	2,037	4,663
Administration . . . . .	15,053	52,199	55,059	67,726	73,646
Other . . . . .	31,894	54,572	195,394	(c)394,831	(c)610,919
<b>Total . . . . .</b>	<b>319,285</b>	<b>781,704</b>	<b>872,218</b>	<b>1,253,991</b>	<b>1,961,349</b>

(a) First year of operation of Transport Commission. Figures not completely comparable with those for following years. (b) Includes hire of plant—1949-50, £237,899; 1950-51, £400,214. (c) Includes hire and maintenance of road construction plant, etc.—1949-50, £192,619; 1950-51, £360,912.



**S. Summary of Roads used for General Traffic.—(i) Proclaimed or Declared Roads.** The table hereunder is a summary of the roads proclaimed or declared under the Acts of the several States relative to the operations of the central road authorities, and shows the lengths of various classes proclaimed or declared as at 30th June, 1951. These proclaimed or declared roads are those for which the central road authority assumes responsibility under the Act for the whole, or a proportion, of the cost of construction and/or maintenance, the extent varying from State to State and with the class and locality of the roads. Before proclamation of a main road, consideration is given, in general, to the following points:—availability of funds; whether the road is, or will be, within one of several classes of main trunk routes; whether the district is, or will be, sufficiently served by railways. Provision is also made in some States for the declaration of roads other than main. The absence of a particular class from the following data for any State does not necessarily imply that there are no roads within that State that might be so classified; the classes are restricted only to roads proclaimed or declared under the Acts. A further point to make is that, through various causes, e.g. insufficiency of funds, manpower or materials, etc., construction or maintenance may not keep pace with gazettals of mileages, and that therefore the condition of a road may not match its status.

**PROCLAIMED OR DECLARED ROADS: LENGTHS, 30th JUNE, 1951.**  
(Miles.)

Class of Road.	N.S.W.	Vic.	Q'land.	S. Aust. (a)	W. Aust.	Tas.	Total.
State highways .. .. .	6,533	3,850	7,781	} 8,122	3,154	} 1,165 660	} 68,825
Trunk roads .. .. .	4,089	} 9,800	10,973				
Ordinary main roads .. .	12,698						
<b>Total Main Roads</b> .. .. .	<b>23,320</b>	<b>13,650</b>	<b>18,754</b>	<b>8,122</b>	<b>3,154</b>	<b>1,825</b>	<b>68,825</b>
Secondary roads .. .. .	59	..	627	..	..	189	875
Developmental roads .. .. .	2,859	..	245	..	13,749	49	16,902
Tourist roads .. .. .	..	432	301	..	..	46	779
Other roads .. .. .	..	(b) 375	(c) 989	..	24	(d) 78	1,466
<b>Total Other Roads</b> .. .. .	<b>2,918</b>	<b>807</b>	<b>2,162</b>	<b>..</b>	<b>13,773</b>	<b>362</b>	<b>20,022</b>
<b>Grand Total</b> .. .. .	<b>26,238</b>	<b>14,457</b>	<b>20,916</b>	<b>8,122</b>	<b>16,927</b>	<b>2,187</b>	<b>88,847</b>

(a) At 30th June, 1948. (b) Forest roads. (c) Includes mining access roads, 697 miles; farmers' roads, 290 miles; tourist tracks, 2 miles. (d) Subsidized roads.

(ii) *Composition of Roads.* The following table represents an attempt to classify all the roads used for general traffic in Australia, at the latest dates available, according to States and Territories and to certain broad composition groups. The results are not entirely satisfactory, (i) because it is doubtful whether the whole of Australia is covered, (ii) because the dates of reference differ, and (iii) because the figures constituting each group are not wholly comparable for the States and Territories. It is hoped, however, despite these defects, that the table will provide an approximate and general idea of the main types of roads in Australia.

The data in the table for the States are obtained from the State Government Statisticians, and are derived mainly from local government sources. Unincorporated areas in some States are probably excluded and the figures on the returns supplied by the local government authorities are in some cases of doubtful accuracy. Details of the composition of roads, as far as they are available, vary to such an extent that it was considered preferable to show here only major divisions.

Groups 1-4 as shown in the table include, respectively, the following types of composition :—

1. *Wood or Stone.* Wood blocks ; stone paved.
2. *Concrete.* Cement concrete ; asphaltic concrete ; bituminous concrete ; sheet asphalt on concrete base.
3. *Bituminous.* Tar or bituminous macadam ; tar and bituminous surface seal ; surfaced water-bound macadam or gravel ; bituminous or cement penetration.
4. *Macadam and Other.* Water-bound macadam ; granite, limestone, and blast-furnace slag, water-bound ; gravel water-bound ; gravel or crushed rock ; metallised (gravel or rubble) ; gravel, sand and hard loam pavements.

Groups 5 and 6 include roads so-called mainly because they are used for general traffic, irrespective of their surfaces, prepared or otherwise.

It will be noticed that some of the terms used above are practically synonymous. Such terms are, of course, not used by any one State, but are the classifications adopted by different States.

For details of any particular State, see the respective paragraphs in the preceding pages.

**ALL ROADS USED FOR GENERAL TRAFFIC : LENGTHS.**  
(Miles.)

Composition of Road.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Terr.	A.C.T.	Total.
	1951.	30th Sept., 1948.	30th June, 1951.	30th June, 1948.	1951. (a)	30th June, 1951.	31st Mar., 1952.	30th June, 1951.	
1. Wood or stone ..	..	62	..	8	..	..	..	..	70
2. Concrete ..	587	352	83	395	..	9	..	3	1,429
3. Bituminous ..	8,866	10,241	4,326	4,283	3,966	914	1,266	143	34,005
4. Macadam and other ..	37,144	28,418	9,430	13,429	13,745	8,559	145	121	110,991
5. Formed only ..	27,390	23,901	44,102	9,307	28,680	(b) 994	8,207	203	142,784
6. Cleared, or natural surface, only ..	52,637	38,437	73,895	25,220	30,317	(b) 1,793	1,092	..	223,391
<b>Total ..</b>	<b>126,624</b>	<b>101,411</b>	<b>131,836</b>	<b>52,642</b>	<b>76,708</b>	<b>12,269</b>	<b>10,710</b>	<b>470</b>	<b>512,670</b>

(a) Municipalities, 31st October and Road Districts, 30th June.

(b) Estimated dissection.

It will be seen from the foregoing table that a little more than one-quarter of the road lengths of Australia has actually been constructed, the remainder, for the greater part, being in little more than the natural state. The percentages for each group are as follows :—Group 1, 0.01 ; Group 2, 0.28 ; Group 3, 6.63 ; Group 4, 21.65 ; Group 5, 27.86 ; Group 6, 43.57. The percentage of constructed lengths to total length in each State is as follows :—New South Wales, 37 ; Victoria, 39 ; Queensland, 10 ; South Australia, 34 ; Western Australia, 23 ; Tasmania, 77 ; Northern Territory, 13 ; Australian Capital Territory, 57. Comparisons between the States should be made with caution, however, because, in addition to the defects enumerated at the beginning of this section, factors such as the area, physiography, density and distribution of population, nature of economic activity, other facilities for transport, etc., in each State must be taken into account.

9. *Summary of Expenditure on Roads and Bridges.*—(i) *General.* Figures showing the total expenditure on roads and bridges in all States are not available. Such totals are very difficult to obtain, not only because of the number of States, but also because of the number of authorities concerned. In most States there are three classes of authorities—the State Government, the central road authority, and the numerous local

government bodies. Both State Government and local government bodies operate through revenue and loan funds, and payments may be made by the State Government direct from either fund, or through the funds of other authorities. The expenditure of the central road authority may also be direct or indirect. Consequently the problem of duplication caused by inter-fund payments arises. On the other hand, some expenditure may be omitted because separate particulars are not available. Ignorance of the precise nature of items may cause either incorrect inclusion or omission. To produce accurate figures would entail more research than at present can be undertaken.

The two paragraphs following therefore represent only: (a) aggregate expenditure from the various State road funds referred to in the foregoing pages, and (b) loan fund expenditure by State Governments. No direct expenditure by local government bodies is included. Paragraph 2. Finances, of § 2, Local Government Authorities, contains some particulars of local government revenue and expenditure in connexion with roads, streets and bridges (see pages 563 and 566).

(ii) *Aggregate Expenditure from State Road Funds.* The following table shows the expenditure on the construction and maintenance of roads, including payments to local government bodies, by each State during the years 1938-39 and 1946-47 to 1950-51, as summarized from the foregoing sections. Expenditure on administration, debt charges, Commonwealth defence works, payments to State consolidated revenues, and on plant and materials is not included. In some instances expenditure on works other than roads and bridges is included. Figures are not completely comparable as between States, and, in some States, as from year to year.

**ROADS AND BRIDGES : AGGREGATE EXPENDITURE FROM ROAD FUNDS.**  
( £'000.)

Year ended 30th June—	N.S.W.(a) (b)	Victoria.(b)	Q'land.	S. Aust.	W. Aust.	Tasmania.	Total.
1939 ..	3,257	2,099	2,405	692	1,067	(c) 272	9,792
1947 ..	3,305	1,976	2,613	851	791	566	10,102
1948 ..	3,886	3,113	3,939	1,314	1,267	675	13,294
1949 ..	4,224	2,601	2,708	1,499	1,614	621	13,267
1950 ..	5,160	3,143	3,212	2,067	1,872	791	16,245
1951 ..	6,063	5,333	4,380	2,174	2,628	1,277	21,855

(a) Excludes Sydney Harbour Bridge.

(b) Excludes Swan Street Bridge.

(c) Year 1939-40.

The foregoing particulars do not represent the total expenditure on roads and bridges in each State. To obtain such information additions must be made on account of (a) State Government expenditure from revenue and loan through Departments or authorities other than the Central Road Authority and (b) local government expenditure from revenue and loan, while, on the other hand, allowances must be made for inter-fund payments (see (i) above.)

(iii) *State Net Loan Expenditure.* In recent years, expenditure from State loan funds on roads and bridges has not been large, and it would appear, also, that a considerable proportion passes through the funds of the central road authorities and is therefore included in the figures of their financial operations in the foregoing sections. Gross loan expenditure by all State Governments during 1950-51 amounted to about £2,000,000, and net expenditure to about £300,000 less. Aggregate net loan expenditure on roads and bridges in each State to 30th June, 1951 amounted to the following approximate sums:—New South Wales, £21,000,000; Victoria, £14,000,000; Queensland, £9,000,000; South Australia, £4,000,000; Western Australia, £3,000,000; Tasmania, £7,000,000; total, £58,000,000.

## § 5. Water Supply, Sewerage and Drainage.

NOTE.—See also Chapter XXVI.—Water Conservation and Irrigation.

1. New South Wales.—(i) *General.* The largest two domestic water supply and sewerage systems are controlled by statutory boards each consisting of a president and a vice-president appointed by the State Government and five members elected by local councils. These are (a) the Metropolitan Water, Sewerage and Drainage Board, which administers the systems in the County of Cumberland, i.e., in Sydney and in the surrounding districts, and, in addition, has jurisdiction over territory extending along the South Coast beyond Wollongong to Lake Illawarra, and (b) the Hunter District Water Board, serving the Newcastle area. At Broken Hill a similar board includes a representative of the mining companies. Other systems, apart from irrigation projects and water storage systems administered by the State Government, are controlled by county, municipal and shire councils.

(ii) *Water Supply—to 30th June, 1951.* (a) *Metropolitan.* The storage reservoirs of the metropolitan system, with a combined available capacity of 125,144 million gallons, drain catchment areas of 376 square miles (Upper Nepean, 347 square miles and Woronora, 29 square miles). Water is drawn also from the Warragamba River, with a catchment of 3,383 square miles. This system is being developed, and building has commenced on a dam to have an overall height of 415 feet (greatest depth of water 340 feet) having a storage capacity of 460,000 million gallons and giving a safe draught of 285 million gallons per day. The existing temporary storage is supplied by a weir 50 feet high with a maximum storage of 579 million gallons. At 30th June, 1951 there were 102 service reservoirs in use with a combined capacity of 542.8 million gallons. Rating for water for 1950–51 was 9½d. in the £1 of assessed annual value and the charge for water measured by meters 1s. 6d. per 1,000 gallons.

(b) *Newcastle.* The water supply is drawn from two sources (1) the Chichester Reservoir, with a storage capacity of about 5,000 million gallons and draining a catchment of 76 square miles, and (2) the Tomago Sandbeds, which extend northerly along the coast towards Port Stephens. Service reservoirs and tanks distributed throughout the Water Supply District have a total storage capacity of 106 million gallons. Water rating for 1950–51 was 1s. 3d. in the £1 on assessed annual value. The price of water to domestic and industrial consumers is 1s. 6d. per 1,000 gallons.

(c) *Water Supplied, etc.* The following tables show, for the Sydney and Newcastle systems, the number of properties, the estimated population supplied, and other details for the years 1938–39 and 1946–47 to 1950–51:—

## WATER SUPPLY, SYDNEY(a) : SERVICES.

Year.	Improved Properties for which Water Main available.	Estimated Population Supplied.	Average Daily Consumption.	Total Consumption for the Year.	Average Daily Consumption.		Length of Mains.	Number of Meters.
					Per Property.	Per Head of Estimated Population.		
	No.		Mill. gals.	Mill. gals.	Gallons.	Gallons.	Miles.	
1938–39 ..	350,161	1,466,000	106.3	38,790	304	72.5	4,539	126,754
1946–47 ..	387,980	1,718,000	131.2	47,874	338	77.1	4,743	160,169
1947–48 ..	400,615	1,774,000	122.1	44,682	305	69.6	4,817	170,124
1948–49 ..	414,893	1,800,000	131.3	47,925	316	73.5	4,894	182,566
1949–50 ..	428,392	1,870,000	130.8	47,735	305	72.1	4,992	196,121
1950–51 ..	442,913	1,940,000	138.9	50,689	314	71.6	5,114	208,712

(a) Includes part of South Coast.

## WATER SUPPLY, NEWCASTLE : SERVICES.

Year.	Pro- perties Supplied.	Esti- mated Popu- lation Supplied.	Average Daily Supply.	Total Supply for Year.	Average Daily Supply.		Length of Mains.
					Per Pro- perty.	Per Head of Esti- mated Popu- lation.	
	No.		Mill. gals.	Mill. gals.	Gallons.	Gallons.	Miles.
1938-39..	48,370	193,480	11.9	4,331	245	61.3	936
1946-47..	56,804	223,656	18.9	6,900	333	83.9	1,134
1947-48..	58,660	231,600	18.5	6,774	316	79.9	1,169
1948-49..	61,215	241,036	19.0	6,951	310	79.0	1,202
1949-50..	63,289	247,992	19.6	7,176	310	79.3	1,215
1950-51..	65,445	261,780	22.3	8,131	340	85.1	1,234

(iii) *Sewerage and Drainage*—to 30th June, 1951. (a) *Metropolitan*. The Sydney sewerage systems consists mainly of outfall systems discharging into the Pacific Ocean. At 30th June, 1951 there were six outfalls and six treatment works, serving a population of 1,380,000 over a length of sewers of 2,951 miles.

Stormwater drainage channels under the Metropolitan Water, Sewerage and Drainage Board's control at the same date were 173 miles long. Sewerage rating for 1950-51 was 9 $\frac{3}{4}$ d. in the £1 of assessed annual value and drainage from  $\frac{1}{4}$ d. to 3d.

(b) *Newcastle*. The main sewerage system of the Newcastle area discharges into the Pacific Ocean at Merewether Gulf. In some of the outlying districts treatment works have been installed.

Sewerage rates for 1950-51 were 1s. 3d. in the £1 of assessed annual value and drainage rates (on certain areas served) 2d. in the £1.

(c) *Particulars of Services*. The following table supplies, for the Sydney system, details of sewerage services and stormwater drains as at 30th June, 1939 and 1947 to 1951.

## SEWERAGE AND DRAINAGE, SYDNEY(a) : SERVICES.

At 30th June—	Improved Properties for which Sewer Available.	Estimated Population Served.	Total Sewage Pumped for the Year.	Length of Sewers.	Length of Storm- water Channels.
1939 .. .. .	254,632	1,066,000	8,299	2,561	87
1947 .. .. .	287,098	1,198,000	9,604	2,805	117
1948 .. .. .	291,069	1,263,000	9,894	2,829	129
1949 .. .. .	294,822	1,282,000	10,621	2,855	153
1950 .. .. .	298,996	1,306,000	(b) 12,200	2,899	154
1951 .. .. .	303,508	1,380,000	(b) 14,300	2,951	173

(a) Includes part of South Coast.

(b) Estimated.

At 30th June, 1951, 45,476 premises had been connected to the Hunter District Water Board's sewerage system (Newcastle area). The total length of sewers under the Board's control was 615 miles, and the length of drains over 24 inches diameter was 38 miles.

(iv) *Finances, Sydney and Newcastle Systems.* The following statement shows the debt, revenue and expenditure on account of the services of water supply, sewerage and drainage by the Metropolitan Water, Sewerage and Drainage Board and the Hunter District Water Board during 1950-51.

**WATER SUPPLY, SEWERAGE AND DRAINAGE, SYDNEY(a) AND NEWCASTLE : FINANCES, 1950-51.**

(£.)

Service.	Capital Debt.	Revenue.	Expenditure.				Surplus (+) or Deficit (-).
			Working Expenses. (b)	Interest and Exchange.	Sinking Fund and Loan Repayment.	Total.	
<b>Sydney(a)—</b>							
Water ..	42,540,485	3,397,828	1,673,497	1,416,383	306,377	3,396,257	+ 1,571
Sewerage ..	20,781,381	1,901,041	1,000,551	738,079	161,774	1,900,404	+ 637
Drainage ..	1,028,460	111,818	66,238	35,871	7,401	109,510	+ 2,308
<b>Total ..</b>	<b>64,350,326</b>	<b>5,410,687</b>	<b>2,740,286</b>	<b>2,190,333</b>	<b>475,552</b>	<b>5,406,171</b>	<b>+ 4,516</b>
<b>Newcastle—</b>							
Water ..	5,387,104	503,176	289,035	178,717	35,325	503,077	+ 99
Sewerage ..	2,600,815	245,817	142,989	91,977	16,015	250,981	+ 5,164
Drainage ..	151,593	16,797	10,215	5,181	1,139	16,535	+ 262
<b>Total ..</b>	<b>8,139,512</b>	<b>765,790</b>	<b>442,239</b>	<b>275,875</b>	<b>52,479</b>	<b>770,593</b>	<b>- 4,803</b>

(a) Includes part of South Coast. (b) Includes provision for renewals, long service leave, loss on exchange, etc. (c) Excludes non-interest bearing capital in respect of stormwater drains transferred from Public Works Department—£2,138,207 at 30th June, 1951.

The following table shows the total debt, revenue and expenditure on account of the combined services of water supply, sewerage and drainage by the Metropolitan Water, Sewerage and Drainage Board and the Hunter District Water Board for the years 1938-39 and 1946-47 to 1950-51.

**WATER SUPPLY, SEWERAGE AND DRAINAGE, SYDNEY AND NEWCASTLE : FINANCES.**

(£.)

Year.	Capital Debt.	Revenue.	Expenditure.				Surplus (+) or Deficit (-).
			Working Expenses.	Interest and Exchange.	Sinking Fund and Loan Repayment.	Total.	
<b>SYDNEY.</b>							
1938-39 ..	43,769,741	2,926,694	957,422	1,727,708	241,564	2,926,694	..
1946-47 ..	48,786,655	4,031,572	1,763,014	1,917,607	350,352	4,030,973	+ 599
1947-48 ..	51,185,095	4,198,786	1,847,321	1,962,324	375,936	4,185,581	+ 13,205
1948-49 ..	54,796,901	4,653,312	2,199,159	2,025,395	403,465	4,628,019	+ 25,293
1949-50 ..	59,918,417	5,051,876	2,488,623	2,092,890	435,660	5,017,173	+ 34,703
1950-51 ..	64,350,326	5,410,687	2,740,286	2,190,333	475,552	5,406,171	+ 4,516
<b>NEWCASTLE.</b>							
1938-39 ..	4,574,880	385,732	167,620	188,185	20,886	376,691	+ 9,041
1946-47 ..	7,038,765	548,190	236,132	266,124	41,840	544,096	+ 4,094
1947-48 ..	7,294,868	576,972	257,659	270,529	44,643	572,831	+ 4,141
1948-49 ..	7,529,877	648,869	325,657	277,879	47,811	651,347	+ 2,478
1949-50 ..	7,767,566	695,548	359,508	285,145	50,766	695,419	+ 129
1950-51 ..	8,139,512	765,790	442,239	275,875	52,479	770,593	- 4,803

NOTE.—See footnotes to previous table.

(v) *Country Water Supply and Sewerage Systems.* At 31st December, 1950, country water supply services were conducted or under construction by 67 municipalities, 55 shires and 6 county councils, and country sewerage services by 57 municipalities and 16 shires. The capital indebtedness of these schemes was £9,777,692 at 31st December, 1950, namely, £6,426,228 for water and £3,351,464 for sewerage. Of the foregoing amounts, Government advances amounted to £373,063. Debt of the municipalities amounted to £6,465,903, shires to £1,592,113 and county councils to £1,719,676. Aggregate income and expenditure, respectively, amounted to £1,385,415 and £1,145,501 in 1950.

(vi) *Other Water Supply and Sewerage Systems.* The water supply and sewerage services for Broken Hill are operated by a statutory board, the Broken Hill Water Board. Its capital indebtedness at 31st December, 1951 was £1,590,996. Income and expenditure, respectively, were £139,309 and £194,693 for 1951 and £117,977 and £134,482 for 1950.

The following country water supply systems—South-West Tablelands, Junee and Fish River—are administered by the Department of Public Works. These supply water in bulk to municipalities and shires, the Railways Department, and other large consumers; only a small quantity is sold directly to private consumers. The capital indebtedness of these systems was £2,475,506 at 31st December, 1951.

There are also the Mulwala Water Supply and Sewerage Service constructed as an urgent war-time work for the Commonwealth, and the Bethunga Water Supply System administered by the Department of Public Works in conjunction with the Junee supply.

2. *Victoria.*—(i) *Melbourne and Metropolitan Board of Works—to 30th June, 1951.*

(a) *General.* The metropolis, for water supply, sewerage and drainage and river improvement purposes, comprises all that land within a radius of 13 miles of the Post Office at the corner of Bourke and Elizabeth Streets, Melbourne, and the remaining portions of the Cities of Moorabbin, Mordialloc, and Nunawading and the shire of Mulgrave and certain portions of the remainder of the Shires of Eltham, Doncaster and Templestowe, and Dandenong, but excludes a portion of the Shire of Werribee within such radius. This territory has an area of 450 square miles and comprises 27 cities and one shire and parts of one other city and 9 other shires. The Board comprises 48 members, including the chairman, who is elected every four years by the other members. These members, or commissioners, are from time to time elected by the councils of the municipal districts wholly or partly within the metropolis. The principal functions of the Board are to control and manage the metropolitan water supply system; to provide the metropolis with an efficient system of main and general sewerage; to deal with main drains and main drainage works; and to control and manage the rivers, creeks and watercourses within the metropolis.

(b) *Water Supply.* There are five storage reservoirs serving the metropolitan area—Yan Yean, 7,234 million gallons (available for consumption, 6,605 million gallons); Toorourrong, 60 million gallons; Maroondah, 6,274 million gallons (4,855 million gallons); O'Shannassy, 930 million gallons; Silvan, 8,853 million gallons (8,823 million gallons); total 23,351 millions gallons (21,723 million gallons). Service reservoirs number 25, with a total capacity of 262 million gallons. Two new projects are under construction. One is a 23-mile conduit to carry water from the Upper Yarra catchment to the Silvan Reservoir and its estimated cost is £2,697,000. Up to 30th June, 1951, about 9 miles of the pipe-line had been laid. The other project, approved by the Board in 1946, consists of a dam, 280 feet high, which will impound 40,000 million gallons of water, on the River Yarra, immediately upstream from the confluence of the Yarra and Doctors Creek, and work on the project is proceeding. In 1951 it was estimated to cost £8,600,000.

The water rate levied by the Board in 1950-51 was 7d. in the £1 on the net annual value of the property served, and from 1st July, 1950, the charge for water supplied by measure in excess of the quantity which, at 1s. per 1,000 gallons, would produce an amount equal to the water rate payable on the property, was increased from 1s. to 1s. 3d. The following table shows particulars of Melbourne metropolitan water supply services for the years 1938-39 and 1946-47 to 1950-51.

## WATER SUPPLY, MELBOURNE : SERVICES.

Year.	Number of Houses Supplied.	Estimated Population Supplied.	Average Daily Consumption.	Total Consumption for the Year.	Average Daily Consumption.		Length of Aqueducts, etc., Mains and Reticulation.	Number of Meters.
					Per House.	Per Head of Estimated Population.		
1938-39	285,408	1,133,000	Mill. gals. 66.9	Mill. gals. 24,408	Gallons. 234	Gallons. 59.0	Miles. 3,234	189,617
1946-47	312,735	1,242,000	87.9	32,092	281	70.8	3,594	218,744
1947-48	320,798	1,275,000	91.9	33,651	287	72.1	3,691	220,992
1948-49	328,843	1,307,000	93.9	34,280	286	71.9	3,771	224,352
1949-50	342,742	1,363,000	91.7	33,458	267	67.3	3,875	229,238
1950-51	354,415	1,409,000	102.0	37,225	288	72.4	3,966	236,883

(c) *Sewerage and Drainage.* Particulars of sewerage and drainage services for 1938-39 and 1946-47 to 1950-51 are shown below. The rate levied in 1950-51 in respect of sewerage was 1s. in the £1 on the net annual value of the property served. The drainage rate was 1d. in the £1.

## SEWERAGE AND DRAINAGE, MELBOURNE : SERVICES.

Year.	Number of Houses for which Sewers are Provided.	Estimated Population for which Sewers are Provided.	Average Daily Pumping.	Total Sewage Pumped for the Year.	Average Daily Pumping.		Length of Sewers, etc.	Length of Main Drains.
					Per House.	Per Head of Estimated Population.		
1938-39	269,411	1,070,000	Mill. gals. 48.2	Mill. gals. 17,601	Gallons. 179.0	Gallons. 45.1	Miles. 2,586	Miles. 97
1946-47	294,343	1,169,000	59.1	21,570	200.8	50.6	2,773	117
1947-48	302,433	1,202,000	61.6	22,551	203.8	51.3	2,814	122
1948-49	308,772	1,228,000	62.5	22,801	202.4	50.9	2,844	125
1949-50	320,006	1,272,000	66.4	24,251	207.5	52.2	2,850	126
1950-51	321,548	1,278,000	67.1	24,491	208.7	52.5	2,927	128

The metropolitan sewerage system consists of the Main system (serving an area of 67,433 acres) and three subsidiary systems—the Sunshine system (serving an area of 941 acres in the Shire of Braybrook, including the township of Sunshine), the Kew system (serving an area of 103 acres in Kew) and the South-eastern system (serving an area of 2,292 acres in Cheltenham, Parkdale, Mentone and Mordialloc). The Metropolitan Sewage Farm, 26,057 acres in extent and situated about 24 miles south-west of Melbourne beyond the township of Werribee, serves to purify and dispose of approximately 95 per cent. of the sewerage flow of the metropolis before its discharge into Port Phillip Bay. The total capital cost (less depreciation) to 30th June, 1951 was £2,080,664. Revenue during 1950-51 amounted to £104,554, cost of sewage disposal £127,929, trading expenses £85,707, interest £75,196, and net cost of sewage purification £184,278. These financial particulars are included in the sewerage items of the summary below.

At 30th June, 1951, the Melbourne and Metropolitan Board of Works had 128 miles of main drains under its control—108 miles of underground, 11 miles of constructed open drains, and 8 miles of natural watercourses and unlined open drains.

(d) *Finances.* The following table provides a summary, for the year 1950-51, of the financial operations of the three services conducted by the Melbourne and Metropolitan Board of Works.



MELBOURNE AND METROPOLITAN BOARD OF WORKS: FINANCES, 1950-51.  
(£.)

Service, etc.	Capital Cost.(a)	Revenue.	Expenditure.				Surplus (+) or Deficit (-).
			Working Expenses.	Interest and Exchange.	Sinking Fund.	Total.	
Water ..	18,692,975	1,580,933	746,608	668,088	..	1,414,696	+ 166,237
Sewerage ..	18,192,997	1,575,752	714,314	681,839	..	1,396,153	+ 179,599
Drainage ..	2,358,058	121,956	37,344	63,269	..	100,613	+ 21,343
General(b)	..	..	284,090	9,000	81,607	374,697	- 374,697
<b>Total ..</b>	<b>39,244,030</b>	<b>3,278,641</b>	<b>1,782,356</b>	<b>1,422,196</b>	<b>81,607</b>	<b>3,286,159</b>	<b>- 7,518</b>

(a) Includes depreciation, £408,031. Total loan indebtedness, £32,642,985. (b) Statutory and general expenditure not distributed over Services.

The following table shows the financial operations of the Melbourne and Metropolitan Board of Works (all services combined) for the years 1938-39 and 1946-47 to 1950-51:—

MELBOURNE AND METROPOLITAN BOARD OF WORKS: FINANCES.

(£.)

Year.	Capital Cost.	Revenue.	Expenditure.				Surplus(+) or Deficit(-).
			Working Expenses.	Interest and Exchange.	Sinking Fund.	Total.	
1938-39 ..	27,598,603	2,214,295	762,558	1,316,603	64,269	2,143,430	+ 70,865
1946-47 ..	31,443,217	2,389,947	1,230,293	1,236,099	65,090	2,531,482	- 141,535
1947-48 ..	32,749,852	2,521,366	1,253,728	1,239,372	67,340	2,560,440	- 39,074
1948-49 ..	34,312,587	2,713,926	1,432,727	1,268,743	69,840	2,771,310	- 57,384
1949-50 ..	36,453,892	2,924,329	1,616,903	1,324,342	73,785	3,015,030	- 90,701
1950-51 ..	39,244,030	3,278,641	1,782,356	1,422,196	81,607	3,286,159	- 7,518

(ii) *Geelong Waterworks and Sewerage Trust.* (a) *General.* The Geelong Waterworks and Sewerage Trust was constituted in 1908 and reconstituted under the Geelong Waterworks and Sewerage Act in 1910. It was further reconstituted in September, 1950 to include a Government nominee (Chairman) and provision was made for a commissioner to be elected by the ratepayers of the Shire of Corio, making a total of seven commissioners instead of five as formerly. The amount of loan money which may be raised is limited to £900,000 for water supply undertaking, £760,000 for sewerage undertaking, and £270,000 for sewerage installation to properties under the deferred payment system. The population supplied is estimated by the Trust at 60,400. This and other general information relates to 30th June, 1951.

(b) *Water Supply.* The catchment area is about 16,900 acres. There are five storage reservoirs and nine service basins whose total storage capacity is 2,746 million gallons. In addition, the State Rivers and Water Supply Commission has made available a supplementary supply of a minimum quantity of 545 million gallons of water per annum from the Bellarine Peninsula System. The total expenditure on water supply to 30th June, 1951 was £888,167. Expenditure for 1950-51 comprised £46,762 on working expenses and £45,508 on interest, sinking fund and reserves, and the revenue for the year 1950-51 was £93,227. The sinking fund appropriations at June, 1951 amounted to £122,727. The replacement and contingencies reserve amounted to £183,354. There is a water rate of 1s. 4d. in the £1 (with minima of 5s. for unbuilt-on land and £1 for tenements) on the net annual value of ratable properties.

(c) *Sewerage Works.* The sewerage scheme consists of a main outfall sewer to the ocean at Black Rock, about 9 miles from Geelong, and 152 miles of main and reticulation sewers. The sewerage area is 9,638 acres, and the number of buildings within the

sewered areas is 14,060 of which 14,058 have been connected. The number of buildings within the drainage area is 14,998. The total expenditure to 30th June, 1951 on sewerage works was £674,242, and on the cost of sewerage installation under deferred payment conditions £258,344, of which £515 was outstanding. The revenue in 1950-51 amounted to £59,926 and the expenditure comprised £22,013 on working expenses and £36,632 on interest, sinking fund and reserves. Sinking fund appropriations at June, 1951 were £108,507. Replacement and contingencies reserve amounted to £155,964. A general rate of 1s. 3d. in the £1 is levied on the net annual value of ratable properties.

(iii) *The Ballarat Water Commission and the Ballarat Sewerage Authority.* (a) *General.* The Ballarat Water Commission was constituted on 1st July, 1880, and the Ballarat Sewerage Authority on 30th November, 1920. The members of the Water Commission constitute the Sewerage Authority. The Commissioners number seven, three (one of whom is chairman) being appointed by the Government, and four being elected by the Council of the City of Ballarat. General and financial information relates to the year ended 31st December, 1951.

(b) *Water Supply.* The Water Supply District embraces an area of about 65 square miles, containing a population of about 50,000. The total storage capacity of the six reservoirs is 2,332 million gallons and the catchment area is 17,545 acres.

The capital cost of construction of the waterworks was £2,034,695 to 31st December, 1951. The liabilities are loans due to the Government, amounting to £1,078,920 at 31st December, 1951. The revenue for the year 1951 was £79,737. Working expenses during 1951 amounted to £32,021 and interest and other charges to £47,038. A rate of 1s. 3d. in the £1 is levied on the net annual value of all ratable properties, with a minimum of 15s. per annum for land on which there is a building or water supply.

(c) *Sewerage.* The Ballarat sewerage district embraces the City of Ballarat and part of the Shire of Ballarat. Work was commenced in 1922 and up to 31st December, 1951 the Authority had constructed a disposals works, an ejector station and more than 100 miles of sewers. The capital cost of sewerage construction works to 31st December, 1951 was £571,204. The method of sewerage disposal is by sedimentation, oxidation and sludge digestion. One hundred and twenty-two seweraged areas had been declared as at 31st December, 1951. Assessments in the sewerage district numbered 14,206, while those in seweraged areas numbered 11,333. There were 9,741 buildings connected.

The scheme is financed by debenture-issue loans from various financial institutions. The liabilities on account of loans secured for construction at 31st December, 1951 amounted to £457,526, redemption payments at that date totalling £169,963. An expenditure of £157,122 was incurred for house connexions, the whole of which has been redeemed. Revenue during 1951 amounted to £48,829 and expenditure, including £27,288 on interest and redemption, to £47,702.

A general rate of 1s. 5d. in the £1 is levied on the net annual value of all properties within the drainage area.

(iv) *Sewerage Authorities.* At 30th June, 1951, 57 sewerage authorities had been constituted under the provisions of the Sewerage Districts Acts in districts outside the areas under the control of the Melbourne and Metropolitan Board of Works and the Geelong Waterworks and Sewerage Trust, and systems were in operation in 28 districts (including three partly operating) serving a population of 182,400 persons.

In addition, sewerage authorities were constituted in a further 29 districts at this date, but their operations had either been suspended or had not commenced.

(v) *Water Supply in Country Towns and Districts.* Most of the country waterworks are controlled by the State Rivers and Water Supply Commission, but in some instances the control is by waterworks trusts or by municipal corporations.

The waterworks controlled by the State Rivers and Water Supply Commission at 30th June, 1951 included 35 large reservoirs and 238 subsidiary reservoirs and service basins with a total storage capacity of 537,906 million gallons (1,975,780 acre feet). Length of channels was 15,305 miles (irrigation, 4,708 miles, domestic and stock, 8,514 miles, drainage and flood protection, 2,083 miles) and of pipe lines 1,180 miles. The quantity of water delivered to water users during 1950-51 was 684,887 acre feet. The Commission administered 68 rural districts during 1950-51 (28 irrigation districts, 35 waterworks districts, 4 flood protection districts and 1 drainage district), and the reticulated pipe supplies for domestic and industrial purposes in 130 urban districts. In addition, 121 urban districts were administered by waterworks trusts and 15 by local governing bodies. The population served in these groups of urban districts numbered, respectively, 152,320, 248,530 and 85,450 persons. The table below is a summary of the Commission's finances for operations in districts under its control for the years 1938-39 and 1946-47 to 1950-51 :-

STATE RIVERS AND WATER SUPPLY COMMISSION, VICTORIA : FINANCES.(a)  
(£.)

Year.	Total Loan Capital Expenditure to 30th June.	Receipts.	Payments.				Total.
			Operating Expenses.	Interest on Capital Allotted.	Depreciation.	Redemption.	
1938-39 ..	24,223,037	560,680	476,085	145,105	27,553	4,922	653,665
1946-47 ..	27,632,136	919,347	1,084,841	39,961	118,701	1,678	1,245,181
1947-48 ..	29,228,673	1,050,528	1,199,552	39,836	55,303	1,660	1,296,351
1948-49 ..	31,226,345	1,186,313	1,319,291	39,208	60,553	1,089	1,421,041
1949-50 ..	35,941,827	1,433,561	1,519,659	38,117	66,441	3,055	1,627,272
1950-51 ..	41,318,382	1,592,333	1,810,264	37,950	97,425	1,383	1,947,022

(a) Excludes Waterworks and River Improvements Trusts and Local Governing Bodies.

The total loan capital expenditure of waterworks and river improvements trusts and local governing bodies at 30th June, 1951 was £6,496,772, making a grand total of £47,815,154 when added to the figure for works under the control of the Commission. The net loan capital after redemption payments of £1,686,552 was £46,128,602.

The financial operations of the State Rivers and Water Supply Commission form part of Consolidated Revenue Fund; but are included in this section for convenience. The major proportion of the interest payable is borne by the State and is additional to that shown above. The net expenditure borne by the State during 1950-51 was £1,641,456.

3. Queensland.—(i) *Brisbane City Council—to 30th June, 1951.* (a) *General.* This organization conducts the water supply and sewerage systems of the City of Greater Brisbane. Prior to 1928, water and sewerage activities had been controlled by the Metropolitan Water and Sewerage Board, but were then absorbed by the Brisbane City Council, which also supplies, in bulk, the whole of the water used by the City of Ipswich and the Town of Redcliffe.

(b) *Water Supply.* Water storage facilities comprise the following (available capacities are shown in parentheses):—Somerset Reservoir, 32,000 million gallons (32,000 million gallons); Lake Manchester, 5,806 million gallons (5,725 million gallons); Brisbane River, 543 million gallons (484 million gallons); Pure Water Reservoir, Holt's Hill, 8.3 million gallons (8.3 million gallons); Enoggera Reservoir, 1,000 million gallons (631 million gallons); Gold Creek Reservoir, 407 million gallons (400 million gallons). There are eleven service reservoirs with a capacity of approximately 35.9 million gallons. The Somerset reservoir is under the control of Stanley River Works Board and is a

dual purpose project with a designed total holding capacity of 200,000 million gallons, 55,000 million gallons to be for water storage and 145,000 million gallons for flood mitigation. Water rating at 30th June, 1951 was 5d. in the £1 of unimproved capital value for improved properties, and 3d. in the £1 for vacant lands, with a minimum of £3 10s. and £2 6s. 8d. respectively. The following table is a summary of operations of the complete Brisbane City Council system (metropolitan area, Ipswich and Redcliffe) for the years 1938-39 and 1946-47 to 1950-51 :—

## WATER SUPPLY, BRISBANE(a) : SERVICES.

Year.	Services Connected.	Estimated Population Supplied.	Average Daily Consumption.	Total Consumption for the Year.	Average Daily Consumption.		Length of Trunk and Reticulation Mains.	Number of Meters.
					Per Service.	Per Head of Estimated Population.		
1938-39 ..	No. 81,389	345,903	Mill. gals. 15.9	Mill. gals. 5,791	Gallons. 195	Gallons. 45.9	Miles. 1,169	(b)
1946-47 ..	98,803	405,093	22.8	8,317	231	56.3	1,299	52,645
1947-48 ..	103,846	425,769	22.9	8,365	220	53.7	1,330	52,699
1948-49 ..	108,671	445,551	24.2	8,326	223	54.3	1,344	52,755
1949-50 ..	111,363	445,897	26.1	9,540	235	58.6	1,376	52,807
1950-51 ..	117,904	472,145	27.9	10,193	237	60.8	1,429	52,691

(a) Includes Ipswich and Redcliffe.

(b) Not available.

(c) *Sewerage.* The sewage treatment works are situated at Luggage Point on the north bank at the entrance to the Brisbane River. The treatment plan is the activated sludge system, but this has not been put into operation, and since the commencement of pumping operations in 1923 a sedimentation plant only has been used. Sewerage rating at 30th June, 1951 was 4½d. in the £1 of unimproved capital value for improved properties, and 3½d. in the £1 for vacant lands, with a minimum of £3 15s. and £3 5s. respectively. The following table is a summary of operations of the Brisbane sewerage scheme for the years 1938-39 and 1946-47 to 1950-51 :—

## SEWERAGE, BRISBANE : SERVICES.

Year.	Premises Connected.	Estimated Population Served.	Total Sewage Pumped for the Year.	Length of Main, Branch, Reticulation, etc., Sewers.
1938-39 ..	No. 33,248	149,616	Mill. gals. (a)	Miles. 484
1946-47 ..	42,246	173,209	4,539	549
1947-48 ..	43,485	178,289	4,696	567
1948-49 ..	44,901	184,094	4,697	580
1949-50 ..	46,330	189,953	4,967	590
1950-51 ..	47,808	196,013	5,351	608

(a) Not available.

(d) *Finances.* The following table shows particulars of the finances of the water supply and sewerage undertakings of the Brisbane City Council for the years 1938-39 and 1946-47 to 1950-51:—

## WATER SUPPLY AND SEWERAGE, BRISBANE: FINANCES.

(£.)

Service and Year.	Gross Capital Cost.	Revenue.	Expenditure.			Surplus(+) or Deficit(-).
			Working Expenses.	Interest Redemption, etc. Charges.	Total.	
<i>Water Supply—</i>						
1938-39 .. ..	4,849,732	606,244	129,219	280,827	422,366	+ 183,878
1946-47 .. ..	6,906,676	744,989	225,343	315,595	596,948	+ 148,041
1947-48 .. ..	7,156,116	765,936	255,430	335,307	633,982	+ 131,954
1948-49 .. ..	7,356,335	815,673	307,130	338,963	703,092	+ 112,581
1949-50 .. ..	7,579,798	866,366	353,805	276,796	700,237	+ 166,129
1950-51 .. ..	8,116,654	926,954	383,700	333,210	805,903	+ 121,051
<i>Sewerage—</i>						
1938-39 .. ..	5,992,936	240,963	52,792	493,386	485,974	- 245,011
1946-47 .. ..	6,763,448	234,032	57,600	224,194	312,152	- 78,120
1947-48 .. ..	7,048,086	254,777	63,998	246,983	343,259	- 88,482
1948-49 .. ..	7,526,302	285,194	76,098	248,341	346,120	- 60,926
1949-50 .. ..	8,117,835	412,833	87,100	264,972	379,299	+ 33,534
1950-51 .. ..	8,821,671	483,854	105,928	313,308	472,725	+ 11,129

(ii) *Country Towns.* (a) *Water Supply.* In addition to the City of Brisbane there were, at 30th June, 1951, 97 cities and towns in Queensland provided with water supply systems controlled by municipal and shire councils.

(b) *Sewerage Systems.* At 30th June, 1951, there were 13 cities and towns outside the metropolitan area—Bundaberg, Charleville, Cunnamulla, Goondiwindi, Hughenden, Ipswich, Mackay, Maryborough, Quilpie, Rockhampton, Toowoomba, Townsville and Warwick—with sewerage systems. A sewerage system was in course of construction in Mt. Isa.

(c) *Finances.* The receipts (other than loan) of water undertakings controlled by the cities and towns referred to above amounted to £731,289 in 1950-51. Expenditure amounted to £761,289, including £246,073 for debt charges. In addition, loan expenditure amounted to £488,702.

Finances of sewerage undertakings are incorporated in council general funds and are not available separately.

4. *South Australia.*—(i) *General.* The water supply and sewerage systems in this State were constructed and are maintained by the Engineering and Water Supply Department under the control of the Minister of Works. The works controlled comprise the Adelaide, Barossa, Baroota Creek, Beetaloo, Bundaleer, Tod River, Warren and other country water districts systems, the Morgan-Whyalla water supply system, the Adelaide metropolitan sewerage system, the Murray River Weirs, water conservation, and the Metropolitan Flood Waters Scheme.

(ii) *South Australian Waterworks. (a) Services.* The table hereunder shows particulars of the area, capacity, etc. of combined metropolitan and country waterworks for the years 1938-39 and 1946-47 to 1950-51 :—

**WATERWORKS, SOUTH AUSTRALIA : SERVICES.**

Year.	Assessments.(a)		Area of Districts Supplied. (a)	Capacity of Reservoirs, Tanks, etc.	Length of Mains.	Number of Meters.
	Number.	Annual Value.				
1938-39 ..	185,625	£ 6,302,445	Acres. 11,857,968	Mill. gals. 23,814	Miles. 6,384	97,074
1946-47 ..	198,952	7,190,146	11,932,461	23,920	6,927	103,514
1947-48 ..	203,422	7,405,970	11,953,022	23,927	6,997	104,726
1948-49 ..	206,904	7,694,428	11,953,235	23,941	7,056	104,649
1949-50 ..	210,808	8,113,905	11,956,885	23,942	7,125	107,092
1950-51 ..	216,989	8,556,078	11,968,452	23,943	7,203	109,433

(a) Excludes Morgan-Whyalla Water Supply—water sold by measure.

(b) *Finances.* Figures for 1938-39 and 1946-47 to 1950-51 are shown in the following table.

**WATERWORKS, SOUTH AUSTRALIA : FINANCES.**

(£.)

Year.	Invested Capital.	Revenue.	Expenditure.			Surplus (+) or Deficit (-).
			Working Expenses.	Interest and Sinking Fund.	Total.	
1938-39 ..	14,649,052	654,688	242,528	651,972	894,500	— 239,812
1946-47 ..	19,577,522	856,733	542,203	676,604	1,218,807	— 362,074
1947-48 ..	20,229,154	935,693	588,703	680,550	1,269,253	— 333,560
1948-49 ..	20,399,213	978,339	670,447	695,547	1,365,994	— 387,655
1949-50 ..	21,247,004	1,016,078	817,696	705,700	1,523,396	— 507,318
1950-51 ..	22,602,531	1,098,360	1,068,102	720,250	1,788,352	— 689,992

(iii) *Adelaide Waterworks.* At 30th June, 1951 the Adelaide waterworks supplied a district of 144,402 acres. The capacity of its five reservoirs was 14,466 million gallons and there were 1,682 miles of mains.

Two major projects are in hand—(i) the construction of a large reservoir on the South Para River to provide additional storage to serve the lower northern areas of the State and to make some additional provision for the metropolitan area, and (ii) bringing River Murray water into Adelaide to supplement the metropolitan and Warren system areas and to serve country areas en route. The capacity of the new reservoir will be about 10,000 million gallons and the pipeline from the Murray near Mannum will deliver about 12,000 million gallons per annum.

Particulars of finances for the years 1938-39 and 1946-47 to 1950-51 are shown below :—

**ADELAIDE WATERWORKS : FINANCES.**

(£.)

Year.	Invested Capital.	Revenue.	Expenditure.			Surplus (+) or Deficit (-).
			Working Expenses.	Interest and Sinking Fund.	Total.	
1938-39 ..	4,676,110	446,459	111,347	202,279	313,626	+ 132,833
1946-47 ..	6,018,680	521,962	209,107	200,105	409,212	+ 112,750
1947-48 ..	6,253,146	574,687	211,450	203,510	414,960	+ 159,727
1948-49 ..	6,248,465	607,718	246,951	210,898	457,849	+ 149,869
1949-50 ..	6,665,805	630,765	310,382	218,737	529,119	+ 101,646
1950-51 ..	7,814,093	680,275	400,600	230,821	631,421	+ 48,854

(iv) *Adelaide Metropolitan Sewerage.* The Adelaide metropolitan sewerage system, comprising the Adelaide, Glenelg and Port Adelaide areas, with drainage areas of 94 square miles in all, includes a sewage farm, and treatment works at Glenelg and Port Adelaide. The total quantity of sewage pumped by the various stations was 3,272 million gallons during 1950-51 as compared with 2,713 million gallons during 1949-50. Other particulars for 1938-39 and 1946-47 to 1950-51 are shown hereunder :—

**ADELAIDE METROPOLITAN SEWERAGE : SUMMARY.**

Year.	Length of Sewers.	Number of Con-nexions.	Invested Capital.	Revenue.	Expenditure.			Surplus (+) or Deficit (-).
					Working Expenses.	Interest and Sinking Fund.	Total.	
	Miles.		£	£	£	£	£	£
1938-39 ..	923	80,745	3,361,034	268,880	77,023	150,273	227,296	+ 41,584
1946-47 ..	1,008	93,440	4,034,770	307,215	135,868	144,702	280,570	+ 26,645
1947-48 ..	1,025	96,057	4,176,725	319,078	159,509	145,732	305,241	+ 13,837
1948-49 ..	1,048	98,948	4,324,787	333,572	182,874	148,754	331,628	+ 1,944
1949-50 ..	1,092	102,782	4,629,510	352,631	209,410	154,959	364,369	- 11,738
1950-51 ..	1,133	107,634	4,855,351	371,835	255,009	160,253	415,262	- 43,427

(v) *Country Water Supply.* Water district systems outside Adelaide at 30th June, 1951 comprised an area of 11,812,939 acres, and the capacity of the reservoirs was 9,433 million gallons. These figures exclude the Morgan-Whyalla supply system, which obtains its water from the River Murray. The storage tanks of this system had a capacity of 44 million gallons.

Construction work is proceeding on the scheme for the augmentation of the Tod River District supplies, and for the supply of other areas not already served, by utilizing water from the Uley-Wanilla sub-artesian basin. During 1950-51, 347 million gallons were pumped from the basin, meeting all the needs of Port Lincoln and augmenting the reservoir. At 30th June, 1951, £4,153,260 had been invested in the Tod River District.

At the request of the Commonwealth, the Engineering and Water Supply Department undertook the construction above ground of a 10-in. pipeline, together with service reservoirs, pumping stations, etc., from Port Augusta to the Guided Missile Range at Woomera, a distance of about 110 miles. This project was completed in June, 1949.

To bring a permanent supply of water to the Yorke Peninsula, contracts were let for 76 miles of steel pipes for the enlargement of the main between the Bundaleer and Clinton Reservoirs, but shortage of steel plate has delayed progress.

The following table gives financial information on country waterworks for 1938-39 and 1946-47 to 1950-51 :—

**COUNTRY WATERWORKS, SOUTH AUSTRALIA : FINANCES.(a)**  
(£.)

Year.	Invested Capital.	Revenue.	Expenditure.			Surplus (+) or Deficit (-).
			Working Expenses.	Interest.	Total.	
1938-39 ..	10,015,613	207,569	130,523	449,691	580,214	— 372,645
1946-47 ..	11,231,493	244,495	307,379	394,392	701,771	— 457,276
1947-48 ..	11,643,730	270,738	337,557	395,246	732,803	— 462,065
1948-49 ..	11,616,857	286,646	395,717	402,809	798,526	— 511,880
1949-50 ..	12,056,803	298,256	508,759	405,355	914,114	— 615,858
1950-51 ..	12,289,918	319,396	647,994	407,810	1,055,804	— 736,408

(a) Excludes Morgan-Whyalla system.

(vi) *Morgan-Whyalla Water Supply Scheme.* This scheme, which involved the laying of 223 miles of main, was officially opened on 31st March, 1944, the capital invested to 30th June, 1951 being £2,498,520. Particulars of this scheme, where applicable, are included in the tables of the combined waterworks in (ii) above. During 1950-51 the water used from the system between Hanson and Whyalla amounted to 1,480 million gallons. Revenue for the year 1950-51 was £228,958, working expenses, etc. £149,777, interest charges, £81,619 and deficit, £2,438.

5. **Western Australia.**—(i) *General.* The water supply and sewerage systems of Western Australia are principally under the management of Government Departments, and are divided into the following categories :—(a) Metropolitan Water Supply, Sewerage and Drainage, covering Perth, Fremantle, Claremont, Guildford, Midland Junction and Armadale District ; (b) Country Areas (previously Goldfields) Water Supply ; (c) Water Supply of other towns, etc. ; (d) Agricultural Water Supply, and (e) Artesian and sub-artesian waters.

(ii) *Metropolitan Water Supply, Sewerage and Drainage.* (a) *General.* The sources of the metropolitan water supply are the Canning Dam, Churchman's Brook, Wongong Brook, Victoria Reservoir, Armadale Pipe Head Dam and Well, and certain bores. The largest reservoir, the Canning Dam, has a capacity of 20,550 million gallons, about 5,000 million gallons more than that of the recently increased Mundaring Reservoir to which it is linked by a pipeline.

The sewage treatment works of Perth and suburbs consist of primary sedimentation with separate sludge digestion and discharge of all effluent direct to the ocean. Fremantle treatment works consist of septic tanks with ocean outfall for effluent. There are three treatment works, situated at West Subiaco, Swanbourne and Fremantle.

(b) *Water Supply.* The following table shows particulars of water supply services for 1938-39 and 1946-47 to 1950-51 :—

**METROPOLITAN WATER SUPPLY, WESTERN AUSTRALIA : SERVICES.**

Year.	Number of Services.	Estimated Population Supplied.	Average Daily Consumption.	Total Consumption for Year.	Average Daily Consumption.		Length of Mains.	Number of Meters.
					Per Service.	Per Head of Estimated Population.		
			Mill. gals.	Mill. gals.	Gallons.	Gallons.	Miles.	
1938-39 ..	61,467	248,248	14.1	5,147	229	56.8	953	40,014
1946-47 ..	70,970	279,000	24.7	9,022	348	88.6	1,107	42,968
1947-48 ..	73,601	284,915	26.9	9,838	365	94.4	1,137	44,795
1948-49 ..	76,562	290,962	27.2	9,918	355	93.5	1,173	47,073
1949-50 ..	79,835	297,123	29.1	10,618	364	97.9	1,224	49,370
1950-51 ..	84,926	303,422	28.4	10,354	334	93.5	1,271	52,277



Water rating for 1950-51 was 1s. 6d. in the £1 on annual valuation, with a minimum of 10s.

(c) *Sewerage and Drainage.* Some particulars of the metropolitan sewerage and drainage services for 1938-39 and 1946-47 to 1950-51 are shown below :—

**METROPOLITAN SEWERAGE AND DRAINAGE, WESTERN AUSTRALIA : SERVICES.**

Year.	Houses Connected.	Estimated Population Served.	Sewage Pumped for the Year. (a)	Length of Sewers.	Length of Stormwater Drains.
			Mill. gals.	Miles.	Miles.
1938-39 .. .. .	36,652	162,457	1,030	444	31
1946-47 .. .. .	44,638	(b)	2,160	537	33
1947-48 .. .. .	45,977	193,103	2,263	550	34
1948-49 .. .. .	47,446	199,273	2,273	569	34
1949-50 .. .. .	48,909	205,418	2,326	588	34
1950-51 .. .. .	50,480	212,016	3,809	605	34

(a) Aggregate of quantities pumped by the various stations. (b) Not available.

Sewerage rating for 1950-51 was 1s. 6d. in the £1 on annual valuation, with a minimum of 7s. 6d. Stormwater drainage rating was 5d. with a minimum of 2s. 6d.

(d) *Finances.* The following table shows particulars of the finances of the Western Australian Metropolitan Water Supply, Sewerage and Drainage Department for the years 1938-39 and 1946-47 to 1950-51 :—

**METROPOLITAN WATER SUPPLY AND SEWERAGE AND DRAINAGE, WESTERN AUSTRALIA : FINANCES.**

(£.)

Service and Year.	Capital Cost.	Revenue.	Expenditure.			Surplus (+) or Deficit (-).
			Working Expenses.	Interest and Sinking Fund.	Total.	
<b>Water Supply—</b>						
1938-39 .. .. .	4,898,167	285,313	50,975	228,527	279,502	+ 5,811
1946-47 .. .. .	5,516,603	372,168	110,572	236,432	347,004	+ 25,164
1947-48 .. .. .	5,669,761	392,761	117,930	243,613	361,543	+ 31,218
1948-49 .. .. .	5,899,578	416,817	136,499	253,244	389,743	+ 27,074
1949-50 .. .. .	6,200,989	452,956	186,219	224,958	411,177	+ 41,779
1950-51 .. .. .	6,771,509	488,396	228,442	243,807	472,249	+ 16,147
<b>Sewerage and Drainage—</b>						
1938-39 .. .. .	3,497,938	174,950	30,630	149,714	180,344	- 5,394
1946-47 .. .. .	3,992,651	219,359	47,401	190,472	237,873	- 18,514
1947-48 .. .. .	4,148,784	223,090	51,119	196,965	248,084	- 24,994
1948-49 .. .. .	4,359,547	259,597	59,182	206,264	265,446	- 5,849
1949-50 .. .. .	4,567,278	274,113	84,988	196,234	281,222	- 7,109
1950-51 .. .. .	4,884,224	288,598	119,125	206,701	325,826	- 37,228

(iii) *Country Areas Water Supply (Previously Goldfields Water Supply).* The source of supply for Kalgoorlie, Coolgardie and adjacent goldfields, as well as for the towns and districts on or near the pipeline, is the Mundaring Reservoir, whose capacity has recently been increased from 4,650 million gallons to 15,100 million gallons. This scheme is now linked by pipeline with the Canning Dam.

Work is proceeding for a comprehensively reticulated water scheme at an estimated cost of approximately £4,000,000 to serve an area of about 4,000,000 acres of farm lands and some 23 agricultural towns, including the principal towns on the Great Southern

Railway. The supply to the Eastern Goldfields will be increased to permit expansion of the gold-mining industry, the increased capacity of the Mundaring Reservoir (*see above*) being part of this scheme. It is also planned to increase the storage capacity of the Wellington Dam to 38,000 million gallons. Financing of the scheme is being shared by the Commonwealth and the State Governments on a £1 for £1 basis. Expenditure on this work to 30th June, 1951 totalled £755,518.

The following table shows details of the Country Areas Water Supply for 1938-39 and 1946-47 to 1950-51 :—

**COUNTRY AREAS WATER SUPPLY(a), WESTERN AUSTRALIA : SUMMARY.**

Year.	Number of Services.	Total Con-	Length of	Number of Meters.	Capital Cost.	Revenue.	Expenditure. (b)	Surplus (+) or Deficit(-).
		sumption.	Water Mains.					
		Mill. gals.	Miles.		£	£	£	£
1938-39 ..	13,670	1,735	1,720	10,872	5,527,890	331,457	298,531	+ 32,926
1946-47 ..	15,130	1,975	1,757	13,163	6,283,631	343,500	396,964	- 53,464
1947-48 ..	15,411	2,028	1,768	13,423	6,425,775	338,892	480,571	- 141,679
1948-49 ..	15,669	2,131	1,773	13,639	6,614,390	341,052	533,851	- 192,799
1949-50 ..	16,063	2,208	1,777	13,991	6,803,271	346,660	566,614	- 219,954
1950-51 ..	16,229	2,162	1,793	14,180	7,331,691	359,468	673,316	- 313,850

(a) Previously Goldfields Water Supply.

(b) Includes interest and sinking fund.

(iv) *Water Supply of Other Towns, etc.* (a) *Controlled by Public Works Department.* During 1950-51 water supplied to other towns and districts, excluding minor water supplies, amounted to 689 million gallons, including service to adjacent mines, 18 million gallons, and railways 64 million gallons. Estimated population served numbered 43,809.

(b) *Controlled by Commonwealth and State Government Railways.* Consumption for the year ended 30th June, 1951 was 292 million gallons. In addition, 470 million gallons were obtained from other sources, mainly the Country Areas Water Supply and the Metropolitan Water Supply.

(c) *Water Boards not Controlled by Government.* During 1950-51 approximately 379 million gallons of water were supplied to an estimated population of 17,770.

(v) *Agricultural Water Supply.* During the forty-one years from 1st July, 1910 to 30th June, 1951, 576 tanks were built, 387 wells sunk, and 3,944 bores put down to a total depth of 212,332 feet. Of the bores put down, 648 yielded fresh, and 383 stock water.

(vi) *Artesian and Sub-artesian Waters.* Up to 30th June, 1951 the total number of bores put down in search of artesian or sub-artesian water and in which water was struck (inclusive of operations by Defence Services) was 454, ranging in depth from 21 to 4,006 feet.

6. **Tasmania.**—(i) *Waterworks.* At the end of 1950-51 there were 36 municipal waterworks in Tasmania. The capacity of the reservoirs was 884 million gallons, the estimated population served was 194,428, the number of properties assessed was 61,305, and the length of aqueducts, mains and reticulation was about 1,110 miles. Costs of construction amounted to £2,131,310. The largest of these undertakings is Hobart, with a reservoir capacity at the end of 1950-51 of 578 million gallons, and 157 miles of reticulation and 92 miles of aqueduct and main.

(ii) *Sewerage.* Sewerage in Tasmania also is the concern of local authorities.

### § 6. Harbour Boards and Trusts.

NOTE.—The number and net tonnage of all vessels which entered the major ports in each State during the years 1938-39 and 1947-48 to 1950-51 are shown in Chapter V.—Transport and Communication, A. §3. Shipping at Principal Ports. Particulars of oversea and interstate cargo discharged and shipped during 1950-51 are shown in A. § 6 of the same chapter.

1. **New South Wales.**—(i) *Maritime Services Board of New South Wales.* (a) *General.* The Maritime Services Board of New South Wales is a corporate body of five Commissioners, three of whom are full-time members and two, representing shipping and

commercial interests, part-time members. The Board was brought into existence on 1st February, 1936 by the Maritime Services Act 1935 in order to co-ordinate the port and navigation services of the State, which had previously been administered by the Sydney Harbour Trust and by the State Department of Navigation.

The Board exercises general control over intra-state shipping, including the survey and certification of vessels, the licensing of harbour craft and the examination and issue of certificates to officers; is responsible for the provision of pilotage services, lights, beacons, buoys and other port facilities; imposes and collects rates and charges on goods and vessels; and is vested with the general control and management of the navigable waters and ports within the State.

At the Port of Sydney the Board is also responsible for the provision of adequate wharfage and channels, and carries out all construction, maintenance and dredging work. At other ports of New South Wales such work is undertaken by the Department of Public Works on behalf of the Board.

(b) *Port of Sydney.* The entrance to Sydney Harbour, the principal port of New South Wales, is nearly a mile wide, and the depth of its navigable channel is not less than 80 feet. Between the entrance, known as "The Heads", and the Harbour proper, a distance of 4 miles, there are two separate channels, each 700 feet wide, the Western Channel not less than 43 feet deep (low water ordinary spring tides) and the Eastern Channel 40 feet deep. The foreshores, which have been reduced by reclamations, are 152 miles in length and the total area of the port is 13,600 acres, or 21 square miles, of which about one-half has a depth of 30 feet or more at low water ordinary spring tide. The mean range of tides is 3 feet 6 inches.

The wharves are situated in close proximity to the business centre of the city, about four or five miles from the Heads. Excluding ferry wharves and jetties used for private purposes, there are 62,963 feet of wharfage controlled by the Maritime Services Board and 8,710 feet of commercial wharfage privately owned. Ferry berths cover 3,470 feet, and the total for all purposes is 75,143 feet. Depth of water at wharves is up to 40 feet. The principal wharves are leased to shipping companies whose vessels engage regularly in the trade of the port; the remainder are reserved for vessels which visit the port occasionally. Special facilities for the storage and handling of staple products such as wheat, wool, etc., are provided and modern plant has been installed for replenishing ships' bunkers with oil or coal.

The docking facilities comprise five large graving docks, four floating docks and eight patent slips. The Captain Cook Graving Dock, opened in March, 1945, is capable of accommodating the largest vessel afloat.

The following table shows particulars of the finances of the Board in respect of the Port of Sydney for 1938-39 and 1946-47 to 1950-51 :-

## MARITIME SERVICES BOARD : FINANCES OF THE PORT OF SYDNEY.

(£.)

Year.	Total Capital Debt.	Revenue.			Expenditure.			Surplus.
		Wharfage and Transhipment Rates.	Tonnage Rates and Berthing Charges.	Total.	Administration and Maintenance.	Interest, Sinking Fund, Exchange, etc.	Total. (a)	
1938-39..	11,276,399	773,501	38,180	1,155,627	380,120	536,781	916,901	238,726
1946-47..	11,097,221	725,903	158,521	1,379,882	702,833	540,240	1,243,073	136,809
1947-48..	11,242,140	759,014	167,406	1,446,779	793,319	530,159	1,323,478	123,301
1948-49..	11,334,338	821,376	182,360	1,569,157	923,656	517,715	1,441,371	127,786
1949-50..	11,571,669	925,144	229,092	1,658,203	957,510	526,171	1,483,681	174,522
1950-51..	11,779,317	1,032,685	333,902	1,955,073	1,155,004	528,928	1,683,932	271,141

(a) Excludes capital expenditure: 1938-39, £28,576; 1946-47, £153,854; 1947-48, £282,345; 1948-49, £221,227; 1949-50, £287,211; 1950-51, £384,911.

(c) *Port of Newcastle.* Newcastle Harbour is administered by the Maritime Services Board and an Advisory Committee consisting of five members appointed by the Governor. In regard to volume of shipping entered, Newcastle ranks second in importance in New South Wales and fifth in Australia. It is primarily a coal-loading port, and the proximity to the coal field has led to the establishment of important industries, including iron and steel works, in the district. Facilities are available for the shipment of wool, wheat and frozen meat, and a wharf is available for timber.

The area used by shipping is about 570 acres, excluding the entrance to the harbour and the inner basin, which together cover an area of 162 acres. The width of the harbour at the entrance is 1,200 feet, and the navigable channel, with a depth of 25 feet 6 inches at low water, is 350 feet wide. Wharfage accommodation amounts to 19,900 feet, the Maritime Services Board controlling 6,720 feet, the Railways Department 7,000 feet, the Public Works Department 200 feet, and private shipping companies 2,600 feet, while tie-up berths and ferry and depot wharves comprise 3,400 feet.

(d) *Port Kembla.* As from 3rd May, 1948, the Maritime Services Board assumed the administration and navigational control of Port Kembla, which had previously been administered by the New South Wales Department of Public Works. The Department continues however to be the constructing authority in respect of works, dredging and maintenance. In respect of volume of shipping entered, Port Kembla ranks third in the ports of New South Wales, and about seventh in those of Australia. It has an area of approximately 330 acres, with depths ranging from 20 to 50 feet (low water ordinary spring tide), and wharfage accommodation has been provided for large ocean-going vessels. It is the port of the southern coalfields and for the expanding industrial area in and about Wollongong.

(e) *Other Ports.* In addition to the ports of Sydney, Newcastle and Port Kembla, the Board controls 29 outports along the coastline of 609 miles. The shipping trade of these outports is relatively small.

(ii) *Port Charges.* The port charges payable in respect of shipping and ships' cargoes in New South Wales are imposed by the Commonwealth Government in terms of the Lighthouses Act and the Federal Navigation Act, and by the State authorities under the Navigation Act of New South Wales, the Harbour and Tonnage Rates Act, and the Sydney Harbour Trust Act. Since 1st February, 1936, the State enactments have been administered by the Maritime Services Board. The gross collections by the State authorities amounted to £2,628,000 in 1950-51. These figures include the Port of Sydney revenue (see table above) and State navigation service collections (£672,901 in 1950-51). Commonwealth Government revenue from light dues and navigation receipts, for the whole of Australia, amounted to £243,296 in 1950-51.

2. *Victoria.*—(i) *Melbourne Harbour Trust.* (a) *General.* Information regarding the origin and constitution of this Trust, which controls the Port of Melbourne, appears in Official Year Book No. 12, p. 970 *et seq.* At 31st December, 1951, the sheds available for wharfage accommodation had a length of 20,093 feet, covering an area of 1,389,982 square feet. The area of water in the bay and River Yarra under the control of the Trust is approximately 5,327 acres and the total length of wharves, piers and jetties in the port is 61,740 feet, giving an area of over 58 acres of wharfage, and 53,209 feet of effective berthing space. During 1951, work was continued on the River Entrance Docks project which provides for the construction of 28 new deep water berths. Other work undertaken during the year provides for new berths at Appleton Dock (ultimately

to have eighteen berths), Victoria Dock and South Wharf. The depth of water (low water ordinary spring tide) of main channels and at principal wharves is about 30 feet, the maximum being about 36 feet.

(b) *Finances.* The following table shows particulars of the financial operations of the Trust during the years 1939 and 1947 to 1951:—

## MELBOURNE HARBOUR TRUST: FINANCES.

(£.)

Year.	Gross Loan Indebtedness.	Revenue.		Expenditure.				Surplus.
		Wharfage and Tonnage Rates.	Total.	Administration and Maintenance.	Interest, Sinking Fund, Exchange, etc.	Depreciation, Renewals and Insurance Account.	Total. (a)	
1939 ..	4,018,527	689,100	843,899	282,533	270,650	129,160	837,577	6,322
1947 ..	3,937,709	819,425	1,113,456	399,641	238,084	123,940	944,516	168,940
1948 ..	3,820,203	961,925	1,313,813	471,039	220,463	134,230	1,037,152	276,661
1949 ..	3,766,678	1,118,059	1,471,221	460,955	190,056	121,798	1,015,421	455,800
1950 ..	3,972,029	1,293,923	1,771,074	675,839	187,582	162,883	1,301,687	469,387
1951 ..	5,883,857	1,493,423	2,129,432	1,036,842	235,881	175,263	1,768,105	361,327

(a) Includes statutory payments to Consolidated Revenue and Geelong Harbour Trust:—1939, £155,234; 1947, £182,851; 1948, £211,420; 1949, £242,612; 1950, £275,383; 1951, £320,119. Excludes capital expenditure:—1939, £128,567; 1947, £375,705; 1948, £393,240; 1949, £623,396; 1950, £1,589,392; 1951, £2,058,921.

(ii) *Geelong Harbor Trust.* The Geelong Harbour Trust was constituted in 1905, and reconstituted in 1934 under the provisions of the Melbourne and Geelong Harbour Trusts Act 1934. The Trust is under the control of three Commissioners appointed by the Governor-in-Council. Revenue for the year 1951 was £184,700, and revenue expenditure was £177,887. Payments made in respect of capital works amounted to £280,000 in 1951, and loans outstanding at the end of the year amounted to £567,019. Depth of water available in Geelong harbour will, upon completion of dredging operations which are well advanced, range from 32 to 37 feet (low water ordinary spring tide).

(iii) *Other Ports.* Portland is the only Victorian port other than Melbourne and Geelong of more than minor importance.

3. *Queensland.*—(i) *General.* The ports of Queensland, except Brisbane and certain minor ports, are administered by Harbour Boards with members representing the towns and districts served by the ports. Brisbane and the minor ports are controlled by the State Treasury through the Department of Harbours and Marine, which supervises the engineering activities of the other ports.

(ii) *Brisbane.* Brisbane accommodates comfortably, in its dredged and improved river, the largest vessels in the Australian trade. The main centres for shipping, although further downstream than formerly, because of the increasing size of vessels, are still within easy access of the city. The maximum depths (low water ordinary spring tide) of the shipping channel decrease from 32 feet in the North-West channel to 20 feet in

the Bulimba Reach to Victoria Bridge section. Depths at wharves vary between 23 and 29 feet. Adequate dry-docking facilities are available. The finances of Brisbane Harbour for the years 1938-39 and 1946-47 to 1950-51 are shown below :—

## BRISBANE HARBOUR : FINANCES.

(£'000.)

Year.	Loan Indebtedness.	Revenue.		Expenditure.		Credit Balance.
		Harbour Dues.	Total.	Working Expenses.	Total (including Interest and Redemption).	
1938-39 ..	1,179	165	173	36	112	(a) — 6
1946-47 ..	1,163	149	171	133	212	132
1947-48 ..	1,219	153	222	126	209	145
1948-49 ..	1,256	190	209	162	250	104
1949-50 ..	1,325	219	299	168	260	143
1950-51 ..	1,572	221	253	237	329	67

(a) Overdraft.

In addition to Brisbane Harbour, the Department of Harbours and Marine also controls the Brisbane Dry Dock, the Cairncross Dock, the Brisbane River, and ten smaller harbours not administered by Harbour Boards.

(iii) *Harbour Boards.* Harbour Boards control the ports of Bowen, Bundaberg, Cairns, Gladstone, Mackay, Rockhampton and Townsville. Finances for each port for the year 1951 are shown below, together with a summary for the years 1939 and 1947 to 1951.

## HARBOUR BOARDS, QUEENSLAND : FINANCES.

(£.)

Harbour Board.	Loan Indebtedness.	Revenue.		Expenditure (excluding Loan).		Surplus (+) or Deficit (-)
		Wharfage and Harbour Dues.	Total.	Working Expenses.	Total (including Interest and Redemption).	
Bowen .. ..	327,513	17,046	27,651	9,398	29,266	— 1,615
Bundaberg .. ..	41,555	4,123	5,794	3,519	9,747	— 3,953
Cairns .. ..	158,618	94,173	150,961	144,871	187,842	— 36,881
Gladstone .. ..	135,669	20,537	68,830	32,784	58,128	+ 10,702
Mackay .. ..	348,890	118,420	126,658	24,235	53,655	+ 73,003
Rockhampton .. ..	553,801	30,519	45,542	35,576	46,461	— 919
Townsville .. ..	220,728	118,085	174,069	119,657	148,996	+ 25,073
Total, 1951 .. ..	1,786,774	402,903	599,505	370,040	534,095	+ 65,410
„ 1950 .. ..	1,611,241	378,949	510,719	284,896	408,561	+ 102,158
„ 1949 .. ..	1,523,644	347,843	464,450	307,716	431,359	+ 33,091
„ 1948 .. ..	1,477,076	280,360	371,987	213,700	304,118	+ 7,869
„ 1947 .. ..	1,481,213	234,872	328,464	205,572	330,022	— 1,558
„ 1939 .. ..	1,548,144	249,510	401,439	139,752	343,083	+ 58,356

4. *South Australia.—The South Australian Harbours Board.* All South Australian harbours are controlled by the South Australian Harbours Board, which consists of three Commissioners appointed by the Governor for a period of five years and eligible for re-appointment. The Board is responsible to the Minister of Marine for the discharge of its duties and functions, and controls about 60 ports, but at many of them there is little or no shipping movement. The more important are Adelaide, Augusta, Lincoln, Pirie, Wallaroo and Whyalla. Maximum depths of water (low water ordinary spring tide) at the wharves of these ports range from 20 to 24 feet at Pirie to 35 feet at Adelaide (Outer Harbour). The following table shows the finances of the Board for 1938-39 and 1946-47 to 1950-51 :—

## SOUTH AUSTRALIAN HARBOURS BOARD : FINANCES.

( £. )

Year.	Capital Expenditure to 30th June.	Revenue.	Expenditure from Revenue.				Surplus (+) or Deficit (-).
			Working Expenses.	Interest.	Sinking Fund.	Total.	
1938-39 ..	7,861,905	664,915	205,848	326,719	50,000	582,567	+ 82,348
1946-47 ..	8,283,775	747,071	371,749	288,833	25,069	685,651	+ 61,420
1947-48 ..	8,367,780	873,059	386,459	281,517	27,585	695,561	+ 177,498
1948-49 ..	8,456,041	938,797	503,563	281,110	30,356	815,029	+ 123,768
1949-50 ..	8,545,084	1,050,742	583,965	281,691	33,327	898,983	+ 151,759
1950-51 ..	8,896,281	1,141,174	784,191	281,657	..	1,065,848	+ 75,326

5. *Western Australia.—(i) Fremantle Harbour Trust.* Fremantle Harbour is controlled by a board of five Commissioners appointed by the Governor-in-Council. Maximum depth of water (low water ordinary spring tide) at the entrance to the harbour is 36 feet, and at the wharves 32 feet. The length of wharf berth accommodation is 10,566 feet.

Gross earnings for the year 1950-51 amounted to £1,497,436, working expenses to £983,357, interest £119,067, sinking fund £34,517, renewals fund £2,000, and payment of surplus cash to Consolidated Revenue £150,064. There was also a special loan repayment from revenue, amounting to £111,700. The total amount debited to loan capital account at 30th June, 1951 was £3,119,590.

(ii) *Bunbury Harbour Board.* The Bunbury Harbour Board consists of five members appointed by the Government. The depth of water at the entrance and at the wharf is 27 feet (low water ordinary spring tide). Berthage accommodation is 3,700 feet. Gross earnings in 1949-50 were £20,508, working expenses £39,000, and interest £28,088. The total amount debited to loan capital account at 30th June, 1950 was £890,439.

(iii) *Other Ports.* Only the ports of Fremantle, Bunbury and Albany in Western Australia are under the control of trusts, the remainder are Government operated. Of these, Carnarvon, Geraldton and Onslow have the largest amount of shipping movement.

6. *Tasmania.*—There are seven Marine Boards and two Harbour Trusts in Tasmania. The Marine Boards control the ports of Hobart, Launceston, Circular Head, Burnie and Table Cape, Devonport, Strahan, and King Island (Currie), and the Harbour Trusts those of Smithton and Leven. Aggregate receipts of revenue accounts of all these authorities during the year 1950-51 were £432,021 and expenditures £436,569, including loan charges £74,950. The total receipts of the Hobart Marine Board during 1950-51

were £192,890, loan charges £13,087 and total expenditure £179,031. Launceston Marine Board receipts during 1950-51 amounted to £93,830, loan charges to £9,893 and total expenditure to £107,259. Loan indebtedness of all Marine Boards and Trusts at 30th June, 1951 was £1,413,672, of which £430,053 was in respect of Hobart and £75,101 in respect of Launceston.

Hobart, Launceston, Burnie and Devonport are the principal ports of Tasmania. In addition to their interstate and intra-state traffic, there is also considerable overseas shipping. Depths of water at wharves vary, in general, between 16 and 34 feet (low water ordinary spring tide), but at Hobart there is a depth of water of from 30 to 52 feet.

## § 7. Fire Brigades.

1. *New South Wales.*—(i) *General.* A Board of Fire Commissioners, consisting of eight members, operates under the Fire Brigades Act 1909-1949, and 153 fire districts had been constituted at the end of 1951. Up to the end of 1949, the cost of maintenance of fire brigades was borne in proportions of quarter, quarter, and half by the Government, the municipalities, and the insurance companies concerned, the expenditure so regulated that the proportion payable by the councils in a fire district should not, except in special circumstances, exceed the amount obtainable from  $\frac{1}{4}$ d. in the £1 rate on the unimproved capital value of ratable land in the fire district. In June, 1949 legislation was introduced (i) increasing the limit of the Board's borrowing power from £250,000 to £500,000, (ii) providing for the varying of the maximum rate that may be levied by councils, and (iii) altering the basis of contributions so that from 1st January, 1950, local councils and the Government will each pay one-eighth and the insurance companies three-quarters.

Other legislation, introduced in September, 1949 to improve and modernize the law dealing with the prevention of bush fires and to build up the organization of the bush fire-fighting services, provided for the establishment of Fire Regions and a Bush Fire Fighting Fund to be financed from contributions by the Government, councils and insurance companies in the proportion of one-quarter, one-quarter and one-half, respectively. The contribution of any council shall not exceed one-twentieth of a penny in the £1 on the unimproved capital value of ratable land in the area of the council not being land within a fire district constituted under the Fire Brigades Act 1909-1949.

(ii) *Board of Fire Commissioners of New South Wales.* At 31st December, 1951 the authorized strength of the Fire Brigade throughout the fire districts of New South Wales was 292 officers and 823 permanent, 2,113 volunteer, and 1,917 reserve firemen. Corresponding figures for the Sydney Fire District were 234, 774, 321 and 778. The revenue for the year 1951 was £1,279,131 made up as follows:—From the Government, £157,311; municipalities and shires, £157,311; fire insurance companies and firms, £943,866; and from other sources, £20,643. The disbursements for the year were £1,310,680.

2. *Victoria.*—(i) *General.* The Fire Brigades Act of 1928 provided for a Metropolitan Fire Brigades Board and a Country Fire Brigades Board each consisting of nine members. In December, 1944 the latter Board was superseded by the Country Fire Authority under an Act of that title, and the number of members was increased to ten. The income of each Board is derived in equal proportions from the Treasury, the municipalities and insurance companies.

(ii) *Metropolitan Fire Brigades Board.* On 30th June, 1951 the Board had under its control 42 stations, 550 permanent staff, 162 special service and clerical, etc. staff, and 22 part-time firemen. The total receipts for 1950-51 were £597,949, comprising contributions £465,985, receipts for services £68,076, and interest and sundries £63,888. The expenditure was £677,377.



(iii) *Country Fire Authority.* This authority, constituted in 1944, is responsible for the prevention and suppression of fires in the "country area of Victoria", which embraces the whole of the State outside the metropolitan fire district, excluding State forests and certain crown lands. The country area has been divided into 24 fire control regions, three of which (Ballarat, Bendigo and Geelong) are wholly urban and the remainder mixed urban and rural. At 30th June, 1951 there were 171 municipal councils and 132 insurance companies included in the operation of the Act, and 194 urban and 960 rural fire brigades. The effective registered strength of the brigades was 76,147 members.

The receipts for the year 1950-51 amounted to £163,048. Total expenditure other than loan amounted to £177,257.

3. *Queensland.*—(i) *General.* The Acts of 1920-1931 made provision for the retention of existing fire districts, and for the constitution of new districts. For each district there must be a Fire Brigades Board consisting of seven members, and the cost of maintenance of each brigade is proportioned as follows:—The Treasury two-sevenths, insurance companies three-sevenths, and local authorities two-sevenths. All volunteer fire brigades in a district must be registered.

(ii) *Fire Brigades Boards.* At 30th June, 1951 there were 63 Fire Brigades Boards. The total number of stations was 106, and full-time staff numbered 434, including 12 administrative, 89 officers and 333 firemen. Workshop staff numbered 14. Part-time staff numbered 565, including 65 administrative, 85 officers and 415 firemen. Volunteers numbered 366. The total revenue for the year 1950-51 was £384,038 received mainly from the following sources—Government £94,279, local authorities £94,400, insurance companies £141,474 and loans (Government and other) £31,333. The total expenditure for the year was £392,002, the chief items being salaries and wages £258,822 and interest and redemption of loans £27,463.

4. *South Australia.*—The Fire Brigades Act 1936-1944 provides for a board of five members, and the expenses and maintenance of brigades are defrayed in the proportion of two-ninths by the Treasury (subject to certain limits when the contribution exceeds £10,000), five-ninths by insurance companies, and two-ninths by the municipalities concerned. At 30th June, 1951 there were altogether 34 fire brigade stations, of which 12 were metropolitan and 22 country.

The authorized strength of the permanent staff was 420, including 311 officers and men and 80 country auxiliary firemen. The total revenue for the year 1950-51 was £214,202, made up as follows:—insurance companies £136,301, Treasury £23,414, and municipalities £54,487. The Treasury contribution includes an additional grant of £12,000.

5. *Western Australia.*—In 1942 certain Municipal and Road Board Districts were constituted fire districts under the control of the Western Australian Fire Brigades Board. There were 30 at 30th September, 1951. The income of the Board is derived in the proportion of two-ninths from the Government, two-ninths from Local Government Authorities, and five-ninths from insurance companies. The number of local government authorities and insurance companies who contributed numbered 54 and 118 respectively. The brigades throughout the State controlled by the Western Australian Fire Brigades Board at 30th September, 1951 numbered 48, with a staff of 1,320, including 207 permanent officers and firemen and 1,096 volunteer brigade officers and firemen. The revenue for the year ended 30th September, 1951 was £178,996 and the expenditure £185,598.

Under the Bush Fires Acts a Rural Fire Prevention Advisory Committee, consisting of ten members, four of whom are nominated by the Road Board Association, was set up to advise the Minister for Lands on bush fire control. The Act also provides for the registration of bush fire control officers, who numbered 1,124 at 30th June, 1951 and the establishment of bush fire brigades, the number of which was 423 at 30th June, 1951.

6. *Tasmania.*—The Fire Brigades Act 1945 provided for the creation of the Fire Brigades Commission of Tasmania to co-ordinate the activities of the 22 existing Fire Brigades Boards, while leaving the responsibility for individual control and management with the Boards. The Commission consists of five members nominated or elected by the Fire Brigades Boards and one member nominated by the Minister. Contributions towards the cost of operations remain on the old basis of one-third each from the Treasury, the municipalities and the insurance companies concerned. The cost for the year 1950–51 amounted to £66,810. There were at 30th June, 1951, 27 stations amongst the 22 brigades, and their aggregate staffs numbered 416, including 85 permanent officers and 303 part-time firemen, including officers.