23

TRANSPORT

NEW TRANSPORT PORTFOLIO*

In May 1982, the Victorian Government announced its policy for the rationalisation, planning, and control of transport. This policy is directed towards a restructuring of the Transport Portfolio. The restructuring is intended to result in an expanded Ministry of Transport to improve the efficiency and effectiveness of transport facilities and networks to better meet the needs of the community. The operation and provision of transport services will be undertaken by four new transport authorities in the place of the previous eight transport authorities.

The four new authorities will be:

(1) A Metropolitan Transit Authority (MTA) which is responsible for the operation of a metropolitan public transport system using trains, trams, and buses;

(2) a State Transport Authority (STA) which is responsible for the operation of freight and rural passenger services using all modes of transport;

(3) a Road Construction Authority (RCA) which is responsible for the construction and maintenance of the road network throughout Victoria; and

(4) a Road Traffic Authority (RTA) which is responsible for road safety, traffic signals, and the licensing and regulation of motor vehicles.

The reorganisation has been designed to meet the future needs of transport in Victoria, with the intention of generating solutions to operations within the financial constraints of the transport industry.

A Victorian Transport Directorate (VTD) has been established to act as a corporate management group for transport. The VTD is responsible for the implementation and review of policy making, and the monitoring of the operating and financial performance of each of the new transport authorities.

MINISTRY OF TRANSPORT

The Victorian Ministry of Transport, in association with the statutory authorities under the Minister of Transport's jurisdiction, controls land transport in Victoria. The Ministry was established under the terms of the *Transport Act* 1951 for the purpose of securing the improvement, development, and better co-ordination of passenger and freight transportation in Victoria. As part of this responsibility, the Ministry carries out detailed investigations into all aspects of land transport and acts as the policy adviser to the Minister of Transport.

Victoria's transport authorities are responsible for the operation and maintenance of the transport system and the Ministry of Transport oversees their activities and formulates policy. Seven transport authorities report to the Minister of Transport.

The Victorian Railways is the largest Victorian transport authority, employing some 21,111 persons and operating a rail network of 5,812 kilometres. During the 1981–82 financial year, the Victorian Railways carried an estimated 76,313,000 passengers and transported about 11,623,000 tonnes of freight (compared with 88,000,000 passengers and 12,721,000 tonnes of freight in 1980–81). Expenditure in 1981–82 amounted to $511.2m,

*At April 1983, legislation was before the Victorian Parliament to restructure the Ministry of Transport's Authorities. Further information concerning the restructuring of the Ministry will be made available in future editions of the *Victorian Year Book*.

C.54890/82—18

compared with $448.3m in 1980–81. Late in 1972, legislation was enacted to change the governing body of the Victorian Railways from three commissioners to a Board of seven members, which has since been expanded to nine members. The Board comprises representatives from the business community and the Victorian Railways.

It became evident during the 1960s that the Flinders Street station area could no longer handle the demand for peak hour train travel and so the Victorian Government, after examining methods of reducing this bottleneck, decided that the best solution was to convert the central terminal into a five section complex by the construction of an underground rail loop around the central business district. When completed, the Melbourne underground rail loop will substantially enlarge the capacity of the whole Melbourne metropolitan area rail network.

The Melbourne Underground Rail Loop Authority was created when the Melbourne Underground Rail Loop Act was proclaimed on 1 January 1971. The Authority is a corporate body comprising nine members. It is responsible for supervising and co-ordinating the planning, financing, and construction of the underground rail loop, which will comprise four new rail tracks under Spring Street and La Trobe Street, linking tracks in the existing railways system from points east of Flinders Street and Princes Bridge to points north of Spencer Street. Two additional elevated tracks, three tracks in separate tunnels, and one completed and one partly completed underground station have been brought into operation by VicRail. To assist in financing the underground rail loop, the Victorian Railways collects a small levy on each suburban rail journey. The balance of the funds required to complete the underground rail loop are to be raised by private and public loans and the redemption and interest payments funded by the Victorian Government, the Melbourne and Metropolitan Board of Works, and the Melbourne City Council.

Many cities around the world have abandoned their tramway systems. Melbourne, however, has retained its trams, and they have become a significant asset in moving persons over comparatively short distances up to 13 kilometres from Melbourne. In fact, the Melbourne and Metropolitan Tramways Board carries more passengers than the Victorian Railways—about 127,000,000 persons in 1981–82. The Board comprises three members, employs 4,600 persons, and maintains 224 kilometres of tram services and 302 kilometres of bus services in the Melbourne metropolitan area.

A necessary part of Victoria's transport system is the operation of commercial road passenger and goods vehicles. The regulation of these functions is the responsibility of the Transport Regulation Board, which comprises three members. The regulatory pattern takes the form of a compulsory licensing system designed to meet public needs and to assist in the balanced use of transport resources.

In 1974, the Victorian Parliament passed the *Metropolitan Bridges, Highways, and Foreshores Act* 1974, thereby creating a single Victorian highway authority by transferring to the Country Roads Board the responsibility for metropolitan bridges and highways. The Country Roads Board maintains nearly 24,000 kilometres of roads and is responsible for planning and constructing new roads. The Board comprises three members and employs about 5,000 persons.

In 1964, a special Victorian Government committee recommended that a proposed crossing over the lower Yarra River should be built as a high level bridge with six traffic lanes. This recommendation was agreed to by the Victorian Government in 1965 and legislation was passed in December 1965 giving the West Gate Bridge Authority, or the Lower Yarra Crossing Authority as it was then known, the power to construct and operate a toll bridge over the lower Yarra River, which was opened in November 1978. Subsequent traffic estimates led the Authority to increase the number of traffic lanes from six to eight. The Authority was founded as a non-profit company limited by guarantee and is registered under the Victorian *Companies Act* 1961 and administered by a chairman, deputy chairman, and seven directors. However, in 1980, legislation was passed which changed the Authority from a company limited by guarantee to a statutory authority.

Complementing the Victorian public transport system is an extensive privately owned bus and taxi network. With the exception of a small number of services into the central business district, Melbourne's private bus network operates on cross suburban routes linking residential areas and local shopping centres, schools, and railway stations. Private

buses operate over routes covering 36,000,000 kilometres and carry about 51,000,000 passengers a year. The Victorian Government is subsidising private bus services to minimise increases in fares and is providing low interest loans to facilitate the purchase of new buses.

In co-operation with Victoria's various transport authorities, the Ministry of Transport has embarked on a major programme to re-equip and modernise the metropolitan transport system with the aim of providing rapid, frequent, and comfortable public transport.

LAND TRANSPORT

Railways

Administration

The Victorian Railways was established in 1856 and was administered first by the Board of Land and Works, and then by either one or three commissioners. A seven-member board, since increased to nine, replaced the commissioners in 1973. The Board, under a full-time chairman, is responsible to the Victorian Government through the Minister of Transport. Day to day matters are controlled by the general manager who is responsible to the chairman for managing the Victorian Railways within Board guidelines.

Total transport service

Victoria's rail system was developed during the second half of the nineteenth century with main lines radiating from Melbourne. Branch lines were built to serve areas which were virtually isolated.

In October 1981, country passenger services were substantially reorganised with new timetables giving increased frequency of services and shorter journey times. A core rail route network was established which connected the large regional centres of Albury, Goulburn Valley, Ballarat, Bendigo, Swan Hill, Warrnambool, the LaTrobe Valley, and Bairnsdale. A computerised seat reservation system was introduced to improve customer service. Patronage increased by 13 per cent in 1981–82 reversing the long-term trend of decline.

Urban transport improvements are continuing, as far as funds allow, to help the Melbourne suburban rail system meet its present commitments and provide for the future demands that are expected to be placed on it.

Urban transport

A feature of the 1969 Melbourne Transportation Committee's plan for 1985 was co-ordinated public transport. The report emphasised the need for developing projects such as station car parking facilities, and tram and bus facilities at modal interchange stations to help develop the public transport network. Since then, VicRail has increased free car parking spaces at suburban stations from 9,300 in 1970 to 19,578 in 1982.

Work under the supervision of the Railway Construction and Property Board is under way on the Box Hill Transport Centre. Box Hill station, one of the busiest stations in the suburban network will become a modern intermodal transport exchange.

In October 1981, a new transport fare system was introduced. The suburban area was divided into three zones—inner suburban, suburban, and outer suburban. The major feature of the new system was the introduction of TravelCard which replaced MetroCards. TravelCard allows unlimited travel on government trains, trams, buses and, for the first time, on privately operated bus services. Weekly rail tickets are still available but instead of issuing quarterly, half-yearly, and yearly tickets a new system of tickets available for between 10 and 52 weeks was introduced.

Electrification of the 18.42 kilometre section of track between Altona Junction and Werribee has commenced and train stabling facilities, new station buildings, track, and overhead wiring re-arrangements have been carried out at Blackburn.

Since 1974, new buildings have been constructed at more that 40 suburban stations. Modern buildings have replaced lightweight timber structures which were costly to maintain and were inadequate for passengers and staff. During 1981 new station buildings were constructed at North Richmond, Aspendale, Edithvale, Bonbeach, Seddon, Tottenham, Balaclava, Blackburn, Victoria Park, and East Camberwell.

Situated in Batman Avenue, overlooking Flinders Street railway yard is the Metrol building. Metrol monitors and controls the operations of all trains in the suburban area. Operation Controllers supervise the inner suburban area and Line Controllers are responsible for the outer suburban area. These controllers maintain communications with stations, signal boxes, and other key operations personnel. Metrol is also responsible for the visual train information units at Flinders Street, Spencer Street, Museum, and Richmond stations. Also located in the Metrol building are staff who prepare suburban timetables and the rosters for over 1,000 VicRail enginemen and guards.

A train describer system which is designed to give the precise location of each train in the suburban network is due to commence shortly. This will also be controlled by Metrol.

Rolling stock

The extension order of nine, first series stainless steel suburban trains was completed during 1980 and in September 1981 the first new generation stainless steel train was officially handed over to VicRail.

In October 1981, the first of the new airconditioned country carriages entered service.

During 1981–82, 110 open wagons were converted to bottom discharge hoppers for moving wheat. A further 80 container wagons, 20 bulk cement wagons, and 50 bogie hoppers (briquettes and grains) were added to the fleet.

Freight

Freight carried by VicRail decreased from 13,453,431 tonnes in 1979–80 to 12,720,780 tonnes in 1980–81. Freight further decreased from 12,720,780 tonnes in 1980–81 to 11,622,571 tonnes in 1981–82.

Wheat hauled decreased from 4,164,782 tonnes to 3,629,683 tonnes during 1980–81, and decreased further to 2,968,430 tonnes during 1981–82.

Total tonnes carried of barley, oats, and rice decreased on figures for 1980–81 and decreased further in 1981–82. Mining and quarry products increased from 866,847 tonnes to 907,731 tonnes in 1980–81, and from 907,731 tonnes to 913,961 tonnes in 1981–82.

Melbourne Underground Rail Loop Authority

The *Melbourne Underground Rail Loop Act* 1970 provided for the establishment of a new authority—the Melbourne Underground Rail Loop Authority, to be responsible for the supervision and co-ordination of the planning, financing, and construction of the Melbourne underground rail loop. The Authority, comprising nine members appointed by the Governor in Council, was constituted in 1971.

The loop is not a new railway system superimposed on existing transport facilities but, as stated in the preamble to the Act, the loop and ancillary works are "for the purpose of increasing the capacity and efficiency of the existing Melbourne suburban rail network".

Three underground stations constructed on the eastern and northern boundaries of the central business district, together with the two existing stations on the southern and western boundaries (Flinders Street station and Spencer Street station), form a five station core to handle the city's labour force during peak hours as well as shoppers and visitors to the city. The three new stations (Parliament station under Spring Street, Museum station, and Flagstaff station under LaTrobe Street) will be linked by four underground tracks in four separate tunnels, and connected to the existing surface tracks to form a loop. This will result in significant increases in the train operating capacity at the centre of the system.

Two extra elevated tracks between Spencer Street and Flinders Street station came into operation in 1978, as well as two tunnels and Museum Station in 1981, the west booking hall of Museum Station, the south booking hall of Parliament Station, and a third tunnel in 1982. The Authority has continued with the remaining sections of the overall programme.

The north booking hall of Parliament station is to be transferred to VicRail during the second quarter of 1983, while the remaining loop (which includes lines through North Melbourne) will be transferred in the third quarter of 1983.

*Finance**

Compared with 1979–80, receipts increased by $23.6m, or by 10.3 per cent. Freight revenue increased by $10.09m.

* The information relating to *Finance* was the latest available at April 1983.

Operational expenses

Expenditure increased by $51.4m to $441.5m in 1980–81. Increases in salaries and wages were estimated to have cost $30.0m, an increase of 11.6 per cent. It is a paradox that railways, while being a most economical user of labour per passenger per kilometre or tonne per kilometre performed, are at the same time highly labour intensive in terms of wages as a proportion of total costs. This makes the railways vulnerable to the financial effects of wage increases.

Loan liability and interest

The face value of stock and bonds allocated to the Railways Department, as reduced in accordance with the *Railways (Finances Adjustment) Act* 1936, amounted to $712.8m at 30 June 1981. After deducting the value of securities purchased from the National Debt Sinking Fund and cancelled ($130.6m), the net liability on current loans outstanding at that date was $582.2m.

The total liability of the State for railways construction, etc., at 30 June 1981 (which includes the liability referred to in the previous paragraph) was $773m. Deduction of securities purchased from the National Debt Sinking Fund and cancelled ($173.4m), notwithstanding a cash credit of $0.9m, reduced the amount outstanding at the end of the year to a net liability of $600.5m.

The *Railways (Funds) Act* 1961 provided that interest and other charges on money borrowed for the purposes of the *Railways Act* 1958 should not henceforth be included in the accounts of the Victorian Railways, but would be charged against the revenues of the State. However, the *Railways (Funds) Act* 1964 reimposed on the Railways, with effect from 1 July 1964, the obligation to pay interest and debt charges on money borrowed for the purposes of the *Railways Act* 1958 on and after 1 July 1969. The total annual interest payable on the liability of $600.5m at 30 June 1981 amounted to $49.7m at an average rate of 8.27 per cent. Of this amount, the Victorian Railways are liable for $30.3m. In addition, the State is required to pay a contribution of $7.3m at a rate of 4.5 per cent on cancelled securities.

Additional funds, which amounted to $172.4m at 30 June 1981, have been provided for railway construction, equipment, stores, etc., out of the Consolidated Fund, the Uniform Railway Gauge Trust Fund, the State Grants (Urban Public Transport) Trust Account, and other funds. No interest is charged against railway revenue on these amounts, with the exception that interest, at 5 per cent, is payable to the Commonwealth Government on the repayable principal amount outstanding in respect of expenditure on the uniform gauge. (See page 621 of the *Victorian Year Book* 1966.)

Railway Construction and Property Board

The *Railway Construction and Property Board Act* 1979 was assented to on 20 December of that year and came into operation on 22 February 1980. The Act reconstituted the Railway Construction Board as the Railway Construction and Property Board and added additional functions to its responsibilities. The additional functions include provision for the development and management of railway land not used directly for railway purposes and makes provision to transfer to the new Board responsibility for the management and control of railway housing which is no longer required by the Railways.

The Railway Construction and Property Board is thus the successor to the Railway Construction Board, set up in 1965 to assume the powers and duties exercised since 1892 by the Railway Construction Branch of the Board of Land and Works. The Railway Construction Board and its predecessor was the constructing authority for all railway lines which the Victorian Parliament authorised to be constructed.

Railway statistics

The following tables relate to the State railways and road motor services under the control of the Victorian Railways Board. Certain border railways in New South Wales are, by agreement between the Victorian and New South Wales Governments, under the control of the Victorian Railways Board. Particulars of these have been included with those of the State railways being operated within Victoria. Details of the operations of the road motor services are shown on page 511.

Capital cost of railways and equipment

The capital cost of all lines constructed and in course of construction, and of all works, rolling stock, and equipment of the Railways Department at 30 June for each of the years 1978 to 1982 is shown in the following table:

VICTORIA—TOTAL CAPITAL COST OF RAILWAYS, ETC.: EQUIPMENT AND ROLLING STOCK
($'000)

At 30 June—	Railways		Road motor services	Total capital cost *(a)*
	Lines open	Lines in process of construction		
1978	494,901	5,297	19	500,217
1979	529,449	6,515	19	535,983
1980	570,177	6,868	19	577,064
1981	744,922	738	19	*(b)*745,679
1982	682,835	738	19	683,592

(a) Written down in accordance with *Railways (Finances Adjustment) Act* 1936, and allowing for depreciation since 1 July 1937. Particulars are exclusive of the cost of stores and materials on hand and in course of manufacture.

(b) Includes $122.425m worth of assets acquired from the Melbourne Underground Rail Loop Authority (MURLA), subsequently transferred back to MURLA at the direction of the Ministry of Transport, and assets to the value of $8,660m which were transferred to the Railway Construction and Property Board in 1980–81 at the direction of the Minister of Transport.

At 30 June 1981, the capital cost of rolling stock, after being written down in accordance with the *Railways (Finances Adjustment) Act* 1936, and allowing for depreciation, was $225.8m. At 30 June 1982, this figure rose to $253.4m.

Railways staff

The number of officers and employees in the railways (including casual labour and butty-gang workers) and the amount of salaries and wages (including travelling and incidental expenses) paid for each of the financial years 1977–78 to 1981–82 are shown in the following table:

VICTORIA—RAILWAYS STAFF: NUMBERS, SALARIES, ETC.

Period	Average number of employees			Salaries, wages, and travelling expenses
	Salaried staff	Wages staff	Total	
				$'000
1977–78	5,382	18,454	23,836	251,055
1978–79	5,384	17,893	23,277	263,480
1979–80	5,388	17,361	22,749	282,811
1980–81	5,362	16,732	22,094	315,073
1981–82	5,276	15,835	21,111	352,542

Railways rolling stock

The following table provides a description of the various types of rolling stock in service (exclusive of road motor rolling stock) at 30 June for each of the years 1978 to 1982:

VICTORIA—RAILWAYS ROLLING STOCK IN SERVICE AT 30 JUNE (EXCLUDING ROAD MOTOR SERVICES)

Rolling stock in service	1978	1979	1980	1981	1982
Locomotives—					
Steam	11	11	10	10	10
Electric	35	35	35	33	31
Diesel electric	265	266	267	257	261
Other *(a)*	90	89	88	82	77
Total	401	401	400	382	379

VICTORIA—RAILWAYS ROLLING STOCK IN SERVICE AT 30 JUNE
(EXCLUDING ROAD MOTOR SERVICES)—*continued*

Rolling stock in service	1978	1979	1980	1981	1982
Passenger coaches—					
Electric suburban	1,056	1,066	1,038	1,038	1,083
Other *(b)*	490	488	469	383	328
Total	1,546	1,554	1,507	1,421	1,411
Goods stock *(c)*	14,574	14,351	12,165	11,797	11,629
Service stock	1,230	1,181	1,154	1,111	1,062

(a) Other locomotives comprise diesel hydraulic locomotives, cranes, rail motor diesel power units, and non-passenger carrying tractors.
(b) Passenger coaches owned jointly with New South Wales and South Australia have been included.
(c) All parcels and brake vans including display cars and standard gauge stock have been included.

Railways route distance

The route distance of the railways (exclusive of road motor service route distance) at 30 June for each of the years 1978 to 1982 is shown in the following table. It should be noted that the Victorian Railways operate certain services in New South Wales.

VICTORIA—RAILWAYS ROUTE DISTANCE AT 30 JUNE
(EXCLUDING ROAD MOTOR SERVICES)
(kilometres)

Lines open for traffic	Gauge width	1978	1979	1980	1981	1982
Single track	—Broad gauge *(a)*	5,499	5,320	5,313	4,999	4,928
Double track	—Broad gauge *(a)*	725	725	731	731	744
Other multi-track	—Broad gauge *(a)*	140	140	140	140	140
Total route distance		6,364	6,185	6,184	5,870	5,812

(a) Broad gauge refers to 1,600 mm and 1,435 mm gauge track.

Railways traffic

The traffic of the railways (exclusive of road motor traffic) for each of the years 1977–78 to 1981–82 is shown in the following table:

VICTORIA—RAILWAYS TRAFFIC (EXCLUDING ROAD MOTOR SERVICES)

Traffic	Unit	1977–78	1978–79	1979–80	1980–81	1981–82
Traffic train kilometres—Country	'000	7,135	6,650	6,208	6,188	6,661
Suburban	'000	13,887	13,386	13,174	13,744	14,209
Goods	'000	10,990	10,820	11,413	10,682	10,266
Total	'000	32,013	30,856	30,795	30,614	31,136
Passenger journeys—Country	'000	4,108	4,065	3,664	*(a)*3,500	3,587
Suburban	'000	93,546	89,258	85,247	*(a)*84,500	72,726
Total	'000	97,654	93,323	88,911	*(a)*88,000	76,313
Goods and livestock carried	'000 tonnes	11,120	11,190	13,453	12,721	11,623

(a) Estimated.

The tonnes carried and tonne kilometres of goods and livestock carried by the Victorian Railways for the years 1978–79 to 1981–82 are shown in the following table:

VICTORIA—RAILWAYS GOODS AND LIVESTOCK TRAFFIC
(EXCLUDING ROAD MOTOR GOODS SERVICES)
('000 tonnes)

Class of goods	Tonnes carried				Tonne kilometres			
	1978–79	1979–80	1980–81	1981–82	1978–79	1979–80	1980–81	1981–82
Grain—								
Barley	471	548	399	376	124,599	147,387	102,786	101,233
Wheat	2,180	4,164	3,630	2,968	661,463	1,309,886	1,117,163	890,212
Other	233	349	216	155	43,735	70,321	35,438	25,853

VICTORIA—RAILWAYS GOODS AND LIVESTOCK TRAFFIC
(EXCLUDING ROAD MOTOR GOODS SERVICES)—*continued*
('000 tonnes)

Class of goods	Tonnes carried				Tonne kilometres			
	1978–79	1979–80	1980–81	1981–82	1978–79	1979–80	1980–81	1981–82
Flour	77	59	56	49	17,196	14,850	14,629	12,878
Stockfood and fodder	41	35	28	15	8,407	9,194	9,114	3,481
Fruit—								
Fresh	78	76	64	59	28,469	26,491	22,183	19,368
Dried	53	45	54	47	29,160	24,650	29,482	24,966
Beverages	147	143	162	126	35,082	33,976	40,946	33,827
Solid fuels	783	783	633	487	139,606	139,537	111,488	87,485
Cement	774	718	778	718	115,338	118,245	136,992	137,964
Mining and quarry products	745	867	908	914	130,052	146,558	144,680	137,395
Dairy produce	14	13	10	3	3,620	2,872	1,942	477
Milk, condensed, powdered, etc.	60	47	27	34	10,778	9,010	5,004	6,288
Tinplate	21	26	19	15	7,339	10,654	7,568	4,711
Iron, steel, and metals, unfabricated	609	749	737	694	197,447	250,419	251,475	244,208
Manures	671	631	618	667	168,449	160,240	162,708	149,471
Motor cars and accessories	173	165	157	167	44,733	39,773	38,116	41,602
Petroleum products	388	341	383	400	120,892	109,976	122,313	130,432
Paper products	193	194	242	258	72,800	70,980	77,183	82,023
Pipes	57	54	35	32	15,323	14,361	10,201	9,771
Timber	180	187	177	149	59,918	65,522	61,173	50,689
Wool	100	92	91	66	25,766	24,157	24,217	18,979
All other goods	2,980	3,039	3,192	3,172	1,035,757	1,047,157	1,142,970	1,196,672
Total goods	11,028	13,325	12,616	11,571	3,095,929	3,846,216	3,669,771	3,409,985
Total livestock	162	128	105	52	49,376	41,578	33,900	16,667
Grand total of goods and livestock	11,190	13,453	12,721	11,623	3,145,305	3,887,794	3,703,671	3,426,652

Railways revenue and expenditure

Revenue for 1981–82 increased by $3,929,002 compared with 1980–81, while revenue for 1980–81 increased by $25,635,290 compared with 1979–80. Total working expenses increased by $62,955,508 for the period 1981–82, compared with $55,268,456 for the period 1980–81.

VICTORIA—RAILWAYS REVENUE AND EXPENDITURE
($'000)

Particulars	1977–78	1978–79	1979–80	1980–81	1981–82
	REVENUE				
Passenger, etc., business—					
Passenger fares	53,813	57,300	62,718	74,880	86,798
Parcels, mails, etc.	7,202	8,219	9,433	9,931	9,665
Other	106	156	145	187	—
Goods, etc., business—					
Goods	92,543	101,030	132,849	143,325	136,803
Livestock	2,191	1,789	1,521	1,610	1,667
Miscellaneous	561	621	673	980	523
Miscellaneous—					
Dining car and refreshments services	7,371	7,840	8,209	6,848	5,744
Mt. Buffalo Chalet	—	—	—	2,051	2,406
Rentals	4,804	5,032	5,332	5,414	5,427
Bookstalls	1,587	1,671	1,721	1,685	1,831
Advertising	335	352	343	369	401
Melbourne Underground Rail Loop Authority special levy	1,798	2,127	2,054	1,950	1,900
Other	4,334	4,971	5,635	7,039	7,033
Total revenue	176,644	191,108	230,633	256,269	260,198

VICTORIA—RAILWAYS REVENUE AND EXPENDITURE—*continued*
($'000)

Particulars	1977–78	1978–79	1979–80	1980–81	1981–82
	EXPENDITURE				
Working expenses—					
General expenses	288,238	300,238	339,840	383,926	434,616
Pensions	19,591	22,582	25,437	29,359	33,435
Contributions to Railway Renewals and Replacement Fund	400	400	400	400	400
Contributions to Railway Accident and Fire Insurance Fund	3,639	4,020	5,094	8,999	9,590
Pay-roll tax	11,695	12,387	13,305	14,636	19,893
Long service leave	5,513	4,996	5,432	8,268	9,199
Appropriation to Melbourne Underground Rail Loop Authority construction	1,798	2,127	2,054	1,950	1,900
Other *(a) (b)*	1,989	1,451	1,448	740	2,199
Total working expenses	332,861	348,201	393,010	448,278	511,233
Net revenue	-156,217	-157,093	-162,377	-192,009	-251,035
Debt charges—					
Interest charges and expenses *(b)*	20,779	22,834	27,157	31,091	35,062
Exchange on interest payments and redemption	31	25	22	14	5
Contribution to National Debt Sinking Fund	630	682	740	791	848
Net result for year	-177,657	-180,634	-190,296	-223,905	-286,950
	per cent	per cent	per cent	per cent	per cent
Proportion of working expenses to revenue	188.4	182.2	170.4	174.9	196.5

(a) Including interest paid to the Commonwealth Government under the Railways Standardisation Agreement.
(b) Including loan conversion expenses.

The gross revenue and working expenses per average kilometre of railway worked for each of the years 1977–78 to 1981–82 are shown in the following table:

VICTORIA—RAILWAYS REVENUE AND EXPENDITURE PER AVERAGE KILOMETRE OPEN (EXCLUDING ROAD MOTOR SERVICES)

Particulars	1977–78	1978–79	1979–80	1980–81	1981–82
Average number of kilometres open for traffic	6,449	6,304	6,304	6,123	5,812
Gross revenue per average kilometre open	$ 27,391	30,315	36,585	41,853	44,769
Working expenses per average kilometre open	$ 51,614	55,235	62,343	73,212	87,961

Road motor services

The following table shows, for each of the years 1977–78 to 1981–82, particulars of the operations of the road motor services under the control of the Victorian Railways Board:

VICTORIA—ROAD MOTOR SERVICES
(Under the control of the Victorian Railways Board)

Particulars	1977–78	1978–79	1979–80	1980–81	1981–82
Bus kilometres	293,164	315,211	n.a.	n.a.	n.a.
Passenger journeys	621,000	569,200	453,121	456,300	501,000
Gross revenue	$ 82,497	87,779	84,182	91,997	148,405
Working expenses	$ 352,640	398,595	423,519	515,652	570,776
Capital expenditure at end of year *(a)*	$ 19,092	19,092	19,092	19,092	19,092

(a) From 1 July 1976, rather than being applied to assets as in the past, depreciation is being charged as working expenses.
NOTE. The apparent discrepancy between the amount of working expenses and revenue was brought about by revenue not having received a proportion of combined rail and road services earnings, while working expenses have been charged with road motor operating costs in full.

Tramway and omnibus services

Melbourne and Metropolitan Tramways Board

The Melbourne and Metropolitan Tramways Board was established by an Act of the Victorian Parliament in 1919, and on 1 November of that year took over the cable

tramway system then operating in Melbourne. It progressively acquired the assets and obligations of the various municipal tramway trusts which had been operating as separate bodies and merged them into a single tramway system for the metropolitan area. The Board embarked upon a programme of electric tramway construction and the conversion to electric operation of the previous cable tramway system, resulting in the formation of the tramway network which exists today.

The Melbourne and Metropolitan Tramways Act provides for a Board consisting of a chairman, a deputy chairman, and a member appointed by the Governor in Council. Subject to the direction of the Minister, the Board controls, manages, operates, and maintains the tramways of the Melbourne metropolitan area, and a fleet of passenger buses operating on routes authorised by the Transport Regulation Board.

The Board is at present carrying out an extensive fleet modernisation. At 30 June 1982, the Board had replaced its entire bus fleet of 267 route service vehicles. All these buses were manufactured in the last 7 years. Tram replacement is continuing at the rate of 26 vehicles per year. There were 196 new trams in service at 30 June 1982 and the current contract for 145 trams will raise that number to 260 vehicles.

The following two tables show an analysis of the Board's operations for each of the years 1977–78 to 1981–82:

VICTORIA—MELBOURNE AND METROPOLITAN TRAMWAYS BOARD: TRAMWAYS: OPERATIONS

Period	Track open at end of year		Tram kilometres	Passenger journeys	Operating receipts	Operating expenses	At end of year	
	Double	Single					Rolling stock *(a)*	Persons employed *(b)*
	kilometres	kilometres	'000	'000	$'000	$'000	number	number
1977–78	217	4	24,185	101,296	27,981	50,780	748	4,708
1978–79	220	4	24,191	101,070	29,836	57,331	750	4,749
1979–80	220	4	23,547	98,889	33,394	60,922	753	4,589
1980–81	220	4	24,062	100,474	39,840	72,242	741	4,571
1981–82	220	4	24,030	103,479	43,977	86,155	698	4,592

(a) Includes rolling stock in reserve or idle.
(b) Includes omnibus employees. Tramways employees not available separately.

VICTORIA—MELBOURNE AND METROPOLITAN TRAMWAYS BOARD: MOTOR OMNIBUS SYSTEMS: OPERATIONS

Period	Route kilometres	Bus kilometres	Passenger journeys	Operating receipts	Operating expenses	At end of year	
						Rolling stock *(a)*	Persons employed *(b)*
		'000	'000	$'000	$'000	number	number
1977–78	258	12,874	19,339	5,760	14,472	305	4,708
1978–79	276	12,879	19,927	6,264	16,523	278	4,749
1979–80	290	12,739	19,872	7,150	18,077	311	4,589
1980–81	291	13,162	21,017	9,023	21,116	270	4,571
1981–82	302	13,336	23,546	10,823	25,279	267	4,592

(a) Includes rolling stock in reserve or idle.
(b) Includes tramways employees. Omnibus employees not available separately.

The following three tables show an analysis of the Board's revenue and expenditure items for each of the years 1977–78 to 1981–82:

VICTORIA—MELBOURNE AND METROPOLITAN TRAMWAYS BOARD: REVENUE, EXPENDITURE, ETC.
($'000)

Particulars	1977–78	1978–79	1979–80	1980–81	1981–82
REVENUE					
Traffic receipts	33,546	35,654	39,894	48,192	53,923
Miscellaneous operating receipts	195	445	651	671	877
Non-operating receipts	551	569	591	705	795
Payment from drivers' licence suspense account	1,927	1,900	1,900	2,000	2,200
Total revenue	36,219	38,569	43,036	51,568	57,795

VICTORIA—MELBOURNE AND METROPOLITAN TRAMWAYS BOARD: REVENUE, EXPENDITURE, ETC.—*continued*
($'000)

Particulars	1977-78	1978-79	1979-80	1980-81	1981-82
EXPENDITURE					
Traffic operation costs	31,709	37,319	36,854	39,946	48,095
Maintenance—					
Permanent way	1,667	2,341	2,083	2,237	2,816
Tramcars	6,982	8,609	8,180	9,148	11,041
Buses	3,182	3,636	3,477	3,575	4,337
Electrical equipment of lines and sub-stations	1,511	1,882	1,835	2,052	2,575
Buildings and grounds	827	1,027	1,094	1,222	1,550
Electric traction energy	1,376	1,571	1,708	2,023	2,542
Fuel oil for buses	661	840	1,243	1,724	1,907
Bus licence and road tax fees	2	1	1	1	1
General administration and stores department costs	2,397	4,787	5,084	5,312	6,452
Pay-roll tax	2,281	2,427	2,494	2,994	4,191
Workers compensation payments	1,499	2,428	560	4,597	3,434
Depreciation	1,780	2,080	2,474	2,944	3,329
Non-operating expenses	241	268	285	279	277
Provisions—					
Long service leave	1,282	1,012	1,207	1,714	1,679
Retiring gratuities	2,122	1,759	1,976	2,355	2,295
Accrued sick leave	216	201	*(a)*	*(a)*	*(a)*
Public liability claims	1,317	1,423	2,020	2,161	2,413
Interest on loans	4,441	4,888	5,986	7,736	10,373
Leasing of rolling stock	—	479	724	1,617	2,404
Total expenditure	65,492	78,978	79,285	93,637	111,711
Net surplus (+) or deficit (-)	-29,273	-40,410	-36,249	-42,069	-53,916
Capital outlay	10,787	12,095	14,432	17,213	15,831
Loan indebtedness at 30 June	54,413	63,161	73,114	87,114	99,114

(a) This item is included in long service leave.

VICTORIA—MELBOURNE AND METROPOLITAN TRAMWAYS BOARD: TRAMWAYS: OPERATING RECEIPTS, OPERATING EXPENSES, ETC.

Period	Operating receipts			Operating expenses		Ratio operating expenses to operating receipts
	Amount	Per vehicle kilometre	Per passenger	Amount	Per vehicle kilometre	
	$'000	cents	cents	$'000	cents	per cent
1977-78	27,981	115.70	27.62	50,780	209.97	181.48
1978-79	29,836	123.34	29.52	57,331	236.99	192.15
1979-80	33,394	141.82	33.76	60,922	258.73	182.43
1980-81	39,840	165.57	39.65	72,242	300.24	181.33
1981-82	43,977	183.01	42.50	86,155	358.54	195.91

VICTORIA—MELBOURNE AND METROPOLITAN TRAMWAYS BOARD: MOTOR OMNIBUS SYSTEMS: OPERATING RECEIPTS, OPERATING EXPENSES, ETC.

Period	Operating receipts			Operating expenses		Ratio operating expenses to operating receipts
	Amount	Per vehicle kilometre	Per passenger	Amount	Per vehicle kilometre	
	$'000	cents	cents	$'000	cents	per cent
1977-78	5,760	44.74	29.78	14,472	112.41	251.25
1978-79	6,264	48.64	31.43	16,523	128.30	263.78
1979-80	7,150	56.13	35.98	18,077	141.91	252.82
1980-81	9,023	68.55	42.93	21,116	160.43	234.02
1981-82	10,823	81.16	45.96	25,279	189.55	233.57

Private motor omnibus services

The following table shows particulars of Victorian private omnibus services, including details of route operations, charter, schools, and other special services. In the year 1978–79, route operations accounted for 47.82 per cent of total distance travelled, while charter, school, and other special services accounted for 19.95, 30.66, and 1.57 per cent, respectively. In 1979–80, route operations accounted for 47.01 per cent of the total distance travelled, while charter, school, and other special services accounted for 19.76, 31.99, and 1.80 per cent, respectively. In 1980–81, route operations accounted for 45.96 per cent of the total distance travelled, while charter, school, and other special services accounted for 20.61, 31.25, and 2.18 per cent, respectively.

VICTORIA—PRIVATE MOTOR OMNIBUS SERVICES

Particulars	1976–77	1977–78	1978–79	1979–80	1980–81
Number of vehicles	3,310	3,341	3,436	3,494	3,477
Distance travelled ('000 kilometres)	103,342	103,342	106,021	109,314	111,884
	$'000	$'000	$'000	$'000	$'000
Revenue	61,045	67,049	74,438	89,178	102,504
Expenditure—					
Drivers' wages	22,908	25,547	27,558	30,872	35,323
Repairs and maintenance	7,934	8,777	9,713	10,497	12,430
Depreciation	3,677	4,215	4,567	5,009	5,502
Other	21,592	24,507	28,840	35,847	41,413
Total expenditure	56,111	63,046	70,678	82,225	94,668
Assets *(a)*—					
Motor vehicles	12,041	13,756	14,142	16,004	16,116
Other assets	18,290	20,306	24,166	29,468	30,395
Total assets	30,331	34,062	38,308	45,472	46,511
Liabilities *(a)*	17,332	20,119	22,029	27,320	27,677

(a) Incomplete. Assets and liabilities of operators engaged solely in school bus services are not available.

Tramways in provincial cities

Tramway services in Ballarat and Bendigo ceased on 19 September 1971 and 16 April 1972, respectively, to be replaced by privately operated bus services. Sections of the Ballarat and Bendigo systems were re-opened during 1972 as tourist attractions operating during weekends and holidays.

Further reference: Melbourne tramways 1930–1961, *Victorian Year Book* 1963, pp. 771–2

Country Roads Board

Introduction

The Country Roads Board, constituted under the *Country Roads Act* 1912, commenced operations in 1913.

There are about 160,000 kilometres of public roads in Victoria, of which some 23,700 kilometres comprise the State's principal system of Country Roads Board declared roads. Under the provisions of the Country Roads Act the Board may, subject to the confirmation of the Governor in Council, declare any road to be a State highway, a freeway, or a main road. The Board also has the power to recommend to the Governor in Council that any road be proclaimed as a tourists' road or a forest road.

The Board meets the full cost of works required to cater for the needs of through traffic on State highways, freeways, tourists' roads, and forest roads. State highways and freeways, while serving the immediate district through which they pass as arterial routes, also carry much long distance traffic. Tourists' roads and forest roads generally pass through areas where little or no rate revenue is available to the local municipality. Main roads, the construction and maintenance costs of which are partly borne by local municipal councils, form what may be described as a secondary system of important roads in Victoria. In addition, there is a vast network of unclassified roads, many of which carry considerable traffic and which, within the limits of available finance, are subsidised by the Board as needs and priorities warrant.

The Board's system of classified or declared roads at 30 June 1982 comprised 6,974 kilometres of State highways, 376 kilometres of freeways, 798 kilometres of tourists' roads, 1,030 kilometres of forest roads, and 14,585 kilometres of main roads.

In addition, the Board is responsible for the maintenance and operation of the West Gate Bridge.

State highways

Under legislation passed in 1924, a "State highway" in Victoria has a specific meaning. It is a road declared as such by the Board with the confirmation of the Governor in Council. State highways are the principal road arteries forming interstate connections and links between important provincial centres. The more important State highways also form part of the national route system of interstate highways. At 30 June 1982, there were 6,974 kilometres of State highways, 6,741 kilometres of which had a sealed surface.

National highways

A national highway is a road or proposed road that, in the opinion of the Commonwealth Minister for Transport, is or will be the principal road linking: (1) two or more State capital cities; (2) a State capital city and Canberra; (3) a State capital city and Darwin; (4) Brisbane and Cairns; or (5) Hobart and Burnie; or a road or proposed road that should, in the opinion of the Commonwealth Minister for Transport, be treated by reason of its national importance as a national highway.

The construction and management of national highways in Victoria is carried out by the Country Roads Board as the State's road authority. At present the Hume Highway and the Western Highway have been declared as national highways under the National Roads Act, excluding sections within the urban areas of Melbourne and Ballarat.

Long-term proposals for the Hume Highway include its development to a dual carriageway road from the outskirts of Melbourne to Wodonga. The completion of the freeway between Wallan and Broadford in mid-1976 extended the construction of dual carriageways from the outskirts of Melbourne to Seymour. Work has continued on the construction of the 9 kilometre Freeway bypass of Seymour from the south of Seymour to the now complete bypass of Avenel. This project is expected to be completed in mid-1983.

The Western Highway between Melbourne and Ballarat is being progressively developed to dual carriageway standard. Further work on the sections between Ballarat and Murray Bridge at the South Australian border is a long-term consideration. Work already commenced or completed includes the construction of a four-lane highway from the outskirts of Melbourne to west of Gordon. The completion of the by-pass of Wallace and Bungaree will provide a continuous four-lane carriageway between Melbourne and Ballarat. The project is expected to be completed in early 1983.

Developmental roads

A developmental road is a road or proposed road that, in the opinion of the Commonwealth Minister for Transport, is or will be of national importance due to its assistance to: (1) development of particular industries or energy resources (including those in remote areas of Australia); (2) interstate or overseas trade and commerce; or (3) significant tourist travel.

The construction and management of developmental roads in Victoria is carried out by the Country Roads Board. At the end of 1981, the only road in Victoria declared as a developmental road is the section of the Princes Highway between Dandenong and Traralgon.

Freeways

An amendment to the Country Roads Act in 1956 gave the Board power to construct bypass roads (freeways), the first constructed being the Maltby Freeway at Werribee, opened in 1961. Since then the development of freeways by the Board has continued with the opening of the West Gate Freeway; the Calder Freeway to Keilor; the Western Freeway from Deer Park to Melton and from Bacchus Marsh to Gordon; the Mulgrave Freeway from Warrigal Road, Chadstone, to north of Dandenong; the South Eastern Freeway; the South Gippsland Freeway; the Tullamarine Freeway; the Princes Freeway at Drouin, and between Moe and Morwell; the Princes Freeway between Melbourne and

Geelong; the Mornington Peninsula Freeway between Dromana and Rosebud, and between Keysborough and Seaford; the Frankston Freeway; sections of the Hume Freeway between Melbourne and Wodonga; and the Eastern Freeway from Collingwood to Balwyn North. The West Gate Freeway in South Melbourne and Port Melbourne, Princes Freeway bypasses of Berwick and Warragul, Western Freeway bypasses of Wallace and Bungaree, the Hume Freeway bypass of Seymour and the extension of the Calder Freeway beyond Keilor are under construction.

Some sections of freeway were developed from existing single carriageway State highways, while others were completely new routes adding to Victoria's total road length.

Tourists' roads

The Country Roads (Tourists' Roads) Act was passed in 1936. Under its terms, the Governor in Council, on the recommendation of the Country Roads Board, may proclaim suitable roads to be tourists' roads.

The Board constructs and maintains tourists' roads in, and leading to, places of special tourist interest in various parts of Victoria. Victoria has about 800 kilometres of proclaimed tourists' roads. The Board bears the full cost of works required to cater for the needs of through traffic, and generally carries out the works concerned.

The Great Ocean Road is the longest tourists' road in Victoria. For 207 kilometres, the road follows the rugged south-west coast from Torquay to Peterborough. The road was built by the Board for the Great Ocean Road Trust. The Trust's purpose was to open up the country to tourists and provide a road to connect the coastal towns. The road was built largely by returned soldiers and sailors of the First World War, and stands as a memorial to the servicemen in that war. The Great Ocean Road was completed in 1932 and proclaimed as a tourists' road in 1936.

Other tourists' roads that cater for holiday travellers include the Phillip Island Road (23 kilometres) and the Wilsons Promontory Road (31 kilometres).

In winter, the tourists' roads leading to Victoria's ski resorts carry many holiday travellers and ski enthusiasts. The major ski resorts are at Mt Hotham, Mt Buller, Falls Creek, and Mt Buffalo. The tourists' roads leading to these ski resorts are the Mt Buffalo Road (39 kilometres), the Mt Buller Road (27 kilometres), the Bogong High Plains Road (66 kilometres) to Falls Creek, and the Alpine Road (83 kilometres) to Mt Hotham. Each winter the Board's snow clearing teams keep these roads open to traffic. The Donna Buang Road (34 kilometres) and the Acheron Way (35 kilometres) lead to Mt Donna Buang.

The number of persons visiting the alpine resorts is increasing each year. The Board's task of maintaining the tourists' roads that lead to the State's resorts benefits both an important tourist industry and the people it serves. In winter and summer, travellers along many tourists' roads can enjoy scenic drives and take a break from driving by stopping at a roadside rest area or scenic lookout.

The Board, local councils, and other authorities have provided roadside stops with eating facilities, toilets, tables, and litter bins to give drivers and passengers an opportunity to stop in a pleasant roadside environment.

Forest roads

Forest roads proclaimed under the provisions of the Country Roads Act are situated within or adjacent to any State forest, or in areas considered by the Country Roads Board to be timbered, mountainous, or undeveloped.

The Board bears the full cost of works required to cater for the needs of through traffic, with about half the work being carried out by municipal councils on behalf of the Board.

The Board's proclaimed forest roads throughout Victoria have had an important effect on the growth of the State's timber extraction industry. Their most important use is in the transport of logs from the forest to the saw mills. About 520 kilometres of the State's 1,030 kilometres of forest roads are used for this purpose. A further 120 kilometres are used to transport sawn timber from the mills to markets. The other forest roads are used for carting local produce, posts, and firewood.

More than 90 per cent of Victoria's saw log and pulp wood production comes from State forests under licence from the Forests Commission, and the Board's forest roads

carry 28 per cent of that production. Many of the roads used for timber extraction are in isolated and mountainous areas and often become a financial burden for local councils because they earn very little rate revenue.

The Board was first given the power to declare forest roads under the *Forest Roads and Stock Routes Act* 1943. When the Country Roads Board takes over responsibility for such roads, municipalities are relieved of all the construction and maintenance costs for them. In 1980–81, Board expenditure on proclaimed forest roads was $2.4m, but grants could be made only for the most urgent works required. Grants for forest roads are allocated on the basis of need, and work priorities are determined by the Board.

The longest forest road in the State stretches 145.5 kilometres from Heyfield to Jamieson, winding through the Great Dividing Range. It is also Victoria's busiest forest road and carries the most timber. However, the road has only been open as a continuous link between Heyfield and Jamieson since 1969 when the Board completed construction of a 16 kilometre section near Mt Skene in the Great Dividing Range. The Heyfield–Jamieson Road provides an additional link between Gippsland and northern Victoria for tourist and commercial traffic as well as for logging trucks.

Main roads

The Board is empowered under the Country Roads Act to declare as a main road any road which in its opinion is of sufficient importance. Main roads are generally roads linking centres of industry, commerce, or settlement. At 30 June 1982, there were 14,585 kilometres of main roads in Victoria.

Rural roads

Victoria is the most densely populated State of Australia, with some 3,948,600 (preliminary estimate) persons at 30 June 1982 inhabiting 227,600 square kilometres. The pattern of Victoria's rural life has come to depend significantly on the rural road system. Since the development of the motor vehicle the demand placed on the road system has increased and rural commerce relies heavily on trucks using roads to carry produce to the railway yards, or directly to the ports.

On 1 January 1913, the Country Roads Act was proclaimed and after fifty years of unco-ordinated control, since the abolition of the Department of Roads and Bridges, the Act once more established a central road authority. The Victorian Government had previously allocated money for roads but, with no State wide body to co-ordinate road development, regional areas, particularly Gippsland, suffered from inequalities in the distribution of funds. When it was established in 1913, one of the first tasks of the new Country Roads Board was to evaluate the condition of roads in the Gippsland region of Victoria.

There are now about 140,000 kilometres of rural public roads in Victoria (excluding public roads in the Melbourne Statistical Division, the Geelong Statistical District, and the urban areas of Bendigo and Ballarat) of which some 21,800 kilometres comprise the principal rural system of Country Roads Board declared roads. In addition to its declared roads the Board, within the limits of available finance, subsidises works carried out by municipal councils on thousands of kilometres of unclassified roads.

Victoria's rural roads can be divided into three systems. The rural State highways are the principal arteries forming interstate connections and link the larger centres of population in the State. State highways such as the Hume, the Western, and the Princes connect Victoria's road system to the highways of the neighbouring States of New South Wales and South Australia. The Hume Highway between Melbourne and Wodonga, and the Western Highway between Melbourne and Ballarat, are being progressively upgraded to freeway standard. These highways form part of an Australia wide national highway network. During 1981–82, the Board spent $62.6m on State highways.

The second system consists of the main roads linking centres of population with other centres or with areas of industry, commerce, or settlement. These roads provide a means for primary producers and manufacturers to move their products to the nearest railway line or highway system, and also cater for recreational traffic. The third system comprises feeder roads, providing local access to farming or residential areas. Each system is co-ordinated with the other systems to enable vehicles, either private or commercial, to move freely between all points in the State.

West Gate Bridge

The *West Gate Bridge Authority (Transfer of Functions) Act* 1982 received Royal Assent on 29 June 1982, and came into operation soon afterwards. The purpose of the Act was to repeal the *West Gate Bridge Authority Act* 1980, and to confer powers on the Country Roads Board. These powers include the operation, maintenance, and repair of the West Gate Bridge, construction of ancillary works, and the financing of the functions and duties required to maintain and operate the Bridge.

Since the opening of the West Gate Bridge and up to 1 November 1982, a total of 37,484,738 crossings have been recorded, for all classes of vehicles.

Further references: *Victorian Year Book* 1975, pp. 661–2; 1981, pp. 549–50

Roadside development

Roads are among the most permanent structures on the landscape, and once built they cannot be considered apart from their surrounding environment. In recent years the Board has furthered the development of what is termed the complete highway to provide a balanced combination of safety, utility, economy, and beauty. Such factors as the preservation of flora, conservation of landscape features, rehabilitation of cleared areas, and erosion control are important aspects of the Board's road design practices. Some 80,000 trees and shrubs are planted each year on declared road reserves. The Board is also developing roadside stopping places for the convenience of travellers. These include rest areas with water and toilet facilities, wayside stops, scenic view points, and parking areas.

Sources of finance

The Board's two main sources of finance are Commonwealth and Victorian Government funds. Funds derived from Victorian Government sources are:

(1) *Motor registration fees.* Fees payable on the registration and re-registration of motor vehicles and trailers, less the costs of collecting the fees (excluding metropolitan omnibus registration fees and the specified proportion of registration fees paid to the Roads and Special Projects Fund).

(2) *Registration number plate fees.* Fees payable for the provision and/or replacement of number plates, less the costs of providing the plates and collecting the fees.

(3) *Examiners' licence fees.* Fees payable by persons licensed to conduct motor car roadworthiness examinations, less the cost of collection of the fees.

(4) *Authorised log book fees.* Fees payable for the purchase of log books, less the cost of providing the books and collecting the fees.

(5) *Learner drivers permit fees.* Seven-eighths of the permit fee and the permit extension fee payable by applicants for, and/or holders of, learner driver permits, less seven-eighths of the cost of collection of the fees (one-eighth less one-eighth cost of collection is paid to the Drivers' Licence Suspense Accounts).

(6) *Drivers' licence testing fees.* Seven-eighths of $4.00 of the fee payable for the test of proficiency of candidates for motor car drivers' licences less seven-eighths of the cost of conducting the test and collecting the fee (one-eighth of $4.00 less one-eighth of the cost of collection, is paid to the Drivers' Licence Suspense Account) and the amount of each fee above $4.00 is paid to the Consolidated Fund.

(7) *Motor car drivers' licence fees and tractor drivers' licence fees.* One-eighth of the fees payable for the issue of drivers' licences less one-eighth of the cost of collecting the fees. (One-half, less one-half cost of collection, is paid to the Consolidated Fund; one-quarter, less one-quarter cost of collection, is paid to the Municipalities Assistance Fund; and one-eighth, less one-eighth cost of collection, is paid to the Drivers' Licence Suspense Account.)

(8) *Motor driving instructors' appointment and testing fees.* Fees payable by candidates for motor driving instructors' licences, less the cost of collection of the fees.

(9) *Motor driving instructors' licence fees.* One-quarter of the fees payable for the issue of motor driving instructors' licences less one-quarter of the costs of collection of the fees. (One-half, less one-half cost of collection, is paid to the Consolidated Fund; and one-quarter, less one-quarter cost of collection, is paid to the Municipalities Assistance Fund.)

(10) *Unregistered vehicle permit fee.* A fee for the issue of a permit to use an unregistered motor car or trailer on a highway for a period of not more than seven days, less the costs of collection of the fee.
(11) *Proprietorship notification fee.* A fee payable with the notification by a proprietor of a motor car or trailer of repossession of the item under a hire purchase agreement, bill of sale or like instrument, less the costs of collection of the fee.
(12) Fines imposed under the provisions of the Country Roads Act.
(13) A proportion of the amount credited to the Roads and Special Projects Fund revenue raised from licence fees issued under the *Business Franchise (Petroleum Products) Act* 1979, and from a specified proportion of registration fees.

The Act adopted a franchise licensing system and provided for the raising of revenue for a licence fee payable by persons who carry on petroleum wholesaling or retailing in Victoria. Since 1 November 1981, the Act has required petroleum wholesalers to hold a licence, the monthly licence fee being $50, together with the payment of an amount of 5.4 per cent of the value of motor spirit and 8.6 per cent of the value of diesel fuel sold by the licence holder in the course of intrastate trade during the month, two months prior to the month to which the licence relates. Petroleum retailers are also required to hold a licence for which an annual fee of $50 is paid on a similar basis to the fee applicable to the petroleum wholesaler's licence, except that the *ad valorem* fee does not apply to fuel purchased by a petroleum retailer from a licensed petroleum wholesaler.

The Act also established a "Roads and Special Projects Fund" into which is to be paid an amount equal to the licence fees collected under the Act after deduction of costs of administration. The Act provides for money in the Roads and Special Projects Fund to be paid to the Country Roads Board Fund and to the Transport Fund as determined by the Minister of Transport with the proviso that the amount paid to the Country Roads Board Fund in each financial year shall not be less than 25 per cent of the amount credited under the Act during the financial year.

From 1 July 1980, motor vehicle registration fees previously directed to the Roads (Special Projects) Fund, which was established by section 7a of the *Motor Car Act* 1958, have been directed to the Consolidated Fund to be appropriated from that Fund to the Roads and Special Projects Fund. The Minister of Transport requires at least 75 per cent of the amount credited to the Roads and Special Projects Fund (from both motor vehicle registration fees and fuel franchise fees) during the financial year to be paid to the Country Roads Board Fund.
(14) Municipal payments on account of main road works.
(15) Any special money appropriated by the Victorian Parliament.
(16) Loan money.
(17) Toll money in respect to the West Gate Bridge.

Money is also provided from Commonwealth Government sources. Commonwealth Road Grants are provided to States for expenditure on national, arterial, and local roads, the categories being defined in the Commonwealth legislation. In 1981–82, receipts from the Commonwealth Government amounted to $137.8m.

From 18 August 1982, an extra Commonwealth surcharge of one cent a litre has been levied on motor spirit and diesel fuel excise under the Australian Bicentennial Road Development (ABRD) Programme to provide additional revenue for roads. The net revenue collected is paid into a specific trust fund for expenditure on the ABRD Programme and is allocated specifically to be spent on National, Urban Arterial, Rural Arterial, and Local Roads categories. The Board's share of the money collected under the ABRD Programme in 1982–83 is expected to be $34m. From 1 July 1983, the surcharge will rise to 2 cents a litre and will terminate on 31 December 1988.

Total funds available to the Board in 1981–82, including a balance of $0.6m brought forward from 1980–81 amounted to $346.5m.

Receipts and expenditure

Receipts and expenditure covering the operations of the Board for each of the years 1977–78 to 1981–82 are shown in the following table:

VICTORIA—COUNTRY ROADS BOARD: RECEIPTS AND EXPENDITURE
($'000)

Particulars	1977–78	1978–79	1979–80	1980–81	1981–82
RECEIPTS					
Fees—Motor Car Act (less cost of collection)	75,978	78,571	74,148	66,490	(a)95,515
Municipalities contributions: permanent works and maintenance—main roads	2,891	2,956	3,112	3,395	3,588
Commonwealth Government grants	98,980	105,652	113,631	127,362	137,841
Allocation from Roads (Special Projects) Fund	33,456	36,320	36,750	—	—
Transfer from Roads and Special Projects Fund	—	—	24,800	79,500	96,790
Redeemed investments	—	—	1,000	—	—
Proceeds from Commercial Goods Vehicles Act	9,818	9,577	1,487	—	—
Loans from Victorian Government	325	1,325	1,500	1,500	1,500
Grants from Victorian Government	581	463	114	77	124
Other receipts	1,924	2,194	2,478	6,842	3,490
Miscellaneous Funds Receipts (Natural Disasters)	—	—	—	—	7,075
Total	223,953	237,058	259,020	285,166	345,923
EXPENDITURE					
Construction, maintenance, etc., of roads and bridges	182,131	189,174	213,226	229,445	262,443
Plant purchases	2,059	2,857	3,998	2,551	3,144
Buildings, workshops, etc.	1,063	899	1,556	1,290	766
Interest and Sinking Fund payments	2,993	3,059	3,136	3,299	3,642
Payment to Tourist Fund	1,216	1,520	1,571	1,483	1,330
Payment to Transport Regulation Board	598	589	575	89	(a)14,996
Payment to Traffic Authority Fund	608	760	786	741	665
Payment to Melbourne and Metropolitan Tramways Board	356	535	500	500	500
Planning and research	2,817	3,722	4,839	4,966	4,700
Management and operating expenditure	29,102	29,903	33,412	40,767	45,447
Temporary investments	—	1,000	—	—	—
Repayment of advance *Country Roads Act* 1958 Sec. 31G	—	—	—	—	4,000
Total	222,943	234,019	263,599	285,131	341,633

(a) From 1 July 1981, the Board was required to pay an amount as determined by the Minister of Transport toward the cost of administration of the Transport Regulation Board in substitution for the cost of collection deduction previously made from revenue. The amount determined for 1981–82 was $14,995,800.

Expenditure on roads and bridges

The following table summarises the total expenditure by the Country Roads Board on roads and bridges during each of the years 1977–78 to 1981–82:

VICTORIA—COUNTRY ROADS BOARD: EXPENDITURE ON ROADS AND BRIDGES
($'000)

Particulars	1977–78	1978–79	1979–80	1980–81	1981–82
State highways—					
Construction	27,594	25,649	30,541	37,760	38,250
Maintenance	14,659	16,602	19,325	19,790	24,326
Freeways—					
Construction	51,551	56,055	61,561	63,884	72,128
Maintenance	2,912	3,231	3,789	3,752	4,856
Main roads—					
Construction	23,031	23,056	25,211	26,559	32,246
Maintenance	12,753	13,949	17,390	18,285	21,975
Unclassified roads—					
Construction	34,690	33,597	36,318	38,972	41,174
Maintenance	7,124	7,428	8,879	9,550	14,115
Tourists' roads—					
Construction	1,445	1,683	1,822	2,215	1,983
Maintenance	1,781	1,926	2,238	2,535	3,130

VICTORIA—COUNTRY ROADS BOARD: EXPENDITURE ON ROADS AND BRIDGES—*continued*
($'000)

Particulars	1977-78	1978-79	1979-80	1980-81	1981-82
Forest roads—					
Construction	687	745	770	550	871
Maintenance	930	1,053	1,208	1,411	1,547
Metropolitan bridges	—	502	13	—	—
Rail/road bridges protection	456	563	439	728	1,034
State Intersection Control Programme	625	745	946	—	—
Murray River bridges and punts	287	566	636	738	1,248
Traffic line marking	1,606	1,824	2,140	2,716	3,558
Total construction	138,998	140,785	156,223	169,940	186,653
Total maintenance	40,159	44,189	52,829	55,323	69,949
Total other	2,974	4,200	4,174	4,182	5,840
Total expenditure	182,131	189,174	213,226	229,445	262,443

Loan liability to the State

The loan liability of the Board to the Victorian Government at 30 June 1982 was $26.2m.

Motor vehicles

Registration, licences, etc.

Every motor car and motor cycle must be registered with the Chief Commissioner of Police if used on Victorian roads, as well as all trailers (except agricultural implements and certain small trailers for private use), fore-cars, and side-cars drawn by or attached to motor cars or motor cycles.

VICTORIA—REGISTRATION AND LICENCE RATES AT 1 JANUARY 1982

Type of registration or licence	Annual rate
REGISTRATION	
Motor cycle	$7.60 plus $2.00 surcharge *(a)*
Motor car (private use)	$1.15 for each power-weight unit *(b)* plus $2.00 surcharge *(a)* (Pension concession rate is half fee)
Motor car (private and business use)	$1.40 for each power-weight unit *(b)* plus $4.00 surcharge *(a)*
Trailer (attached to motor car)	From $7.80 each, according to the unladen weight and use
Motor car (used for hire as special service omnibus and touring omnibus)	From $1.40 to $1.65 for each power-weight unit *(b)* according to the unladen weight plus $4.00 surcharge *(a)*
Motor car (commercial passenger vehicles) operating on an omnibus service	$2.65 plus $4.00 surcharge *(a)*
Motor car (commercial passenger vehicles) operating on a temporary school service licence	$27.75 plus $4.00 surcharge *(a)*
Motor car (used for carrying passengers or goods for hire or in the course of trade)	From $2.20 to $4.05 for each power-weight unit *(b)* according to the unladen weight plus $4.00 surcharge *(a)*
Motor car (constructed for the carriage of goods) owned by primary producer and used solely in connection with his business	$60.00 plus $2.00 surcharge *(a)* where tare is less than 3,000 kg $120 plus $2.00 surcharge *(a)* where tare is 3,000 kg or more
Mobile crane, self-propelled (used otherwise than for lifting and towing vehicles)	$49.90 plus $4.00 surcharge *(a)*
Recreation vehicle	$3.00 for vehicle with not more than 3 wheels, in any other case $10.00
LICENCE	
Driver's or rider's licence	$30.00 issued for a three year period (an appointment fee of $5.00 and testing fee of $10.00 is payable by all applicants for new licences)

VICTORIA—REGISTRATION AND LICENCE RATES AT 1 JANUARY 1982—*continued*

Type of registration or licence	Annual rate
	LICENCE—*continued*
Learner's permit	$5.00 for twelve months and $5.00 for a three month extension, if required. Appointment and testing fees as above, are also payable
Instructor's licence	$100.00 issued for a three year period

(a) Surcharges apply to registrations or re-registrations effected on and after 1 August 1972 and renewals due on and after that date.
(b) The number of power-weight units is that number which is equal to the sum of the horsepower and the weight in 50-kilogram units of a motor car unladen and ready for use.
NOTE. The minimum annual fee for the registration of any motor vehicle other than a motor cycle is $21.90.

VICTORIA—DRIVERS' AND RIDERS' LICENCES IN FORCE AT 30 JUNE

Type of licence	1978	1979	1980	1981	1982
Drivers'	1,945,501	1,999,646	2,046,331	2,099,421	2,164,116
Riders'	70,562	72,526	74,138	82,293	91,323
Total	2,016,063	2,072,172	2,120,469	2,181,714	2,255,439

The following table shows the number of motor vehicles on the register by type. Particulars of Australian Government-owned vehicles, with the exception of defence service vehicles, are included. Tractor-type vehicles, plant, and trailers are excluded.

VICTORIA—NUMBER OF MOTOR VEHICLES ON REGISTER BY TYPE OF VEHICLE

Type of vehicle	Census, 31 December 1962	Census, 30 September 1971 *(a)*	Census, 30 September 1976 *(a)*	Census, 30 September 1979 *(a)*	At 30 June 1981
Motor cars	610,974	929,477	1,222,733	1,314,015	1,379,926
Station wagons	69,528	201,884	233,480	240,386	252,608
Utilities	94,470	89,764	104,538	109,216	113,900
Panel vans	31,851	46,539	46,980	54,905	56,997
Trucks—					
Rigid	76,591	79,386	117,764	127,768	136,756
Articulated		9,417	9,766	10,377	11,090
Other truck type vehicles	2,890	3,520	4,867	9,833	10,492
Buses	3,409	5,129	7,294	8,995	9,914
Motor cycles	15,802	28,160	51,931	48,502	64,214
Total	905,515	1,393,276	1,799,353	1,923,997	2,035,897

(a) Revised classifications of motor vehicles were adopted for the censuses of motor vehicles at 30 September 1971, 1976 and 1979. Classifications used in 1979 are the same as those for 1976.
The principal differences between the new classification for 30 September 1971 and that at 31 December 1962 were:
(i) Utilities and panel vans include "light commercial type vehicles" and trucks with a carrying capacity under 1.016 tonnes, and ambulances and hearses (which were previously included under motor cars).
(ii) "Rigid trucks" include utilities and panel vans with a carrying capacity of 1.016 tonnes and over.
(iii) "Other truck type vehicles" consist of those truck type vehicles which are designed for purposes other than freight carrying, e.g., street flushers or fire engines. Previously, this category incorporated vehicles such as tankers and concrete agitators which are now classified as "trucks".
The 1976 and 1979 Motor Vehicle Censuses have as their main features:
(i) Allocation of commercial vehicles to the categories "utilities", "panel vans", or "rigid trucks" solely on the basis of the body type as recorded by the registration authority.
(ii) The inclusion in "other truck types" of ambulances, hearses, and motorised caravans.
Direct comparisons, therefore, between the four censuses can only be made for the categories station wagons, buses, and motor cycles. However, for comparative purposes "light commercial type vehicles—open" registered at 30 September 1971 have been included in the classification utilities and "light commercial type vehicles—closed", registered at the same date, are included in the classification panel vans. Trucks and other truck types registered at 31 December 1962 have also been included under similar headings but attention is drawn to the changes in definition of those categories outlined above.

The following tables, showing new vehicle registrations by types and makes of vehicles, include details of Australian Government-owned vehicles (other than those of the defence services):

VICTORIA—REGISTRATIONS OF NEW MOTOR CARS AND STATION WAGONS ACCORDING TO MAKE
(Includes Australian Government-owned vehicles other than those of the defence services)

Make	Motor cars				Station wagons			
	1978–79	1979–80	1980–81	1981–82	1978–79	1979–80	1980–81	1981–82
Alfa Romeo	584	501	492	546	—	—	—	—
Audi	282	71	82	98	—	—	—	—
B.M.W.	374	476	653	737	—	—	—	—
Chrysler *(a)*	8,282	8,646	3,307	37	2,218	3,029	1,270	9
Daihatsu	—	177	660	629	—	2	1	—
Datsun	12,348	10,709	10,316	11,217	1,113	1,635	2,377	2,925
Fiat	422	212	177	198	52	35	20	10
Ford	22,575	20,248	19,182	24,572	5,402	4,842	4,539	4,847
Holden	29,070	25,963	23,126	24,670	4,845	5,251	5,181	5,555
Honda	1,864	2,373	1,861	1,424	31	131	245	104
Jaguar	272	205	244	135	—	—	—	—
Leyland	583	23	12	2	1	3	5	11
Mazda	6,971	8,788	9,732	8,174	1,058	839	873	511
Mercedes Benz	883	574	663	914	—	41	68	69
Mitsubishi *(a)*	—	—	6,437	8,762	—	—	2,337	4,523
Peugeot	782	478	593	606	66	55	51	60
Renault	540	387	233	169	258	142	108	61
Rover	317	259	209	147	211	139	223	261
Saab	138	153	114	133	—	—	—	—
Subaru	173	422	670	792	384	684	845	1,107
Toyota	13,245	12,668	12,596	11,921	4,251	2,908	2,884	3,727
Triumph	403	44	78	26	—	—	—	—
Volkswagen	572	338	123	54	17	19	24	12
Volvo	1,188	1,055	1,139	1,214	375	347	315	334
Other	689	574	485	484	122	121	149	173
Total	102,557	95,344	93,184	97,661	20,404	20,223	21,515	24,299

(a) As a result of the purchase in April 1980, of Chrysler Australia by Mitsubishi Motors Corporation, all vehicles produced, imported, and sold by the new company from October 1980 have borne the name "Mitsubishi".

VICTORIA—REGISTRATIONS OF NEW MOTOR VEHICLES OTHER THAN MOTOR CARS, STATION WAGONS, AND MOTOR CYCLES ACCORDING TO MAKE
(Includes Australian Government-owned vehicles other than those of the defence services)

Make	1980–81				1981–82			
	Utilities	Panel vans	Other	Total	Utilities	Panel vans	Other	Total
Bedford	—	10	357	367	—	1	108	109
Chrysler *(a)*	28	4	27	59	—	—	1	1
Daihatsu	214	21	454	689	146	82	690	918
Datsun	1,252	168	1,053	2,473	1,731	101	1,669	3,501
Dodge *(a)*	2	—	34	36	—	—	3	3
Ford	1,311	1,473	1,483	4,267	1,591	836	2,055	4,482
Holden	1,548	1,107	719	3,374	1,898	872	1,097	3,867
International	10	—	861	871	6	—	880	886
Isuzu	237	3	802	1,042	21	3	949	973
Leyland	197	4	184	385	165	—	130	295
Mazda	217	245	1,011	1,473	287	319	1,401	2,007
Mitsubishi *(a)*	215	47	639	901	441	150	1,202	1,793
Nissan	69	11	194	274	24	—	106	130
Suzuki	230	508	670	1,408	311	436	741	1,488
Toyota	1,373	227	3,262	4,862	1,562	491	3,453	5,506
Volkswagen	—	3	60	63	1	2	78	81
Volvo	—	6	66	72	—	1	159	160
Other	223	8	1,074	1,305	198	2	1,117	1,317
Total	7,126	3,845	12,950	23,921	8,382	3,296	15,839	27,517

(a) As a result of the purchase in April 1980, of Chrysler Australia by Mitsubishi Motors Corporation, all vehicles produced, imported, and sold by the new company from October 1980 have borne the name "Mitsubishi".

Transport Regulation Board

Introduction

The *Transport Regulation Act* 1932 set up a Board of Inquiry to investigate Victoria's land transport problems. The recommendations of this Board led to the constitution of the Transport Regulation Board in 1934. The Board, consisting of a chairman, a primary producers' representative, and a representative of commercial interests outside a radius of 40 kilometres from the G.P.O., Melbourne, is a statutory authority originally constituted "for the purpose of securing improvement and co-ordination of means of and facilities for locomotion and transport" and for the purposes of carrying into effect the provisions of specific legislation in this field. Although by later amending legislation a Ministry of Transport was established with particular functions, the Board's functions as a licensing authority are still to channel the evolution of road transport in the interests of the most efficient use of community resources.

The *Motor Registration Act* 1980 has broadened the scope of the Board by authorising the amalgamation of the Transport Regulation Board and the Motor Registration Branch and in so doing, conferred on the Board the responsibility for the licensing and registration of motor vehicles and licensing of drivers effective from 29 April 1981.

To give the Board additional expertise, the Act also provided for the expansion of its membership from three members to five, effective from 9 July 1980, the two additional members being the Chief Commissioner of Police and the Chairman of the Country Roads Board, or their respective nominees.

VICTORIA—TRANSPORT REGULATION BOARD: LICENCES ISSUED: SUMMARY OF FINANCIAL OPERATIONS

Particulars	1977–78	1978–79	1979–80	1980–81	1981–82*(a)*
Licences issued "as of right"—					
40 kilometres of Melbourne	24,417	25,514	25,539	r26,489	—
40 kilometres of Ballarat, Bendigo, or Geelong	2,699	2,765	2,750	r2,743	—
40 kilometres of owner's place of business	11,254	11,777	12,092	r12,224	—
Primary producers (vehicles over 2 tonnes load capacity)	16,955	17,515	18,167	r18,939	—
Butter, milk, and cheese factories	513	499	492	r448	—
80 kilometres of owner's place of business (vehicles up to 6 tonnes load capacity)	29,181	28,353	27,357	r26,733	—
State-wide rights for carriage of own goods (vehicles not exceeding 500 kilograms)	19,034	19,364	19,186	r17,785	—
Third Schedule (basically perishable commodities)	8,040	7,938	7,675	r7,676	—
Approved decentralised secondary industries	2,061	2,293	2,415	r2,477	—
80 kilometres of Melbourne	558	578	588	r655	—
80 kilometres of Portland	55	50	53	r75	—
Bulk tankers—petroleum products	504	553	563	r528	—
"Discretionary" licences—					
Passenger—					
Omnibuses	3,827	3,897	3,966	4,039	4,173
Taxis and hire-cars	3,555	3,559	3,563	3,566	3,582
Omnibus temporary/special	192	190	201	219	246
Goods	10,094	10,175	8,551	5,714	*(b)* 759
Goods—passenger	14	11	10	9	7
Total licences issued	132,953	135,031	133,168	r130,319	8,767
Financial transactions—	$'000	$'000	$'000	$'000	*(c)* $'000
Revenue	8,298	8,619	8,797	r9,560	—
Expenditure	7,954	8,447	8,525	9,351	—
Levy to Transport Fund	681	703	736	—	—
Balance	-337	-531	-464	r+209	—
Collections—					
Road maintenance contributions collected and transferred direct to Country Roads Board	9,819	9,587	1,487	—	—
Motor boat registration fees collected and paid to Tourist Fund	1,036	1,026	1,099	1,116	1,140
Log book fees	15	19	21	22	25

(a) Effect of the Transport (Deregulation) Act 1980.
(b) Tow truck licences only.
(c) Transport Regulation Board operations are now combined with those of the Motor Registration Branch.

Licences, permits, and drivers' certificates

During the year ended 30 June 1982, there were 2 new tow truck licences issued and at 30 June 1982 there were 759 licences on record. For the year ended 30 June 1982, there were 6,035 new drivers' certificates issued: 4,344 commercial passenger, 1,208 private omnibus, and 483 tow truck.

Buses

Commercial buses at 30 June 1982 totalled: metropolitan 1,625, urban 114 (Ballarat 36, Bendigo 20, and Geelong 58), country 2,293, touring omnibus 141, and temporary special licence 246.

Taxis and hire-cars

Taxis and hire-cars at 30 June 1982 totalled: metropolitan 2,936, urban 201 (Ballarat 50, Bendigo 37, and Geelong 114), and country 444.

Passenger fares

At 30 June 1982, adult bus fares were 35c, 50c, and 60c, respectively, for the first three sections travelled, rising to 70c for sections 4 and 5, 85c for sections 6 and 7, 95c for sections 8 to 10, and thereafter by various amounts.

In October 1981 a new zone based multi-mode ticketing system known as "Travelcard" was introduced, one ticket enabling travel on trains, trams, tramway buses, and private buses on a zonal fare basis.

Since 1 October 1975, there have been two tariffs operating for taxi fares. The second tariff represents a 20 per cent loading on the normal meter distance charge and applies between 9.00 p.m. and 6.00 a.m. Monday to Saturday (6.00 p.m. and 6.00 a.m. in country areas), 1.00 p.m. Saturday to midnight Sunday, and on public holidays. Taxi fares at 30 June 1982 were $1.00 flagfall (including the first 240 metres on tariff 1 and the first 192 metres on tariff 2), plus 10c for each additional 240 or 192 metres for tariff 1 or tariff 2, respectively.

Goods and passenger applications

For the year ended 30 June 1982, the Board heard 62 passenger applications at public hearings. The majority of applications were determined and settled without the need for a public hearing, and numbered 3,439 cases.

Motor boats

The Board is responsible for the registration of motor boats (under 20 metres in length) and for keeping records of ownership. Fees collected from motor boat registrations totalled $1,139,523 during 1980–81. These fees, less the cost of collection and administration of the Motor Boating Act, are paid into the Tourist Fund administered by the Department of State Development, Decentralization and Tourism. At 30 June 1982 there were 97,479 motor boats registered by the Board.

Commercial freight transport

In 1976, the Victorian Government decided that transport regulation in its present form would be progressively phased out within five years, and that road and rail services would eventually operate in a competitive condition. Since that time the Board has been required to administer existing legislation so as to provide the Victorian Railways with the opportunity to adjust to the changes that would occur in a more competitive environment.

The *Transport (Deregulation) Act* 1980 was passed in December 1980 amending the *Transport Regulation Act* 1958. The Act provided for an as-of-right system of licensing (except for tow truck and VicRail road operations), giving State wide operating rights automatically upon registration of a goods carrying vehicle (effective from 1 July 1981). Protection of major bulk railway traffics, notably grain and bulk petroleum products, were retained.

Passenger services

The Victorian Government's financial assistance scheme for private operators of route bus services continued to be administered by the Board during 1981–82. A revised subsidy scheme was introduced from 1 July 1979 for metropolitan and urban services based upon

a payment for each timetabled bus hour operated. The new subsidy scheme forms the basis for contracts with operators.

For country areas, operators continued to receive a subsidy based on a percentage of route fare revenue. The cost of maintaining the fare subsidy schemes was $16.7m in 1981–82, bringing total subsidies paid since the introduction of the financial assistance scheme in October 1974 to $74.5m.

Taxi industry

The licensing and organisation of Melbourne taxis was the subject of an inquiry by the Board in October 1978. Following the inquiry, metropolitan and suburban taxis operated experimentally under identical rights for a period of 18 months.

After reviewing the effects of the experiment, the Board decided that the common operating rights should be made permanent, effective from 1 June 1980. At 30 June 1982 325 of the 986 suburban taxi licences have been converted to metropolitan taxi licences.

Enforcement

Enforcement action relating to the provisions of the Transport Regulation Act and the Transport Consolidated Regulations is the responsibility of the Board's field staff comprising inspectors located at Head Office and its twelve regional offices. In addition, the Board is considerably involved in other legislation which its officers are empowered to enforce, including the Motor Car Act and Regulations and the Road Traffic Act and Regulations as they relate to commercial road transport.

VICTORIA—TRANSPORT REGULATION BOARD:
PROSECUTIONS TAKEN TO COURTS UNDER ENFORCEMENT LEGISLATION

Acts or Regulations	1977–78	1978–79	1979–80	1980–81	1981–82
Transport Regulation Act (Passenger)	91	192	132	129	90
Commercial Goods Vehicles Act—Part 1	1,649	1,420	1,712	1,733	*(a)* 44
Transport Consolidated Regulations 1977	211	252	267	363	298
Motor Car Act	1,681	1,652	1,948	2,426	2,152
Motor Car Regulations	291	175	382	375	507
Road Traffic Regulations	232	163	242	371	385
Summary Offences Act	2	3	2	4	3
Magistrates' Court Act	—	20	7	—	2
Total	4,157	3,877	4,692	5,401	3,481

(a) Effect of the *Transport (Deregulation) Act* 1980.

Tow trucks

In July 1979, the Board conducted an inquiry into the operation and control of tow trucks in Victoria. This inquiry was established after interested parties had endorsed proposals for an inquiry into the rationalisation of the accident towing industry which was recommended by a representative committee comprising members of the towing industry, panel repair industry, insurance companies, police, social protection groups, and Board officers.

Following the inquiry, a working party was established with representation from the Victorian Automobile Chamber of Commerce, the Royal Automobile Club of Victoria, and the Transport Regulation Board to develop measures by which the attendance of tow trucks at accident scenes could be better controlled.

Special attention was given to the development of a central communications system, using the facilities of the Royal Automobile Club of Victoria to allocate work. The Accident Towing Allocation Scheme commenced operation on 1 September 1982, and its functions have been monitored by a steering committee provided for in the Transport Consolidated (Towtruck) Regulations 1982.

Road Safety and Traffic Authority

The Road Safety and Traffic Authority (RoSTA) has the responsibility of framing policies for the safe and orderly movement of traffic and pedestrians on Victorian roads and implementation of such policies as directed by the Victorian Government. The Authority's functions under the Road Traffic Act are to carry out research and

investigation into road accident prevention; promote road accident prevention practices; request municipal councils to adopt specific practices; and advise the Minister of Transport on accident prevention policies, regulations, and any matter for the improvement of traffic conditions or control. These functions embody those of the former Traffic Commission which the Authority replaced in March 1971.

Since 1958, the Authority has received from the Victoria Police a comprehensive statistical record of reported road accidents involving casualties and certain types of property damage accidents. This information forms the basis of the State Traffic Accident Record.

A part of the State Traffic Accident Record, Accidents by Location, which shows reported accidents by location and road user movement has been produced on an annual basis since 1968. Interim accumulative statistics are provided on a quarterly basis and supplied to highway authorities approximately two months after the end of the quarter. The information contained in the State Traffic Accident Record is also used as a basis for research into road accidents, for advice to the Victorian Government and the Parliamentary Road Safety Committee, as well as to highlight areas where promotion of road safety practices and the development of accident countermeasures is required.

Further reference: ***Victorian Year Book*** **1977, pp. 670–1**

Motor Accidents Board

The Motor Accidents Board of Victoria administers a "no fault" motor accident compensation scheme. This scheme excludes any attempts to introduce degrees of fault, allocation of negligence, and similar concepts. It was the first of its type in Australia and is proving of interest overseas.

The "no fault" concept is a fundamental departure from the law of tort. Such are the complexities and numbers of accidents in current society, many of which are not related to negligence or fault, that payment of some compensation is seen as a social liability paid for by the motor vehicle owners.

The beginning of the Victorian Government's move for a "no fault" system of motor accident compensation was in the recommendation of two committees, the first appointed to report on methods of reducing the time involved and the high costs of litigation procedures, and the second to draw up in draft detailed provisions for "no fault" benefits and administration. The Motor Accidents Act, which embraced most of the second committee's recommendations concerning a "no fault" system, received Royal Assent in April 1973. Its administrative provisions, including appointment of the Board, were enacted in September 1973, and benefits began to operate from 12 February 1974. The total amount of benefits paid by the Board to 30 June 1982 was $247,707,143.

Road traffic accidents

The following tables include particulars of those road traffic accidents reported by the Victoria Police during the periods specified, which satisfied the following conditions:

(1) That the accident occurred on any road, street, lane, thoroughfare, footpath, or place open to or used by the public by right or custom, at the time of the accident;

(2) that it involved:

- (i) any road vehicle which, at the time of the accident, was in motion; or
- (ii) any animal which, at the time of the accident, was in motion and was being used for the purpose of transportation or travel; or
- (iii) any train passing over a level crossing for the time being open to the public; and

(3) that the accident resulted in:

- (i) death of any person within a period of thirty days after the accident; or
- (ii) bodily injury to any person to an extent requiring surgical or medical treatment.

While there is a requirement for accidents involving a casualty to be reported to the Victoria Police, in practice not all such accidents are so reported, particularly where injury of minor severity has occurred, and there is some evidence of understatement in recent years of the numbers of accidents and persons injured compared with earlier years.

The tables do not include figures of accidents on railway lines (except at level crossings), or on private property. For these and other reasons, the total number of deaths shown in these tables is not comparable with that shown on page 189.

VICTORIA—ROAD TRAFFIC ACCIDENTS INVOLVING CASUALTIES: NUMBER OF PERSONS KILLED OR INJURED

Period	Number of accidents	Persons killed	Persons injured	Per 100,000 of mean population		
				Number of accidents	Persons killed	Persons injured
1977–78	14,964	926	20,243	r388	24	r525
1978–79	14,758	842	r20,056	r381	22	r518
1979–80	14,644	785	19,504	r376	20	r501
1980–81	15,576	713	20,765	396	18	528
1981–82	15,642	717	20,723	394	18	522

The table which follows provides a description of types of road users killed or injured in road traffic accidents occurring during the years 1978–79 to 1981–82:

VICTORIA—ROAD TRAFFIC ACCIDENTS INVOLVING CASUALTIES: DESCRIPTION OF PERSONS KILLED OR INJURED

Description	1978–79		1979–80		1980–81		1981–82	
	Killed	Injured	Killed	Injured	Killed	Injured	Killed	Injured
Drivers of motor vehicles	307	8,502	292	8,132	266	8,747	246	8,792
Motor cyclists	78	1,555	63	1,633	56	1,903	78	2,037
Passengers (any type)	232	7,056	214	6,642	189	6,887	200	6,701
Pedestrians	200	1,990	165	1,969	174	2,064	153	1,998
Pedal cyclists	23	921	49	1,103	25	1,132	38	1,155
Other	2	32	2	25	3	32	2	40
Total	842	20,056	785	19,504	713	20,765	717	20,723

Particulars of victims of road traffic accidents during the years 1978–79 to 1981–82 are shown according to their ages in the following table:

VICTORIA—ROAD TRAFFIC ACCIDENTS INVOLVING CASUALTIES: AGES OF PERSONS KILLED OR INJURED

Age group (years)	1978–79		1979–80		1980–81		1981–82	
	Killed	Injured	Killed	Injured	Killed	Injured	Killed	Injured
Under 5	28	499	22	460	28	466	23	445
5 and under 7	11	351	11	280	15	326	10	289
7 and under 17	67	2,277	73	2,137	44	2,288	66	2,306
17 and under 21	138	4,025	132	4,043	138	4,246	135	4,102
21 and under 30	180	4,854	189	4,816	160	5,265	170	5,309
30 and under 40	107	2,423	74	2,368	81	2,564	77	2,690
40 and under 50	78	1,551	58	1,479	53	1,588	45	1,675
50 and under 60	82	1,410	70	1,366	59	1,380	52	1,339
60 and over	148	1,613	155	1,481	133	1,586	138	1,517
Not stated	3	1,053	1	1,074	2	1,056	1	1,051
Total	842	20,056	785	19,504	713	20,765	717	20,723

Further references: Australian Road Safety Council, *Victorian Year Book* 1966, p. 761; Traffic Commission, 1971, pp. 741–2; Board of Inquiry into Land Transport in Victoria, 1975, p. 634; Transport in the Victorian environment, 1979, 1–26; Recent trends in road transport, 1982, pp. 536–7

SEA TRANSPORT

Shipping

Introduction

During the 1830s, settlers quickly found that, because of the lack of roads, sea transport was essential in and between the settlements of the Port Phillip District. Despite the rapid growth and spread of speedier land transport in the next one hundred years, the size of Port Phillip Bay encouraged the regular use of ships to a greater extent than other coastal

areas of the State. Cargoes from the western region included dairy products, livestock, and timber, and from the eastern region, fish. Servicing of the goldfields at Walhalla and the Tambo Valley was also provided by way of Port Albert.

The Port of Melbourne was established in 1877 when the Melbourne Harbor Trust Commissioners was constituted as the port authority under the Melbourne Harbor Trust Act. The port expanded with the growth of Victoria's population and consequent trade also utilised facilities at Geelong and Portland.

The Pool of Melbourne opposite the Customs House and other Yarra River and Bay berths were crowded with the masts of sailing ships and Victoria became associated with the clipper classic, the annual grain race. By the early years of the twentieth century sail had been superseded by coal and oil fuels, with their accompanying dock, bunkering, and maintenance requirements.

In the years following the Second World War, Australian shipowners revised their trading practices as a result of vigorous competition from land-based transport operators. Consequently, the entire coastal trade by sea was transformed, and ships modified to make them more useful as a means of transportation around the coast.

One of the results of this trend was the expansion of the bulk cargo trade to include goods, such as sugar, as well as various oils and oil products. Later, unit loads and containers with improved handling facilities on both ship and shore were introduced. These new methods led to the specialised ship, exclusively designed and equipped to meet requirements of the particular trade. These were the roll on-roll off stern loading ships for cargo packed on road vehicles, and the container ship designed for containerised cargo and other unit loads.

New packaging and cargo handling methods, as well as new ships, are bringing changes to port facilities, where specially designed wharves, equipment, and port modifications are matching the new concepts in ship and cargo handling around the Australian coast and the demands of Australian overseas trade.

The types of cargo handled by the other major Victorian ports still reflect proximity to the rural sectors of the State, with wheat and wool exports being made from Geelong and Portland. Western Port has developed in the last decade as a major port for petroleum products and steel with the development of secondary industry in the region surrounding the port. The Port of Melbourne, with its expanded container handling facilities, caters for all types of cargo for both the coastal trade and overseas trade.

Searoad service between Victoria and Tasmania

The following table shows details of the searoad service operated by the Australian Shipping Commission between Victoria and Tasmania during the years 1978–79 to 1981–82:

VICTORIA—TASMANIA: SEAROAD SERVICE *(a)*

Vessel	Passengers				Accompanied vehicles			
	1978–79	1979–80	1980–81	1981–82	1978–79	1979–80	1980–81	1981–82
Empress of Australia	112,320	111,196	120,072	121,361	32,058	31,509	36,188	36,048

(a) Excludes commercial cargo which consists of unit loads, i.e., containers, trailers, timber packs, etc.

Statistics

Production of statistics of coastal shipping (interstate and intrastate) ceased from July 1978. Statistics appearing in tables below relate only to international voyages and overseas cargo.

Vessel arrivals and departures

The following table shows vessel movements to and from Victoria for the period 1976–77 to 1980–81. "Vessel calls" are so defined that a vessel is counted each time it arrives at or departs from a Victorian port. "Deadweight tonnage" refers to the total weight (in tonnes) of cargo, stores, fuel, passengers, and crew carried by a ship when loaded to its maximum summer waterline.

VICTORIA—OVERSEAS SHIPPING: VESSEL ARRIVALS AND DEPARTURES

Particulars	1976–77	1977–78	1978–79	1979–80	1980–81
Arrivals—					
Vessel calls	2,103	1,548	1,551	2,220	2,431
Deadweight tonnage ('000 tonnes)	n.a.	n.a.	n.a.	46,710	50,980
Departures—					
Vessel calls	2,048	1,540	1,566	2,257	2,469
Deadweight tonnage ('000 tonnes)	n.a.	n.a.	n.a.	47,740	52,492

Particulars of vessel movements at Victorian ports are shown in the following table for the years 1978–79 to 1980–81:

VICTORIA—OVERSEAS SHIPPING: VESSEL ARRIVALS AND DEPARTURES BY PORT

Particulars	Melbourne			Geelong			Western Port			Portland		
	1978–79	1979–80	1980–81	1978–79	1979–80	1980–81	1978–79	1979–80	1980–81	1978–79	1979–80	1980–81
Arrivals—												
Vessel calls	1,137	1,637	1,820	218	283	266	112	159	217	84	141	128
Deadweight tonnage ('000 tonnes)	n.a.	30,922	35,158	n.a.	7,600	6,715	n.a.	3,942	5,915	n.a.	4,246	3,192
Departures—												
Vessel calls	1,156	1,695	1,868	219	271	262	107	152	212	84	139	127
Deadweight tonnage ('000 tonnes)	n.a.	32,508	36,805	n.a.	7,313	6,733	n.a.	3,703	5,741	n.a.	4,215	3,213

Nationality of shipping

The country of registration of a vessel is the country in which a vessel is registered according to Lloyd's Register of Shipping. The countries of registration of vessels which arrived at or departed from Victorian ports during 1980–81 were as follows:

VICTORIA—OVERSEAS SHIPPING: VESSEL MOVEMENT BY COUNTRY OF REGISTRATION, 1980–81

Country of registration	Arrivals		Departures	
	Vessel calls	Deadweight tonnage	Vessel calls	Deadweight tonnage
		('000 tonnes)		('000 tonnes)
Antilles (Netherlands)	8	38	9	39
Australia	217	6,318	216	6,251
Belgium-Luxembourg	10	423	10	423
Bermuda	1	36	1	36
China (excluding Taiwan)	37	831	38	862
Denmark	26	389	29	434
France	19	536	21	624
Germany, F.D.R.	160	2,441	166	2,614
Greece	85	2,687	87	2,734
Hong Kong	234	4,559	245	4,835
India	42	780	40	737
Italy	11	350	12	382
Japan	377	6,900	406	7,735
Liberia	154	3,657	156	3,772
Netherlands	49	1,134	48	1,160
Norway	65	1,351	69	1,468
Panama	183	2,992	174	2,869
Singapore, Republic of	72	1,408	74	1,443
South Africa, Republic of	9	129	10	143
Sweden	33	810	33	795
United Kingdom	299	7,702	314	8,176
United States	45	1,743	46	1,773
U.S.S.R.	94	1,125	94	1,130
Other countries	201	2,641	171	2,057
Total all vessels	2,431	50,980	2,469	52,492

Cargo discharged and loaded

The table below examines overseas cargo discharged and loaded at Victorian ports in the years 1979–80 to 1980–81 in revenue tonnes and gross weight. The "revenue tonne" is the unit of measurement predominantly used in the shipping industry. It is the basis on which freight is charged and statistics are obtained by adding mass (tonnes) and volumetric (cubic metres) units. "Gross weight" is the total weight of cargo excluding the weight of containers, irrespective of the basis on which freight is charged.

VICTORIA—OVERSEAS SHIPPING: CARGO DISCHARGED AND LOADED BY PORT

Port	Discharged				Loaded			
	1979–80		1980–81		1979–80		1980–81	
	Revenue tonnes	Gross weight	Revenue tonnes	Gross weight	Revenue tonnes	Gross weight	Revenue tonnes	Gross weight
	('000)	('000 tonnes)	('000)	('000 tonnes)	('000)	('000 tonnes)	('000)	('000 tonnes)
Melbourne	4,607	2,558	4,782	2,661	2,760	2,327	2,793	2,453
Geelong	1,358	1,347	1,508	1,505	3,800	3,776	2,725	2,724
Western Port	101	101	100	100	1,858	1,858	1,807	1,807
Portland	206	206	214	214	1,424	1,424	1,054	1,054
Total	6,272	4,212	6,604	4,480	9,843	9,386	8,378	8,037

The tables following show particulars of overseas cargo discharged and loaded in Victoria over 1978–79 to 1980–81:

VICTORIA—OVERSEAS SHIPPING: CARGO DISCHARGED AND LOADED IN VICTORIA BY TRADE AREA OF OVERSEAS PORT OF LOADING/DISCHARGE
('000 revenue tonnes)

Trade region of overseas port of loading/discharge	Discharged			Loaded		
	1978–79	1979–80	1980–81	1978–79	1979–80	1980–81
Non-Specific	1	23	—	2	7	2
Europe	959	1,046	1,034	988	2,580	1,938
East Asia	197	477	559	68	1,916	1,184
Japan	875	1,250	1,587	2,111	2,859	2,772
North America (East)	533	813	838	438	197	249
North America (West)	453	678	643	83	152	143
Central America	9	8	14	51	24	39
South America (West)	—	—	—	24	19	8
South America (East)	1	32	42	35	86	43
West Africa	3	4	14	2	2	1
South and East Africa	59	110	74	77	43	56
Red Sea	19	*(a)* 280	11	79	410	105
Persian Gulf	456	*(a)* 255	700	226	227	304
West India	34	90	34	76	199	89
East India	16	36	42	180	151	115
South East Asia	807	771	711	851	524	882
Papua New Guinea	27	25	25	155	173	270
Central Pacific	4	5	6	232	246	148
French Pacific	—	—	—	6	11	30
Pacific Islands	499	367	272	35	16	1
New Zealand	259	*(b)*	*(b)*	826	*(b)*	*(b)*
Total	5,211	6,272	6,604	6,545	9,843	8,378

(a) In 1979–80, Saudi Arabia was not split into Red Sea and Persian Gulf ports.
(b) New Zealand cargo details are excluded due to confidentiality.

VICTORIA—OVERSEAS SHIPPING: CARGO DISCHARGED AND LOADED BY COUNTRY OF REGISTRATION OF VESSEL
('000 revenue tonnes)

Country of registration	Discharged			Loaded		
	1978–79	1979–80	1980–81	1978–79	1979–80	1980–81
Antilles (Netherlands)	47	—	12	25	3	8
Australia	440	492	486	162	231	252
Belgium–Luxembourg	16	36	65	8	142	5

VICTORIA—OVERSEAS SHIPPING: CARGO DISCHARGED AND LOADED BY COUNTRY OF REGISTRATION OF VESSEL—*continued*
('000 revenue tonnes)

Country of registration	Discharged			Loaded		
	1978–79	1979–80	1980–81	1978–79	1979–80	1980–81
Bermuda	89	9	—	101	20	14
China (excluding Taiwan)	2	21	88	237	1,084	460
Denmark	288	138	127	186	23	77
France	25	33	41	15	69	25
Germany, F.D.R.	324	346	390	220	319	325
Greece	235	240	423	675	1,277	926
Hong Kong	66	235	250	165	273	330
India	47	26	67	39	365	200
Italy	80	25	37	28	27	70
Japan	613	858	930	1,037	1,046	1,025
Liberia	355	659	764	773	972	981
Netherlands	100	218	311	36	206	73
Norway	241	245	184	251	240	250
Panama	266	301	453	771	941	1,136
Singapore, Republic of	65	77	146	159	249	245
South Africa, Republic of	34	41	16	19	21	17
Sweden	136	188	148	81	132	108
United Kingdom	1,044	1,275	1,092	925	1,282	1,176
United States of America	366	298	272	174	148	123
U.S.S.R.	12	109	135	42	224	293
Other countries	320	402	167	416	549	259
Total	5,211	6,272	6,604	6,545	9,843	8,378

Container cargo

The following table provides details of containers and container cargo discharged and loaded at Victorian ports in 1979–80 and 1980–81. All statistics relating to containers are expressed in terms of 20 foot units. A 40 foot container is recorded therefore as 2 twenty foot equivalent units (or TEU's).

VICTORIA—OVERSEAS SHIPPING: CONTAINERS AND CONTAINER CARGO DISCHARGED AND LOADED BY VICTORIAN PORTS

Port	1979–80		1980–81			
	Container cargo	Other cargo	Container cargo			Other cargo
	Revenue tonnes ('000)	Revenue tonnes ('000)	TEU's Empty (number)	TEU's with cargo (number)	Revenue tonnes ('000)	Revenue tonnes ('000)
			DISCHARGED			
Melbourne	2,558	2,049	9,465	137,685	2,787	1,995
Geelong	27	1,332	2	334	7	1,501
Western Port	—	101	—	—	—	100
Portland	—	206	—	—	—	214
Total	2,585	3,687	9,468	138,019	2,794	3,810
			LOADED			
Melbourne	1,942	818	20,145	122,464	2,003	790
Geelong	51	3,749	170	1,094	16	2,709
Western Port	—	1,858	—	—	—	1,807
Portland	—	1,424	—	60	3	1,051
Total	1,992	7,850	20,315	123,618	2,022	6,357

Further references: Lighthouses, *Victorian Year Book* 1964, pp. 665–6; Principal ports of Victoria, 1965, pp. 744–7; Australian Shipbuilding Board, 1975, pp. 665–6

Port Phillip Sea Pilots

Forty-four former shipmasters operate the Port Phillip Pilot Service, sixteen of whom are also licensed for Western Port. The Service is conducted on a co-operative, non-profit basis. Licences as pilots are issued by the Marine Board of Victoria, each ingoing pilot purchasing a share of the pilot vessels and other plant. The Port Phillip Pilot Service is

one of the oldest organisations in Victoria, the first pilot licence having been issued to George Tobin by Governor Sir George Gipps of New South Wales on 26 June 1839.

The following table shows the number of ships (sailing inwards and outwards) piloted through Port Phillip Heads and the entrance to Western Port during the period 1972–73 to 1981–82. Although the number of ships has increased slightly, tonnes carried have risen markedly because of larger vessels such as container, roll on-roll off, and LASH (lighter aboard ship) ships.

VICTORIA—NUMBER OF SHIPS PILOTED THROUGH PORT PHILLIP HEADS AND THE ENTRANCE TO WESTERN PORT

Year	Number of ships		Year	Number of ships	
	Port Phillip	Western Port		Port Phillip	Western Port
1972–73	3,921	560	1977–78	3,897	620
1973–74	3,903	644	1978–79	3,824	683
1974–75	4,117	665	1979–80	3,988	683
1975–76	3,778	744	1980–81	3,646	671
1976–77	3,717	741	1981–82	3,854	722

Port of Melbourne Authority

Administration

The Port of Melbourne Authority (originally the Melbourne Harbor Trust Commissioners) is a statutory body established in 1877 by an Act of the Victorian Parliament to regulate, manage, and improve the Port of Melbourne. The responsibility of executing the Act is vested in a Board consisting of a full-time chairman and five part-time members appointed by the Governor in Council for their specialised knowledge of their particular sphere in the shipping industry, i.e., exporters, importers, primary production, shipowners, and labour.

The Port of Melbourne comprises an area of 31.5 square kilometres of land and water and provides 19 kilometres of berthage.

The Port of Melbourne is one of Australia's principal ports and one of the world's leading container ports in volume of cargo handled. It is a general cargo port with major installations at Swanson Dock for overseas container handling; Webb Dock for overseas roll on-roll off and container traffic; Appleton Dock; and 32 South Wharf for overseas roll on-roll off.

Cargo pattern

Container and unit-load methods of cargo handling in the Port of Melbourne were introduced and extended during the 1960s. By 1970, the cumulative effect of gradually developing these new facilities had had a significant impact on the Port as a whole and the emphasis of cargo handling activities in the Port had shifted from the long established conventional cargo handling areas to five principal areas catering for container and unit-load ships and cargo handling methods. During the year ended 30 June 1982, the Port handled a volume of 19,354,000 tonnes of import, export, and transhipment cargo. This volume was handled by coastal and overseas shipping which paid 2,348 calls at the Port.

The changes in the character of the Port became noticeable when the first overseas container ship on the United Kingdom–Australia service arrived in March 1969. Cargoes flowing through all ports of the world are classed as either wet or dry bulk cargoes (such as oil carried in tankers or sugar carried loose in the hold of a bulk carrier) or general, which includes the variety of goods usually crated, boxed, or carried in some other individual packaging. Container ships carry this general cargo in containers of various international standard sizes.

Unit-load multi-purpose vessels, which first began to operate out of Melbourne in the overseas service in 1966 and in the coastal trade some eight years earlier, are vessels especially designed to carry containers and unit-loads, which are a collection of general cargo assembled into one load, usually on a tray or pallet. These ships can also carry conventional cargo, namely, individual items of general cargo handled and loaded separately, and handled individually inside the ship and on shore. During the year ended

30 June 1982, the Port handled 16,041,000 tonnes of general cargo (including empty containers), an increase of 5.6 per cent on that recorded in the previous year. In 1981–82, 70 per cent of general cargo was containerised with a highest ever total container throughput of 525,221 containers. The Port handled 3,313,000 tonnes of bulk cargo during the same period, a decrease of 4.1 per cent on that recorded in the previous year.

New developments

The Port of Melbourne Authority occupied the first building to be completed in the World Trade Centre (WTC) in June 1982. Two more buildings were ready for occupation by the end of 1982, while the remaining two structures of the five building complex became available early in 1983. On completion, approximately 64,000 square metres of office, rental, and exhibition space will be provided in the Centre. A number of Commonwealth and State Government departments and commercial organisations involved in the servicing and promotion of trade are expected to take up occupancy in the Centre during 1983.

A new container roll-on/roll-off berth, No. 5 Webb Dock, is expected to come into operation in late 1982. The berth, which incorporates a large container stacking area at the rear, will be operated by Australian National Line for their overseas operations. When in operation the berth will be equipped with two container cranes and a floating ramp.

Construction work is continuing on the new multi-purpose general cargo berth at 17 Victoria Dock. The berth will be equipped with a container crane and includes a cargo shed and cargo stacking area.

Facilities at Appleton Dock will be upgraded by the development of land on the north side of Moonee Ponds Creek and the construction of a shiploader to handle bulk cargoes.

The Port of Melbourne Authority has commenced implementation of its policy of improving the Port's landscape including the provision of public access to viewing locations of Port activities, the development of guidelines for leasehold areas and a general policy of beautification of the Port. Locations where these works are planned in 1983 include Berth Nos. 1–4 South Wharf, Berth Nos. 10–17 North Wharf, Station Pier and Todd Road/Beach in Port Melbourne, and the Maribyrnong River.

1980 Forward Development Plan

The Port of Melbourne Authority has a Forward Development Strategy Plan which is revised regularly and identifies the intended direction of long-term port development including all major future land uses. A number of intermediate stages which represent a logical development sequence consistent with the long-term development strategy are also identified.

The major considerations involved in long-term planning of the Port relate to the provision of adequate berthage (number of berths); provision of adequate land adjacent to the berths for cargo handling operations; adequacy of navigation channels and swinging basins (both depth and width); adequacy of transport links to the Port area (both road and rail); and economic and social implications of the Port to the community.

The 1980 Forward Development Plan provides for the construction of additional berths and facilities to handle anticipated trade through the Port well into the next century. The Plan includes the construction of five additional overseas container berths at Webb Dock over the next 20 years. One of these berths is to be provided by seaward reclamation beyond the existing berth at 5 Webb Dock and the other four by re-alignment and inland extension of Webb Dock.

An additional three container berths, with associated terminal areas, are proposed at Fishermens Bend which is on the southern bank of the Yarra River some 3 kilometres upstream from its mouth. This proposal would require the relocation of the Government Aircraft Factory and the Commonwealth Aircraft Corporation. It is anticipated that these berths will not be required before the year 2000.

These eight berths, together with the upgrading and reconstruction of existing upstream berths will cater for anticipated general cargo trade through the Port well into the twenty-first century.

In addition, the Plan provides for a large area of reclamation offshore from Williamstown to cater for future bulk trades. Such trades cannot be predicted statistically but could arise as a result of individual actions such as industrial location or resource

development decisions. The reclamation is therefore included in the Plan as a strategy option only.

Finance

The Port of Melbourne is self-supporting and does not receive any financial grants from the Victorian Government. The Authority's revenue is derived from a number of charges paid by the users of the Port. The charges are principally wharfage rates levied on each tonne of cargo landed in, or shipped out of the Port, and tonnage rates levied on the gross registered tonnage of ships and the time they spent in Port. Other charges cover rent of sheds, hire of Port-owned cargo handling equipment, general Port services, and rental of land reserved for essential long-term Port development. Expenditure is on Port maintenance, reconstruction, modernisation, and development, with any surplus being put back into Port development. At 30 June 1982, the Authority had approximately $354m invested in Port assets. Capital works are financed out of revenue and out of loans, which are raised and financed by the Authority itself and guaranteed by the Victorian Government. The Authority is required to pay into the Consolidated Fund of the Victorian Government approximately 4 per cent of its revenue from import wharfage and tonnage.

The following table shows particulars of the financial operations of the Port of Melbourne Authority for the years 1977–78 to 1981–82:

VICTORIA—PORT OF MELBOURNE AUTHORITY:
REVENUE, EXPENDITURE, ETC.
($'000)

Particulars	1977–78	1978–79	1979–80	1980–81	1981–82
REVENUE					
Wharfage and tonnage rates	19,821	22,816	26,410	30,412	37,829
Rent of sheds	488	499	408	479	623
Ancillary services	279	261	220	218	231
Rent of lands	4,967	5,076	5,503	5,775	6,275
Crane fees	2,089	2,477	2,675	2,826	3,081
Other	2,973	3,101	4,140	5,672	7,712
Total revenue	30,617	34,230	39,356	45,382	55,751
EXPENDITURE AND APPROPRIATIONS					
Administration and general expenses	2,869	3,238	3,359	5,851	6,078
Port operating expenses	8,027	8,783	9,593	11,057	12,691
Maintenance—					
Dredging	2,241	3,330	3,719	4,832	5,498
Harbour	416	483	549	626	738
Wharves	1,895	2,342	2,702	2,617	3,206
Approaches	558	618	708	776	812
Railways	135	168	137	196	182
Cargo handling equipment	1,295	1,401	1,567	1,748	2,054
Other properties	143	169	237	204	192
Interest	4,610	5,163	5,995	6,864	9,074
Depreciation and renewals	5,896	6,394	8,577	8,222	9,719
Insurance	537	428	440	515	595
Sinking Fund	1,000	800	2,618	342	386
General reserve	—	—	—	2,500	—
Payments to Consolidated Fund	700	667	769	836	1,034
Appropriation	—	—	-1,296	—	—
Other	—	1	—	—	—
Total expenditure and appropriations	30,322	33,985	39,674	47,186	52,259
CAPITAL OUTLAY					
World Trade Centre Project	3,093	2,678	14,702	24,166	34,090
Land and property	289	1,858	2,286	4,409	4,034
Reclamation	606	1,574	29	735	77
Deepening waterways	4,433	6,170	5,257	4,782	5,242
Wharves and sheds construction	4,494	2,706	5,407	4,170	5,459
Cargo handling equipment	589	14	795	5,155	4,520
Approaches construction	152	791	971	1,402	703

VICTORIA—PORT OF MELBOURNE AUTHORITY:
REVENUE, EXPENDITURE, ETC.—*continued*
($'000)

Particulars	1977-78	1978-79	1979-80	1980-81	1981-82
Floating plant	1,567	1,841	579	600	577
Other works, etc.	2,288	2,571	2,091	2,454	1,442
Total capital outlay	17,511	20,203	32,117	47,873	56,144
Loan indebtedness at end of period	68,769	86,448	100,833	120,247	167,016

Further references: Changing trends in port development, *Victorian Year Book* 1968, p. 745; Port facilities, 1969, p. 755; Port emergency service, 1970, pp. 750–1; Advent of new cargo pattern, 1971, pp. 715–18; New cargo handling era, 1974, pp. 749–50; Forward development plan, 1975, pp. 672–3; Co-ordinated port development plan, 1975, pp. 673–4

Port of Geelong Authority

The Port of Geelong is under the control of the Port of Geelong Authority which was constituted under an Act of the Victorian Parliament in 1905. The Authority consists of three commissioners appointed by the Governor in Council.

Entrance to the Port is by 24 kilometres of channel dredged to a depth of 11 metres and a width of 122 metres. There are sixteen effective berths in the Port and two berths at the Commonwealth Explosives Pier, Point Wilson, owned and operated by the Commonwealth Government. The Port Authority operates a commercial slipway for vessels up to 1,000 tonnes, and a container berth equipped with a 40 tonne single-lift crane. Trade of the Port for 1981 totalled 6,434,528 tonnes (imports 2,059,134 tonnes, exports 4,375,394 tonnes).

The following table shows particulars of the financial operations of the Port of Geelong Authority for the calendar years 1977 to 1981:

VICTORIA—PORT OF GEELONG AUTHORITY:
REVENUE, EXPENDITURE, ETC. *(a)*
($'000)

Particulars	1977	1978	1979	1980*(b)*	1981
REVENUE					
Cargoes	2,205	2,644	2,438	2,527	3,321
Ships	2,099	2,339	2,185	878	987
Stevedoring	442	476	677	889	1,153
Other port services	81	96	201	251	434
Rippleside ship repairs	—	—	161	709	739
Rents	297	272	276	245	265
Miscellaneous	4	3	7	20	19
Investment income	178	363	495	1,181	1,162
Extraordinary items	—	—	—	122	9
Total revenue	5,306	6,193	6,440	6,822	8,089
EXPENDITURE AND APPROPRIATIONS					
All port operations	1,665	1,933	1,833	1,217	1,470
Rippleside ship repairs	—	—	126	470	494
Administration	1,657	1,773	2,079	1,797	2,323
Maintenance	767	764	657	416	427
Depreciation and amortisation	844	861	848	794	789
Interest on loans	142	115	83	70	65
Sinking Fund	22	15	14	17	25
Port Development Fund	—	—	—	707	873
Other	16	32	57	145	108
	5,113	5,493	5,697	5,633	6,574
CAPITAL OUTLAY (NET)					
Floating plant	27	—	—	—	—
Land and property	11	263	97	425	74
Wharves and approaches	191	103	193	9,331	1,310
Other	43	11	79	34	364
Total capital outlay	272	376	369	9,790	1,748
Loan indebtedness at end of period	2,239	1,479	1,371	1,126	1,113

(a) For purposes of comparison revenue and expenses for 1977 and 1978 include the full year of operation of towage and boatman service, 1979 included 9 months of operation of these services, while 1980 and 1981 did not include these services in any manner.
(b) Adjusted for accounting charges.

Port of Portland Authority

Situated on the south-west coast of Victoria, Portland is a modern, deep-sea port which is experiencing major expansion of both trade and port facilities. The port is within thirteen kilometres of the main interstate and overseas shipping lanes, with deep water approaches to the entrance of the harbour basin.

In addition to the five existing berths, the Port of Portland Authority is constructing a new berth to cater for the shipping requirements of the aluminium smelter which is being constructed at South Portland.

The port is equipped with facilities for the berthing of all types of bulk and general cargo vessels, the pre-shipment storage of bulk and refrigerated cargoes as well as open space for the assembly, handling, and storage of containerised and unitised cargoes. There is a network of road and rail services connecting the port and the town of Portland to all regions of mainland Australia.

Overall trade through the port during 1981–82 amounted to 1,303,140 tonnes, a reduction of 20 per cent compared with 1980–81.

Exports accounted for 851,113 tonnes and imports for 452,027 tonnes of port trade.

The following tables show particulars of shipping, trade, and financial operations for the Port of Portland Authority during the years 1977–78 to 1981–82:

VICTORIA—PORT OF PORTLAND AUTHORITY:
TRADE AND SHIPPING SUMMARY

Year	Trade vessels	Other vessels	Gross tonnage	Total exports (tonnes)	Total imports (tonnes)	Total trade (tonnes)
1977–78	121	21	1,786,532	567,531	559,431	1,126,962
1978–79	102	13	1,656,901	527,399	596,119	1,123,518
1979–80	165	10	2,885,022	1,438,993	474,355	1,913,348
1980–81	139	30	2,351,153	1,115,257	513,522	1,628,779
1981–82	118	32	2,084,263	851,113	452,027	1,303,140

VICTORIA—PORT OF PORTLAND AUTHORITY:
REVENUE, EXPENDITURE, ETC.
($'000)

Particulars	1977–78	1978–79	1979–80	1980–81	1981–82
REVENUE					
Wharfage rates	505	529	696	701	678
Grain terminal	594	—	—	—	—
Shipping services	365	384	830	891	984
Other services and revenue	343	466	640	971	939
Interest	15	276	352	478	808
Victorian Government grant	1,000	1,450	1,500	1,530	1,060
Extraordinary revenue	—	—	—	827	—
Total revenue	2,822	3,105	4,018	5,398	4,469
EXPENDITURE AND APPROPRIATIONS					
Administration	429	489	583	615	791
Maintenance	192	222	226	206	292
Shipping services	395	407	509	540	683
Depreciation	30	72	70	391	394
Interest on loan	1,416	1,482	1,620	1,845	2,329
Sinking Fund	55	212	258	297	429
Loan redemption	117	140	—	—	—
Grain terminal (excluding depreciation)	271	—	—	—	—
Other	182	242	233	284	277
Total expenditure and appropriations	3,087	3,266	3,499	4,178	5,195
CAPITAL OUTLAY					
Port rail system	—	83	34	—	—
Road works	—	—	105	—	—
Reclamation	—	37	206	88	231
Deepening waterways	—	82	—	—	56

VICTORIA—PORT OF PORTLAND AUTHORITY: REVENUE, EXPENDITURE, ETC.—*continued*
($'000)

Particulars	1977–78	1978–79	1979–80	1980–81	1981–82
CAPITAL OUTLAY—*continued*					
Wharves and sheds	509	329	368	2,496	1,560
Other	322	198	908	409	242
Total capital outlay	831	729	1,621	2,993	2,089
LOAN INDEBTEDNESS AT 30 JUNE					
Victorian Government	3,823	3,823	3,823	3,823	3,823
Public	21,284	22,383	23,189	24,005	28,647
Total loan indebtedness	25,107	26,206	27,012	27,828	32,470

Western Port

Western Port is an extensive inlet eastward of and adjacent to Port Phillip, and is separated from it by the Mornington Peninsula which is about 16 kilometres wide. The Port is sheltered from Bass Strait by Phillip Island at its south-eastern end and the waters between the western side of this island and the mainland form the entrance to the Port. It is approximately 42 kilometres from the entrance to the northern extremity of the inlet.

Although the entrance contains some large sandbanks, a deep water channel up to 31 metres deep marked by 37 light buoys runs close to the island. This navigable channel extending from the western entrance to Crib Point is 20 kilometres long with low water depths of 14.3 metres and 14.9 metres, in the northern and western arms, respectively. Tidal rises are of the order of 3 metre springs and 2 metre neaps.

The Crib Point Jetty provides two berthing heads each 38 metres in length: No. 1 with 15.8 metres of water alongside for 100,000 tonne tankers; No. 2 with 12.8 metres of water alongside for 40,000 tonne tankers. The Long Island Jetty has a berthing head of 108 metres in length for 100,000 deadweight vessels with 15.8 metres of water alongside. Steel Industry Wharf No. 1 consists of loading ramp 28 metres in length (curved) and fender wharf of 46 metres in length for vessels with stern door up to 10,000 tonne. Steel Industry Wharf No. 2 consists of a wharf 152 metres long for vessels up to 19,500 deadweight. Depth alongside for both Steel Industry Wharves is 12.2 metres.

VICTORIA—WESTERN PORT: PORT TRAFFIC

Year	Petroleum products		Steel	
	Tankers	Tonnes	Vessels	Tonnes
		'000		'000
1977–78	319	11,362	79	570
1978–79	368	10,799	89	703
1979–80	335	11,142	94	759
1980–81	362	10,423	77	758
1981–82	312	10,045	96	818

AIR TRANSPORT

Civil aviation

Administration

The Victorian *Air Navigation Act* 1958 prescribes that control of aviation within Victoria shall be vested in the Commonwealth Government. The Air Navigation Act and Regulations in Victoria are consequently administered by the Commonwealth Department of Aviation through its Regional Director in Melbourne.

The functions performed by the Department include:

(1) Registration and marking of aircraft;

(2) determination and enforcement of airworthiness requirements for aircraft and the issue of certificates of airworthiness, certificates of type approval, and supervision of aircraft design;

(3) licensing of pilots, navigators, aircraft radio operators, flight engineers, and aircraft maintenance engineers;
(4) licensing of airline, charter, and aerial work operators, and supervision of their activities;
(5) provision and maintenance of aeronautical communications, navigation aids, aerodromes, and landing grounds;
(6) establishment and operation of air traffic control, flight service, aeronautical information, search and rescue, and fire-fighting and rescue services; and
(7) investigation of aircraft accidents, incidents, and defects.

Victorian aerodromes

The major aerodromes in Victoria are owned and operated by the Commonwealth Government through the Department of Aviation. Since 1957, Commonwealth Government policy has been that aerodromes (except capital city airports) should be owned and operated by local government authorities under the local ownership plan.

At present in Victoria there are seven Commonwealth Government owned aerodromes at Melbourne (Tullamarine), Avalon, Bacchus Marsh, Essendon, Mallacoota, Mangalore, and Moorabbin, as well as thirty-three licensed aerodromes at Ararat, Bairnsdale, Ballarat, Benalla, Bendigo, Birchip, Corryong, Donald, Echuca, Grampians, Hamilton, Hopetoun, Horsham, Kerang, La Trobe Valley, Leongatha, Maryborough, Mildura, Nhill, Orbost, Portland, Robinvale, St Arnaud, Sale, Sea Lake, Shepparton, Stawell, Swan Hill, Warracknabeal, Warrnambool, Whittlesea, Wycheproof, Yarrabank (heliport), and Yarram.

The licences of all licensed aerodromes, except Grampians, Whittlesea, and Yarrabank (heliport), are held by the appropriate local government authority. Under the local ownership plan, the Commonwealth Government pays 50 per cent of the development costs of new aerodromes or transfers existing aerodromes free of cost to local authorities and then pays 50 per cent of future approved maintenance and development costs. Similar assistance is given to the local authority to develop and maintain aerodromes which are, or will be, served by a regular public transport service.

The assistance authorised by the Commonwealth Government to Victorian local authorities for aerodrome works during the year ending 30 June 1981 was $1,047,981 for development, and $379,945 for maintenance works.

In addition to these main aerodromes, there are hundreds of authorised landing areas which serve the needs of the increasing number of light aircraft users throughout Victoria.

Classification of flying activities

Flying activities are classified by regulation into the following categories:

Private operations

These are operations in which an aircraft is used for personal transportation—private or business, carriage of persons or goods for other than hire or reward, or other activities of a non-commercial nature. The extent of this activity within Victoria may be gauged from the fact that there were 862 aircraft classified in the private category and approximately 6,267 licensed private aeroplane pilots in Victoria at 30 June 1981.

Aerial work operations

These operations refer to aircraft being used for aerial survey, spotting, photography, agriculture, flight training, and the cartage of goods for purposes of trade. In terms of hours flown, the most significant operations are agricultural and flight training. To 30 June 1980, over 95,600 training hours were flown by training organisations in Victoria.

Charter operations

These consist of flights for the carriage of passengers or cargo for hire or reward, but which may not be notified to the general public as being operated between fixed terminals or to fixed schedules, or for the carriage of passengers or cargo between fixed terminals to fixed schedules in circumstances in which the accommodation in the aircraft is not available to members of the public. During the 1950s, most charter operations were conducted in single engine aircraft, but there is an increasing use of twin engine aircraft. Twin jet aircraft are being used increasingly in executive type work. At 30 June 1980,

there were 92 Victorian based operators licensed to conduct charter operations; over 45,000 hours were flown by these organisations.

Commuter operations

Since the end of the Second World War, country or feeder air services within Victoria have commenced on different occasions but ceased operations when they proved to be uneconomic. In 1966, the Commonwealth Government decided that a new attempt should be made to provide this type of air service between Melbourne and numerous country centres. As it was felt charter operators would be prevented by the Air Navigation Regulations from operating to a fixed schedule, it was decided to grant certain exemptions under the Regulations. A charter operator who met appropriate additional requirements and standards would be permitted to operate air services between centres to a fixed schedule and on a regular basis. This type of operation is usually known as a commuter service.

By October 1967, exemptions under the Regulations had been granted to three operators. Using single and light twin engined aircraft capable of carrying six to thirteen passengers, these operators were approved to operate services to Stawell, Ararat, Ballarat, Kerang, Swan Hill, Echuca, Shepparton, La Trobe Valley, West Sale, and Bairnsdale, and to the interstate centres of Albury and Merimbula. Some of these services commenced in November 1967 and others followed with varying degrees of success and continuity. At June 1982, Victorian commuter services of the type in question were approved to operate between the following centres on a regular basis: Essendon — Flinders Island, Essendon — Smithton — Queenstown — Strahan, Essendon — Warrnambool — Portland, Essendon — Horsham, Essendon — Sale — Bairnsdale, Melbourne — Shepparton, Melbourne — Bendigo — Swan Hill — Mildura, Melbourne — Cooma — Merimbula, Melbourne — Wagga Wagga, Melbourne — Griffith — Wagga Wagga — Canberra, Mildura — Renmark — Adelaide, Mildura — Swan Hill — Wagga Wagga, and Phillip Island — Smithton.

Regular public transport

Although commuter operations are regular public transport services, this heading usually refers to aircraft operating in accordance with an airline licence, to carry passengers and cargo according to fixed schedules and on specified routes.

Services based or terminating at Melbourne Airport are domestic—Ansett Airlines of Australia and Trans Australia Airlines, or international—Qantas Airways, Air Nauru, Air New Zealand, Air Pacific, Alitalia, British Airways, Cathay Pacific, Continental Airlines, Garuda Indonesian Airways, J.A.T. (Yugoslavia), K.L.M. Royal Dutch Airlines, Lufthansa, Malaysian Airline System, Pan American World Airways, Philippine Airlines, Singapore Airlines, and Thai Airways International.

Gliding clubs

Gliding is mainly carried out at Ararat, Bacchus Marsh, Benalla, Barnawartha, Bendigo, Colac, Derby, Horsham, Kurweeton, La Trobe Valley, Laverton, Leongatha, Mildura, Moorooduc, Mt Beauty, and Swan Hill. Many other areas are used to a lesser extent. A Commonwealth Government subsidy is granted to clubs through the Gliding Federation of Australia.

Control of air traffic

Control of air traffic is maintained by the Commonwealth Department of Aviation through its air traffic control organisation. This includes the closely co-ordinated sections of operational control, which are concerned with each individual flight; airport control, which applies to all movements on or within 32 kilometres of an aerodrome; and area control, which controls aircraft along the main air routes to ensure the avoidance of collisions. In conjunction with air traffic control, the Department maintains a wide range of air navigation aids and a comprehensive search and rescue organisation. The function of navigation aids is described in detail on pages 773–6 of the *Victorian Year Book* 1965. Special articles on Air Traffic Control and the Omega navigation facility can be found on pages 551–2 of the *Victorian Year Book* 1982.

Melbourne (Tullamarine) Airport

The Tullamarine site of 2,140 hectares was chosen for the development of Melbourne Airport when Essendon Airport could not be further enlarged. The completed aerodrome is 20 kilometres from the G.P.O., Melbourne, 7 kilometres from Essendon Airport, and is accessible by a freeway.

The 15 kilometres of runways and taxiways were completed early in 1968. The north-south runway (2,591 metres) and the east-west runway (2,286 metres) are both designed for the operation of modern jet aircraft. The structures are 147 centimetres thick and are capable of taking the weight of the Boeing 747 ("Jumbo" jet) and supersonic aircraft. High speed turnouts have been provided to both runways which allow aircraft to turn off the runway at 100 kilometres per hour. The north-south runway was extended to 3,658 metres in 1972. There is a provision for future development of the east-west runway to extend to 2,743 metres and for a second set of parallel runways.

Civil aviation statistics

Domestic passenger movements, which represent the total of embarkations and disembarkations for each Victorian aerodrome served by a regular service for the years 1977 to 1981 were as follows:

VICTORIA—DOMESTIC PASSENGER MOVEMENTS OF REGULAR AIR SERVICES

Airport	Passenger movements				
	1977	1978	1979	1980	1981
Melbourne	4,291,450	4,628,254	4,908,893	5,173,483	5,038,312
Mildura	20,214	23,078	22,283	21,238	18,415
Hamilton	7,009	7,610	6,714	6,178	5,172

The following table shows particulars for 1980 and 1981 of regular interstate and intrastate air services terminating in Victoria:

VICTORIA—REGULAR INTERSTATE AND INTRASTATE AIR SERVICES TERMINATING IN VICTORIA

Particulars		Interstate		Intrastate		Total	
		1980	1981	1980	1981	1980	1981
Kilometres flown	'000	49,428	47,069	527	498	49,955	47,567
Passenger kilometres	'000	3,974,082	4,240,336	11,219	9,608	3,985,301	4,249,944
Freight—							
Tonnes		69,150	74,379	52	46	69,202	74,425
Tonne kilometres	'000	50,350	40,779	19	16	50,369	40,795
Mail—							
Tonnes		6,967	7,421	—	—	6,967	7,421
Tonne kilometres	'000	5,957	6,034	—	—	5,957	6,034

The first of the following tables deals with aircraft registered and licences issued by the Commonwealth Department of Aviation in Victoria, while the second describes activities at Melbourne (Tullamarine) Airport:

VICTORIA—AIRCRAFT REGISTERED AND LICENCES ISSUED

Particulars	1977	1978	1979	1980	1981
Registered aircraft	1,363	1,499	1,531	1,562	1,460
Student pilot licences	4,299	4,520	5,436	5,613	5,651
Private pilot licences	4,184	4,747	5,548	5,825	6,267
Commercial pilot licences	934	970	r1,043	r1,187	1,309
Airline pilot licences	1,154	1,205	1,294	1,365	1,463
Aircraft maintenance engineer licences	1,263	1,326	1,337	1,390	1,466

VICTORIA—MELBOURNE (TULLAMARINE) AIRPORT

Particulars	1977	1978	1979	1980	1981
Domestic aircraft movements	68,558	72,159	70,065	72,028	66,500
Domestic passengers embarked	2,144,619	2,276,812	2,451,235	2,584,332	2,518,313
Domestic passengers disembarked	2,146,831	2,275,750	2,457,658	2,589,151	2,519,999
International aircraft movements	8,578	9,309	9,131	9,907	9,719
Passengers arriving/departing overseas	685,219	710,045	893,210	971,376	955,784

Further references: History of civil aviation, *Victorian Year Book* 1962, p. 742; Classification of flying activities, 1964, pp. 843–4; Radio aids to air navigation in Victoria, 1965, pp. 773–6; Aerial agricultural operations, 1966, pp. 764–5; Flying training in Victoria, 1967, pp. 783–5; Regular public transport, 1968, pp. 779–81; Commuter services, 1969, pp. 790–1; Radar development in the Melbourne area, 1971, pp. 748–50; Aerodrome local ownership plan, 1974, p. 791; Use of radar in traffic control, 1975, pp. 682–4; Civil aircraft manufacture, 1977, pp. 688–90; Air traffic control, 1982, pp. 550–1; Omega, 1982, p. 552

BIBLIOGRAPHY

ABS publications

Monthly summary of statistics, Victoria (1303.2)
Exports by mode of transport, Australia (quarterly) (5415.0)
Rail, bus, and air transport, Australia (annual) (9201.0)
Bus fleet operations survey, Australia (irregular) (9203.0)
Journey to work and journey to school, Australia (irregular) (9205.0)
Outward overseas cargo, Australia (annual) (9206.0)
Overseas shipping, Australia (annual) (9207.0)
Survey of motor vehicle usage, Australia (irregular) (9208.0)
Survey of motor vehicle usage: commercial vehicle usage, Australia (irregular) (9209.0)
Survey of motor vehicle usage: accident exposure data, Australia (irregular) (9210.0)
Motor vehicle registrations, Victoria (monthly) (9301.2)
Motor vehicle census, Victoria (irregular) (9302.2)
Motor vehicle registrations, Australia (monthly) (9303.0)
Motor vehicle registrations, Australia (annual) (9304.0)
Motor vehicle census, Australia (irregular) (9309.0)
Road traffic accidents involving fatalities, Australia (monthly) (9401.0)
Road traffic accidents involving casualties, Victoria (quarterly) (9401.2)
Road traffic accidents involving casualties, Australia (quarterly) (9402.0)
Road traffic accidents involving casualties, Victoria (annual) (9402.2)
Road traffic accidents involving casualties (admissions to hospitals), Australia (quarterly) (9405.0)