

RAILWAYS.

TO the proper development of a country like Australasia, ill-supplied with navigable rivers, railway construction is absolutely essential. This has been recognised from an early period, and for the last forty years the Governments of the principal colonies have been fully alive to the importance of carrying on the work. For a long time, however, they were hampered in their efforts by the difficulty of borrowing money in London at a reasonable rate of interest ; but since the year 1871 considerable progress has been made in the work of construction ; indeed, by far the greater portion of the public debt of Australasia has been contracted for railway purposes. As the area of the seven colonies almost equals that of Europe or the United States of America, while the population numbers less than four and a half millions, it is almost needless to say that many of the lines run through districts very sparsely peopled. This is particularly the case in the colonies of Queensland, South Australia, and Western Australia, where there are vast tracts of territory in which little in the nature of permanent settlement has yet been accomplished, and in none of the colonies can it be said that the railway lines traverse thickly-settled areas. Indeed, if a fault may be found with the State policy pursued in the past, it is that in some cases expensive lines have been laid down in empty country the requirements of which could have been effectually met for many years to come by light and cheap lines, and that in consequence the railway administrators find themselves heavily burdened with a number of unprofitable lines. A few of these have been closed, but the vast majority are worked at a loss. Notwithstanding these drawbacks, however, the railways of Australasia collectively yield a net return equal to 3·27 per cent. on the cost of construction.

HISTORY OF RAILWAY CONSTRUCTION.

An agitation for the introduction of the railway into the colony of New South Wales was afoot as early as 1846, and in August of that year it was decided at a public meeting held in Sydney to survey a line to connect the capital with Goulburn. But no decided step was taken towards construction until September, 1848, when the Sydney Railroad and Tramway Company was formed for the purpose of laying down a line between Sydney and Parramatta and Liverpool, to be afterwards extended to Bathurst and to Goulburn. The first sod was turned by the Hon. Mrs. Keith Stewart, daughter of Sir Charles Fitzroy, the Governor of the colony, on the 3rd July, 1850. Although started during

a period of trade depression, when there was an abundant supply of labour, the scheme was only well under weigh when the discovery of gold caused a stampede from the city, and the company was left without workmen to carry on the undertaking. Undeterred, however, by the difficulties into which the changing conditions of the country had plunged the Sydney Railroad and Tramway Company, private enterprise in 1853 essayed the further task of constructing a line between Newcastle and Maitland ; but this project proved no more successful than the other, and in the following year the Government were forced to step in and carry out the schemes for which the two companies had been promoted. From that time the work of construction was vigorously pressed forward, and on the 26th September, 1855, the line from Sydney to Parramatta, 14 miles in length, was opened to traffic ; and on the 11th April, 1857, Newcastle was connected with East Maitland. The extension to Goulburn of the Sydney line was completed on the 27th May, 1869.

While the Sydney Railroad and Tramway Company were trying to surmount the obstacles that had arisen in their path, the work of railway construction was begun in the neighbouring colony of Victoria, no fewer than three private companies being promoted in 1853 for that purpose. Material assistance in the shape of land grants and guarantee of interest was afforded by the Government ; and on the 13th September, 1854, the first completed railway in Australasia, a line extending from Flinders-street, Melbourne, to Port Melbourne, was opened to traffic. It had been begun nearly three years after the line to connect Sydney with Parramatta, but was only $2\frac{1}{2}$ miles long. No further mileage was brought into operation until May 13, 1857, when the Melbourne and Hobson's Bay Railway Company, who had constructed the first line, effected communication with St. Kilda ; and on the 17th June of the same year a line from Williamstown to Geelong, 39 miles in length, which had been built by another company, was declared open. Meanwhile the Government of the colony had not remained inactive. In addition to assisting private enterprise with liberal concessions, it had taken over in 1855 an unfinished line started by the third of the companies referred to, and was carrying on the work of construction on its own account. By the year 1863 it had acquired all the lines in the colony with the exception of those owned by the Melbourne and Hobson's Bay Company, which were not purchased until the year 1878.

Although a line from Goolwa to Port Elliot, 6 miles in length, over which the locomotive now passes, was opened on the 18th May, 1854, it was at that time merely a horse tramway ; and the first railway in South Australia was a line connecting the city with Port Adelaide, $7\frac{1}{2}$ miles long, which was thrown open to traffic on the 21st April, 1856. The following year saw a railway constructed as far north as Gawler. New Zealand was the next of the Australasian colonies to make the introduction. As the result of an agitation on the part of the settlers of Canterbury, a railway was begun during the year 1863 for the purpose of connecting the city of Christchurch with the port of Lyttelton, and

the first portion was brought into use on the 1st December, 1863. The northern colony of Queensland had enjoyed the privilege of self-government for several years when, early in 1864, a line to connect Ipswich with Grandchester was commenced, and on the 31st July of the same year it was opened. Although the Tasmanian Parliament granted a sum of £5,000 in 1863 for the survey of a line to connect Hobart with Launceston, the first railway in the island was one between Launceston and Deloraine, 45 miles in length, which was opened on the 10th February, 1871, having been commenced three years before. It was built by a private company, to whose capital, however, the Government had subscribed eight-ninths of the total amount of £450,000, on condition that the interest should be a first charge on the net receipts, and on the 3rd August, 1872, the line passed entirely into the ownership of the State. Communication between Hobart and Launceston was effected in 1876 by the completion of a line, connecting the southern city with Evandale Junction, which was constructed by an English company. The last of the seven colonies to introduce the railway was Western Australia, where a line from the port of Geraldton to Northampton was begun during 1874 and opened in 1878; while on the 1st October, 1889, a line from Palmerston to Pine Creek, in the Northern Territory, which had been built by the South Australian Government, was opened, the length being $145\frac{1}{2}$ miles.

The progress of railway construction, except, perhaps, in the colony of Victoria, was anything but rapid during the earlier years. This was in a great measure owing to the sparseness of the population and the natural fear that the return would not justify the expenditure which would have to be incurred in making wide extensions of the lines. It was also due, as previously pointed out, to the low estimation in which Australasian securities were held in London, and the consequent high rate of interest at which money for railway construction had to be borrowed. Since the year 1871, however, all the colonies have made satisfactory progress. In the following table will be found the length of line opened during each year, and the total mileage at the close of the working year:—

Year.	Miles opened.		Year.	Miles opened.	
	Total.	During each year.		Total.	During each year.
1854	2 $\frac{1}{2}$	2 $\frac{1}{2}$	1864	474	74
1855	16 $\frac{1}{2}$	14	1865	495	21
1856	32 $\frac{1}{2}$	16	1866	524	29
1857	117	84 $\frac{1}{2}$	1867	718	194
1858	132	15	1868	789	71
1859	171	39	1869	918	129
1860	215	44	1870	1,040	122
1861	243	28	1871	1,135	95
1862	373	130	1872	1,273	138
1863	400	27	1873	1,498	225

Year.	Miles opened.		Year.	Miles opened.	
	Total.	During each year.		Total.	During each year.
1874	1,700	202	1886	8,669	788
1875	2,144	444	1887	9,498	829
1876	2,679	535	1888	10,230	732
1877	3,447	768	1889	11,074	844
1878	3,976	529	1890	11,713	639
1879	4,393	417	1891	12,174	461
1880	4,933	540	1892	12,405	231
1881	5,526	593	1893	12,796	391
1882	6,169	643	1894	13,142	346
1883	6,587	418	1895	13,790	648
1884	7,425	838	1896	13,831	41
1885	7,881	456	1897	14,269	438

It will be seen from the above table that the lines opened in Australasia averaged 30 miles in length during each year from 1854 to 1861; from 1862 to 1871 the annual average was 89 miles; from 1872 to 1881, 439 miles; from 1882 to 1891, 665 miles; and from 1892 to 1897, 349 miles. It is now the established policy of each colony to keep the railways under State control, and only in exceptional circumstances is that policy departed from. Excluding coal and other lines which are not open to general traffic, there are in Australasia only 718 miles of private lines, or but 5·03 per cent. of the total mileage open. In Victoria and Queensland the railways are entirely in the hands of the Government; while in Western Australia there are 391 miles of private lines, or 28·72 per cent. of the total mileage of the colony; in New Zealand, 167 miles; in New South Wales, 85 miles; in Tasmania, 55 miles, of which 7 (the Dundas-Zeehan line) are worked by the State; and in South Australia, 20 miles.

The divergence of the policy of Western Australia from that pursued by the other colonies was caused by the inability of the Government to construct lines when the extension of the railway was urgently required in the interests of settlement. Private enterprise was therefore encouraged by liberal grants of land to undertake the work of construction; but the changing conditions of the colony has modified the State policy, and on the 1st January, 1897, the Government acquired the Great Southern Railway, 243 miles in length, one of the two trunk lines in private hands. This railway, which was owned by the West Australian Land Company, Limited, was built on the land-grant system, the State concession being 12,000 acres for every mile of line laid down, of which the original concessionaire retained 2,000 acres. The total price paid by the Government for the railway, with all the interests of the Company and the original concessionaire, was £1,100,000, of which £800,000 is set down as the capital sum on which the railway authorities are expected to provide interest, exclusive of the amount invested in rolling stock.

The other trunk line is the Midland Railway, 277 miles in length, owned by the Midland Railway Company of Western Australia, Limited. In this case the land granted by the State was also 12,000 acres per mile of line. In 1891 the Government granted some slight assistance to the Company, and in the following year guaranteed £500,000 of 4 per cent. debentures, the security being a first charge upon the railway and its equipment, and 2,400,000 acres selected land. At three months' notice, the State may foreclose should the Company be indebted to it to the amount of £20,000.

The following statement shows the gauge and length of the private railways of Australasia :—

Line.	Gauge.	Length.
New South Wales—	ft. in.	miles.
Deniliquin-Moama	5 3	45
Cockburn-Broken Hill	3 6	36
Clyde-Rosehill	4 8½	3
Warwick Farm	4 8½	1
South Australia—		
Glenelg Railway Co.'s lines :		
Holdfast Bay	5 3	7
Victoria Square	5 3	7
Sidings, loops, &c.	5 3	6
Western Australia—		
Midland : Midland Junction-Walkaway		
Junction	3 6	277
Canning Jarrah Timber Co.'s Railway ...	3 6	20
Jarrahdale Timber Co.'s Railway	3 6	27
Waigerup Railway	3 6	14
Quindalup Railway	3 6	12
Karridale Railway	3 6	8
Torbay Timber Co.'s Railway	3 6	33
Tasmania—		
Emu Bay-Waratah	3 6	48
Dundas-Zeehan	3 6	7
New Zealand—		
Wellington-Manawatu	3 6	84
Kaitangata-Stirling	3 6	4
Midland Railway	3 6	79

A proviso has been inserted in the charters of the companies owning the private lines in New South Wales, whereby after a certain date the Government can, if disposed, acquire the lines at a valuation. Similar conditions are found in most of the charters granted by the other colonies permitting the construction of private lines.

In the construction of railways during the last working year the colony of Western Australia displayed most activity, in consequence of the urgent need of laying down lines to the goldfields. Of the 438 miles thrown open to traffic in Australasia during the twelve months, 201 miles were opened in Western Australia, 139 being built by the

Government and 62 by private companies. The most important addition to the system of the colony was the line from Southern Cross to Kalgoorlie, 138 miles in length. This line was opened to traffic as far as Boorabbin, 60 miles, on the 1st July, 1896; and the extension to Kalgoorlie, a further distance of 78 miles, was thrown open on the 1st January, 1897. From Kalgoorlie the railway has now been taken north to Menzies. The most important line under construction at the end of the last working year was the Cue Railway, connecting Cue with Mullewa, a distance of 196½ miles, which has now been opened. A further extension of this line is in course of construction.

In New South Wales the 108 miles opened during the twelve months comprised the Jerilderie-Berrigan line, 22 miles in length; the Parkes-Bogan Gate line, 23 miles; and the Narrabri-Moree line, 63 miles. These are all light "pioneer" lines, capable of carrying ordinary rolling stock, hauled by a light engine, at 15 to 20 miles an hour. The railways of this class have averaged only £2,019 per mile; and it is intended to extend them to other districts where the country is level and the expected traffic does not warrant the construction of properly-equipped lines. The only other colony whose railway mileage was considerably increased in the course of the year ended June, 1897, was Queensland, where 116½ miles were opened to traffic, the principal lines being the Charleville-Wyandra, 61 miles; and Iveragh-Gladstone, 26½ miles. Two short lines—Colton-Pialba, 16½ miles; and Hendon-Allora, 3½ miles—were constructed under the Railway Guarantee Act of 1895, by which the local authority, representing the ratepayers of a district, agrees to pay up to one-half of the deficiency in working expenses and interest during the first fourteen years after opening, collected by means of a rate not exceeding 3d. in the £ of value of ratable lands. Should the operations of any year provide a surplus, half of this is retained by the Government, and the other half paid to the local authority, for distribution amongst the ratepayers, in return for the payments made on account of the deficiency in previous years. Where the line has been payable for three years, the Government may cancel the agreement.

The following table shows the extension of the railway in each colony since 1861:—

Colony.	1861.	1866.	1871.	1876.	1881.	1886.	1891-2.	1896-7.
New South Wales	73	143	358	554	1,040	1,941	2,266	2,724
Victoria	114	275	276	718	1,247	1,754	2,903	3,129
Queensland	*	50	218	298	800	1,433	2,320	2,506
South Australia	56	56	133	308	845	1,226	1,823	1,889
Western Australia.....	*	*	*	38	92	202	657	1,361
Tasmania	*	*	45	45	168	303	425	475
New Zealand	*	*	105	718	1,334	1,810	2,011	2,185
Australasia	243	524	1,135	2,679	5,526	8,669	12,405	14,269

* Railways not in existence.

In 1833 a junction was effected between the New South Wales and Victorian lines at the river Murray ; three years later direct communication was established between Victoria and South Australia ; and in 1888 the last mile of line connecting Sydney with the northern colony of Queensland was completed, thus placing the four capitals, Brisbane, Sydney, Melbourne, and Adelaide, in direct communication with each other. A few years ago proposals were made to the Government of Western Australia to construct a railway upon the land-grant system, connecting the eastern districts of the colony with South Australia. It was proposed to extend the lines to Eucla, close to the South Australian border, and when that colony had extended its railways to the same point, Perth would be connected with all the capitals of the Australian colonies. In June, 1897, the South Australian Railways Commissioner, in a report to the Commissioner of Public Works, estimated the cost of construction and equipment of a line to the Western Australian border, a distance of 553 miles, at £1,903,000. When the railways of the two colonies shall have been connected, as they will possibly be at no far distant date, the European mails will, in all likelihood, be landed at Fremantle, and sent overland to all parts of the continent.

The following table shows the length of Government railways in course of construction and authorised on the 30th June, 1897 :—

	Miles.		Miles.
New South Wales.....	95	Tasmania	35½
Victoria	9	New Zealand.....	124
Queensland.....	87½		
Western Australia....	432	Total.....	783

Notwithstanding the energetic expansion of the railway systems throughout Australasia since 1871, there is still room for considerable extension. In the colony of South Australia construction is entirely confined to the south-eastern corner and to the extension of the Northern Line, which has its present terminus at Oodnadatta, 686 miles from Adelaide. It is proposed to eventually extend this line as far north as Pine Creek, the southern terminus of the Port Darwin line. In the course of the year 1896 offers were made on behalf of various syndicates for the construction of the Transcontinental railway, with the acquirement of the section from Palmerston to Pine Creek ; but the Government were not prepared to recommend to Parliament the acceptance of any offer based on the land grant or guarantee system. When this railway is completed direct overland communication will be established between the northern and southern portions of the continent. The length of the gap between the terminus at Oodnadatta and that at Pine Creek is 1,140 miles on the telegraph route.

In New South Wales the railway extensions will be chiefly confined to perfecting the various systems already constructed. At the present time several lines of what is termed the "pioneer" class are in course of construction in level pastoral country. These are of a light and cheap kind

on which the produce of the settlers may be conveyed to the trunk lines at a reasonable speed and at a cheaper rate than carriage by road. In Queensland, with its vast expanse of partly-settled territory and extensive seaboard, the railways are being constructed in separate systems. The lines commence from each of the principal ports and run inland, but there is no doubt that not many years will elapse before these systems will become branches of a main trunk-line which, in all likelihood, will be the Brisbane-Charleville line extended as far as Normanton at the Gulf of Carpentaria. In this colony a system has been introduced by which railways are constructed under a guarantee given by the local authority on behalf of the ratepayers of the district. Details of this system are given on a previous page. In Victoria, Tasmania, and New Zealand the railways are well developed compared with size of territory, and any future extensions will hardly be on so large a scale as in the other colonies. In Western Australia great activity now prevails in extending the lines to the gold-fields, and also in the south-western portion of the colony in the interests of permanent settlement.

CONTROL OF STATE RAILWAYS.

The colonies of Victoria, South Australia, New South Wales, and Queensland have found it expedient to place the management and maintenance of railways under the control of Commissioners. Victoria, in 1883, was the first colony to adopt this system; four years later South Australia made the change, while New South Wales and Queensland followed in 1888. Each of these colonies appointed three officials as Commissioners, and conferred upon them large executive powers, amounting to almost independent control, the object aimed at being to obtain economical management of the lines free from political interference. Subsequently Queensland, Victoria, and South Australia reduced the number of Commissioners to one; but in New South Wales, where the administration has been most successful, no changes in the system have been made. The control of the New Zealand railways was also handed over to a body of three Commissioners in 1887; but at the beginning of 1895 the Government resumed charge of the lines, a general manager being responsible to a Minister for Railways.

In New South Wales and Victoria an additional safeguard in railway construction prevails. All proposals for new lines are submitted to a committee selected from Members of the Houses of Parliament. These committees take evidence regarding the suitability of the route proposed, the probable cost of construction, the financial prospects of the line, and the grades to be adopted; and thereupon advise Parliament to adopt or reject the schemes proposed. This supervision of railway development may be said to have been attended with success, although lines that are not likely to be commercially successful have been recommended by the committee and sanctioned by Parliament.

DIVERSITY OF GAUGE.

Unfortunately for intercolonial communication, railway construction in Australia has proceeded without uniformity of gauge, and the accomplishment of this work, which it is everywhere admitted must be secured, becomes more formidable to contemplate as the years roll on. In 1846 Mr. Gladstone advised that the 4-ft. 8½-in. gauge should be adopted for any lines constructed in New South Wales; and two years later this gauge was adopted as the standard by the Royal Commission appointed for the purpose of determining a uniform gauge for England and Scotland. In 1850, however, the Sydney Railroad and Tramway Company decided to adopt the 5-ft. 3-in. gauge, and in 1852 an Act was passed which provided that all railways in the colony should be laid down to that gauge. But in 1853 the company mentioned, having changed their engineer, altered their views on the gauge question, and applied to have the 4-ft. 8½-in. gauge substituted for the 5-ft. 3-in., succeeding in repealing the Act and in passing another which made the narrower gauge imperative. This step was taken without the concurrence of the other colonies, and feeling ran very high in Victoria in consequence, as two of the railway companies in that colony had already given large orders for rolling-stock on the 5-ft. 3-in. gauge. Until the lines of the two colonies met on the boundary no discomfort was, of course, experienced; but since then the break of gauge, with the consequent change of trains, has been a source of irritation and inconvenience. The South Australian Government adopted at the outset the 5-ft. 3-in. gauge of Victoria; but finding that the construction of lines of this gauge involved a heavier expense than they were prepared to face, the more recent lines were built on a gauge of 3 ft. 6 in. In that colony there are 514½ miles laid to the 5-ft. 3-in. gauge, and 1,229½ to that of 3-ft. 6-in., which is also the gauge of the 145 miles of railway in the Northern Territory. The line joining Adelaide with the Victorian border, as well as several of the other trunk-lines, has been constructed on the wide gauge, so that the line from Melbourne to Adelaide is uniform. The private line which prolongs the South Australian system into New South Wales as far as Broken Hill is on the 3-ft. 6-in. gauge. All the Queensland lines are built on the gauge of 3 ft. 6 in., so that transshipment is necessary on the boundary between that colony and New South Wales. Tasmania, Western Australia, and New Zealand have adopted the 3-ft. 6-in. gauge. The first line laid down in Tasmania was on the 5-ft. 3-in. gauge, but it was soon altered to 3 ft. 6 in. On the west coast of that island an experiment is being made in the construction of a 2-ft. gauge line, at one-fourth the cost of a line laid down to the Tasmanian standard gauge. The advisability of constructing lines of this class is also being considered in Victoria. The total length of line in Australasia laid down to a gauge of 5 ft. 3 in. is 3,688 miles; there are 2,643 miles on the 4-ft. 8½-in. gauge, and 7,938 miles on the 3-ft. 6-in. gauge.

As far back as May, 1889, Mr. Eddy urged the Government of New South Wales to take action with the object of securing a uniform gauge for the colonies, and frequently since that date the Railway Commissioners have directed attention to the urgency of dealing with this important question before the colonies incur greater expenditure in railway construction. They have suggested that the settlement of the difficult question of the adoption of a standard gauge should be approached from the standpoint of which of the two gauges, 4 ft. 8½ in. and 5 ft. 3 in., can be adopted at the least cost and with the smallest amount of inconvenience to the country; and that the whole of the railways of New South Wales and Victoria, with that part of the South Australian lines laid to the 5-ft. 3-in. gauge, as well as the line to Cockburn, and all the lines in Queensland south of Brisbane leading to New South Wales, shall be altered to the standard, the cost of altering the railways and the rolling stock necessary to work them to be a national charge.

COMPARISON OF RAILWAY FACILITIES.

The population and area of territory per mile of line open vary considerably in the different colonies. In comparison with population, Western Australia, South Australia, and Queensland—the most extensive colonies—have the greatest mileage; but in proportion to the area of territory, Victoria, New Zealand, and Tasmania take the lead. The annexed table shows the relation of the railway mileage to population and to the area of each colony for the year 1896–7 :—

Colony.	Per mile of line open.	
	Population.	Area.
	No.	sq. miles.
New South Wales	477	114
Victoria	374	28
Queensland	192	267
South Australia* ..	189	478
Western Australia	116	717
Tasmania ...	350	55
New Zealand	328	48
Australasia	305	216

* Including Northern Territory.

In the following table are given the average population and area of territory per mile of line open in the principal countries of the world.

Of course a comparison can only be made fairly between Australasia and other young countries in process of development :—

Countries.	Length of Railway.	Per Mile of Line Open.	
		Population.	Area.
	miles.	No.	sq. miles
United Kingdom	21,277	1,855	6
France	25,121	1,533	8
Germany	27,392	1,908	8
Austria-Hungary	18,983	2,179	13
Belgium	2,857	2,244	4
Netherlands	1,862	2,610	7
Switzerland.....	2,233	1,314	7
Sweden	6,058	812	29
Norway	1,071	1,868	116
Russia (exclusive of Finland).....	21,948	4,291	86
Spain	7,301	2,495	27
Italy	9,579	3,266	11
India (inclusive of Native States).....	20,114	14,280	78
Canada.....	16,270	312	212
Cape Colony	2,507	727	110
Argentine Republic	8,832	447	201
Brazil	8,086	2,020	397
Chili.....	1,782	1,663	165
United States of America	182,600	394	16
Australasia	14,269	305	216

COST OF CONSTRUCTION.

At the close of the year 1896-7, the cost of construction and equipment of the State railways completed and open to traffic in Australasia was, in round figures, £130,000,000, or nearly 58 per cent. of the public debts of the colonies, after deducting sinking funds. To what extent the provinces have contributed to this expenditure will be apparent from the table given below, showing the total cost and the average per mile. A comparison of the mileage embodied in the table, with the figures given on previous pages, will disclose certain differences. In the case of Victoria, the tramway from Dookie to Katamatite, 17 miles, has been excluded from the expenditure of that colony, and the total mileage correspondingly reduced; and in the case of Queensland, the line from Charleville to Wyandra, 61 miles in length, was not officially opened until the 1st July, 1897, and therefore will not appear in the accounts until next year. For Western Australia, the total cost of construction and equipment is given of the average mileage open to traffic during the working year, as the accounts are thus presented in the Annual Report of the Minister for Railways. Consequently, the amount shown only includes seven-twelfths of the price paid by the Government of that colony for the Great Southern Railway, which was

taken over on the 1st December, 1896. Also, the mileage set down is, under these circumstances, not the total open to traffic on the 30th June, 1897, but the average worked during the year :—

Colony.	Year ended	Length of line open.	Gauge.	Total cost of Construction and Equipment.	Average cost per mile.
		miles.	ft. in.	£	£
New South Wales ...	30 June, 1897	2,639½	4 8½	37,369,205	14,157
Victoria	30 " "	3,112	5 3	38,329,402	12,317
Queensland	30 " "	2,445	3 6	17,280,569	7,068
South Australia	30 " "	1,723¾	{ 5 3 } { 3 6 }	12,599,892	7,310
Northern Territory..	30 " "	145½	3 6	1,155,720	7,943
Western Australia ...	30 " "	970	3 6	3,734,477	4,499
Tasmania	31 Dec., 1896	419¾	3 6	3,524,051	8,395
New Zealand	31 Mar., 1897	2,018	3 6	15,577,392	7,719
Australasia .....	.....	13,473½	.....	129,570,708	9,617

It will be seen that the lines which have been constructed most cheaply are those of Western Australia, where the average cost per mile has only been £4,499, as compared with an average of £9,617 for the whole of Australasia. In that colony there have been few engineering difficulties to contend with, and the lines laid down have been of a light kind. In New South Wales, the average cost, given as £14,157, has been somewhat reduced lately, in consequence of the construction of light "Pioneer" lines, built for an expenditure of £2,019 per mile. It is proposed by the Minister for Public Works to construct several new lines by day labour, as the Railway Construction Department has had a somewhat unfortunate experience in regard to claims for extras to contracts, and expensive litigation in resisting such claims. In Victoria the average cost has been reduced from £13,153 to £12,317 since 1891. At that date it was decided to apply the "butty-gang" system to the construction of railways in the colony, and to build all new country lines as cheaply as possible, and this has been strictly adhered to. Fairly substantial permanent way has been laid down, with reduced ballast; unless they have been absolutely necessary, fencing and gatehouses have been dispensed with; and only a skeleton equipment for stations and water supplies has been provided. As settlement progresses and traffic is developed, it is intended to raise these lines to the requisite standard of efficiency. In Queensland construction is now proceeding, in some cases, under a guarantee from the local authorities.

It would hardly be fair to institute a comparison between the cost of construction per mile in Australasia and in the densely-populated countries of Europe, for while in Europe the resumption of valuable ground is perhaps the heaviest expense in connection with the building

of railways, in the colonies this item of expenditure is not of leading importance. The cost per mile in certain sparsely-settled countries is as follows :—

Canada	£11,522
Cape Colony	9,093
United States	12,889
Argentina.....	10,632
Mexico	9,417
Chili	6,358
Brazil	8,104

while for Australasia it is £9,617.

REVENUE AND WORKING EXPENSES.

The avowed object of State railway construction in Australasia has been to promote settlement, apart from considerations of the profitable working of the lines ; but at the same time the principle has been kept in view that in the main the railways should be self-supporting, and some of the colonies have, with more or less success, handed them over to Commissioners to be worked according to commercial principles, free from political interference. With the exception of South Australia, so far as the Palmerston-Pine Creek line, in the Northern Territory, is concerned, in all the colonies the revenue derived from the railway traffic exceeds the working expenses; but only Western Australia derives a profit from the working of the lines. Even in New South Wales, where the Commissioners have achieved most commendable results during the term of their administration, and claim to have at last made the lines self-supporting, there is still a deficiency when it is borne in mind that the average price received for the loans of the colony is but £96·28 per £100 of stock, and the interest payable is calculated accordingly. The net sum available to meet interest charges during the last two working years will be found in the following table, showing the earnings and working expenses :—

Colony.	Working year, 1895-6.			Working year, 1896-7.		
	Gross Earnings.	Working Expenses.	Net Earnings.	Gross Earnings.	Working Expenses.	Net Earnings.
	£	£	£	£	£	£
New South Wales.....	2,820,417	1,551,888	1,268,529	3,014,742	1,601,218	1,413,524
Victoria	2,401,392	1,546,475	854,917	2,615,935	1,563,805	1,052,130
Queensland	1,085,494	644,362	441,132	1,179,273	684,146	495,127
South Australia	986,500	583,022	403,478	1,025,035	614,254	410,781
Northern Territory	15,105	15,289	(—) 184	17,908	18,966	(—) 1,058
Western Australia	529,616	263,705	265,911	915,483	577,655	337,828
Tasmania*	149,642	120,351	29,291	162,932	122,171	40,761
New Zealand†	1,183,041	751,368	431,673	1,286,158	789,054	497,104
Australasia	9,171,207	5,476,460	3,694,747	10,217,466	5,971,269	4,246,197

* Years ended 31st December, 1895 and 1896. † Years ended 31st March, 1896 and 1897.

(—) Denotes deficiency in amount available to meet working expenses.

In the first of the years shown in the table there was a severe drought in the four great colonies of Australia, causing a heavy fall in the earnings from traffic in wool and agricultural produce. As compared with the year 1894-5, the net revenue was thereby lessened in New South Wales, Victoria, and Queensland; but in South Australia the loss mentioned was more than counterbalanced by an expansion in other traffic. In the other three colonies the financial results were improved—to a remarkable extent, indeed, in Western Australia; and a glance at the figures given in the table will show that during the following year 1896-7 all the colonies participated in the general improvement in the traffic returns—always excepting, of course, the line in the Northern Territory.

Dealing first with New South Wales, the reduction in the gross earnings during the twelve months ended June, 1896, as compared with the previous year, amounted to £57,787—due, as before explained, to a decrease in the traffic in pastoral and agricultural produce, in consequence of the drought, and also, it may be said, to the strike of coal-miners at Newcastle, which lasted nearly three months. The decrease in the amount of the gross earnings would have been greater than the sum stated had it not been for an expansion in the coaching traffic to the extent of £20,069. Floods in the Bourke district led to a considerable expenditure on repairs; but, in spite of this fact, the liberal expenditure during previous years and the lower prices of materials enabled a large reduction to be effected in the permanent way expenses, and the working expenditure was, therefore, reduced by £15,701, leaving the net revenue £42,086 less than in 1894-5. This, however, was but a temporary check, and in the following year the Commissioners obtained the best results which have yet attended their successful administration of the lines of the colony. The gross earnings amounted to £3,014,742, being an increase on those of the previous year of £194,325, to which both coaching and goods traffic contributed; and after providing for an increased working expenditure, chiefly caused by debiting this account with a greater amount of new stock, and effecting more extensive repairs, the net earnings were left at £1,413,524, being much in excess of any sum before received. In connection with the New South Wales lines, it is the opinion of the Commissioners that it will soon be necessary to expend a considerable sum in enlarging the workshops and in providing the necessary machinery for the repair of the large locomotives now in use.

In the neighbouring colony of Victoria the drought told severely on the railway returns for the year 1895-6. The gross earnings were the smallest since 1885-6; the net earnings were the lowest since 1883; the deficiency in providing interest on the capital expenditure was the greatest known. At the end of this year a change was made in the management of the lines; there was a better season in 1896-7, and goods traffic increased; the revenue from passenger traffic was augmented by £54,733; and the total earnings amounted to £2,615,935, as

compared with £2,401,392 in the previous year. Although concessions amounting to £35,000 were made to the employees, and extensive maintenance works and renewals were carried out, the working expenses showed an increase of only £17,330, the net earnings—£1,052,130—being only exceeded during the last eight years in 1892-3 and 1893-4. Unlike New South Wales and Victoria, Queensland had an expansion in passenger and in other goods traffic sufficiently great to more than counteract the loss on account of the bad season in 1895-6, the gross earnings being larger than those of the previous year by £59,982, which, however, was all swallowed up by increased working expenses—partly in repairing considerable damage caused by floods—and the net earnings were £2,407 less than in 1894-5. This fall was more apparent than real, as, but for a change in the system of paying the wages of the employes, the net revenue would have shown an increase. During the twelve months ended June, 1897, the lines of Queensland, with a better season, earned the largest amount of gross and net revenue so far obtained, passenger traffic showing an increase as well as the traffic in wool and agricultural produce.

South Australia was more fortunate in 1895-6 than the other colonies affected by the drought, as an increase in the traffic in other goods compensated for the loss on account of the diminished quantities of wool and agricultural produce carried, and a greater passenger traffic resulted in an addition of £12,296 to the net revenue obtained in 1894-5. In the following year the harvest was a failure, an adverse season being again experienced in the colony; but a great increase in the Barrier traffic and in coaching raised the gross earnings by £38,535. Of this sum, however, £31,232 was absorbed by increased working expenses. This, it is stated, was almost wholly due to the necessity for recouping capital account for expenditure which ought to have been debited to working expenses at an earlier date. In connection with the Palmerston-Pine Creek line, in the Northern Territory, the feature of the working during the last two years was the failure of the revenue to defray working expenses. This was not due to a falling-off in the traffic, for the earnings increased in both years, but to the heavy expenditure necessitated, first, by the ravages of the teredo to the jetty at Palmerston, and, second, by the terrific cyclone which struck Port Darwin in the early part of 1897.

The rush to the gold-fields of Western Australia has brought an enormous amount of traffic to the railways of that colony, and the lines at present stand in a position which it is impossible for those of any other province to attain except under similar circumstances, the earnings, after defraying working expenses, being sufficient to yield a return on invested capital of 11·48 per cent. in 1895-6 and 9·04 per cent. in 1896-7. In great contrast to these lines are those of Tasmania, which, although showing improved earnings and a smaller proportion of working expenses, only returned 1·15 per cent. on the capital expenditure in 1896, and this, too, the highest return so far obtained.

During the last two years the lines of New Zealand have shown a substantial development both in goods and in passenger traffic, and the proportion of working expenses has been reduced. For the year ended 31st March, 1897, the net earnings were the highest obtained during the last eight years.

The proportion of gross earnings absorbed by working expenses during each of the last five years will be found below :—

Colony.	Percentage of Gross Earnings absorbed by Working Expenses.				
	1892-3.	1893-4.	1894-5.	1895-6.	1896-7.
New South Wales	59·39	56·58	54·46	55·02	53·11
Victoria	63·23	59·99	59·78	64·40	59·78
Queensland	62·47	62·61	56·75	59·36	58·01
South Australia	63·56	56·98	59·26	59·10	59·92
Northern Territory	74·90	70·42	77·96	101·22	105·91
Western Australia	86·10*	73·96	61·50	49·79	63·09
Tasmania†	91·32	89·73	85·02	80·42	74·98
New Zealand‡	61·97	62·70	63·62	63·51	61·35
Australasia	62·51	59·96	58·67	59·71	58·44

*Half-year ended June, 1893.

† Years ended 31st December, 1892-6.

‡ Years ended 31st March, 1893-7.

It will be seen from this table that the percentage of working expenses for Australasia as a whole has declined from 62·51 to 58·44 in the course of the five years. In Western Australia the decrease amounted to 26·72 per cent. ; in Tasmania, to 17·89 per cent. ; and in New South Wales, to 10·57 per cent. In New Zealand the improvement during the quinquennium was at the rate of only 1 per cent., while in Victoria it was 5·46 per cent. ; in Queensland, 7·14 per cent. ; and in South Australia, 5·73 per cent. Comparing the first with the last year given, the line in the Northern Territory actually showed an increase in working expenditure at the rate of 41·40 per cent. At the present time the proportion of gross earnings absorbed by working expenses is smallest in New South Wales, and, setting aside the Palmerston-Pine Creek railway, highest in Tasmania.

INTEREST RETURNED ON CAPITAL.

In establishing the financial results of the working of the lines, it is the practice of the railway authorities to compare the net returns with the nominal rate of interest payable on the railway loans or on the public debt of the colonies. An accurate comparison, of course, is afforded by taking the average rate of interest payable on the actual price yielded to the State by outstanding loans. This information is not obtainable for New Zealand; but for the other colonies it is to be understood that the figures in the second column of the following table, showing the interest on outstanding loans, represent the actual rate payable by the State when the prices at which the stocks were sold are taken into consideration. On this basis, the only colony whose lines pay their way is Western Australia, where the activity in gold-mining has resulted in a net profit of 5·43 per cent. on the railway lines of the colony after defraying the actual interest charge on the capital expenditure. Even in New South Wales, where the Commissioners have announced a profit after paying interest on the invested capital, there is still a deficiency of 0·07 per cent., but it may be expected that this will be extinguished at an early date:—

Colony.	Interest returned on Capital.	Actual rate of Interest payable on outstanding Loans.	Average Loss.
	per cent.	per cent.	per cent.
New South Wales	3·78	3·85	0·07
Victoria	2·74	4·00	1·26
Queensland	2·86	4·09	1·23
South Australia	3·26	4·19	0·93
Northern Territory ...	(—) 0·08	3·94	4·02
Western Australia.....	9·04	3·61	*5·43
Tasmania.....	1·15	3·87	2·72
New Zealand	3·19	3·92	0·73
Australasia	3·27	3·96	0·69

* Average gain.

The rate of return on capital which is shown in the foregoing table represents the interest on the gross cost of the lines. In some cases the nominal amount of outstanding debentures is less than the actual expenditure on construction and equipment, owing to the fact that some loans have been redeemed; but as the redemption has been effected by means of fresh loans charged to general services, or by payments from the general revenue, and not out of railway earnings, no allowance on this account can reasonably be made.

The table given below shows the rate of interest returned on the capital expenditure for each of the last five years, with the deficiency in meeting the actual rate of interest payable on outstanding loans. In the case of New Zealand, only the nominal loss is shown; the actual loss was somewhat higher :—

Colony.	1892-3.	1893-4.	1894-5.	1895-6.	1896-7.
	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.

INTEREST RETURNED ON CAPITAL EXPENDITURE.

New South Wales	3·48	3·46	3·60	3·44	3·78
Victoria	2·87	2·89	2·74	2·24	2·74
Queensland	2·37	2·18	2·68	2·63	2·86
South Australia	3·07	3·54	3·12	3·21	3·26
Northern Territory	0·34	0·42	0·28	(—)0·02	(—)0·08
Western Australia	†0·79	3·12	5·44	11·48	9·04
Tasmania*	0·43	0·44	0·61	0·83	1·15
New Zealand	3·05	2·88	2·73	2·80	3·19

NET LOSS IN WORKING LINES.

New South Wales	0·48	0·51	0·35	0·46	0·07
Victoria	1·15	1·15	1·28	1·84	1·26
Queensland	1·81	1·99	1·49	1·46	1·23
South Australia	1·21	0·73	1·20	1·01	0·93
Northern Territory	3·60	3·52	3·64	3·96	4·02
Western Australia	†3·37	0·99	‡1·46	‡7·66	‡5·43
Tasmania*	3·66	3·67	3·35	3·05	2·72
New Zealand	1·37	1·54	1·37	1·14	0·73

* Years 1892 to 1896.

† Six months ended June, 1893.

‡ Net profit.

In 1881 the New South Wales railways yielded 5·31 per cent.—a higher rate of interest on the capital cost than was ever reached before or since. In the same year the Victorian lines yielded a return of 4·04 per cent., which is the highest on record in that colony, with the exception of 4·18 in the year 1886. The decline in the net profits was largely due to the extension of the lines in sparsely-populated districts; but with the adoption of a more prudent policy in the matter of construction, largely dictated by the severe financial pressure to which the colonies were subjected, and with more careful working, the returns, as will be evident from the foregoing table, are again showing improvement.

EARNINGS AND EXPENSES PER MILE.

The gross earnings, expenditure, and net earnings per average mile worked during the last two years were as follow :—

Colony.	Gross Earnings.		Expenditure.		Net Earnings.	
	1895-6.	1896-7.	1895-6.	1896-7.	1895-6.	1896-7.
	£	£	£	£	£	£
New South Wales..	1,114	1,171	613	622	501	549
Victoria	769	837	496	500	273	337
Queensland	455	486	270	282	185	204
South Australia ...	573	595	339	356	234	239
Northern Territory	104	123	105	130	(—) 1	(—) 7
Western Australia..	913	1,103	455	696	458	407
Tasmania*	350	381	281	286	69	95
New Zealand	592	638	376	391	216	247
Australasia...	710	770	424	450	286	320

* 1895 and 1896.

For the whole of Australasia the gross earnings per average mile worked during 1896-7 were £60 more than in the previous year, and the working expenses were increased by £26, leaving the net earnings at £320 in 1896-7, as compared with £286 for 1895-6. In the two previous years the net earnings stood at £293 per mile. Below will be found a table giving the returns per train mile. In all the colonies, with the exception of the Northern Territory, there was an increase in the train mileage run during 1896-7. The increase in Western Australia was nearly a million miles :—

Colony.	Gross Earnings.		Expenditure.		Net Earnings.	
	1895-6.	1896-7.	1895-6.	1896-7.	1895-6.	1896-7.
	d.	d.	d.	d.	d.	d.
New South Wales..	87·69	88·99	48·25	47·27	39·44	41·72
Victoria	64·11	68·03	41·29	40·67	22·82	27·36
Queensland	54·91	57·30	32·59	33·24	22·32	24·06
South Australia ...	68·57	66·95	40·53	40·12	28·04	26·83
Northern Territory	114·28	137·28	115·67	145·38	(—) 1·39	(—) 8·10
Western Australia..	82·44	86·59	41·05	54·64	41·39	31·95
Tasmania*	49·36	52·85	39·69	39·63	9·67	13·22
New Zealand	85·85	90·54	54·53	55·55	31·32	34·99
Australasia ...	72·13	75·01	43·07	43·84	29·06	31·17

* 1895 and 1896.

In some of the colonies the railways pass through heavy and mountainous country, involving steep gradients. This is particularly the case in New South Wales, where the lines are most exceptional in their character, having been constructed with an unusual proportion of steep gradients, the worst being on the trunk-lines, and so situated that the whole of the traffic has to pass over them. In the Southern system the line at Cooma reaches an altitude of 2,659 feet above the sea-level; in the Western, at the Clarence station, Blue Mountains, a height of 3,658 feet is attained; while on the Northern line the highest point, 4,471 feet, is reached at Ben Lomond. In no other colony of the group do the lines attain such an altitude. In Queensland the maximum height is 3,008 feet; in Victoria, 2,452 feet; in South Australia, 2,024 feet; in Western Australia, 1,522 feet; and in New Zealand, 1,252 feet. In the colonies where heavy gradients prevail the working expenditure must necessarily be heavier than in the colonies where the surface configuration is more level.

FINANCIAL RESULTS OF FOREIGN RAILWAYS.

The interest on capital cost, the proportion of working expenses to the gross revenue, and the returns per train mile for the railways of some of the principal countries of the world are given below. The figures for the countries other than Australasia refer either to the year 1896 or 1895:—

Country.	Capital Cost.			Working Expenses: Proportion to Gross Revenue.	Per Train Mile.		
	Total.	Per Mile Open.	Return Per Cent.		Gross Revenue.	Working Expenses.	Net Revenue.
	£	£	p. cent.	per cent.	d.	d.	d.
United Kingdom	1,029,475,335	48,384	3·88	56·0	61·2	34·1	27·1
France	620,840,000	27,540	3·73	52·9	66·8	36·2	30·6
Germany	559,043,000	20,409	4·98	61·0	73·6	44·3	29·3
Belgium	60,422,956	29,556	4·22	56·2	56·4	33·1	23·3
United States	2,230,584,487	12,331	3·10	70·5	69·3	48·8	20·5
Canada	187,462,062	11,522	1·72	69·3	56·8	39·9	16·9
Cape Colony	21,193,417	9,407	10·18	47·1	98·0	46·2	51·8
Australasia	129,570,708	9,617	3·27	58·4	75·0	43·8	31·2

The figures given above for the Cape Colony are for State lines only, and the return on the invested capital is exclusive of the Orange Free State's share of the profits.

COACHING AND GOODS TRAFFIC.

The following table shows the number of passengers carried on the lines of the various colonies during the years 1881, 1891-2, and 1896-7. It will be seen that during the last few years the number of

journeys on the Victorian lines has fallen off enormously, although the traffic has again taken an upward movement. Nearly all the colonies, however, experienced the effects of the diminished spending power of the people; but in the majority of cases a recovery has taken place. The number of passenger journeys in Tasmania in 1896 was still very small compared with the 1891 returns:—

Colony.	Passengers carried.		
	1881.	1891-2.	1896-7.
New South Wales	6,907,312	19,918,916	22,672,924
Victoria	18,973,070	69,546,921	42,263,638
Queensland*	247,284	2,370,219	2,633,556
South Australia	3,032,714	5,749,028	5,799,928
Northern Territory	No lines	4,541	3,080
Western Australia.....	67,144	508,304	3,607,486
Tasmania.....	102,495	725,724	542,825
New Zealand	2,911,477	3,555,764	4,482,456

* Exclusive of journeys of season ticket-holders.

The amount of goods tonnage is shown in the subjoined table. In the period from 1881 to 1891 there was an increase of about 156 per cent., varying from 71 per cent. in South Australia to 377 per cent. in Queensland. Since the latter year the tonnage has increased by not quite 7 per cent.; but Victoria is the only colony where the goods traffic was smaller in 1896-7 than in 1891-2. The figures are appended:—

Colony.	1881.	1891-2.	1896-7.
	tons.	tons.	tons.
New South Wales	2,033,850	4,296,713	4,507,041
Victoria	1,249,049	3,431,578	2,383,445
Queensland	161,009	768,527	1,243,603
South Australia	646,625	1,106,839	1,146,293
Northern Territory	No lines.	2,633	3,150
Western Australia.....	27,816	94,476	858,748
Tasmania.....	44,396	161,141	229,707
New Zealand	523,099	2,122,987	2,368,927
Australasia	4,685,844	11,084,894	12,800,914

The percentage of receipts from coaching traffic to the total receipts is somewhat less in the Australasian colonies than in the United Kingdom, where for the year 1896 the coaching receipts formed 45·9 per

cent. of the total obtained from goods and passenger traffic. The figures for each colony are given below :—

Colony.	Coaching Traffic.	Goods Traffic.
	per cent.	per cent.
New South Wales	36·4	63·6
Victoria	50·8	49·2
Queensland	37·4	62·6
South Australia	30·3	69·7
Northern Territory	30·0	70·0
Western Australia	41·0	59·0
Tasmania	45·5	54·5
New Zealand	38·1	61·9
Australasia	40·5	59·5

ROLLING STOCK.

The following table gives the different classes of rolling stock in the possession of the several Australasian Governments at the end of the year 1896-7, and, considerable as are the numbers of each class, they could with advantage be largely increased in most of the colonies :—

Colony.	Engines.	Coaching Stock.	Goods Stock.
New South Wales	502	1,026	9,455
Victoria	517	1,490	8,631
Queensland	287	465	4,310
South Australia	320	369	6,219
Northern Territory	6	7	134
Western Australia	151	224	3,485
Tasmania	61	213	997
New Zealand	269	714	8,503
Australasia	2,113	4,508	41,734

In Victoria the stock of powerful engines requires augmenting without delay ; and at the close of the working year, 355 waggons were under construction. Queensland has a large number of rolling stock under order, as have also New Zealand and Western Australia.

RAILWAY ACCIDENTS.

The persons meeting with accidents on railway lines may be grouped under three heads—passengers, servants of the railways, and trespassers ; and the accidents themselves might be classified into those arising from causes beyond the control of the person injured, and those due to

misconduct or want of caution. The following table shows the number of persons killed and injured on the Government railways during 1896-7 in those colonies for which returns are available:—

Colony.	Passengers.		Railway Employés.		Trespassers, &c.		Total.	
	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.
New South Wales	2	50	8	78	15	7	25	135
Victoria	1	137	6	295	28	86	35	518
South Australia	2	4	4	18	3	1	9	23
Northern Territory* .....	...	...	...	...	...	...	...	...
New Zealand	4	11	2	158	2	74	8	243

* No accidents.

The railways of Australasia have been as free from accidents of a serious character as the lines of most other countries. In order to obtain a common basis of comparison it is usual to find the proportion which the number of persons killed or injured bears to the total passengers carried. There is, however, no necessary connection between the two, for it is obvious that accidents may occur on lines chiefly devoted to goods traffic, and a more reasonable basis would be the accidents to passengers only compared with the number of passengers carried. The data from which such a comparison could be made are wanting for some countries. As far as the figures can be given they are shown in the following table, which exhibits the number of passengers killed and injured per million carried. The figures are calculated over a series of years and brought down to the latest available dates:—

Country.	Number of Years.	Number of Passengers.		Average per million passengers carried.	
		Killed.	Injured.	Killed.	Injured.
Germany.....	5	250	980	0·10	0·40
Austria-Hungary.	3	46	435	0·13	1·26
Belgium	5	72	589	0·16	1·27
Sweden	4	6	10	0·10	0·17
France.....	5	397	2,019	0·26	1·30
Norway	4	1	1	0·04	0·04
Holland	5	8	33	0·07	0·28
Switzerland	6	142	475	0·61	2·04
Russia.....	6	177	591	0·74	2·46
United Kingdom.	4	398	5,084	0·11	1·38
Spain	6	96	533	0·56	3·12
Canada	4	43	230	0·76	4·04
New South Wales	10½	81	515	0·40	2·32
Victoria	10	36	1,196	0·07	2·45

STATE RAILWAYS OF AUSTRALASIA, 1897-8.

The financial results obtained from the administration of the State lines of the colonies during the last financial year are shown in the following table. An analysis of the figures cannot yet be made :—

Colony.	Year ended—	Cost of Construction and Equipment.	Gross Earnings.	Working Expenses.	Net Earnings.	Interest returned on Capital.
		£	£	£	£	per cent.
New South Wales	30 June, 1898..	37,719,402	3,026,748	1,614,605	1,412,143	3·75
Victoria	30 „ 1898..	38,602,304	2,608,896	1,046,054	962,842	2·49
Queensland	30 „ 1898..	18,056,285	1,215,811	686,066	529,745	2·03
South Australia	30 „ 1898..	12,764,106	984,228	603,474	380,754	2·98
Northern Territory	30 „ 1898..	1,155,172	14,124	20,268	(—) 6,144	Nil.
Western Australia	30 „ 1898..	5,047,261	1,019,677	786,318	233,359	4·62
Tasmania	31 Dec., 1897..	3,572,091	166,833	128,544	38,289	1·07
New Zealand	31 Mar., 1898..	15,993,903	1,376,008	857,191	518,817	3·24
Australasia .....	.....	132,910,524	10,412,325	6,342,520	4,069,805	3·07

NOTE.—(—) minus = deficiency in earnings to meet working expenses.

TRAMWAYS.

In all the Australasian colonies tramways are in operation, but it is chiefly in Sydney and Melbourne, the inhabitants of which numbered at the latest date 417,250 and 458,610 respectively, that the density of settlement has necessitated the general adoption of this mode of transit. In New South Wales steam-motors are mostly used, though there are 2 miles of cable tram and $3\frac{1}{2}$ miles of electric tram at North Sydney, and another cable-line, $2\frac{1}{2}$ miles in length, from King-street, Sydney, to Ocean-street, in the suburb of Woollahra. The length of Government tram-lines open on the 30th June, 1897, was $62\frac{1}{2}$ miles, which had cost for construction the sum of £1,452,670. The receipts for the year ended on the same date were £306,695, and the working expenses £248,881, leaving a profit of £57,814, or 3·98 per cent. on the invested capital.

In Victoria the cable system is in operation in the metropolitan area, the lines having been constructed by a municipal trust at a cost of £1,705,794. The tramways are leased to a company, and the receipts for the year ended 31st December, 1897, were £365,981. The number of passengers carried during the year was 36,231,106. In addition to these cable lines, 48 miles in length, there are 5 miles of steam and 4 miles of electric tramway in Victoria. There is no record of the length of horse tramways in the colony.

In Queensland there is a system of horse trams, controlled by a private company, which is now being converted into an electric system. No information regarding liabilities is available, but the assets on the 30th

September, 1896, were set down at £131,182. The receipts for the year ended 30th September, 1897, were £30,299, and the expenses, including depreciation, £26,304. The company owned 33 electric and 24 horse cars, and 70 horses. The length of the tramways is 15 miles, or 25 miles of single line.

In South Australia there are no Government tramways, but horse trams are run in the principal streets of Adelaide by private companies. No particulars have been collected respecting the length of these lines, nor of the returns therefrom.

The Western Australian Government owns a line of horse tramway on a 2-ft. gauge between Roeburne and Cossack, a length of $8\frac{1}{2}$ miles, constructed at a cost of £21,767. For the year ended 30th June, 1897, the gross earnings were £3,686, and the working expenses £2,491, leaving the net receipts at £1,195, equal to 5·49 per cent. on the capital cost.

In Tasmania there is an electric tramway, about 9 miles in length, owned by a private company. The cost of construction and equipment was £90,000; the average number of hands employed is 65; and the company possesses 20 cars, of which the average number in use is 12. For the year ended 31st December, 1896, the receipts amounted to £12,052, and the working expenses, excluding directors' fees, to £8,511. The passengers carried during the twelve months numbered 1,219,273.

There are also tramways in existence in New Zealand under private management, but no particulars in regard to them are at present available.