

The miles run by trolley bus or petrol bus services on the smaller vehicle would be increased by 15%. The increase in t. due to these additional miles has not been taken into consideration. is an unknown quantity. For depreciation purposes the useful life of petrol buses should be taken at not more than 200,000 miles, trolley buses 15 years, and reinstated tramways 15 years.

Administration charges in the case of each service should be considerably lower after 1934, due to the fact that certain moneys now allocated to this account will cease to be paid.

In considering the substitution of tramways by petrol buses or trackless trolleys the question of the carrying capacity of the roadways is a vital question, and it is safe to state that a big percentage of the roadways in which tramways now operate would not maintain a regular and frequent trolley bus service with a vehicle weighing 7 to 8 tons loaded weight.

The general remarks as applied to the Bendigo report in regard to utility of trolley buses and estimates apply to Ballarat. In the event of reinstatement of tramways being carried out unemployment relief money could be utilised on the basis of 50%. Twelve months would be the ideal period for completion of the reconstruction and 3 years the maximum.

Should it be decided to install petrol buses £15,000 unemployed relief funds could be utilised over a period of twelve months, and in the case of trolley buses £16,000 over the same period.

Viewing the problem of the Ballarat tramway from every angle it is suggested that a trolley bus system would meet the requirements of the population with a specially designed trolley bus keeping the weight down as low as possible, and possibly reducing the carrying capacity to 25 passengers per bus, with a consequent increase in the number of vehicles in service. The whole question, however, will depend on whether satisfactory arrangements can be made with the local authorities concerned as to the provision of suitable roadways in the first instance for a vehicle which would possibly have a loaded weight of between 6 and 8 tons.

The subsequent maintenance of the roadways on which a vehicle of this class would operate is also a vital matter and must be decided before trolley buses can be introduced.

Failing satisfactory arrangements being concluded in regard to the above, the only other alternative is to proceed with the reinstatement of the tramways on the lines as already recommended for the Bendigo undertaking.

BALLARAT TRAMWAYS.

REPORT ON GENERAL RECONSTRUCTION OF BALLARAT TRAMWAYS
UP TO A STANDARD WHICH PROVIDES A REASONABLY EFFICIENT
SERVICE, MAKING USE AS FAR AS POSSIBLE OF EXISTING
CONSTRUCTION.

Tools and Equipment:

The condition of tramways and reinstatement of same was dealt with in our general report dated 15/5/30, and should be considered in conjunction with the following information:

Overhead Construction, including trolley wire,
positive and negative feeders:

Replacement of 6 wooden poles, lining up existing poles, and painting all poles used on system

750

Trolley Wire:

Approximately 12 miles of 4/0 grooved wire erected, and including replacement of all insulation, other than porcelain, and general overhaul of overhead work

4,000

Positive and Negative Feeders:

500

Rails, Fish plates, and Bonds:

The only expenditure under this heading is for removing 20,300 yds. of corrugations at 1/- per yard

1,150

Permanent Way - Paving:

Regrading the track from end to end, replacement of concrete stringers where necessary with sleepers, construction, levelling up double track, and generally carrying out all necessary work to bring the permanent way to reasonable and workable standard

60,000

(Sebastopol track, 1.72 miles, not included in above).

Sebastopol Track:

1.72 miles would require reconstruction from end to end with standard 90 lb. rails. Estimated cost of reconstruction to the Geelong standard

13,000

Special Work:

Points, crossings, curves, cross-overs, and all special work should be replaced, with the exception of such special work as can be rehabilitated by welding

5,000

Rolling Stock:

As 10 M.T.B. cars have been purchased it is considered that the existing rolling stock will be sufficient for the time being, and possibly at a later date additional M.T.B. cars can be purchased

Car Sheds:

The existing car sheds are badly situated, and unsuitable for the purpose, but for the time being an expenditure of £500 would suffice to carry out the service

500

Workshops:

No expense necessary under this heading.

Carried forward £84,900

Car Sheds and Workshop Equipment:

Although most of the existing equipment is out of date it still represents a life of several years. No special expense is therefore necessary.

Amount.	Pence per Car Mile
2732. 9. 3	1.2420

Track tools and equipment:

In addition to existing tools a roller, air compressor, with drills, packers, bitumen boilers, motor truck, picks, shovels, bores and sundry small tools would be required, at an estimated cost of

(Note - If reconstruction work at Ballarat and Bendigo is not carried out at the same time then this cost could be spread over both towns).

345. 1. 9	.1569
7317. 15. 8	3.4170
72. 10. 10	.0110
940. 15. 9	.2458
199. 3. 0	.0905
29. 7. 3	.0133
1080. 19. 1	.4823
264. 5. 11	.1201
12. 2. 10	.0055

Overhead tools and equipment:

One motor tower waggon with sundry small tools
 Rails including joints, crossings, tiebars &c
 Line equipment, including poles, brackets and
Grenville Street Waiting Room, etc: telephones

The question of this expenditure is wrapped up with the proposal after 1934 to provide a showroom in Ballarat. The tramway requirements can therefore be held over until a decision in regard to the above is made.

Tools and Sundry Plant
 Car Shed Buildings, Fixtures & Improvements
 Miscellaneous equipment

1121. 2. 5	600	.0096
931. 10. 10		.4234
470. 19. 6		.3141
2536. 12. 0		1.1530
815. 4. 9		.3705
16. 1		.0058
99. 15. 11		.0454
224. 10. 9		.1021
91. 3. 5		.0414
11. 16. 9		.0054

Administration - Local Office

Total

3285. 10. 9	£88,500	.4934
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Insurance

128. 10. 0		.0054
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Workers' Compensation

In the above estimates only the work absolutely necessary to

provide a reasonably efficient tramway service has been included, and it

is pointed out in this connection that heavy expense is necessary to

reinstate the permanent way, making use of worn rails, which under present

conditions of traffic on straight track have an effective life of from

12 to 15 years.

73. 10. 0	.0316
23081. 15. 10	10.4711
23946. 15. 9	10.8845
4 065. 0. 11	.1933

STATISTICS

Total Miles run	528020
Passengers Carried	2392354
Passengers per Car Mile	4.531
Units used on Cars	748064
Units per Car Mile	1.417
Receipts per passenger	2.402
Operating expenses per Car Mile	10.4913
Revenue per Car Mile	10.8845

ELECTRIC SUPPLY COMPANY OF VICTORIA LTD. BALLARAT.
REVENUE & OPERATING COSTS ONE (1) YEAR ENDED 30th June, 1932.

	<u>Amount.</u>	<u>Pence per car mile</u>
<u>Operating Expenses</u>		
<u>Power</u>	2732. 9. 3	1.2420
<u>Traffic Expenses</u>		
Superintendence	345. 1. 9	.1569
Wages of Motormen & Conductors	7517.15. 8	3.4170
Wage of Other Traffic employees	72.10.10	.0330
Cleaning and Oiling Cars	540.15. 9	.2458
Cleaning and sanding track	199. 3. 6	.0905
Fuel, Light & Water for Car Shed	29. 7. 3	.0133
Ticket check, including Wages of Inspectors and clerks	1080.19. 1	.4913
Uniforms, Badges and Punches	264. 5.11	.1201
Miscellaneous	12. 2.10	.0055
<u>Maintenance</u>		
Tracks, excluding rails	1121. 2. 5	.5096
Rails including Points, Crossings, Tiebars &c	931.10.10	.4234
Line equipment, including poles, Brackets and telephones	470.19. 6	.2141
Trucks, brakes and Guards	2536.12. 0	1.1530
Bodies only	815. 4. 9	.3705
Electrical Equipment, including Lighting, Trolleys &c	496.16. 1	.2258
Other Rolling stock	99.15.11	.0454
Instruments, Testing Apparatus, Traction Switchbds	224.10. 9	.1021
Tools and Sundry Plant	91. 3. 6	.0414
Car Shed Buildings, Fixtures & Improvements	11.16. 9	.0054
Miscellaneous equipment	11.16. 9	.0054
<u>Administration - Local Office</u>	3285.10. 9	1.4934
<u>Insurance</u>	128.10. 9	.0584
<u>Workers' Compensation</u>	73.10. 0	.0334
TOTAL EXPENDITURE:	23081.15.10	10.4913
<u>REVENUE</u>		
<u>Traffic Receipts</u>	23881.16. 5	10.8549
<u>Advertising Rents etc.</u>	65. 0. 4	.0296
TOTAL REVENUE:	23946.16. 9	10.8845
PROFIT:	£ 865. 0.11	.3932

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TROLLEY BUSES.

SUBSTITUTION OF TROLLEY BUSES FOR FIXED SYSTEM OF TRAMWAYS IN BALLARAT.

In considering the introduction of trolley buses the most vital point, other than the fact that tramways are already in existence, is the question as to whether the tarred macadam roads as at present laid in the area in which trolley buses would operate are suitable for vehicles weighing between 7 and 8 tons. This factor in preparing the estimates for a trolley bus system has not been taken into consideration.

	Amount	Pence per Mile
<u>ESTIMATE</u>		
<u>Permanent Way:</u> A water for car shed	30. 0. 0	£ .0119
Cost of scrapping the existing permanent way and portions of overhead	1006. 0. 0	.3976
Reinstating permanent way to the Council's standard, estimated at 7/6d per sq.yd. - 15 miles 21 chains	264. 0. 0	5,000
Provision of 25 30-passenger trolley buses at £2,000 per vehicle	12. 0. 0	20,000
<u>Overhead Construction:</u>		
(Making use as far as possible of the existing overhead material) 14 miles, including terminals, at £1750 per mile.	706. 0. 0	50,000
Alteration to existing car sheds to act as a garage for trolley vehicles	250. 0. 0	24,500
Special equipment in workshops to suit the altered system	25. 0. 0	200
Car shed buildings, fixtures & improvements	150. 0. 0	750
Miscellaneous equipment	91. 0. 0	£ 100,450
Administration Local Office	12. 0. 0	
Insurance	3285. 0. 0	1.2504

The scrap value of the tramway undertaking, including rolling stock, has not been estimated, owing to the difficulty in finding a market for this class of material, with the exception of copper, the nett value of which would be in the vicinity of £400.

Traffic receipts	23882. 0. 0	9.4392
Advertising rents etc	67. 0. 0	.0257
<u>TOTAL REVENUES:</u>	<u>23949. 0. 0</u>	<u>9.4649</u>
<u>EXPENDITURE:</u>	<u>£ 2402. 0. 0</u>	<u>.8510</u>

THE ELECTRIC SUPPLY COMPANY OF VICTORIA LTD. BALLARAT

TROLLEY BUSES

REVENUE AND OPERATING COSTS FOR ONE YEAR FOR
TROLLEY BUS SERVICE BASED ON 607223 MILES PER
ANNUM AT 1.5 UNITS PER CAR MILE.

The proposition would be to scrap the existing tramways and
dispose of the material, including trackwork, spares, and everything

appertaining thereto at the best value obtainable. Amount Pence per Mile

Operating Expenses

Power 910834 units @ .8459d per unit 3210. 0. 0 1.2687

Traffic Expenses

Superintendence 345. 0. 0 .1364

Wages of Drivers (based on Fare Box Rates) 7373. 0. 0 2.9141

Wages of other traffic employees

Cleaning & oiling vehicles incl. oil & grease 541. 0. 0 .2138

Fuel, light & water for car shed 30. 0. 0 .0119

Ticket check, incl. wages of clerks & inspectors 1006. 0. 0 .3976

Uniforms, badges and punches 264. 0. 0 .1043

Miscellaneous 12. 0. 0 .0048

Maintenance

Line equipment including poles, brackets 6,000 .2790

Reinstating the permanent and telephones Council's standard, estimated at 7/6d per sq. yd. 15 miles 706. 0. 0 .2790

Trucks, brakes, motors & guards, including 20,000
tyres 3100. 0. 0 1.2252

Bodies only 25 30-passenger petrol buses at £1,500 800. 0. 0 .3162

Electrical equipment incl. lighting, trolleys & 37,500 250. 0. 0 .0988

Instruments, testing apparatus & traction 200
for petrol vehicles switchboards 25. 0. 0 .0099

Tools and sundry plant shops to suit the altered 150. 0. 0 .0593

Car shed buildings, fixtures & improvements 750 91. 0. 0 .0360

Miscellaneous equipment 12. 0. 0 .0048

Administration Local Office 3285. 0. 0 1.2984

Insurance 184. 0. 0 .0727

Workers Compensation 81. 0. 0 .0320

TOTAL EXPENDITURE: £21465. 0. 0 8.4839

Revenue

Traffic Receipts 23882. 0. 0 9.4392

Advertising rents etc 65. 0. 0 .0257

TOTAL REVENUE: £23947. 0. 0 9.4649

PROFIT: £ 2482. 0. 0 .9810

4/10/32.

PETROL BUSES.

The proposition would be to scrap the existing tramways and dispose of the material, including tramcars, spares, and everything appertaining thereto at the best value obtainable. No estimate can be made of the value of material of this nature, other than copper, as the disposal of same depends entirely upon whether a purchaser is in the market for plant of this nature.

The buses would be of a type suitable for operation on tarred macadam roads, the unloaded weight of same being kept as low as possible, but for estimate purposes we have provided for buses with a capacity of 30 passengers.

Garage	30. 0. 0		30. 0. 0
Street check including wages of inspectors and clerks	1006. 0. 0		1006. 0. 0
<u>ESTIMATED COST OF SUBSTITUTING IN BALLARAT PETROL DRIVEN VEHICLES FOR EXISTING TRAMWAYS.</u>			
	12. 0. 0		12. 0. 0
Cost of scrapping the existing permanent way and overhead	800. 0. 0		800. 0. 0
		6,000	
Reinstating the permanent way to the Council's standard, estimated at 7/6d per sq.yd. 15 miles 21 ch.	1898. 0. 0		1898. 0. 0
		20,000	
Provision of 25 30-passenger petrol buses at £1,500 per vehicle	150. 0. 0	37,500	37,500. 0. 0
Alteration to existing car sheds to act as a garage for petrol vehicles	0. 0. 0	200	200. 0. 0
Special equipment in workshops to suit the altered system	12. 0. 0	750	750. 0. 0
			200. 0. 0
			81. 0. 0
			<u>£64,450</u>
TOTAL EXPENDITURE			<u>£ 7500. 0. 0</u>

Office expenses	2,000. 0. 0		2,000. 0. 0
Advertising rates etc.	95. 0. 0		95. 0. 0
			<u>£ 2,095. 0. 0</u>
			<u>£ 1,943. 0. 0</u>

REVENUE COSTS OPERATING FOR ONE YEAR FOR
PETROL BUS SERVICE BASED ON 607223 MILES
PER ANNUM.

	<u>Amount</u>	<u>Pence per Mile</u>
<u>Operating Expenses</u>		
Power (petrol)	6326. 0. 0	2.5003
<u>Traffic Expenses</u>		
Superintendence	345. 0. 0	.1364
Wages of drivers (based on Fare Box Rates)	7373. 0. 0	2.9141
Cleaning and oiling cars	541. 0. 0	.2138
Fuel, light & water for garage	30. 0. 0	.0119
Ticket check including wages of inspectors and clerks	1006. 0. 0	.3976
Uniforms, badges and punches	264. 0. 0	.1043
Miscellaneous	12. 0. 0	.0048
<u>Maintenance</u>		
Body Maintenance	800. 0. 0	.3162
Chassis Maintenance	1898. 0. 0	.7501
Engine Maintenance	1898. 0. 0	.7501
Tyre repairs and renewals	1518. 0. 0	.6000
Car shed buildings, fixtures & Improvements	150. 0. 0	.0593
Tools and sundry plant	91. 0. 0	.0360
Miscellaneous equipment	12. 0. 0	.0048
Administration Local Office	3285. 0. 0	1.2984
Insurance	260. 0. 0	.1027
Workers Compensation	81. 0. 0	.0320
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TOTAL EXPENDITURE:	£ 25890.0. 0	10.2328
 <u>Revenue</u>		
Traffic Receipts	23882.0. 0	9.4392
Advertising rents etc.	65.0. 0	.0257
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	£ 23947. 0. 0	9.4649
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Loss:	£ 1943. 0. 0	.7679
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