

THE MELBOURNE, BRUNSWICK & COBURG TRAMWAYS TRUST

CONSTITUTION

The Melbourne, Brunswick and Coburg Tramways Trust was constituted by the Melbourne, Brunswick and Coburg Tramways Act 1914. Its Board consisted of a Chairman, (Thos. O'L. Reynolds, Esq., J.P., from 1914 to take-over), plus two Councillors from each of the interested Councils. Over the years under review, the constituent Councils were represented on the Trust by the following named gentlemen:

	<u>Melbourne</u>	
Ald. Sir D.V. Hennessy,	.	1914 to take-over
Ald. John Gardiner, J.P,		1914 to take-over

	<u>Brunswick</u>	
Cr. F.T. Hickford, M.A,		1914 to 1917
Cr. J. Millward, J.P,		1914 to take-over
Cr. A.G. Wales,		1918 to take-over

	<u>Coburg</u>	
Cr. A. Bush,		1914 to 1918
Cr. H.J. Richards, J.P,		1914 to take-over
Cr. W.E. Cash,		1918 to take-over

The Act incorporating the Melbourne and Metropolitan Tramways Board passed through Parliament and the Board came into being on the 1st November, 1919, taking control of the cable tramways as from that date, whilst the Electric Tramways were merged under the one control as from the 2nd February, 1920. The Government appointed the Chairman of the Trust, T.O'L. Reynolds, Esq., as a member of the new Board.

OPENING OF THE LINE

The work of designing and constructing the tramways was commenced in June, 1914. The Coburg section, viz., that in Sydney Road between Moreland Road and Bell Street, was opened for traffic on the 27th April; the section from Bell Street to Bakers Road came into use on the 14th May, and the section from Sydney Road to Park Street on the 14th August, 1916. Difficulties in the supply of various materials delayed the official opening; however, the tramway was completed to Queensberry Street and the undertaking officially declared open on Tuesday, 31st October, 1916, by the Hon. the Minister for Public Works, Mr. W.A. Adamson, M.L.C.

EXTENSIONS

In 1916, it was fully recognised that an extension of the system from Queensberry Street along Madeline (now the northern section of Swanston Street) and Swanston Street to Lonsdale Street would be of great advantage to the Trust and a convenience to the travelling public, but to carry this out it would be necessary for the section of cable tramway from Queensberry Street to Lonsdale Street to be vested in the Trust. With this object in view, a deputation waited on the Minister of Public Works and laid the proposal fully before him, and he undertook to bring the matter before the Cabinet. This extension was considered

of the greatest importance, and it was hoped that the negotiations which were proceeding, would have resulted in putting the Trust in a position to be able to provide a convenient City terminus to its system, which would have proved a source of public satisfaction and advantage to the Municipalities constituting the Trust. To facilitate traffic in the meantime, a system of transfer tickets was inaugurated, and it enabled passengers who wished to travel on the electric cars to journey on the cable car from City Road, South Melbourne, to Queensberry Street, Carlton, or vice versa, for 1d.

During 1917 and 1918, considerable negotiations took place in connection with this proposed extension, but further consideration by the Government was deferred pending the constitution of a central Tramway Authority, but as the proposed was held up indefinitely, negotiations were resumed with a view to the much desired extension being brought about.

Another extension planned was from Bakers Road, along Sydney Road, to the New Melbourne General Cemetery at Fawkner, about one mile in length, the preliminaries had been arranged by October, 1916, and the various Councils agreed to indemnify the Trust against loss up to a fixed sum per annum over a term of four years. In 1917, the draft agreement for the extension was submitted to the Councils and the Trust and this agreement was sealed by all parties during 1918, and the Trust, through its Chairman, had several interviews with the Minister for Public Works, who undertook to bring the question before the Cabinet with a view to the project being included in the schedule of Tramways authorised to be constructed in the Tramways Bill before Cabinet. However, the Trust was duly informed by the Department that it had decided not to grant any extensions pending the passage of the Bill through the House.

The southern terminus of the system was extended in 1918 for a short distance south of Queensberry Street, and afforded a much appreciated convenience to passengers changing trams at that point.

PROPOSED TRAMWAY

A report, dated 25th October, 1915, was made on a proposed Tramway, by Valentine J. Crowley, A.A.I.E.E. The route was to run up Queen Street from Flinders Street to the Melbourne Cemetery (now part of the Victoria Market), then along Franklin Street to William Street, thence to Royal Park corner at Flemington Road via Howard, Courtney and Errol Streets, through Royal Park to McVean Street, Brunswick, along Brunswick Road to Grantham Street, then along Dawson Street to Pearson Street (taking in a twenty-foot strip of ground belonging to the Hoffman Brick Company in Dawson Street). Continuing north along Pearson Street, it reached Moreland Road by a westerly deviation from Albion Street to Forbes Street. It then ran along Donne Street, Coburg, to Sussex Street, at the corner of Gaffney Road, which was to be the proposed northern terminus. A spur track was to be built down Moreland Road from Forbes Street, Brunswick, to Sydney Road, to allow the cars to reach the sheds belonging to the Trust.

The total length was estimated to be 8 miles 23 chains 25 links. Of this total, 5 miles 3 chains 75 links was to be double track, and 3 miles 19 chains 50 links in single track, making a total track length of single and double track of 13 miles 27 chains. The proposed Tramway was, naturally, to be similar to the existing lines, consisting of 600 volt direct current overhead line, and standard gauge rails, the tracks to be set on 10 ft. centres. Both Bogie and

single truck rolling stock were to be provided, the cars collecting current by means of a trolley from figure 8 copper wire, supported by tubular steel poles in the City, and round wooden poles in the suburbs.

DESCRIPTION OF THE UNDERTAKING

A thickness of 8 inches of ballast was provided under the sleepers, and to ensure the foundation remaining hard and dry, a subsoil drain of 3 inch agricultural tiles was provided under each track, with frequent outfalls along the route. Redgum, grey box and ironbark sleepers were used throughout. On about 6 miles of track, the joints were made with ferrignite, but this process was abandoned and the remaining 6 miles done with the oxyacetylene process, which, in 1916, gave every sign of proving satisfactory. The road surface was paved with Gilsonite, with a vitrified brick against the rail to decrease maintenance. Guage of the track was standard 4ft. 8½in. The road surface was in first-rate condition everywhere, except on a part of Sydney Road, so the pavement Contractor was called upon to make the necessary repairs.

Both steel and wood poles were used for the overhead construction, five miles being constructed with steel poles and two miles with dressed ironbark poles. The difference in cost was about 5 per pole, and the wood poles were quite as good in appearance as those of steel. Special steel poles with an extension five feet long were provided in Melbourne on one side of the street for the Council's overhead mains (the Council confined their wires to one side and the Trust to the other).

The span wire system was adopted throughout, compared with centre poles, as largely used on other local lines and same became standard practice in Melbourne. In order to avoid trouble caused by span wires breaking, a slightly heavier wire than usual was used.

The double track extended from Queensberry Street, Melbourne, to Wilsons Road, Coburg; from there to the terminus at Bakers Road, and in Nicholson Street, was single track.

The track milage of the system was thus:-

Single	1.77
Double	5.26
Total	<u>12.29</u> miles

The innovations introduced in construction did have a beneficial effect on maintenance costs. The drainage provided in the subgrade or foundation kept this important feature of construction firm and dry, so that it was not necessary to lift more than 50 ft. of rail while the bricks set along the rail prevented the asphalt from breaking away at this point. In 1918, a few broken joints which required attention were welded with the Trust's "Electric Arc Weld" apparatus. Special work for a crossover at Bell Street was available in 1918, but the installation was delayed owing to difficulty in obtaining some of the overhead equipment. It was estimated that it would be to hand shortly, whereupon the work would proceed.

POWER SUPPLIES

Power was purchased from the Melbourne City Council Electricity Supply under rather different conditions from those prevailing with other Municipal Electric Tramway undertakings in Melbourne. Both the Prahran & Malvern and the Hawthorn Tramway Trusts purchased current at the Direct Current Bus Bars, the

Supply Company installing and operating the sub-station. The MB&C Trust bought high tension alternating 6000 volt 3-phase current from the Melbourne City Council on a flat rate and maximum demand system, and installed its own sub-station. The equipment of the station included two 200 kW rotary converter sets, one 50 kW transformer for the supply of light and power at the Depot, and two 10 kW series transformers for track lighting, together with the necessary switchboard and control gear. No storage battery was installed, and the station was automatic, not requiring a constant attendant. In 1918, an additional Rotary Converter was ordered and delivery was effected and the equipment put to use prior to the 30th September, 1919. 1,072,222 high tension units were supplied to the 30th September, 1917, at an average cost of 1.237d. per unit. The output of the sub-station was 933,019 units, at an average cost per unit of 1.459d. The maximum demand was at the rate of 300 kW, or 25 kW per car in service.

At the 30th September, 1918, 1,388,500 high tension units were supplied at an average cost of 1.242d. per unit. The output of the substation for the period was 1,179,840 units, at an average cost per unit of 1½d. The maximum demand was at the rate of 366 kW, or 20 kW per car in service. In 1919, 1,528,110 units were supplied at an average cost per unit of 1.223d. The output of the substation was 1,279,859 units at an average cost per unit of 1.46d. The maximum demand reached 546 kW, or 30.3 kW per car in service.

GENERAL

The Postmaster-General's Department removed all overhead wires from the streets along which the tramway ran, so that when the Brunswick Council's lighting wires were transferred to the Trust's poles, the only poles along the route were those belonging to the Trust.

The various stopping places in Brunswick and Coburg were lit by the Trust with 100 c.p. high efficiency incandescent lamps on the series system. The lighting of the route in the City of Melbourne was supplied by the City Council, who supplied high candle power incandescent lamps suspended over the centre of the street and spaced approximately 100 yards apart. Lygon, Elgin and Madeline Streets were among the best illuminated streets in the City. An agreement was made with the Coburg Council to provide 12 additional lights in Sydney Road, and when these lights were installed, the lighting of that street compared with any in the Melbourne suburbs.

DEPOT AND OFFICES

They were located on freehold land at the corner on Moreland Road and Nicholson Street, Coburg. Under the one roof were all administrative offices, substation, store, workshop and car depot. As constructed there was space for 20 cars, and this could have been increased at small expense to provide for four times that number.

Provision was made in the workshop for all necessary tools for repair work, viz., Radial Drill, Sensitive Drill, Wheel Press, Wheel Lathe, High Speed Lathe, Hack Saw, Emery Wheel and Buff, and Emery Stone. All were direct motor driven, so that there were no cumbersome overhead shafting in the shop.

ROLLING STOCK

The Trust's rolling stock consisted of 12 single-truck combination cars, capable of seating 44 passengers, 24 in the saloon and 20 in the outside smoking compartments. The truck wheel base was 7 feet. The motors were of 55 hp capacity of self-ventilated box frame type, embodying all the latest improvements and ensuring very economical operation. The cars were the first in Melbourne to be equiped with air brakes, and they gave every satisfaction. Another 6 combination cars were placed on order in 1916, being furnished with similar electrical and brake equipment but mounted on radial type trucks with 12 feet wheelbase. The cars were painted green and white, and were admired by all whosaw them. The interior was finished in native timbers, varnished and polished in their natural colours. Lighting was provided by 6 lamps, of 16 c.p. each, fitted with opal shades, and were a great improvement on the old style of lighting. A special relay operated contactor was introduced, which did all the making and breaking of the main current supply, thus decreasing maintenance of the controllers, and preventing any danger of fire in the motorman's cabin. The cars weighed 24,800 lbs., and seated 44 passengers. All of these cars were expected to be in service by the end of October, 1917.

A works car was built for track cleaning, emergency work, etc., and proved very useful.

Steps were being taken to obtain 6 additional cars by the 30th September, 1918 and, when completed, the number available for traffic would be 24. In 1919, it was reported that the Electrical equipment was being delivered.

(See Rolling Stock Notes on pages 16 and 17)

CAR MILES

As at 30th September ...

<u>Council Section</u>	<u>1916</u>	<u>1917</u>	<u>1918</u>	<u>1919</u>
Melbourne	Nil	199,144	245,233	245,706
Brunswick	14,993	180,866	211,268	213,881
Coburg	55,285	158,447	202,795	209,442
Totals	<u>70,218</u>	<u>538,457</u>	<u>659,296</u>	<u>669,029</u>

PASSENGERS CARRIED

<u>1916</u>	<u>1917</u>	<u>1918</u>	<u>1919</u>
718,958	4,364,457	5,404,247	5,886,235

RESULTS OF OPERATION

The revenue to 30th September, 1916, amounted to £ 3,423/3/6d., whilst the ordinary expenditure on operation, plus interest on capital, was £3,116/9/11d., leaving a surplus of £ 306/13/7d., but unfortunately as the result of a collision between cars in Sydney Road shortly after the opening of that section, this sum was swallowed up in compensation and expenses, leaving a debit balance of £ 93/6/5d.

	<u>Revenue</u>	<u>Expenditure</u>	<u>Surplus for allocation</u>
1917	£ 28,674/ -/6d.	£ 25,199/ 1/ 4d.	£ 3,474/19/ 2d.
1918	£ 36,074/17/1d.	£ 32,055/10/ 4d.	£ 4,019/ 6/10d.
1919	£ 40,049/ 2/1d.	£ 35,894/14/10d.	£ 4,154/ 7/ 2d.

TICKETS

Conductors were warned to carefully examine the tickets supplied to them by the Receiving Clerks, and to check them with the Revenue Journal before signing it. The tickets were lettered in 4 series, "A", "B", "C", and "D". Care had to be taken to use tickets of the right series for the day. If a conductor was supplied with tickets, and for any reason did not use them on the day for which they were issued, he was instructed to return them to the office when paying in.

SECTIONS AND FARES

The completed tramway route was divided into the following sections:-

- Queensberry Street to Princes Street via Lygon Street,
- Princes Street to Park Street via Lygon Street,
- Albion Street to Sydney Road via Holmes Street & Moreland Road,
- Moreland Road to Bell Street via Sydney Road,
- Bell Street to Bakers Road via Sydney Road,
- Moreland Road to Bell Street via Nicholson Street.

The fare was 1 penny for each passenger per section, with the following exceptions:-

- (a) No fare payable for children under 4 years of age carried in arms
- (b) Children over 4 and under 12 years of age, and children under 4 who were not carried in arms, were carried for the following fares:-
 - Over any 2 consecutive sections 1d.
 - Over 3 or 4 consecutive sections 2d.
 - Minimum fare per child 1d.

Provided that for any one or more sections the fare to be charged for 2 children travelling together under the age of 12 years shall not exceed the fare charged for 1 adult.

(c) The following through fares were charged:-

- Queensberry Street to Albion Street or vice versa 2d.
- Queensberry Street to Bell Street via Sydney Road 3d.
- or via Nicholson Street 4d.
- Queensberry Street to Bakers Road or vice versa 4d.

For children the through fares were:-

- Queensberry Street to Albion Street or vice versa 1d.
- Queensberry Street to Bakers or Bell Street, via Nicholson Street or vice versa 2d.

(d) The charge for Monthly Tickets to school children under the age of 18 years and over 3 sections was 2/6d., and for 4 or more consecutive sections 5/-, for the purpose of journeying to and from school on school days.

(e) Blind persons were allowed to travel free on the Tramways, provided that their attendants paid the ordinary fares chargeable thereon.

On Children's cash fare ticket, the number of the last section travelled over had to be punched twice. Conductors were instructed that on no occasion were they to permit school children travelling on monthly tickets to travel on same, except during the hours for which they were available, namely, up to 5.30pm on weekdays, and 1.30pm on Saturdays.

MINIMUM FARE CARS

Conductors working cars known as Minimum Fare cars were instructed to call out "Minimum Fare, 2d." or whatever the amount may be, and they could not collect less than the minimum fare. This rule applied to adult passengers only, not children. "Minimum Fare" cars became ordinary cars on arrival at the end of the first section on the down trip, at which point the front and rear side "Minimum Fare" boards were reversed until arrival at the terminus. It was the Motorman's duty to reverse the boards.

FINANCIAL

The Trust's borrowing powers provided for the raising of £ 200,000 by the issue of debentures and a further £ 10,000 on overdraft.

COST OF UNDERTAKING

The total costs of the Trust's undertaking to the 30th September, in the years under review are listed hereunder, but did not include the portion of Contracts not complete.

<u>1916</u>	<u>1917</u>	<u>1918</u>	<u>1919</u>
£ 131,996/11/2d.	£ 158,025/-/11d.	£ 168,079/9/1d.	£ 177,292/6/8d.

APPOINTMENTS

During 1918, the Engineer and Manager (Mr. Straun Robertson), resigned his appointment to take a similar position in the service of the Hawthorn Tramways Trust. It was decided to appoint Mr. M.K. Westcott (Works Superintendent) to the position of Engineer, the Management being left in the hands of the Chairman.

EXTRACTS FROM THE TRUST'S RULES AND REGULATIONS AND BY-LAWS

Railway Crossing at Park Street

The Motormen were instructed not to approach the railway points at the crossing at a speed of more than 4 miles per hour. The points may have been prevented from working properly through dirt or stones getting into the apparatus. Cars must be stopped at indicated compulsory stops when approaching the railway, and must not proceed until the signals are in their favour and the gates are open to Tramway Traffic.

Instructions for Motormen and Conductors

Motormen had to come on duty at least 10 minutes before starting time, so that they could assure themselves that all operating gear, brakes, sanding gear, etc., were in good order; and both Motormen and Conductors had to examine the car to see that it was in first-class condition, free from dust, dirt and grease, floors and windows clean, and everything in readiness to start promptly on time. Employees were considered to have received the cars in good order unless any defect was reported at once.

All Inspectors, Conductors and Motormen had to carry a good reliable watch, and to keep it set by the Talykron clock at the Depot.

Badges, buttons and name plates had to be kept bright and clean, and under no circumstances could they be lent or given to any other person.

Full authorised uniform, including cap and all badges, had to be worn by all employees whilst on duty, or whilst travelling free, to and from duty. Black boots only, neatly polished, and in good order, must be worn. Working without wearing the uniform was absolutely forbidden, and men could not wear cycle trouser clips or any other unauthorised articles while on duty.

Employees were instructed to be always neat and clean in their appearance. Motormen and Conductors had to wear white collars whilst on duty, and had to keep their tunics buttoned right to the neck.

Motormen and Conductors had to understand that uniforms were to last for a specific period, and if worn out or damaged through improper use they were to be replaced at the expense of the wearer.

Hereunder is the schedule of the periods for which the uniforms were to last, also the value of same:-

	Period	
Overcoats	5 years	£3/ 5/-
Mackintoshes	3 years	£2/ 5/-
Oilskins	3 years	£1/15/-
Caps	1½ years	10/-
Tunics	16 months	£2/13/-
Trousers	11 months	£1/10/-

The following schedule sets out the value of the various articles issued to employees: these amounts will be charged in the event of such articles being lost or damaged through improper use:-

White Cap Covers	1/-
Waterproof Cap Covers	1/-
Cap Badge Shields	2/6d.
Number Badges	2/-
Collar Name Badges	2/6d.
Ticket Punches	£1/ -/-
Conductors' Cash Bags	£1/15/-
Dusters	1/-

Toolbox Equipment

Trolley Tongs	6/6d.
Insulated Cable, per yard	2/-
Hand Broom	2/-
Pinch Bar	2/6d.
Oilcan	2/6d.
Car Hand Lamp	7/6d.

Micellaneous

Telephone and Staff Keys	2/6d.
Controller Handles	£1/-/-
Reversing Handles	7/6d.
Signal Lamps	£1/-/-
Time Recorder Keys	2/6d.
Coasting Recorder Keys	2/6d.
Air Brake Handles	5/-

Breakages

When windows were broken by passengers and others, the Conductors had to obtain full particulars as soon as possible and report, stating whether saloon, door windows, etc., as the case may be. They also had to obtain such passengers' names and addresses, and endeavor to collect for the windows, etc., broken through negligence of passengers, the following amounts:-

Motorman's Protector Windows	5/-
Bulkhead and Partition Windows	5/-
Saloon Drop Windows	10/-
Saloon Door Windows	10/-
Saloon Fixed Windows	5/-

Bell Signals

- (a) Conductor to Motorman --
 - 1 stroke -- Stop, also Pause, Stop.
 - 2 strokes -- Go Ahead.
 - 3 strokes -- Stop (urgent signal)
 - 4 strokes -- Car Full, No stops ...
 - 2 strokes on starting and 2 strokes after car started.

- (b) Motorman to Conductor --
 - 1 stroke -- Apply rear hand brake.
 - 2 strokes -- Let off rear hand brake.
 - 3 strokes -- Attend to Trolley
 - 4 strokes -- Come forward.

Instructions for Motormen Only

Running on the wrong track was forbidden, unless Motormen were specially directed to do so by an Inspector or other Officer.

In taking cars out from the shed to take up running, those cars going to Sydney Road had to run on the wrong track in Nicholson Street in shunting. Conductors had to throw over the points for that operation.

When the down-car was waiting at the turnouts in Nicholson Street and at Wilson Street, to allow the up car from the terminus to pass, the Motorman had to always ascertain if there were more than 1 car to pass. Cars were not permitted to be brought to a stop opposite one another, but had to stop head to head, except where separate signs were provided, when cars had to stop opposite the signs.

All cars had to stop before entering the curves at the corner of Moreland and Sydney Roads and the corner of Moreland Road and Holmes Street. The Conductor had to signal the 'all clear' before the Motorman could proceed. Two cars were not permitted to be in these curves at the one time. At all times the up car was given precedence. Speed in the curves at Moreland Road Corners was set at 4 miles per hour. Speed on other curves was as under:-

Corner of Madeline and Elgin Streets,	6 m.p.h.
Corner of Elgin and Lygon Streets,	6 m.p.h.
Corner of Albion Street,	6 m.p.h.

Run No. Discs

Conductors were held responsible for seeing that the cars leaving the Depot bore the correct run discs for the line on which they were to travel.

Staff Working

A staff box with ticket drawer was fixed at each staff section, and the drawer could only be opened by the staff for the section to which the tickets applied. If other cars were intended to follow before the staff could be returned, a staff ticket had to be obtained by the Motorman of the first car, the staff for that section being seen by him, and so on with each following car, except the last, which carried the staff itself. Each staff had marked upon it the name of the staff section to which it applied, and it was not permitted to be carried beyond such section without the authority of the Chief Traffic Inspector. No car could leave a staff section until the Motorman had received the proper staff or staff ticket, except when pilot working was in force. When a car was required to run over a staff section, and no second car was intended to follow before the staff was required for a car in the opposite direction, the Motorman had to obtain the staff and place it on the ledge in the front of him with the lettered side uppermost. On arriving at the end of the section to which the staff applied, the staff had to be placed in the staff box, unless immediately required for another car, or authority had been issued for it to be carried beyond that section.

Time Recorders

The A.M. Motorman on each car was given a numbered Recorder Key when signing on daily, and had to hand this key over to the Motorman relieving him. Intermediate and P.M. Motormen had to obtain this key when taking charge of a car, and the Broken Shift and P.M. Motormen had to hand in the Recorder Key when signing off.

Motormen had to carry the Key of their run with them the whole of the time they were in charge of the car.

The Record tape was removed daily from the Recorder by the proper Officer.

Instructions for Trailer Operation -- Conductors only.

When Electric cars were to be run coupled, the Conductor "in charge" had to be on the front car, and his Assistant or Assistants on the rear cars, and ALWAYS in a position at stopping places, whether collecting fares or not, which gave an unobstructed view of passengers entering or leaving cars.

When coupled cars were running to the Depot, the Assistant Conductor had to stand on the rear platform of the last trailer by the hand brake.

Assistant Conductors were instructed to give the "all clear" signals VERBALLY TO THE CONDUCTOR "IN CHARGE", who was the only one to give the regulation "go ahead" signal to the driver.

No trams could be shunted backwards unless the Conductor "in charge" was at the rear end of the last trailer, in a position to give signals orto use the brake easily.

When regulations required a flying shunt to be made, the Conductor must be in the proper position on the front end of the second car.

When coupled cars had to be shunted at Nicholson Street Junction or elsewhere, the Assistant Conductors had to help in shunting before leaving their trams to do other work or to sign off.

Care of Cars

Coupling pins of the cars were not allowed to trail. On the Electric cars, drawbars had to be placed on the hook provided when not in use, especially on cars fitted with wheel guard tripping gate.

Drawbars on the trailing car at the rear end were to be hooked up by the chain provided. Motormen were held responsible for the front end and the Conductors the rear end of the car.

TRAM CAR DATA

MB&CTT Number	M&MTB No.	Date in Service	Painted Green	Converted to One-Man Car	to Footscray	Scrapped
1	154	26/7/16	8/41	8/41	9/41	28/5/53 *
2	155	28/7/16	8/41	28/8/41	8/9/41	1/6/53 *

Notes: * at Footscray.