

BRISBANE TRAMWAYS: THEIR HISTORY AND DEVELOPMENT

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(Read at a meeting of the Historical Society of Queensland, Inc., on August 26, 1943.)

On December 30, 1879 the Brisbane Municipal Council considered two proposals to operate tramways, one from a Sydney Company to use horse traction, and the other a proposal to form a company in Queensland to operate steam locomotives in the streets, to haul not only passengers, but gravel, etc., for the Council and goods for the public. Both projects, however, fell through.

The next move appears to have been on March 2, 1881, when a meeting of residents, under the chairmanship of Mr. J. M. Thompson, M.L.A., decided to form the Brisbane and Suburban Tramways Company, with a capital of £60,000. A deputation was appointed to wait upon the Mayor, but this proposal also failed to materialize.

"The Tramways Act of 1882" (assented to on October 3, 1882) authorised either registered companies or local authorities to construct tramways, subject to the plans and specifications being approved of by the Governor-in-Council. Under the authority of this Act the Metropolitan Tramway and Investment Company Limited was formed in 1883 to establish passenger tramways in Brisbane. The Company was registered on November 29, 1883, with a capital of £50,000, which was increased to £100,000 the following year. The Chairman of Directors was Mr. T. E. White, and other Directors were Messrs. Edward Taylor, E. W. Walker, Robert Porter and Josiah Young.

In February, 1884, the Municipal Council adopted the Company's proposal to build a double line of tramways from Woolloongabba Hotel via Stanley, Queen and Wickham Streets to Breakfast Creek Bridge, with branches to the Exhibition Building and New Farm (6½ miles in all), and on April 9, the Government authorised the issue of a construction order. Tenders were invited early in September, and in October, 1884, a contract was let to Mr. R. L. Thompson, of Adelaide, to carry out the construction of the tracks.

Cars From U.S.A.

Nine of the first cars were built by Messrs. Stephenson & Co. of New York, and nine by the Brill Co. of Philadelphia, and all arrived in Moreton Bay on 17th April, 1885 in the German sailing ship "Von Moltke." The Brisbane "Courier" wrote: "The cars are constructed of "cedar and mahogany, highly polished, and are fitted with all the latest improvements. They are mounted on steel springs, making the motion almost imperceptible." The trams were put together at Babbidge Bros.' workshops, South Brisbane. The single deck cars seated 16 passengers and the double-deckers 40, and both types were designed for horse-traction. A fare box was installed on the small cars, but the larger trams had a conductor. Two horses were used on each car, but an extra "tip horse" was attached to assist the double-decked cars up the steep grades to New Farm, the Exhibition and on the Dock Hill in Stanley Street.

Opening Ceremony

The opening of the tramway took place on August 10, 1885, when two cars carrying Hon. W. Miles, M.L.A. (Minister for Railways), directors, officials and guests, ran from the bridge to the Exhibition, and then to the Breakfast Creek line. The first car was drawn by "four magnificent roan horses" and although it was derailed it was quickly replaced on the track and reached the Exhibition in 14 minutes. The "Telegraph" said, "Drivers will have to be warned not to raise their whips too high, as this constitutes a danger to passengers travelling on the top." The "Telegraph" also said: "The adoption of this new system of traffic marks a new era in our history, and should go to prove that Queensland does not intend to be behind in this very fast age."

When the public service began the Company had 18 cars and 100 horses. Two more cars arrived by the sailing ship "Tyburnia," in January, 1886. Car depots and stables were built at Light Street, New Farm and Logan Road; and, later, at West End.

In February, 1886 a contract was let to Mr. Musson to lay double tram tracks across Victoria Bridge, and the first car crossed the river on April 30, 1886. This made a through connection between Breakfast Creek and Woollongabba, and it commenced to run

next day. Waggonettes were installed in February, 1886 to run as "feeders" between the tram terminus at Breakfast Creek Bridge and Hamilton Hotel. These vehicles carried eight passengers each. What a contrast with present-day loading to Hamilton and Ascot! Later the Company bought out certain bus lines and used the vehicles as feeders in other places.

The tram fare in Queen Street at that time was 1d., but elsewhere the charge was 3d. Packets of a dozen tickets for 2/9 were introduced in September, 1885, but they were reduced to 2/6 on 1st July, 1887, when the fare of 6d after 10 p.m. was abolished.

The first manager was Mr. J. W. London, but he resigned owing to some difference with Mr. White. Other early managers were Messrs. E. Everingham and T. Irving. Mr. A. G. Stephens was brought from the Melbourne Tramways as Traffic Superintendent in February, 1891. After some years he was promoted to the position of Traffic Manager, and later to Manager, which position he held until his retirement through ill-health in 1921. He was a member of the Brisbane Tramway Trust from 1922 to 1925, after which he lived in retirement until his death on March 29, 1938.

In May, 1886, the Company decided to proceed forthwith with extensions to Bulimba Ferry and along Melbourne Street to Boundary Street, and authority to extend the latter line along Boundary Street as far as Vulture Street was obtained in November, 1887.

Use of Electric Power

At a meeting of the Company in February, 1887, correspondence was read indicating that electric power was about to be utilised on the tramways in most of the large cities of Europe and America and, after discussion, it was decided to apply to the local authorities for permission to use electricity instead of horses on the Brisbane tramways. The system preferred by the Company was that patented by M. Julien, of Belgium, under which accumulators were used, these being recharged at a central power station. The great advantage of this method was that the cars then in use could be easily converted to electric traction. The scheme was never carried out, however, and horses continued to be used until the system was electrified and the cars driven by motors ten years later. The

electrification was said to have been delayed by the financial crises in the early nineties.

Employees Union Formed

About 120 employees of the Company held a secret meeting after midnight in April, 1887, for the purpose of forming a Union, to be affiliated with the Trades and Labor Council. This was carried out, and the body was called the Tramway and Omnibus Union. Difficulty arose because the Company refused to make any distinction between Union and non-Union men, and on August 17, 1887 a strike resulted. Great inconvenience was caused and an attempt was made to run the cars with volunteer labour, but most of them were forced off the roads by the strikers, and by 4.30 p.m. not more than three cars were running. A settlement was effected during the day, the Company conceding the right to the men to persuade any one to join the Union, but maintaining the right to employ any one they chose. The Company agreed further not to discharge anyone because he was a member of the Union.

At this time the tramways were not a financial success. In a newspaper report, it was stated on the authority of Mr. D. Stewart, who had risen from being a horse-car conductor to the position of depot-master at the new Ipswich Road depot that the Company paid no dividends and, at times there seemed a likelihood of its having to close altogether. Mr. Stewart had said that most of the people at that time were too poor to ride even in tramcars and many made a habit of walking from the suburbs to the city and back. Mr. Stewart remembered the efforts made by the Company to sell out and the talk there then was about adopting the cable car system.

The "Brisbane Courier" of November 15, 1888, reported that the trams had carried 1,762,713 passengers during the year, which gives an average of under 34,000 per week. I do not think it possible for anyone to have made a financial success of a horse tramway venture with so little public patronage, but the foundation had been laid upon which great expansion was possible. By way of comparison I may mention that during the year ending June 30 last the trams carried nearly 135½ million passengers, an average of about 2,600,000 a week.

An old employee named Timothy Lynch told the "Telegraph" on March 9, 1932 that in the horse-car days a driver had to work 15 to 16 hours a day for 24/- a week, plus 10 per cent. of the takings above £2 a day, but there are no records to confirm this. They were not provided with uniforms, overcoats or mackintoshes, and the only distinguishing article was a uniform cap, the white covering of which (worn in summer) had to be provided by the men.

The Brisbane Tramways Company, Limited

"The Tramways Act of 1882 Amendment Act of 1890," which was assented to on November 20, 1890, authorised a company (with the consent of the Governor-in-Council) to sell its tramway undertaking to any person or persons, corporation or company. This authority was not acted upon for some time, but eventually Sir Malcolm McEacharn (of Melbourne) went to London and induced some financial friends in 1895 to form the Brisbane Tramways Co. Ltd., with the object of acquiring the rights and plant from the Metropolitan Tramway and Investment Co. Ltd., the intention being to instal electrically propelled trams and extend the system. The new company was registered in London on November 14, 1895, and in Brisbane on January 29, 1896, but in the meantime the old horse-car system had been purchased by the new company on September 30, 1895 for £105,200 (in round figures). This amount was made up as follows—

Overdraft at Queensland National Bank	£82,200
A.M.P. Society, Mortgage on Real Property	8,000
Mr. T. E. White, Liquidator of the Metropolitan Tramway & Investment Co.	15,000
	£105,200

At that time the horse cars ran from the city to the Exhibition, Breakfast Creek, Bulimba Ferry, New Farm, Logan Road and West End. It is to be regretted that the original promoters got so little for their investment of £100,000, for they undoubtedly had displayed initiative and courage.

Electrifying The System

In 1895 a contract was let to the Tramways Construction Co. Ltd., of London, to electrify the system, and they arranged for the supply and installation of a quantity of electrical supplies by the General Electric Co. of the United States of America, which sent Mr. J. S. Badger to take charge of the work in Brisbane; he arrived in May, 1896, and remained for 27 years. In 1897 Mr. Badger was appointed Manager, and afterwards became General Manager and Managing Director. He returned to America in 1923, and died at his home in California on November 22, 1934, being then 83 years of age.

At the outset Mr. J. J. Walklate came from England as manager and constructing engineer, but he returned to the old country in 1897 after Mr. Badger became manager.

The Brisbane Tramways Co. Ltd. did not actually carry out the track construction, building of power houses, carsheds, etc., which was done first by the Tramways Construction Company Limited (1895 to 1900) and later by the Brisbane Electric Tramways Investment Company Limited (1900 to 1922). Both these were London companies and were associated with the Brisbane Tramways Company Limited; and, when the system was taken over by the Brisbane Tramway Trust in 1923, the Tramways Investment Company held 149,893 of the 150,000 shares in the Brisbane Tramways Co.

No time was lost in setting about the electrification of the system, strengthening and bonding the tracks, erecting overhead wires, building new cars, and lengthening and converting old cars for electric traction, and it is worthy of note that a few of the latter type are still put into service at times of pressure, but many have necessarily been scrapped. The powerhouse, workshops and offices were erected at the foot of Countess Street on land leased from the Commissioner for Railways, the first part of the powerhouse being completed in 1896. Smaller powerhouses were erected at Light Street (where two gas-engines were installed) and at Logan Road (where two horizontal steam engines with large flywheels were used to generate electric power).

Many of the horse-car drivers were taught to drive

electric cars, the instructor being Sir (then Mr.) Harold W. Clapp, who spent some years on electric railways in America, and later became Chairman of the Railway Commissioners in Victoria. He is now Director General of the Commonwealth Land Transport Board, which was created during the present war.

First Electric Tramway

The official opening of the first electric tramway took place on June 21, 1897, a car being run from Logan Road to the southern end of Victoria Bridge by Mr. Badger, with Mr. Clapp on the platform with him. The car stopped at the Council Chambers and picked up Alderman A. F. Luya (Mayor) and other aldermen of the South Brisbane Council. Others accepted a general invitation to board the car, including the band of the Queensland Volunteer Rifles, which played for a few trips to and fro. The electric service in Queen Street commenced on July 3, 1897, about a year before electric trams were used in Glasgow, which has one of the best tramway systems in the world.

Steady progress was made for several years and many new lines and extensions were constructed, as under—

- 1897 Logan Road, Ithaca, George Street, Red Hill and part of the Paddington line.
- 1899 Ipswich Road, Paddington extension, Ascot.
- 1901 Gladstone Road, Kelvin Grove, Clayfield.
- 1902 Wharf Street, Edward Street.
- 1903 Lower Edward Street, East Brisbane (to Norman Bridge), Newmarket.
- 1904 Toowong, Rosalie.
- 1905 Enoggera Terrace.
- 1908 Dutton Park.
- 1914 Greenslopes, Windsor, Kedron Park, Merthyr Road.
- 1915 Coorparoo, Cracknell Road.
- 1917 Grey Street (single track in place of inbound track in Stanley Street).

When the electrification took place in 1897 there were only 20 trams running on 15 miles of track, but when the Brisbane Tramways Co. ceased operations on December 31, 1922, they left 181 cars providing services on $42\frac{1}{2}$ miles of tram routes, or (counting double lines as two) $70\frac{1}{2}$ track miles. The older sections had

been laid with rails weighing 55 and 77 lbs. to the yard, but the Brisbane Tramways Company had these replaced by 83 lb. rails, and towards the end of its tenure the Company laid new rails on some sections of track.

“Fine Tramway Band”

Mr. Badger inaugurated a fine Tramway Band, which functioned from 1900 to 1911. He leased Dutton Park, where Band Concerts and “Continental” (including picture shows) were conducted on summer evenings, special trams being run from the city on these occasions. Concerts also were held in the Botanical Gardens and Musgrave Park and at Hamilton, to which special trams were run. The first Bandmaster was Mr. Burns, and he was followed by Mr. Bloomfield. There is no record as to why the band ceased operations, but probably the stage was reached when the extra revenue it attracted did not justify the expense.

The Company had a valuable business in supplying electricity for lighting and power purposes to properties near the tram lines, as they served parts of South and East Brisbane, Ithaca, Paddington, Leichhardt Street, Brunswick Street, New Farm and Toowong. They sold all the south side connection, and also the Leichhardt Street and New Farm business to the City Electric Light Co. Ltd. The Trust purchased the remainder, with the tramway system, but the sale of electricity was afterwards transferred to the Electricity Supply Department of the Council, and the Tramways Department lost a valuable source of revenue.

1912 Tramway Strike

A serious tramway strike took place on January 19, 1912, and lasted for three weeks, the principal item in dispute being the desire of the men to wear a Union badge whilst on duty, which the management would not agree to. Some of the cars were kept running by the officers of the Company and a section of the motor-men and conductors who remained loyal, but the service was greatly disorganised. A large section of railway men struck in sympathy with the tramway men and this caused further inconvenience, but most of the trains continued to run as usual.

Feeling ran high on the part of both the public and the strikers, and the Police Department found it necessary to swear in hundreds of civilians as special

constables. New men were taken on by the tramway management and trained as quickly as possible, and the services were gradually restored to normal; but none of the tramway strikers were taken back until after the Tramway Trust commenced to operate in 1923. This was covered by "The Brisbane Tramway Trust Act of 1922," which provided that no discrimination in the employment of men was to be shown against those who struck in 1912. A few years after the strike the Tramway Union took the matter of Union badges to the Federal Arbitration Court, which granted the men the right to wear them.

Patriotic Activities

During the 1914-18 war the employees of the Tramways Company worked hard for patriotic purposes, a Tramways Branch of the Red Cross Society being formed. The sum of approximately £10,000 was raised, and, in addition, three motor ambulances were purchased and equipped (the Company contributing liberally towards the cost) and sent overseas, the ambulance drivers being tramway men. Among the means of raising money was the inauguration of two hours' tram rides for 6d., the motormen and conductors giving their services voluntarily, and the Company donating the revenue to the fund. A great number of employees enlisted for service overseas, and, on their return, every one of these was found a position. The Company, among other things, adopted the principle of allowing their period of active service overseas to stand for the purpose of seniority and rates of pay, and their annual leave was permitted to accumulate and to be taken on their return. The same principles are now being adopted by the Council during the present war.

Valuation Board

In June, 1920 the Government appointed a Tramway Valuation Board to value all the assets, as the purchase of the system from the Company was under consideration. The Chairman of the Board was Mr. R. E. Sexton (Chief Engineer for Railways), and the other members were Messrs. J. P. Macfarlane (Public Accountant), C. A. Murton (Accountant of the Railway Department and later Commissioner), O. W. Brain (Sydney) and W. Stone (Melbourne). The last named resigned and was replaced by Mr. J. S. Just, who was

then Manager of the City Electric Light Co. Ltd. The Secretary was Mr. P. R. T. Wills (now Commissioner for Railways). After very extensive investigations and the employment of experts from the Southern States, the Board's valuation of the assets of the Brisbane Tramways Company was eventually fixed at £1,063,231, but the report was not made until June 27, 1924, and in the meantime a settlement with the Company had been made on May 19, 1924.

The Company also spent much money upon a separate valuation under the Chairmanship of Mr. R. D. Frew, a civil engineer in Brisbane. They also employed Sir George Julius and other leading electrical and mechanical experts from Sydney, Melbourne and Adelaide, and a very extensive examination of all the assets was made on behalf of the Company. Apart from the valuation of the Company's assets made by the Board appointed by the Queensland Government, a brief financial history of the tramways from 1883 to 1919 (dated July 10, 1922) was prepared for the Government by Messrs. J. P. Macfarlane and C. A. Murton, and it gave the original capital of the Brisbane Tramways Co. as £200,000, which was increased to £250,000 on March 24, 1897. At the same time the issue of 2,500 one-hundred-pound 5 per cent. debentures was authorised, and these were sold between 1897 and 1899, producing another £250,000. During 1900 the share capital was altered to 150,000 shares of £5 each, representing £750,000. Messrs. Macfarlane and Murton pointed out, however, that the Brisbane Tramways Company and the Brisbane Electric Tramways Investment Co. were so related that both were taken into consideration in their reports, and the capital of the latter Company, when the sale to the Trust took place, was £1,425,535.

In reply to a request from the Home Secretary (Mr. W. McCormack, M.L.A.), Messrs. Macfarlane and Murton reported further on July 12, 1922 that it was impossible to form a definite opinion as to the amount of "watered stock" in the Company, but it would appear that a large number of shares were issued for which no tangible assets existed, and, in addition, bonus shares to the extent of £75,000 were issued in 1912 from accumulated profits to the holders of the Electric Tramways Investment Company's stock.

The preference shareholders in the Brisbane Elec-

tric Tramways Investment Co. Ltd. (which held all except 107 shares in the Brisbane Tramways Co. Ltd.) received 5 per cent dividends throughout. No dividends were paid on the ordinary shares for the first few years, but they afterwards paid from $6\frac{1}{2}$ to $8\frac{1}{2}$ per cent.; and, for several years before the transfer of the system to the Brisbane Tramway Trust, the dividend remained steady at 8 per cent.

Increases In Fares

Owing to increased wages, shorter working hours, and higher costs of materials generally, and also the fact that in 1919 and 1920 the Company had not been able to make any provision for renewals, it was decided to make certain increases in fares from May 1, 1921. The fare of 1d. for one section was to be increased to 2d. for either one or two sections, and the 3d. fare was to be limited to three sections (instead of the whole route to or from the City), while 4d. was to be charged for longer distances. The fares for special cars to race-courses were also to be increased.

The Chairman of the Brisbane directors of the company (Mr. A. J. Thynne, M.L.C.) and the General Manager (Mr. J. S. Badger) interviewed the Premier (Mr. E. G. Theodore) some time in April, 1921 to ascertain if the Government intended to exercise its right to purchase the tramways in the immediate future, in which case the proposed fare increases could be left to be dealt with by the Government. The Government had the right to purchase the tramways in September, 1920, when the Company's franchise expired. On April 12, the Premier wrote to Mr. Badger expressing the opinion that before the Company could fairly claim an increase it should show that the existing fares did not permit of sufficient return on the actual investment. Mr. Badger replied to the Premier on April 21 to the effect that for the past five years the Company had borne the burden of increased expenses without passing on to the public any part of the increases, except for a very small amount. He also said the Company's policy was to charge only such fares as would produce enough revenue to pay the reasonable dividend of 8 per cent. and make proper provision for reserves for depreciation and other purposes. The figures were not given in the correspondence, but

the wages of the senior motormen and conductors had risen by 40/- a week between 1909 and 1920, and the other employees had all received substantial increases.

The Company was within its rights in raising the fares, because they were lower than allowed by the Act, but the Government considered that no increase should be made, and on April 29, 1921 the Cabinet decided to take action to prevent it. A proclamation was issued on that date bringing tramways under "The Profiteering Prevention Act of 1920," and the Commissioner of Prices (Mr. T. A. Ferry) fixed the tramway fares generally at the rates which were being charged on April 28, 1921. Consequently the Company could not bring the proposed increases into operation, although they had been advertised in the press and new tickets and instructions to the staff had been printed. It may be mentioned, however, that the Company continued to pay 8 per cent. dividends to the end.

Notwithstanding the greatly increased population in the suburbs, no new tram routes were provided by the Company after 1915, although some lines may have been extended a little further and sidings laid down, $2\frac{1}{4}$ miles of track being added between 1915 and the end of 1922, when the Company's ownership ceased. During the closing years of the Company's existence the expansion of the system was cramped because the directors had no franchise to allow them to continue for any length of time, and in the circumstances they hesitated to raise further capital. This policy also curtailed the building of new trams, only eight being added in the last five years, equal to an increase of only $4\frac{1}{2}$ per cent. in cars, while the number of passengers increased by 38 per cent., resulting in intense overcrowding, even in times of normal traffic.

Company's Good Service

For many years Mr. Badger and the Brisbane Tramways Co. Ltd. gave excellent service to the public of Brisbane. They took charge at a time when the former Company with its antiquated plant could not expand to meet public requirements, as it could not raise additional capital for further extensions or electrification. Until the last few years Mr. Badger expanded the transport system and kept pace with the growth of population at reasonable fares, and he also did well for the shareholders. The system had the ad-

vantage of being well laid out at the commencement, as each of the principal routes served a suburb on each side, instead of terminating at dead-ends in the City. This was an important factor in expeditious and economical working, and the Company left a good paying and well-managed service.

Brisbane Tramway Trust

The Brisbane Tramway Trust was brought into being by "The Brisbane Tramway Trust Act of 1922," which received Royal assent on October 14, 1922.

The Queensland Government Gazette, No. 209, dated December 6, 1922, contained a proclamation by the Governor-in-Council (dated 1st December, 1922) constituting the Trust for a period of three years from that date as follows—

Mr. G. R. Steer, Secretary, Railway Department (Chairman), and Mr. G. L. Beal, Under Secretary, Treasury Department (Vice-Chairman), were the Government members.

Alderman H. R. Gelston and Alderman A. M. Oxlade, represented the City of Brisbane.

Councillor A. C. Wylie and Mr. A. G. Stephens, as representatives of the City of South Brisbane and the Shires of Balmoral, Coorparoo and Stephens.

Alderman W. A. Jolly and Alderman H. M. Russell, as representatives of the Towns of Hamilton, Ithaca, Toowong and Windsor, and the Shires of Enoggera, Kedron and Toombul.

Transfer from Company to Trust

The same Government Gazette fixed the date upon which the Tramways were to be taken over by the Trust from the Brisbane Tramways Company, Limited, as the first day of January, 1923. On that day Mr. A. J. Thynne (Chairman of the Brisbane Board of Directors of the Company), accompanied by Mr. J. S. Badger (Director and General Manager) and Messrs. R. H. Tanner and R. D. Frew, met the Trust in the board-room at Countess Street, and formally handed over the tramways to the Trust.

The amount to be paid by the Trust to the Company for the tramway undertaking had not then been fixed, and the Full Court of Queensland, on August 28, 1923, by a majority, gave judgment to the effect that

the compensation should be paid on the basis of the structural value, as at January 1, 1923, of the physical assets comprising the tramway (with allowances to the Company in respect of the unexpired statutory rights in the case of certain extensions) also that the Land Court of Queensland should be the tribunal to fix the amount. Against this judgment the Company appealed to the Privy Council, and the hearing was set down for May 19, 1924; but a few days before that date, negotiations were opened up on behalf of the Company, with the object of arriving at a settlement. A meeting was arranged in London between the representatives of the Government, the Company, and the Trust, and several conferences were held, but finality was not reached before the case came on for hearing by the Privy Council. However, as the points in dispute appeared to be capable of adjustment, a short adjournment was asked for and granted, and full agreement was subsequently arrived at. The Trust was represented by Sir John Simon, K.C., Mr. H. D. Macrossan (afterwards Chief Justice of Queensland), Mr. W. F. Webb (then Solicitor-General and now Chief Justice of Queensland), Mr. H. L. Murphy (of London), and Mr. G. L. Beal (who was later appointed Auditor General of Queensland). These gentlemen were unanimously of opinion that the price and conditions which were eventually agreed upon were satisfactory and in the interests of the Trust, but the Chairman of Directors of the Company (Mr. H. R. Beeton), at a subsequent meeting of the Company's shareholders in London, said the sum was less than the Company had hoped to get.

When the Trust came into possession on January 1, 1923, the principal officers taken over from the Company were Messrs. W. M. Nelson (Chief Engineer and Acting General Manager), J. Cryle (Traffic Manager), W. Arundell (Works Manager), H. P. Littler (Accountant) and E. Bell-Booth (Stores Manager). Mr. S. L. Quinn (of the Railway Department) was appointed Secretary to the Trust on April 2, 1923. All these were men of high attainments and thoroughly competent to carry out their important duties. In making appointments to the technical staff the Trust set a high standard, as four juniors were Bachelors of Engineering from the Queensland University, and an experienced draftsman came from the Railway Depart-

ment, and all have done excellent and important work. The great activity entered upon by the Trust necessitated the positions of Chief Engineer and Acting General Manager being separated, and (after inviting applications throughout Australia), Mr. G. R. Steer was appointed General Manager from February 14, 1925. Mr. Nelson continued as Chief Engineer and Mr. Quinn was appointed Assistant General Manager. Mr. Beal became Chairman of the Trust, and Mr. J. D. O'Hagan (now Under Secretary for Justice) was appointed to fill the vacancy on the Trust. The Brisbane Tramway Trust Act gave the men the right of appeal to an Appeal Board (with a Police Magistrate as Chairman) against any punishment inflicted upon them by the General Manager.

Urgent Works Undertaken

When the Trust took possession of the undertaking on January 1, 1923 a great amount of work and money were required to put the system into proper condition, not only with regard to the powerhouses and other buildings mentioned above, but many old sections of track were in need of replacement with new materials—the duplication of single tracks was urgent, additional cars were required, the car depots were too small to hold even the limited number then available, and new plant of almost all descriptions was needed. Vexatious delays were caused by the many sections of single track on almost all lines, and even the heavy traffic to and from Ascot Racecourse had to be conducted over four sections of single line.

The Trust vigorously tackled the most urgent works, and during its three years of office $14\frac{1}{2}$ miles of track relaying were carried out on 14 different lines. The British standard specification of tram rail was adopted, weighing 96.4 lb. per yard, with 102.3 lb. on curves. In the same period $5\frac{3}{4}$ miles of single track (extending over many sections) were duplicated. The condition of the road surfaces were much improved, $29\frac{1}{2}$ miles having been treated with bitumen and tar, $18\frac{1}{2}$ miles with high grade asphalt and $12\frac{1}{2}$ miles were laid in concrete.

Steps were taken to grind out the corrugations which had formed on the surface of the rails in many places, the latest type of rotary and reciprocating grinders being imported, drawing their power from

the overhead trolley wires. Sorbitically treated rails were brought from England to ensure greater wear. Double-tongued junctions were introduced instead of single tongues, reducing the number of derailments. Many new track drains were also constructed, lessening maintenance costs. Two electric welding plants, mounted on motor trucks, were purchased for repairing the tracks without removal of the rails. Commodious overhead storage bins and chutes were erected, which reduced the cost of handling road metal by 1/6 per cubic yard.

Trust's First Report

The Trust's first annual report dated March 28, 1924 (for the year ending December 31, 1923) contained the following—

“Several districts already sufficiently settled to make extensions payable have been waiting for tramlines for years, and the development of desirable residential areas has been retarded owing to the absence of communication. The Trust is fully alive to the necessity for extending the lines, but could not do so immediately because the present congestion requires relief by the provision of a large number of additional cars, and also because so much was needed in the way of duplicating and relaying the tracks. To have built new lines last year, and thereby creating new business, would simply have accentuated the overcrowding. The Trust is now, however, in a position to commence construction in a moderate way, and has decided to apply for Orders-in-Council for the following extensions. . . .”

Under the terms of the agreement the Trust paid the Company £1,400,000, which was raised by floating a loan of £1,500,000 in London. The issue price was £99, the interest payable $5\frac{1}{4}$ per cent., and the loan was repayable in 30 years, with the option of redemption in 20 years. The stock was eagerly sought after and the loan was over-subscribed by more than £4,000,000, proving the confidence the London investors had in the Trust. After paying flotation expenses, discounts, etc., the balance was only £23,404, and in order to carry out the necessary developmental works it was necessary to raise a further loan in London. This was done in Octo-

ber, 1925, by the issue of stock to the value of £500,000, the price being £98/10/- and the interest $5\frac{1}{4}$ per cent., the net proceeds being £482,327/17/9.

The debt in London is still £2,000,000, at what is now the high interest rate of $5\frac{1}{4}$ per cent., and this is greatly accentuated by the later imposition of the present high rate of exchange (25 per cent.) which has to be paid in remitting the interest to London every six months; with this included the cost of the loan is over $6\frac{1}{2}$ per cent., and the first opportunity the Brisbane City Council has of repayment or conversion will be on October 1, 1944, after giving three months' notice. It was stated in the Tramways Act that these loans were subject to a Sinking Fund payment of not less than 10/- per cent., but the Trust decided to set aside one per cent. annually, which has been continued ever since, and the last published figures show this as having accumulated £529,831 up to 30th June, 1942.

Burden of Over-Capitalisation

The price paid to the Company for the whole undertaking was £337,000 in excess of the value of the assets as arrived at by the Valuation Board, in addition to which it included £199,000 for the purchase of three obsolete powerhouses, workshops, stores and offices, all of which had to be demolished and replaced in the first few years. These two amounts totalled over half a million pounds, and they imposed a heavy burden of over-capitalization upon the Trust, and later upon the Brisbane City Council.

The extensions actually completed by the Trust during its life of three years totalled 7 miles 59 chains, and were as under—

- 1923 Exhibition loop (via Sutton and Leichhardt Streets).
- 1924 Red Hill to Ashgrove.
- 1925 Coorparoo to Camp Hill and Cavendish Road.
Kedron Park to Lutwyche Cemetery.
East Brisbane to Balmoral.
Wharf Street—Adelaide Street loop.
Warner Street loop.
West End to St. Lucia Ferry.
Ascot to Oriel Park.

These brought the length of tram routes up to $50\frac{1}{4}$ miles, and the extensions from Chatsworth Road to Holland Park and from Kelvin Grove to Newmarket State School were also in progress on November 30, 1925, when the Brisbane City Council assumed control.

One of the earliest necessities was to evolve an entirely new design of tramcar, as none of the six different types taken over from the Company was in every way satisfactory for modern requirements, the largest and best cars having high steps and a narrow entrance at each end only. This led to the designing of the "drop-centre" car, which had much more power, greater seating and carrying capacity, five exits instead of two, the floor eight inches lower, and much greater protection from the weather than the previous open-ended cars. The new type of cars necessarily took considerable time to develop, but in 1924 tenders were accepted for building 30 of them.

In order to obtain relief as quickly as possible the Trust placed contracts for 21 cars of the "Dreadnought" type to be built locally, and undertook the construction of five small cars in its already overcrowded workshops.

When the Trust handed over the concern to the Council the number of trams in traffic had risen from 181 to 225, an increase of 44 cars. Nineteen were then in course of construction, and it was proposed to invite tenders for 20 more. The Trust's difficulties had been accentuated by the bad condition of many of the older cars, particularly as regards obsolete and inefficient motors (50 of which had to be replaced by a more powerful type), also by the bad state of the wheels, inefficient maintenance of the insulation of electric cables underneath the cars and leaky roofs. The motors replaced by new ones were used in smaller cars in lieu of motors of still less power.

A special breakdown van mounted on a motor truck was put into use on July 31, 1924, available for instant despatch to any part of the system (day or night) where its services might be required to deal with accidents. It was fully equipped with lifting jacks, pulleys, re-railing devices, powerful levers, tools, lights, ambulance kit, etc.

Erection of Workshops

On June 5, 1925, a contract was entered into with

Mr. G. H. Turner for the erection of commodious new workshops at Boomerang Street, which resulted in infinitely greater capacity, more economical working and less delay to cars, in addition to which the conditions under which the men labour were greatly improved. The cost of car repairs in 1922 in the old workshop at Countess Street was 2.28d. per car mile, but this was reduced to 1.17d. per mile in the present shops in 1941-2.

Another contract was let on the same date to Messrs. A. & J. D. MacDonald for the building of new carsheds to accommodate 112 cars and depot offices at Ipswich Road, to take the place of the two small depots purchased from the Company at Logan Road and Lang Street.

Elevated signal cabins were installed in 1925 at each end of Petrie's Bight, and others were decided upon for Valley Junction, Wharf Street and Woolloomgabba. In these cabins the pulling of one lever not only moves the points, but automatically alters the electric interlocked signals in all directions to ensure the safe passage of cars and makes it impossible for conflicting signals to be shown. This not only protected the signalmen from the weather when standing on the road, but removed the danger of their being run down by passing vehicles. At several other junctions levers were fixed on the footpath to move the points instead of being worked by hand from the centre of the road. Thirteen shelter sheds for passengers were provided at busy stopping places.

Increased Electric Energy

The supply of electric energy to meet the needs of the rapidly expanding traffic was given careful attention, as power was being generated in the Trust's three obsolete and expensive powerhouses, in addition to a portion being drawn from the City Electric Light Co. Ltd.—in fact, at peak hours, the energy was being drawn from 13 separate generators, which necessitated a great deal more expense than was justified. The Trust decided that if its tenure was to be extended beyond the three years for which it was first appointed, it must proceed as quickly as possible with the construction of a modern power plant, but it hesitated to commit the Brisbane City Council to such a policy, as it appeared likely that the Council might take over the

tram system. Meantime the Trust's officers rendered excellent service by so improving the efficiency of the old plant at Countess Street that in three years the output was increased by 30 per cent. and the cost reduced by almost $\frac{1}{2}$ d. per unit.

In order to provide for a better distribution of power, tenders were let by the Trust for the supply of machinery for substations at Russell Street, Logan Road and Windsor.

During 1925 eleven motor bus chasses were purchased, the bodies being built by local contractors. A new garage was built on North Quay to service both the 'buses and the Trust's fleet of motor vehicles. The 'bus services between William Street and Grange (to pioneer a prospective tram route) commenced on November 26, 1925, between Valley and Teneriffe on March 22, 1926, and on the Kalinga Park route on April 12, 1926, by which time the Council was in control.

Privately-owned 'buses were licensed and controlled by the Tramway Trust, and during its three years the number licensed was increased from 16 to 40 vehicles, which were rendering useful service to districts not served by tramways.

The Brisbane Tramways Co. did not allow advertisements to appear in the cars, but the Trust decided to commercialize its advertising space. In its last year (1925) the Trust made a profit of £6,141 from advertisements in the cars and on tram tickets.

During the three years of the Trust's control public services were improved as fast as the additional cars permitted, and the number of miles run increased from 5,102,524 in 1922 to 5,915,844 in 1925, while the number of passengers increased from 71,529,033 to 82,514,979, and revenue also rose by £110,235.

Owing to more being spent in wages, reduced working hours (44-hour week), increased maintenance of tracks and cars, etc., the expenditure increased by £129,540, but the proportion of net earnings to capital expended was 8.46 per cent., which was higher than in other Australian capitals.

In the Annual Report for 1925, just after the Brisbane City Council came into control, the General Manager said—

“I am satisfied that tramways can be operated just as successfully under civic control as under private enterprise, and there are no company lines in the Australian capitals. In Great Britain 70 per cent. of the tramway concerns are municipal, and they carry 85 per cent. of the passengers.”

Brisbane City Council

Following the adoption by Parliament on October 30, 1924 of “The Greater Brisbane Act,” the scope of the Brisbane City Council was enlarged in 1925 to include the City of South Brisbane and all the surrounding towns and shires. The area then included all the suburban tram lines, and on the expiry of the Tramway Trust’s appointment on November 30, 1925, the Government handed the whole system to the new Council from December 1, 1925. A special Committee was appointed to deal with tramway and bus matters, and regular reports were submitted to the Council for consideration, as is the present practice. In a general way the Council continued the Trust’s policy and methods, with conspicuous success.

The Council acquired from the Trust $50\frac{1}{4}$ miles of tram route, which contained equal to $85\frac{1}{2}$ miles of single line, and the following new lines and further extensions have since been completed—

- 1926 New Farm Park, Holland Park, Kelvin Grove to Newmarket.
- 1927 Barry Parade, Albion Park Racecourse loop, Davies Park loop.
- 1928 Grange.
- 1929 Kalinga.
- 1930 Rainworth.
- 1931 Gregory Terrace loop.
- 1932 Brisbane Cricket Ground loop.
- 1935 Ashgrove School, Exhibition siding extension, Balmoral extension.
- 1937 Bardon, Moorooka, Doomben extension.
- 1939 Dutton Park extension.
- 1940 Stafford and Salisbury.

The system now covers 63 miles of route, or $112\frac{1}{4}$ track miles, and there are 24 different tram termini. The grooved tram rails formerly used were imported from England, but during the last few years Australian made railway rails have been used, the groove being formed in the solid concrete in which the rails and

steel ties are set, except on curves, where guard plates are bolted to the rails to form a groove. The relaying of older sections of track in concrete has been proceeded with for several years, and about 55 miles have now been so treated, greatly improving the road surface and reducing maintenance costs to a minimum.

Power House Built

The Council took an important step in 1926, when (after protracted negotiations with the City Electric Light Co. Ltd.) it confirmed the Trust's previous decision to build a power house, not only for the tramways, but to meet the needs of the Council in supplying energy to all the suburbs when the working agreements with the City Electric Light Co. expired. The Council made available the site at New Farm and the Tramways Department was entrusted with the arrangements for erection and management. They were fortunate in securing the services of two experts from Sydney to supervise the preparation of the drawings and specifications. Work was pushed ahead rapidly and contracts let for the piling foundation (Mr. Peter Blondell), erection of the brick building (Mr. G. H. Turner), the supply of boilers (Babcock & Wilcox), turbo-alternators, switchgear, etc. (Australian General Electric Co. for British Thomson-Houston machinery). The new station commenced to deliver current on June 27, 1928, and the venture has been an outstanding success, resulting in great savings to the Council. The plant has been extended from time to time, and in 1941-2 the output for the Transport and Electricity Departments was nearly 125 million units at a cost of 0.571d. per unit, including all capital charges, depreciation, working expenses, the high price of coal, etc. The five turbo-generators installed total 75,000 K.W.

The plant is now connected to the City Electric Light Co.'s powerhouse at Doughboy Creek in such a way that either can draw current from the other as desired, and this is not only most useful, but is avoiding the necessity of having spare plant necessary for two independent power houses.

A complete reorganization of the distribution system was made, energy from the powerhouse being carried by underground mains at 11,000 volts to 11 substations, and there converted from alternating to direct

current and distributed to the trolley wires at 600 volts. This ensures a much greater supply of power to the long hilly lines, and avoids the former heavy losses in transmission.

Owing to the increasing costs, fewer working hours, etc., on August 1, 1926 the Council found it necessary to increase the minimum cash fare from 1d. to 2d., but this covered either one or two sections, as had been proposed by the Brisbane Tramways Co. Ltd. The journey covered by the 3d. fare was limited to approximately four miles, with an extra charge for greater distances. The growth of traffic and economical working made it possible to make several reductions in charges later, notably the following—

February 20, 1928.—City concession tickets introduced at the rate of 12 for 1/-, and on May 31, 1931, these were extended to cover one section on any part of the system.

December 11, 1933.—Weekly tickets introduced for 12 rides to and from the city in one week at a reduction of 25 per cent.

Family tickets for Sundays and holidays, tourist tickets, evening excursion tickets and other concessions have been inaugurated from time to time and all proved popular.

The average fare per passenger has been reduced from 2.45d. in 1930 to 2.18d. in 1941-2, notwithstanding the extension of so many lines and a heavier issue of the higher priced tickets. In the same period the average fare per mile has fallen from 0.9561 to 0.8159 pence.

Mr. W. M. Nelson, Chief Engineer and formerly General Manager for the Brisbane Tramways Company, died suddenly on October 5, 1926. The vacancy was filled by the promotion of Mr. W. Arundell (whose place was taken by Col. J. M. Grant) to the position of Chief Assistant Engineer.

The motor bus venture entered into by the Trust did not turn out a financial success, and during 1926 it resulted in a loss of £5,631. The Council eventually decided to sell the bus fleet, and the services ceased on November 23, 1927. In two years the total loss (including the capital loss) amounted to £19,792, which was liquidated out of tramway profits. It is worthy of mention that depreciation costs were £8 per bus per

week and tyre renewals averaged £5/12/- per bus per week. On July 6, 1940 the Council again entered the bus business under much more favourable auspices, as the advent of good road surfaces, and the economical Diesel engines have greatly reduced running costs, and there is now a larger population. Thirteen buses are in operation, and they are quite successful and provide service in thirteen new areas.

In 1929 the present tramway office on Coronation Drive was erected, almost wholly from old materials salvaged from the dismantling of the old offices, power house and workshops at Countess Street. The design was prepared by the Tramway Construction Engineer (Mr. R. R. Ogg), and he supervised the erection by day labour. The cost was about £14,000, while with new materials it would have been about £20,000.

The provision of additional cars has proceeded steadily under the Council's control, and for many years the building of them has been done in the tramway workshops, the underframes, trucks, wheels, motors and controllers being obtained from various contractors as before. In 1938 an entirely new type of all-steel car was designed, and 36 have been built since, the complete underframe and body being made by tramway employees. This car has eight equal wheels and four motors (instead of unequal wheels and two motors as formerly), giving more power, quicker acceleration and deceleration, wider entrances and more room for passengers. It is known as the "400" or "streamlined" type, and has been a decided success, the maintenance costs being negligible. During the last six years all new cars, and many of the older drop-centre type, have been fitted with air brakes.

The number of trams taken over from the Trust was 225, and the number at present in traffic is 400, after allowing for several old cars which were scrapped. A further car-building programme has been authorised by the Council, but war conditions make it impossible to obtain materials without great delay.

The continued increase in the number of cars made more housing accommodation necessary, with the result that a new depot was erected at Light Street in 1931, while the depot erected by the Trust at Ipswich Road and the Paddington Depot were considerably enlarged in 1936 and 1938 respectively.

On January 23, 1935 the Council lost a valuable officer in Mr. James Cryle, Traffic Manager, who had spent his life in the service. Mr. W. J. Franceis (Assistant Traffic Manager) was promoted to the vacancy.

Mr. Steer resigned from the General Managership of the Tramways and Powerhouse Department on February 13, 1939, after having served for 14 years, with an absence of six months in 1933 when he visited Great Britain and the Continent to investigate and report upon street transport matters. He was succeeded by Mr. S. L. Quinn, whose former position as Assistant General Manager was filled by the promotion of Mr. Franceis (Traffic Manager), who also continues to supervise the Traffic Branch.

During the Council's ownership of the tramways, public traffic has developed greatly, the number of passengers having risen from 82½ millions in 1925 to 135½ millions in the year ended June 30 last, while in the same period the revenue from passengers rose from £678,290 to £1,209,928. It has not all been plain sailing, however, as during the depression the traffic fell back steadily for seven years, and by 1932-3 the number of passengers had been reduced by over 13 millions for the year compared with 1926. Then there were natural increases each year until 1939-40, when war necessities caused enormous increases and consequent overcrowding. This, together with the large number of enlistments, has necessitated the employment of over 300 women conductors, and has created many difficulties for the management and staff.

In addition to the original London debt of £2,000,000, further sums from the Council's borrowings have been allotted to the Department, and the tramway capital expenditure on June 30, 1942 stood at £2,618,295, but amounts paid to the Sinking Fund (and invested by the Sinking Fund Trustees in Government stocks) reduced this to £2,068,121.

The Council and the public have a very valuable asset in the Transport and Powerhouse Department. The buildings, plant and equipment are modern and efficient, and the officers are keen and progressive. The Department is giving good and efficient service to the public at the lowest fares in Australia, and for many years has consistently produced profits.

