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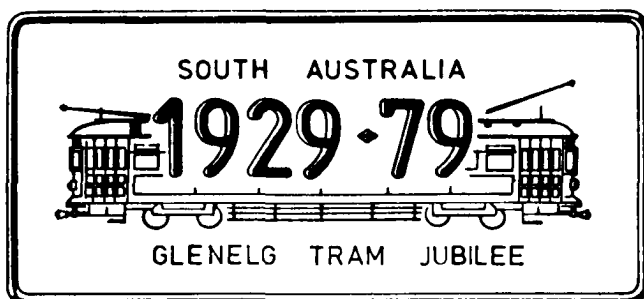
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COVER STORY - Adelaide H type car 380 is the first car to appear in decorated format as part of the Golden Jubilee celebrations for the Glenelg Tramway. Painted by high school students, it into traffic in late May. Although it is an unrefurbished 'silver' car, it is regarded as a 'red' car for traffic purposes and sees considerable off peak running. As it bears no numbers externally, it can run coupled with any red car without offending the STA's usual principle of coupling its cars in consecutive numerical pairs. - John Radcliffe

Other Jubilee highlights include:

- * H type 370 on the cover of the Adelaide 1979-80 telephone directory
- * H type 377 refurbished gold, to enter traffic in September 1979
- * H type 351 refurbished in its original colour scheme as used when it opened the line on 14 December 1929. It will re-enter traffic in the Jubilee procession along Jetty Road Glenelg on 16 December 1979. The procession will include historic horse drawn vehicles, horse trams, motor buses and electric trams.
- * Museum trams will operate on the Glenelg line on Weekends and Holidays between 8 December 1979 and 10 January 1980.
- * A model display in the Glenelg Town Hall with trams, trains, aircraft and other forms of transport.
- * A transport photography competition with major prizes
- * A special illustrated history of the Glenelg line produced by the STA.



FIFTY YEARS AGO

THE ROCKDALE TO BRIGHTON-LE-SANDS TRAMWAY - N.S.W.

By K. McCarthy

On Saturday 3 September 1949 the 1 mile 40 chain isolated Rockdale to Brighton-le-Sands tramway on the western shore of Botany Bay closed after 63 years operation. The eight L/P type tramcars attached to the undertaking were transferred to the main Sydney system between 5 and 7 September.

Some aspects of the history of this tramway appeared in "Trolley Wire" for August 1974 but some further details have recently emerged dealing with the period around 1929. At that time the outer end was extended 20 chains from Bay Street to Teralba Rd. along that section of General Holmes Drive then known as the Esplanade. This construction was carried out to serve the new municipal baths enclosure.

The "new" sharkproof bathing enclosure was opened for the 1928 summer season by the Rockdale Council at Brighton-le-Sands. The semi-circular structure was fitted with a broad promenade deck and diving boards. The dressing sheds and

bathing facilities were in the traditions of Thomas Saywell's earlier baths opened at the end of Bay Street, to the north of the "new" structure, in 1886.

Thomas Saywell operated the Rockdale Tramway from 1885 to 1900 by steam traction and with electric cars from 1900 to 1914 when his lease expired and the N.S.W. Government Tramways took over the undertaking.

The "new" swimming facilities attracted such a large volume of people during the summer of 1928-9 that the rolling stock available on the Rockdale tramway could not handle the traffic. Although the Bay Street terminus at Brighton was only a block from the pool the terminus and the bay side roadway were congested with people during the holiday periods.

Like the other NSWGT isolated systems (with the exception of Broken Hill) the Rockdale tramway had a physical track connection with the railway system which enabled rolling stock to be transferred between systems and to the main work-

A coupled set of L/P cars with 215 at the rear, at the new Teralba Road terminus, Brighton-le-Sands. 5 October 1929.

shops at Randwick. The Rockdale tramway, however, retained coarse railway profile trackwork and wheel flanges, the only electric line at that stage with such clearances, and as a result additional rolling stock could not be transferred from adjacent tramways during emergencies or times of heavy loadings.

By 1928 the Rockdale tramway was served by six tramcars:- L/P types 215, 216, 294, 296 and N cars 619 and 622. From time to time steam trailer cars were borrowed from the adjacent Kogarah steam tramway, but such trailer operation only caused further congestion and overloading of the motors on the electric cars.

Following difficulties experienced during Eight Hour Day (Labour Day) 1 October 1928, Traffic Manager E. Doran recommended to the Railway Commissioner on 10 October that the Rockdale tramway be converted to finer tramway contour trackwork to enable additional tramcars to be transferred as traffic demanded. Two further L/P cars were due to be received at Rockdale for the 1928 summer services, but if the conversion was approved these two vehicles (cars 386 and 387) could retain their ordinary tramway wheels. Wheel to floor clearances on the larger 80 seat O and P type trams were so close that those cars could not operate with coarse railway flanges and treads but the conversion of the Brighton line would enable these vehicles to also use the tramway.

Mr. A. Wray, the Tramway Engineer of that period, reported on 11 October 1928 that 16 sets of new points would be required for the track conversion and in addition, 13 chains of track would have to be fitted with check rails while 20½ chains of existing check rail would have to be repositioned. The cost of the conversion was estimated to be £610. Preparation would take one week but the actual conversion could be conducted between the last tram on Saturday night and the first car on Sunday morning.

By that stage the Rockdale tramway consisted of only 11 points so the need for 16 sets remains a mystery. The conversion was approved on 12 October 1928 and in all probability was carried out on the evening of 20/21 October.

The N cars attached to the Rockdale line had been used by the Tramway Department to haul a coupling match truck and railway goods wagons along the tramway from 1914. This service was mainly concerned with coal deliveries to Saywell's old power house at Brighton. The NSWGT erected a sub station at Rockdale in 1917 and this freed the tramway from the local supply from 21 December. The St. George County Council was provided with bulk power from the White Bay Power Station on 22 October 1922, and the Saywell power house ceased operation in October 1923.

Approval was also given on 10 October 1928 for the local goods service to be discontinued.

L/P cars 386 and 387 were prepared at Randwick workshops on 18 October 1928 for transfer to Rockdale, the delivery being most probably carried out on 20 and 21 October. The tramcar record cards have no individual entries of wheel changes being carried out in Randwick Workshops on the Rockdale cars, so exchange tramway contour wheels must have been fitted at the small Rockdale Depot in October 1928.

This increase of rolling stock from six to eight vehicles also created a problem. Although the galvanised iron depot erected in 1914 was positioned on the site in such a way that it could be the first bay of a much larger depot which could accommodate 80 cars, at that stage the structure only covered an area of 42ft x 120ft in which six trams could be housed on three roads. With the arrival of 386 and 387 a nightwatchman had to be employed to guard the two trams left outside the shed each evening.

As the summer of 1928-9 progressed the popularity of the new bathing enclosure grew. Between 8.36 am and 5.04 pm on Sunday 13 January 1929, 13,720 passengers travelled along the single line tramway from Rockdale to Brighton. During the day 17 departures from Rockdale consisted of one coupled set (2 tramcars), 32 departures were made up of 2 coupled sets (4 cars) and 4 departures consisted of 3 coupled tram sets (6 cars). On that day the 9.54 am trip from Rockdale consisted of 3 coupled sets (6 cars) carrying 520 passengers. In addition to this number approximately 190 people were left behind for the next departure. The 10.14 am departure also consisted of 3 coupled sets (6 cars). This time 600 passengers were accommodated but 150 remained for the next departure. The next wave of passengers was experienced at 10.54 am when two coupled sets of 4 cars departed with 380 passengers. On that trip a further 100 people had to wait for the next trams.

During the afternoon of Sunday 13 January 1929 a further peak was reached at the 2.19 pm departure. The six trams however, were able to carry the 500 passengers waiting at Rockdale.

On 15 January 1929, Traffic Manager E. Doran reported to the Commissioner that some of the problems of that previous Sunday could be overcome by the construction of an extension at the Brighton-le-Sands end and the provision of a new terminus at Rockdale.

Specifications of the Brighton-le-Sands extension had been prepared by late October 1928 after a heavy 8 Hour Day (Labour Day) traffic of 1 October. These planned for a 20½ chain extension from Bay Street, along the Esplanade to Teralba Rd. at a cost of £5,848.



LP 154 at Brighton-le-Sands terminus, Teralba Road. 13 June 1949. -B.J.Parle

The Rockdale extension required the demolition of two shops at the western end of the Tramway Arcade to enable a 65ft radius curve to be built from the existing terminus, which was located at right angles to the Illawarra Railway into Greeves Avenue reserve for a distance of 400ft. parallel to the railway tracks. A 59ft x 10ft 6in building would also be constructed under the station overbridge steps providing a staff meal room, a waiting room and two shops. These Rockdale improvements were never constructed but the Brighton extension to Teralba Road was approved on 14 February 1929. Construction must have progressed immediately as the new tramway was opened for traffic on Thursday, 28th March 1929 in time for the Easter holiday weekend.

To work the enlarged tramway two O type cars, 1330 and 1342 were transferred from Sydney. Official car records indicate that both vehicles received "A" overhauls before the transfer: 1342 being outshopped from Randwick on 22 March 1929 and 1330 followed on 27 March. Other

sources indicate, however, that on 14 and 15 March 1929 O car 1330 and L/P trams made test runs along the new extension for timetable purposes. Making regular stops the O was able to cover the 1 mile 40 chains in 6 minutes 55 seconds and 7 minutes 7 seconds from Rockdale to Brighton while 7 minutes 31 seconds and 7 minutes 29 seconds were required on the two return trials in the up hill direction. The two motor L/P cars, however, required 8¼ to 9 minutes for the trip.

The reason for transferring the four motor, 80 seat O cars to Rockdale was to enable two cars to maintain a 10 minute service along the extended line. The original operation along Bay St. was only just within the capacity of the 2 motor N and L/P cars to provide a ten minute frequency using two cars passing at Farr St. loop (opened on 24 December 1922). During the peak period the two motor cars were able to work the service employing three trams passing at Farr St. loop and the old Brighton terminus which became Trafalgar Loop after the extension was opened.



*LP 216 in Tramway Arcade at Rockdale Station, 13 June 1949.
The proposed terminus extension of 1929 would have resulted
in a curve passing through the shop site adjacent to the tram.
- B.J.Parle*

The only way in which L/P or N types could work the off peak service with two trams was for the turn back to be at Duke Street, two blocks from the Teralba Rd terminus.

The official trial along the extension was made on Tuesday 26 March 1929. The line now had ten items of rolling stock available for service:- N cars 619 and 622, L/P types 215, 216, 294, 296, 386, 387 and O cars 1330 and 1342.

This non standard collection of rolling stock caused considerable variations in time keeping; this being a major consideration for a tramway which depended on regular connections with the electric railway at Rockdale Station. The L/P cars were powered by 2 x GE 67 motors of 48 hpeach, the N's by 2 x GE 90-60 hp units while the O cars were fitted with 4 x DK 10A-37 hp motors.

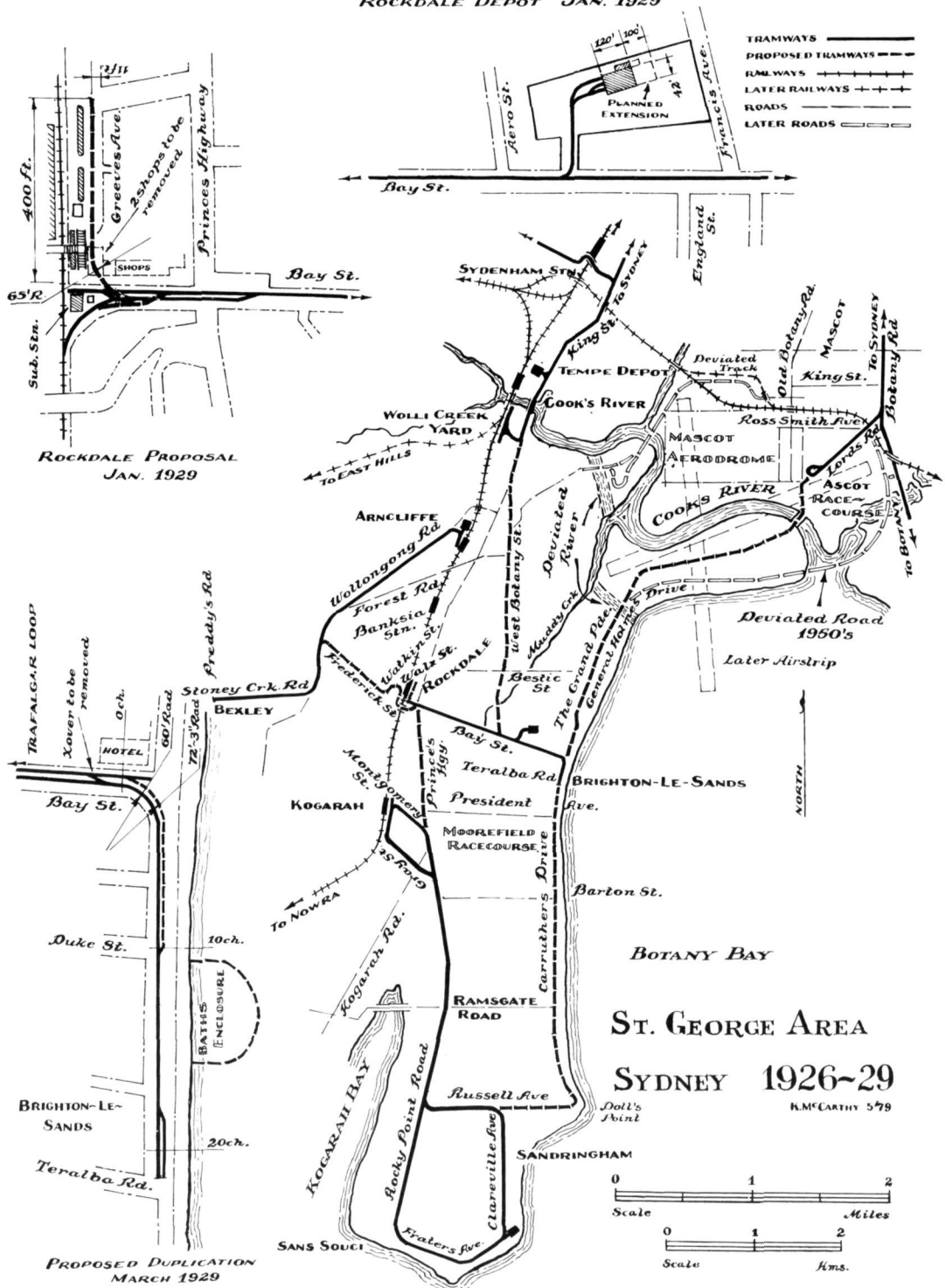
On 9 April 1929 further running trials were conducted with the O cars and single and coupled N tramcars. The two O's could just manage to run the 10 minute service and while the N cars could accelerate at a smarter rate than the L/P types these

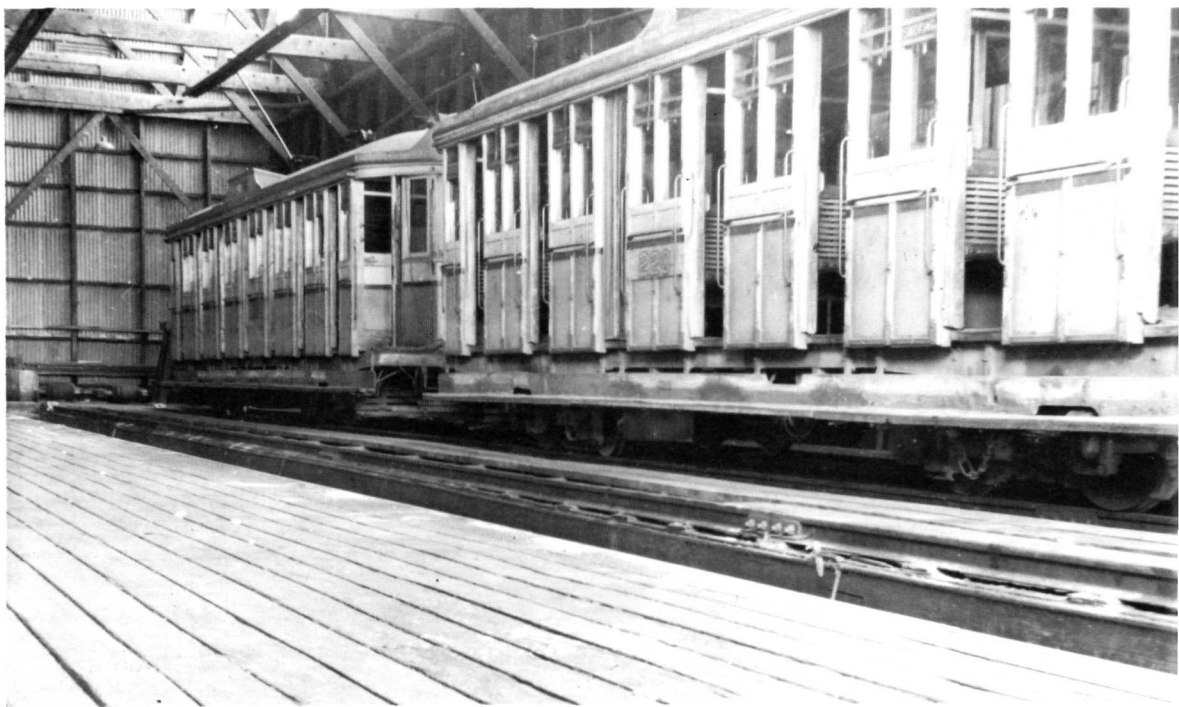
other vehicles could still not be expected to follow a 10 minute table with 2 trams in operation.

With the summer of 1929-30 approaching a report dated 21 August 1929 revealed that the two O cars were experiencing difficulty in the off peak service and were losing 8 to 10 minutes in the day and missing train connections. The Traffic Manager expressed fears for this running arrangement as the tourist traffic was expected to place greater strains on the service as the warmer weather approached. At first the two car service was crossing at Trafalgar Loop, and later Farr Street Loop was employed, leaving no time for standing at the Brighton terminus. On 12 September 1929 Traffic Manager E. Doran stated that the two passing loops were badly situated for the 2 car x 10 minute frequency and if the O car operations were to continue some changes were necessary including the extension of the Trafalgar Loop from Bay Street into the Esplanade as far as Duke Street to provide a 15½ chain length of duplication.

The Eight Hour Day (Labour Day) holiday of 7

ROCKDALE DEPOT JAN. 1929





220 and another L.P car fill up road 3 at Rockdale Depot on 13 June 1949.- B.J.Parle

October 1929 again extended the service to maximum capacity. The entire fleet of 10 cars were pressed into operation working on a 3 tram operation at a 10 minute frequency, passing at the two intermediate loops, between 9.45 am and 6.5 pm. During that period the 3 trams worked to these combinations:-

1. 2 divisions of 2 coupled sets = 4 cars.
2. 2 divisions of 1 coupled set and 1 single car = 3 cars.
3. 2 divisions of 1 coupled set and 1 single car = 3 cars.

After 6.45 pm 3 trams continued to provide the 10 minute frequency employing one coupled set per departure or 6 cars in all. In spite of these activities 50 to 100 people were left behind on all trips from Rockdale between 10 am and 11.30 am.

With this first taste of summer traffic for the 1929-30 period two alternatives were considered:-

1. The system should be standardised with 8 O cars.
2. The system should be standardised with 12 two motored cars.

The existing power supply arrangements were insufficient to cope with a fleet of 8 four motored O or P cars. To avoid the cost of providing feeder cables and a booster unit the decision was made to standardise on a fleet of two motored cars. While low voltage may be experienced at the outer end of

the line, the existing power supply could cope with this arrangement.

So the Tramway Department decided to introduce a new off peak timetable on the Rockdale tramway using three trams on a ten minute frequency. On Sunday 15 December 1929 O cars 1330 and 1342 were transferred back to the main Sydney system and L/P cars 237 and 238 from Tempe Depot and 184 and 191 from Newtown arrived in their place enabling the new timetable to commence on the following day, Monday 16 December.

The rolling stock roster now consisted of 12 trams:- N 619 and 622, L/P cars 184, 191, 215, 216, 237, 238, 294, 296, 386 and 387. The planned track alterations between Bay Street and Duke Street at the eastern end of the line and the Greeves Avenue extension at Rockdale were never carried out.

The proposal made in 1929 to extend the 42ft x 120ft depot shed by another 100ft at an estimated cost of £7,152 also included the installation of a sprinkler fire system in place of the chemical extinguishers and hydrants fitted to the original structure. This extension was planned to enable 12 x 80 seat cars to be housed under cover. Approval for this work was withheld in July 1929 due to a shortage of finance and the proposed changes being contemplated at that time in the operation of the

Tramways Department.

The Rockdale shed never received a sprinkler system and it is doubtful if the galvanised iron structure was ever extended. After July 1943 only 8 L/P type cars were attached to the tramway and from memory these could not all be accommodated in the shed.

There were many schemes designed to connect the small Rockdale tramway with the adjacent isolated systems. The main proposals were:-

1. Cook's River to Rockdale via West Botany St. (To main Sydney system)
2. Bexley to Rockdale via Frederick St. (To Arncliffe steam tramway)
3. Kogarah to Rockdale via Princes Highway. (To Kogarah steam tramway)
4. Brighton to Ascot via General Holmes Drive. (To main Sydney system)
5. Brighton to Sandringham via General Holmes Drive. (To Kogarah steam tramway).

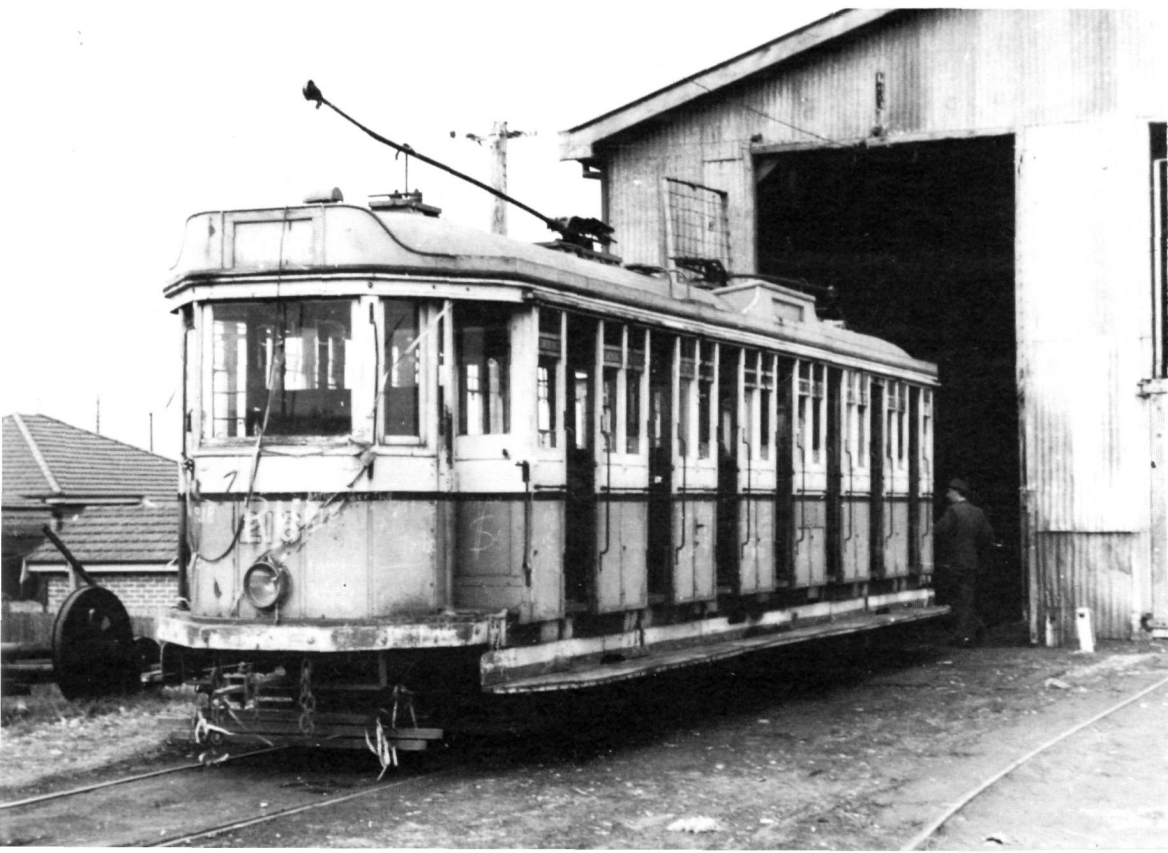
The Cook's River (Tempe) to Rockdale scheme was considered by a Public Works Committee during December 1915. The cost of this 3 mile 5 chain single track connection was expected to amount to £24,570. The details of this proposal

were given in "Trolley Wire" for April and May 1953.

The connection with the Bexley steam tramway was an interesting proposal. The Arncliffe-Bexley steam tramway opened on 13 October 1909 and continuously operated at a loss. It closed on 31 December 1926 replaced by a private bus route. After the closure track maintenance continued to cost the Tramways Department £150 p.a. Little time was wasted in lifting the tracks of the Parramatta and Maitland tramways which closed on the same day, but the State Parliament directed that the Arncliffe tramway should not be dismantled until overall future transport plans for the area were considered. These plans included a long standing proposal to connect the Bexley tramway with the Rockdale line and operate it as a through electric service from the Preddy's Rd. terminus, West Bexley to Brighton-le-Sands via Rockdale.

On 19 May 1927 the connection between the Bexley Tramway and Rockdale via Frederick St. was expected to cost £37,000 an amount which included the electrification of the outer half of the former steam tramway. An anticipated profit of £400 p.a. was expected on this new undertaking. The cost of lifting the tracks and restoring the road

LP class tramcar 216 at Rockdale Depot on the last day of operation, 3 September 1949. Spare maximum traction bogie wheelsets can be seen to the left. - B.J.Parle





LP 216 in Bay Street at Depot Junction, 3 September 1949. -B.J.Parle

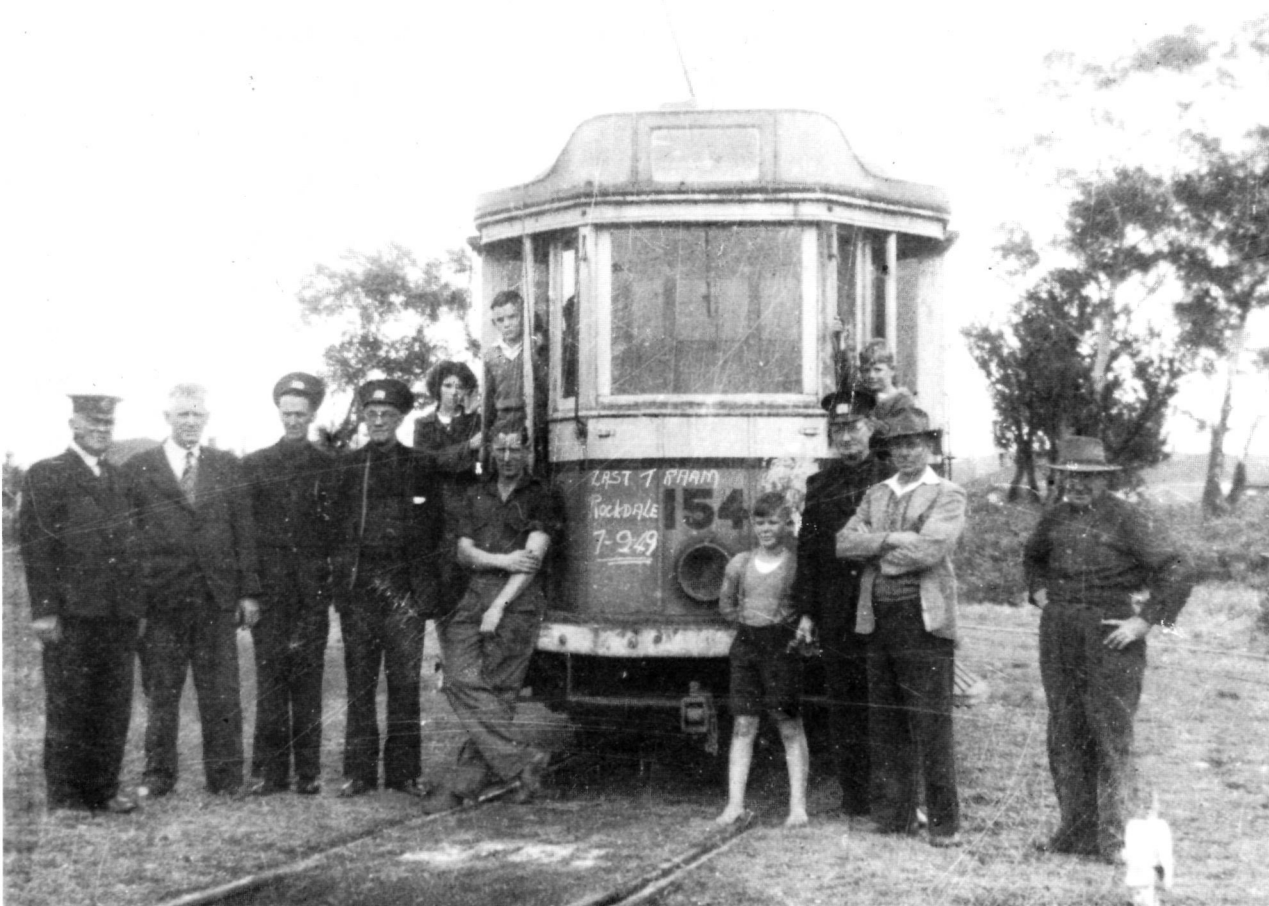
surface of the inner end of the Arncliffe line (1 mile 43 chains from Frederick St to Arncliffe Station) was estimated as £2093 and the value of recovered material should amount to £900. The Railway Commissioners felt, however, that this project should not proceed until local private bus competition was regulated and the corporate structure of the proposed new transit authority decided upon.

On 4 April 1928 a decision on this project was still awaited. One steam motor was retained in Arncliffe depot at this stage to carry out track lifting and this situation still existed in January 1929. The construction of the East Hills suburban railway through North Bexley in 1931 removed the need for tramway extensions into that region.

During June 1926 Traffic Manager E. Doran reported on a proposal, raised from time to time by

Rockdale Council, for a one mile connecting link along Princes Highway between the Kogarah steam tramway and the Rockdale electric line. Mr. Doran recommended against this proposal claiming that the area was well served by the adjacent suburban railway!!!! Although this venture would serve the Moorefield Racecourse, only nine race meetings were held there each year so little worthwhile race traffic was expected. The claim that links between the Arncliffe-Rockdale-Kogarah tramways would enable the rolling stock scattered over the three depots to be kept in one central shed was dismissed. The economic gains made in a reduction of depot staffs would be more than expended in dead running.

The link between Kogarah and Rockdale was made in July 1937 when the electric trolley buses



Late morning, 7 September 1949, LP 154 stands in the Rockdale Depot yard for its last trip to Brighton-le-Sands. This was the last tram to leave the depot to be transferred to the Sydney system on the Lizard road trailer. - K. McCarthy

replaced the Kogarah steam trams.

The "Sydney Sun" for 19 November 1925 reported that work was about to start on a lift bridge and roadway over the mouth of the (old course) Cook's River just south of Ascot Racecourse and that provision would be made on this structure for a tramway extension. This bayside connection between the main Sydney system and the Brighton tramway had been investigated in September 1924 but the intervening area was sparsely settled at that stage. The roadway through North Brighton was eventually built with a central plantation to take a reserved track tramway but this right of way disappeared with the road widening projects of the early 1950's.

Traffic Manager Doran inspected a connection from the Sandringham-Doll's Point area along the

bayside to Brighton-le-Sands during September 1924. In February 1925 he recommended that any connection with the Kogarah and Arncliffe tramways should be held over until both steam lines were electrified.

During September 1924 work was progressing on the construction of the second (duplicated) track on the inner side of the Sans Souci loop of the Kogarah steam tramway. This new track was constructed to fine tramway wheel contours for eventual electrification. On 10 June 1925 Mr. E. Doran informed the Sans Souci Progress Association that when the Kogarah tramway was electrified it would become an "end to end" operation instead of the "figure 8" working of the then existing team tramway. The Montgomery St. loop would be abandoned at Kogarah and trams would again work in both



LP 154 at Brighton-le-Sands terminus about to be driven onto the Lizard road trailer for transfer to the Sydney system. 7 September 1949. - K.McCarthy

directions along Gray St. The Russel Ave. part of the outer balloon loop would also be closed and the electric trams would terminate at Doll's Point after passing through Sans Souci and Sandringham.

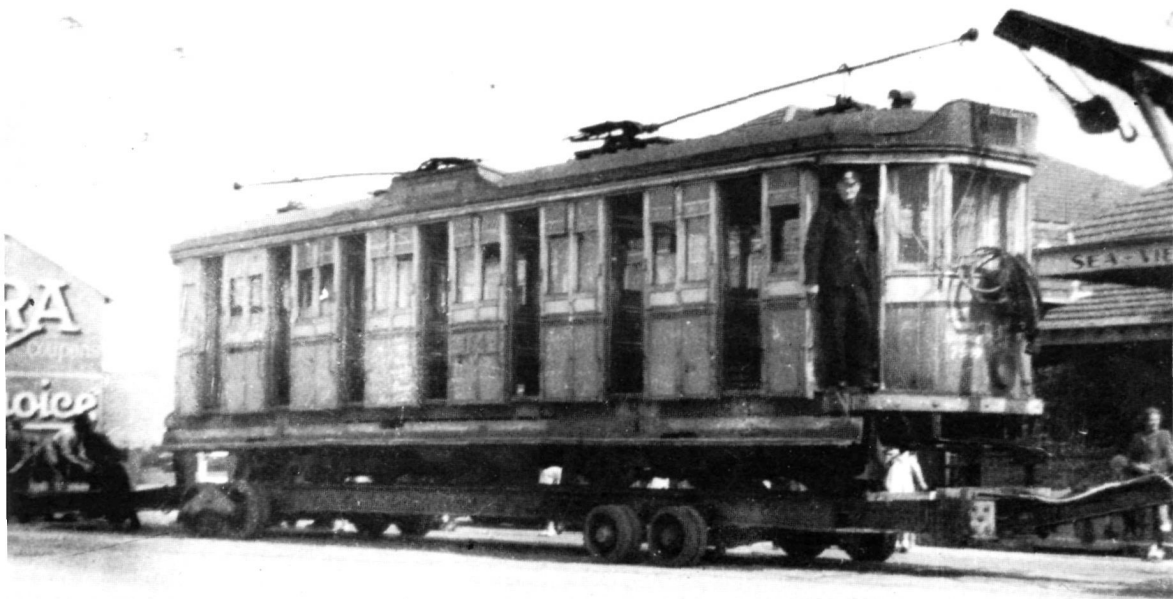
For their entire periods of operation the Kogarah steam tramway worked on coarse railway contour trackwork while the Arncliffe steam line was constructed with fine tramway wheels and clearances.

The eventual electrification of the Kogarah tramway took the form of trolley buses in July 1937 and the Sans Souci peninsular was wired with several balloon loop connections so that the new

buses could approximately follow the loop operation of the former steam tramway.

From time to time portions of the bayside connection between Brighton and Sandringham were investigated. Eventually the short 20 chain extension from Bay St. to Teralba Rd. Brighton was constructed, as outlined in an earlier portion of this article. Other possibilities were also considered:-

1. During 1924 a one mile extension from Bay St. to Barton St. (Villa St.) was considered. This single track extension was expected to require three passing



The end of the Rockdale tramway. The last tramcar, LP 154, on the Lizard road trailer at Brighton-le-Sands, 7 September 1949.

- K. McCarthy

loops and would cost £4,990 p.a. to operate. As only an income of £2,850 p.a. was expected the extension would operate at a considerable loss. The need for three passing loops and a possible terminal siding on this proposal was possibly the reason for the 16 sets of points required for the rail contour conversion in 1928.

2. On 19 September 1928 a 34 chain extension from Bay St. Brighton to President Avenue and Cook Park was investigated.
3. During August 1934 a 14 chain extension from the new Teralba Rd. terminus at Brighton-le-Sands to President Avenue was again considered. No loops were required and the operating cost was expected to amount to £721 p.a.

This proposal was coupled with a request by the local U.A.P. State Parliamentary Member Mr. J. Ross M.L.A. for the substitution of L/P cars with the new saloon R type. This latter suggestion was rejected on the grounds that these new vehicles could not operate coupled so would be unsuitable in meeting the peak holiday traffic to Brighton; an expensive feeder system would have to be installed to cope with the power consumption of these new

four motor cars; the R tramcars were being used to replace obsolete single truck cars on the main Sydney system.

The main factor against any further short extensions of the Brighton tramway was based on the fare structure. The long extension to Barton Street would have increased the length of the Rockdale tram journey from 1 mile 20 chains to 2 miles 20 chains, a distance still within the scope of the standard Sydney single fare section. The residents along the extension areas already walked to the Teralba Rd. terminus to join the tram. Any extension beyond that point, according to the Traffic Manager, would not appreciably increase the volume of patronage nor would it increase the income of the tramway!

One final unusual aspect of the Rockdale Tramway needs to be mentioned here. That is the problem of the facing direction of the electric tramcars on the line. The two N cars (619 and 622) and the L/P trams attached to the line were direct controlled vehicles which could only couple electrically at the number 2 ends. As there were no reversal facilities at Rockdale the fleet had to be paired. At the time of the closure in September 1949 L/P cars 154, 223, 230 and 387 had their number 2 coupling ends facing Rockdale while 191,

220, 216 and 386 faced Brighton. During July 1948 car 216 had been reversed on the tramcar carrying trailer known as the "Lizard". At that stage 223 was taken to Randwick Workshops for routine maintenance and remaining tram 386 was not in a reliable condition. Thus 216 was reversed so that 3 reliable coupled sets could be arranged at peak periods.

The "Lizard" road trailer entered service on 19 February 1937 to transfer rolling stock between the main Sydney system and the isolated North Sydney, Enfield and Rockdale tramways. The physical tramway/railway connections were eventually removed, with the exception of Wolli Creek Sidings in Sydney and Ivy St. per way yard in Newcastle.

It appears that on many occasions the "Lizard" had to "do the triangle" on the corner of Bay St. and General Holmes Drive to reverse cars on the Rockdale tramway.

During September 1934 a report revealed that of the ten L/P cars and two N trams at Rockdale only two N's and two L/P's were suited to winter operation. Cars N 619 and 622 were fitted with glass sliding doors while L/P 386 and 387 had pleated accordion type canvas doors. The other cars carried pull down canvas blinds in the doorways which were a nuisance to operate in cold and wet weather.

During July 1935 Mr. J. Ross M.L.A. and the Brighton Ratepayers League complained about the lack of sliding door cars at Rockdale. As a result on 18 August 1935 L/P 294 and 215 were transferred to Sydney and pleated door cars 220 and 230 were received in exchange. On the following Sunday, 25 August, pleated door cars 154 and 223 arrived at Brighton. This provided enough cars to make up four coupled sets for winter traffic.

Routine visits to Randwick Workshops, however, resulted in the fleet again facing in the wrong direction by the winter of 1937 to work all coupled sets with pleated door stock. By September 1937 pleated door L/P cars 223, 387, 230 and 154 had their coupling no.2 ends facing Rockdale while 386 and 220 faced in the opposite direction. Roller blind trams 191, 216 237 had their number 2 ends facing Brighton while 296 faced in the reverse direction. The "Lizard" was due to take 191, 216 and 237 to Randwick Workshops for routine overhaul so the vehicle was directed to "do the triangle" with one of cars 154, 230, 387 or 223 to correct the situation.

At that stage low windowed L/P car 296 had been at Randwick Workshops for an "A" overhaul since 16 August 1937. This tram returned to Rockdale on 27 September 1937 and remained there until July 1943.

The short Rockdale tramway operated at a profit for most of its working life. The profit for the year ended 30 June 1927 was £3,924; 1928 returned a profit of £7,427 while 1929 produced £5,181. During these periods the number of passengers carried amounted to 2,020, 482 during 1927-28 and 2,115, 556 in 1928-29. A peak of 2,187,230 was reached for the 1929-30 period; followed by a decline to 2,003,152 for 1930-31 and 1,831,025 for 1931-2 as the effects of the depression were felt.

Nevertheless the closure of the Rockdale to Brighton tramway was not considered during the 1930's when decisions were reached to close the Enfield, Manly and Newcastle systems. During World War II the Rockdale tramway developed the appearance of neglect and by the time of the closure the trams and their crews were providing a dependable service but the cars were all in need of repainting and major overhauls while the trackwork along Bay Street was in need of repacking.

40 years ago on the evening of 30 September 1939 the Manly tramway system closed. This was the largest tramway in Australia and the first electric system in New South Wales to close at this time.

Opened in 1903 it was operated by steam, horse, steam (again) and electric trams in its short life span. Although an isolated outpost of the far flung Sydney system it had many unusual features which have never before been studied in depth.

Ken McCarthy has for some time been undertaking a fresh, in depth look at the Manly Tramways and the first part of what will be the definitive work on this subject will appear in Trolley Wire for October 1979.

THE MANLY TRAMWAYS - N. S. W. 1903 - 1939

Part A 1903-1907 The Steam and Horse Tramway Era

***** In the next issue of TROLLEY WIRE *****

WHY ELECTRIC TRAMS?

By C.J.M. Steele

Concluded



The trolleybus did not gain much of a foothold in Western Europe. However, many of these systems remain and flourish. This modern Volvo articulated vehicle operates in Lucerne, Switzerland. - D.H. Jones

Having thus far documented the impelling reasons "Why electric trams?" came into being, it would be appropriate to account for their equally dramatic exit from the transport scene. The battlefields of World War I were to be the proving grounds of a challenging technology - motor transport. Early motoring had been very much the pursuit of inventors and their wealthy clients but the final stages of this conflict were marked by the increasing supply and use of quite reliable mechanically driven vehicles. "Mass production" was soon to become a household cliché.

The 1920s saw a phenomenal change begin in the travelling habits of a broad spectrum of the population in many countries. The purchase of a factory produced motorcar was within the means of an increasing number of families. No longer would people be bound to use tramcars for travelling. The role of the city centre as the sole hub of community activities began waning from this time. The revolution wrought by Henry Ford affected American society immediately. Ridership dropped, not only on the metropolitan tramways, but also on the vast network of long intercity electric lines called inter-

urbans, of which the Glenelg tramway is the only Australian example. Newly paved roads made automobile travel comfortable, quick and most importantly, convenient.

With their tramway systems now showing signs of wearing out, and at the same time a realisation that public transport had still to be provided in the burgeoning post-war cities, many operators were convinced that any further commitment to the fixed plant and equipment of tramways was a poor investment. They therefore decided to join the trend of using flexible, rubber-tyred vehicles, and tramway abandonment projects started to get underway by the mid-20s.

Since the expertise in tramway organisation was fundamentally electrical, it was natural that an electric bus or "trackless trolley" was regarded as the solution to the public transport problem of the day. It was a relatively easy matter to erect the overhead wires and extend routes where required. Adelaide was the leader in the field in this country, the MTT launching an experimental trolley-bus route between Payneham and Paradise in 1932, using a modified Garford motorbus. A permanent



The PCC was a radical departure from the traditional tramcar in equipment, performance and appearance. It enabled many American systems to survive the depression and World War 2. Designed for one man operation it was usually single ended and single sided. The car in this photo was built by the St. Louis Car Company and delivered to the St. Louis Public Service Company in December 1946. An all electric car it mainly differs from pre war cars only in the provision of standee windows.

installation, which was to last 25 years, was established between Tusmore and the Port Adelaide municipality in the years 1937-38. Trolley-buses were particularly favoured in Great Britain and whole tramway systems were converted to that form of operation during the depression years. Europe, Japan, Africa and South America had few installations, but the Soviet Union embraced them with a vengeance.

Following World War II, though as many as 49 trolley-bus systems were established in the United States, a different pattern evolved. As the weaker tramway systems succumbed to their economic plight, the various company presidents banded together with the intention of producing a standard, modern electric tramcar for the remaining viable enterprises. Known as the Presidents' Conference

Committee car (PCC) it made its initial appearance on the streets of Brooklyn in 1936. For the next decade and more orders poured into the licensed manufacturers for thousands of these luxurious streamlined units. They were an instant success and being one-man operated quickly held in check increasing labour costs. This did not please the forces behind the promotion of automobile products - internal combustion engines, transmissions systems, rubber tyres, petroleum products, and concrete manufacturers in the case of roads.

About 1932, General Motors, Standard Oil of California and Firestone Tyre and Rubber Company put together a holding company called National City Lines, whose sole objective was to go about the country purchasing tramway systems from their private owners, and converting them to

buses manufactured by General Motors, fuelled by Standard Oil and running on Firestone tyres. As even the most modern motorbus was essentially inferior to a contemporary tram the ultimate purpose of this plot was to divert patrons away from public transport into General Motors automobiles, their most profitable division. The mathematics of it explain all. One tram could carry 50 passengers and even a bus 35. The roadmakers got into the last act of the scenario. Anti-trust laws designed to prevent such conspiracies existed, but they failed to deal with the facts head on. At this date it is conjecture as to whether lobbyists circumvented remedial political action. Suffice it to say that dozens of tramway systems were destroyed by 1950 after which attention was given to removing the trolley-bus systems. At the present time, only seven electric tramways and five trolleybus systems remain in the whole of the United States.

As a pace-setter in the western world this manoeuvre in the United States had its effect elsewhere. American companies, particularly manufacturers of electrical equipment and associated hardware had by the beginning of the 20th century set up works or licensed their competitors in other countries to take advantage of supplying the local tramway market. Within the next fifty years a different heavy industry demand and a colossal domestic and commercial consumption of electrical goods made these companies' interests in electrical traction components an inconsequential sideline, reinforced by the continuing losses of their American markets. Items would still be willingly produced, but at a cost, and this was inevitably too high even for the tramway companies that wanted to

carry on. This situation accounted for the abandonment of systems in tramway strongholds like Leeds and Sheffield in Great Britain and one or two tramway cities in Australia. Certainly the point was raised in Adelaide prior to the decision being taken to replace trams with buses 25 years ago.

The "bleeding" of tramway depreciation funds for politically motivated rate relief - a popular pastime of municipal operators in England - and copied in a fashion in Melbourne until fairly recently, was another reason for trams disappearing from the streets. And some managements got rid of trams simply because it seemed the right thing to do!

Where does this leave the debate mere hours before we commemorate the centenary of continuous tramway operation in the streets of Adelaide? Was the near extinction of the electric tramway a natural phenomena or the result of ill-conceived actions? The evidence suggests both.

Sufficient systems have survived into the last quarter of this century to preserve the basic 'know-how' of the industry and to capitalise on the benefits of a new era in electricity - electronics. Cities in Western Germany, Holland and Belgium, parts of Scandinavia and the Soviet Union, Toronto in Canada, and Melbourne in Australia never lost faith in the electric tramcar to do the job of moving people.

Today when those inseparable problems of environment and energy conservation, which have been exacerbated by our love affair with the motor car, occupy our minds seeking solutions, one might be excused as Adelaide enters the second century of public transport for rephrasing the question - "Why NOT Electric Trams?"

BRISBANE ELECTRIFICATION

The electrification of the Brisbane suburban railway network came a step closer on 18 July 1979 when the first three car electric train arrived at Mayne electric car depot after a two day journey from Maryborough. Manufactured by Walkers ASEA Pty. Ltd. in Maryborough the cars introduce new features to both Queensland and Australia.

The most notable feature is the introduction of mainline electrification to the 3 ft 6 in gauge and of 25 Kv 50 Hz AC to Australia. Each three car set consists of a driving trailer, a non driving motor with pantograph as the centre car and a driving motor car without pantograph. The only previous use of non driving motor cars was in Sydney in the 1920's but these were built with use as driving cars in mind. At 75 ft 7½ in they are the longest cars to be operated

by the QR and the longest built for use on the 3 ft 6 in in Australia. They also introduce air conditioning to suburban trains, although Adelmay be the first to regularly operate such services. (It is possible to ride in air conditioned trains on Sydney suburban services but this is in interurban or country stock.) Other features are air suspension, Scharfenberg couplers, public address and radio equipment, train describer system and centre driving positions.

The length of the cars caused some delivery problems and clearances had to be enlarged at some locations. As a precautionary measure the delivery train was followed by a Suzuki inspection car and an accident crew followed by road.

An initial order for 39 cars (13 sets) has been followed by an additional 33 cars (11 sets).

TROLLEY WIRE

AUGUST, 1979

The driving motors are classified DM and numbered from 101, the non driving motors M and 201 and the driving trailers DT and 301. These letters will not be carried on the cars, the numbers on all vehicles being prefixed EM. The sets will be numbered 01 upwards.

The first movement under power took place at Corinda on Friday 3 August 1979 followed by running on the down suburban line between Sherwood and Milton. Later testing also used the up suburban between these points. During this time the set was stabled on an unwired siding at Corinda.

As with most electrification programmes extensive civil engineering and signalling work has been undertaken. Initial work has been between Ferny Grove and Darra via Central although wiring is complete to Ipswich. Additional tracks have been provided at various locations, tunnels rebuilt and three new bridges built. The largest of these is across the Brisbane

River and forms part of the new link between South Brisbane and Roma Street. The other two are across Breakfast Creek at Mayne.

The initial service will be between Ferny Grove and Darra, with, it is expected, two six car sets providing a mixed service with diesel trains. The Official Opening will be on Saturday 17 November 1979 and a special service will then operate for the remainder of the weekend with the normal service commencing on Monday 19 November.

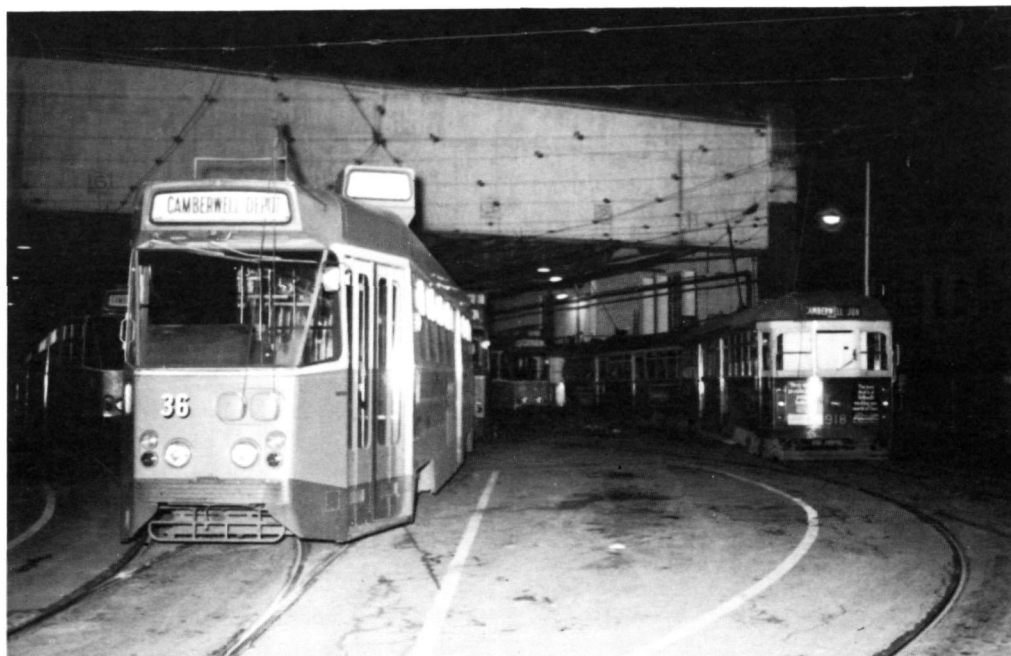
Present plans call for suburban electric services to Petrie, Shornecliffe, Lota, Woodridge and Ipswich including the Exhibition Loop and the Corinda to Yeerongpilly connection. The Pinkenba line is not included. Darra to Ipswich will be the next section converted. It is hoped to have electric operation on the Woodridge line to at least Kingston by 1982 for the Commonwealth Games and to this end work has started at Vulture Street tunnel.

The first three car electric train for Brisbane near Eudlo on its delivery run from Maryborough on 17 July 1979. The consist is 1460 class loco 1479, QFC 36725, DT 301, M 201, DM 101, QFC 36724, Griddle Car 1255, First Class Sleeper AAS 1230, Van BGV 873. -D.J.McGill



CITY SECTION

News of the Melbourne and Metropolitan Tramways Board



SW6 918 was the last Camberwell Depot green tram to run on the Burke Road route, 72 and to return to Camberwell Depot. It is seen here berthed on road 1 immediately after its return at approx. 1.05 am Sunday 5.8.79. - K.S.Kings

The Wattle Park line, route 70, was converted to full time Z car operation from Sunday 5 August. Additional Z cars were transferred to Camberwell Depot to enable this to take place and the full allocation for this running shed is now 53 trams of Z, Z1 and Z2 classes. Of the Z2 cars, 101 was present by 23 June and has subsequently been joined by 103, 105, 107 and 109 (at least). The last green tram to run to Elgar Road terminus was 244, a veteran W2, on Friday evening 3 August. It was due away from Batman Avenue, City, terminus at 6.47 pm, arrive Wattle Park 7.25, depart 7.26 and run into Camberwell Depot at 7.42 pm. However, due to Union activity as part of the overall campaign for a wage rise which has adversely effected Melbourne commuters for several months, 244 was rather late leaving the city and about 30 minutes late arriving at Wattle Park. (The Saturday service has been operated by Z cars since

earlier this year, whereas the Sunday runs have remained green cars to share the weekend penalty rates between Z and non Z crews).

Camberwell Depot operated route 72 City to Camberwell via Malvern and Burke Roads on Saturday 4 August, with the last tram into the depot being SW6 918 at approximately 1.00 am on the Sunday morning. Seven hours later the mass exit of W2, W5, SW6, W6 and W7 trams from Camberwell Depot took place and was complete by mid morning. The last green tram away was W2 630 at 9.45 am. Camberwell, at its fiftieth year, is thus Melbourne's first all Z depot and operates only the East Burwood and Wattle Park routes. (The small car shed at North Fitzroy, although operating only Z cars, is part of the combined North Fitzroy bus and tram depot as far as traffic operations are concerned, while it is a sub depot of East Preston for maintenance).

Route 72 is now run entirely from Malvern Depot except for the first and last trams Monday to Saturday and the first two and last one on Sundays. These runs are actually Z cars from Camberwell which run between the terminus and Gardiner crossover, where they exchange passengers with the tram to or from the City (a Malvern car). To enable Malvern to take all trips in route 72, it ceased to work East Malvern-Darling Road, which service reverted to Glenhuntly Depot. This weekend thus saw the largest re-organisation of tram workings in Melbourne for some years.

The latest Z3 body received from Com Eng to the end of July is 121. Z2 115 was noted in service on Friday 3 August. This now completes the extra 15 cars added to the original order for 100 cars with Com Eng bodies and ASEA electrical equipment. 111 had not at this time been in revenue service but was being used for comparative tests with prototype Z3 116.

The first of the 100 new buses on MAN chassis with Ansair bodies has been received. It is understood that they will be numbered in the 100s.

The MMTB have recently commissioned two new auxiliary road vehicles. One unit is their second 'cherry picker' which has replaced an old tower waggon, while the other is a tramway emergency waggon. It is an improved version of the present unit which dates from the mid 1950s. The new unit has been fitted with more modern equipment. The old unit has been left intact and is being kept for possibly a year before its future is decided. The new unit is based in the same garage at South Melbourne Depot and operates under similar conditions, including the same radio call sign.

The new 'silhouette' type stop signs now appear on well over half the tram routes and

some of the bus routes. The conversion work is due to be completed well before the end of this year.

The track relay in concrete with new rail in Park Street South Melbourne, between St. Kilda Road and Kingsway, was completed about mid June and subsequent work has been of a lesser nature. Part of Mills Street Albert Park has been lifted, packed and resurfaced, while similar work has been performed at several other parts of the system over short lengths of track. The sweeping triangular junction at the northern end of Hawthorn Road North Caulfield, where it meets Dandenong Road, was due to be relaid starting in July. Work commenced but had not proceeded very far when it was hindered by a series of industrial disputes. At early August the junction sections in Dandenong Road had been renewed and set in concrete, as was about 200 feet of double track south of the Hawthorn Road turnouts (back to the previous concrete relay). Excavation was in hand for further work, but progress is slow. Track lights have been strung in High Street East Kew, from Burke Road westwards towards the East Kew crossover at the *Harp of Erin* corner. Extra trolley wire for temporary track is in place and it is hoped to commence this relay from Burke Road later in August. The double track curves from Clarendon Street South Melbourne across Albert Road into the reserved track were renewed in mass concrete recently.

A new amenities block is to be erected at Preston Workshops on the south side of the paint shop. To facilitate this, one track, between the paint shop and the timber rack, has been removed, together with the timber rack. The timber stored therein was moved to spare space in one of the other timber racks west of the mess hall.

*The new emergency waggon at South Melbourne Depot.
23.6.79*

- K.S.Kings





W2 244 became the last green tram to regularly operate to Wattle Park, on Friday evening 3.8.79. It is seen here at Elgar Road Terminus. - K.S.Kings

ADELAIDE TRANSPORT NEWS

One of the biggest per way jobs for many years in the City was carried out in Adelaide in early June when the combined STA railway and tramway gangs replaced the reverse curves leading from King William Street into the Parklands at South Terrace. The rails were laid in conventional ballast without tie bars using T rails. Bitumen sealing was carried out by the Adelaide City Council, the final topping being put on some weeks later. On this occasion, the STA provided a tram to groove the hot mix as it was laid, the work being done on a Sunday morning. - John Radcliffe



THE SYDNEY SCENE

Transport News from the Sydney Region

Eastern Suburbs Railway

Little can be said about this line at this stage except that it has been overwhelmed with passengers. The first week crowds have not dwindled to the extent expected and all stations except Central (low level) are busy all day. There is a high level of short distance traffic, particularly between Town Hall, Martin Place and Kings Cross.

Bondi Junction station and bus interchange is the worst laid out on the line, except Town Hall which was bad enough before the influx of of ESR passengers, having been reduced in size as an economy measure when the incoming Labor Government reviewed the future of the project. It has difficulty in handling peak crowds and if it is to remain the terminal extra escalators, or stairs or lifts, would be necessary. A temporary ticket window has been opened to sell weekly tickets and an additional permanent window is likely to be provided.

The stopping positions for the four car trains have been moved to the centre of the platforms to even the loading on the escalators, but as these face towards the ends of the platforms at stations from Martin Place out, passenger flow is still impeded.

Seven train sets are used to provide the 5 minute headway service and two or three remain stabled on the line overnight. The sets working in and out provide a public service but do not stop at Redfern. Trains are provided by Mortdale and Punchbowl depots and are interworked on other lines. Because of this the all silver service did not eventuate. The sets used on the opening weekend were rapidly dispersed and in the usual Sydney manner, broken up and painted cars (red, blue and white and silver with yellow front) were in operation from Monday 25 June.

There have been holdups due to signalling problems with some long gaps in the service. Crew rostering has also caused delays as drivers do a maximum of four return trips on the line as part of their roster which is thus intergrated with the main system and is subject to any delays encountered thereon.

The connecting bus services can not be considered entirely satisfactory. The combined travel time in some instances exceeds that of previous direct express bus services. This is partly due to one man operation and an apparent

lack of co-ordination with trains at the interchanges.

When State Parliament resumed in August, Rosemary Foot, MP for Vaucluse, asked the Minister for Transport to remove the surcharge on through bus travel to the City and to restore the full through bus service so that passengers would not have to change to trains at Edgecliff. Newspaper reports had indicated some resistance from Vaucluse area residents to changing at Edgecliff. Needless to say Mr. Cox declined the request. In a further elaboration on eastern suburbs transport he said that agreement had been reached with the union for the eventual one man operation of all bus services.

Further to the report on the opening day train working in June TW, the 12.35 pm train from Central which formed the third public service from Bondi Junction ran into the turnback siding before returning from no. 1 platform. It appears that this was the only train to do so at this period and the remainder worked as reported.

Locomotives

New electric loco 8501 failed on a 600 ton down train approaching Lawson (8.3. going up hill) on Monday 2 July 1979 and evening peak services were seriously delayed until the loco was removed to the yard at Lawson and a pair of 46s arrived to take the train to Lithgow. The failure can be attributed to teething troubles and unfamiliarity by the crew.

8502 was delivered in August. It was reported being towed to Delec with 8501, which has been back to Com Eng on a number of occasions, but the date has eluded us. 8502 was noted on an up western coal train, together with the Dynamometer Car, on Thursday 16 August and it made the first passenger run by an 85 on Friday 17 August when it took the 2.10 pm to Lithgow.

46 class locos have been regularly working Glenlee coal traffic in July and August. This traffic has been almost exclusively diesel operated for some time.

Rolling Stock

Nine single deck suburban cars, C3118 C3414 C3265 N4680 T4617 T4464 T4619 C3273 C7497, were stored in the unwired goods yard at Hornsby from mid June until Sunday 12

August 1979 when the first seven together with nine other cars from Hornsby Depot were taken to Canterbury Racecourse sidings in a 16 car train by diesel loco 42105 (running flat end leading). This train comprised: T4617 T4464 T4619 C3118 C3414 C3265 N4680 T4828 N4679 T4514 T4773 T4419 C3204 C3362 C3925 C7492 and ran without a van. It should be noted that T4828 is a double deck Tulloch trailer and C3925 is a silver double deck motor. Some of the cars are painted in the new red, with 3118 the only car in blue and white. The two cars left in the goods yard were subsequently removed. On the same day ten cars were noted in the north sidings at Elcar stripped ready for scrapping. Included were two single deck interurban cars and 1955 type motor C3736.

Over the following weekend sixteen cars were stored in the sidings in the triangle at Strathfield. In this instance all are single deck cars and all except one in blue and white, are in faded old red and would appear to be candidates for early scrapping.

Two of the three N type trailers which are conversions from 1955 type motors are in the group at Canterbury and the third, N4681, is also out of service. These and some other cars have a small heater in the guards compartment and have been banned by the guards. This resulted in many seven car sets with only three trailers being in service. It is not clear why these cars could not be included in sets and other accommodation provided for the guard.

Two double deck Tulloch trailers are being painted silver grey and the first one, T4852, is expected to be in traffic early in September. A slight modification has been noted in the new

Goninan double deck suburban cars. Commencing with C3021 and T4111 the external square louvre panels covering the ventilation fans have been replaced by louvres pressed out of the body sides between the ribbing.

T4963, the suburban double deck trailer with experimental bogies was reported in these pages as having dropped out of sight after trials in March. It has now been learned that a fault developed in one of the bogies whilst on the North Shore line and the car was worked to Hornsby Depot where it presumably still is.

The Punchbowl washing plant was dismantled in early July to make room for the new one. This leaves the electric cars without any which has shown up in their appearance.

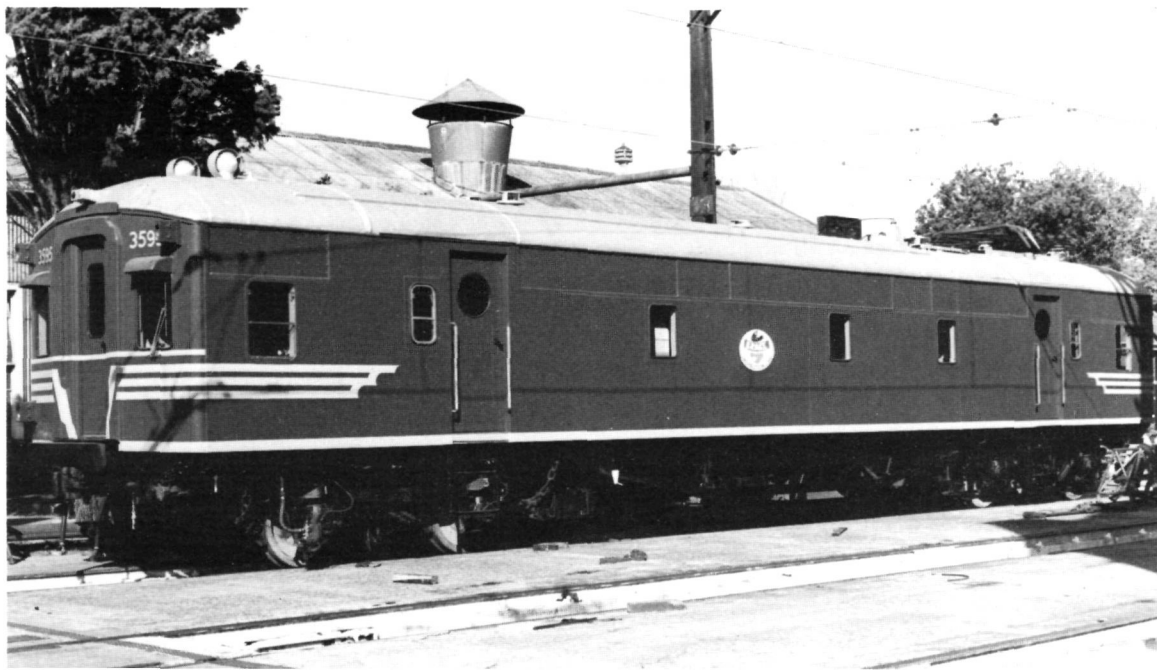
The PTC is to order a prototype air conditioned eight car suburban double deck train. There is insufficient space on motor cars to house all the equipment and some will have to be shared with the trailers. This will result in the operation of two car blocks which has previously only been done with the first series double deck interurbans. It is likely that the pantograph will be on the trailers.

Return of the Trolley Bus?

The Minister for Energy Mr. Pat Hills has forecast that the trolley bus will return to Sydney in two or three years time. He said the previous trolley buses had torque problems but this had been overcome overseas and that the latest technology would now be used.

The Lord Mayor of Sydney immediately condemned the proposal on the grounds that the overhead wires would be unsightly.

Brake Inspection Car 3595, rebuilt from parcel van first 3555. -D.Siddons



★ *Museum Notes and News*

C.O.T.M.A.

News from the Council of Tramway Museums of Australasia

The Executive have recently been able to assist member societies to acquire additional items from the MMTB. Initially the Board offered a quantity of GE CP 27 air compressors which were placed with five groups after mention in one of the periodical circulars. Subsequently, in connection with new building work at Preston Workshops, our executive officer was offered a quantity of wooden seats from the drop centre of trams together with some destination boxes, to be removed in a little over a week! There was no time for a mail out, so telephone calls were made to COTMA Chairman John Radcliffe and to TMSV, BTPS and HTW secretaries. It was felt that only groups having similar Melbourne cars would be interested and they had to be capable of shifting their purch-

ases within a few days. Varying quantities were acquired by these three groups and quickly removed. Further supplies of these items will become available in the future.

More than half the time has elapsed between the last Conference and the next and some of the keen participants from previous gatherings are already talking about the visit to Brisbane in June 1980. John Radcliffe has already commenced serious negotiations with the BTMS, which group is to host the next Conference. Member societies will be advised of full details in due course, while the general will be mentioned in these periodical reports in order that all members of all societies will be informed of events.

BYLANDS . . .

Tramway Museum Society of Victoria



Our June and July main work days saw quite a deal of progress made towards completion of moving and stacking all remaining material south of the main line junction. A heavy crane was brought in to re-align van 21 C, but an extremely strong southerly wind made it difficult to control the van and limited progress was made. Its height was raised but final alignment could not be achieved and will now be completed by jacking. The crane moved rails and cable tram track sections from opposite the depot to the storage area. The July work party saw nearly all the wooden poles creosoted for about five feet up from their bases and two of these plus thirteen steel poles (complete with

welded inserts) towed to locations by tractor. We are now in a position to arrange with the local SECV branch to drill holes and position the poles in the yard area. An inspection by their representative was arranged for early August. These two work parties also saw further progress with minor painting of some trams (silverfrost to grab rails and step tread plates as well as step boards and floors painted grey), which improved their appearance considerably, as well as sanding down the interior of 21 C preparatory to repainting.

The protracted on and off and on again negotiations with the Railways and Kilmore Council about the Bylands site seem to be

coming to fruition at last. The Shire has agreed that the Society buy the land, right of way and rails from VicRail at an advantageous price, with the Shire having the first right of refusal at a price calculated in accordance with the agreement if we ever wish to sell. This will alleviate the problem of crown land passing to a private concern (which the Society is at law) at a non commercial price. We are now proceeding to finalise (we hope) the matter with VivRail.

The Society held a quite successful tram tour on Saturday 23 June with an afternoon run from South Melbourne Depot via Malvern Road to Camberwell Depot and East Burwood and return. SW2 478 which had just been outshopped from modernisation at Preston Workshops was used from South Melbourne, but unfortunately

a bearing overheated about Gardiner and a change over was supplied from Camberwell Depot. This was (surprisingly) W2 630, which made the run thence to East Burwood and back to South Melbourne Depot. This car subsequently became the last W series tram to leave Camberwell Depot six weeks later. The opportunity was taken to inspect the new tramway emergency waggon and tourist tram X2 676 at South Melbourne and rebuilt tourist tram V 214 at Camberwell Depot.

Another Melbourne Pageant will be held on the Australia Day holiday next January, based in the Treasury and Fitzroy Gardens. The transport format has not yet been finalised, but the society's trams will probably play a similar role to last January.



Who says that the weather is always bad at Bylands? It was sufficiently mild on 28.7.79 for some of the work party and their children to have a picnic lunch using facilities in the picnic area. - K.S.Kings

FERNY GROVE . . .



Brisbane Tramway Museum Society

The last few weeks have seen further consolidation at Ferny Grove in the face of perfect weather and a slight improvement in attendance at work parties.

On 18 August a second pour of ready mixed concrete finished the no. 1 depot fan except for a small amount of surface finishing. Depot no. 2 is fully occupied by a collection of trams and trolley bus 34. The pointwork which will ultimately form the fan connecting the depot access track has been located adjacent.

Substation work is proceeding to plan as outlined in the last report.

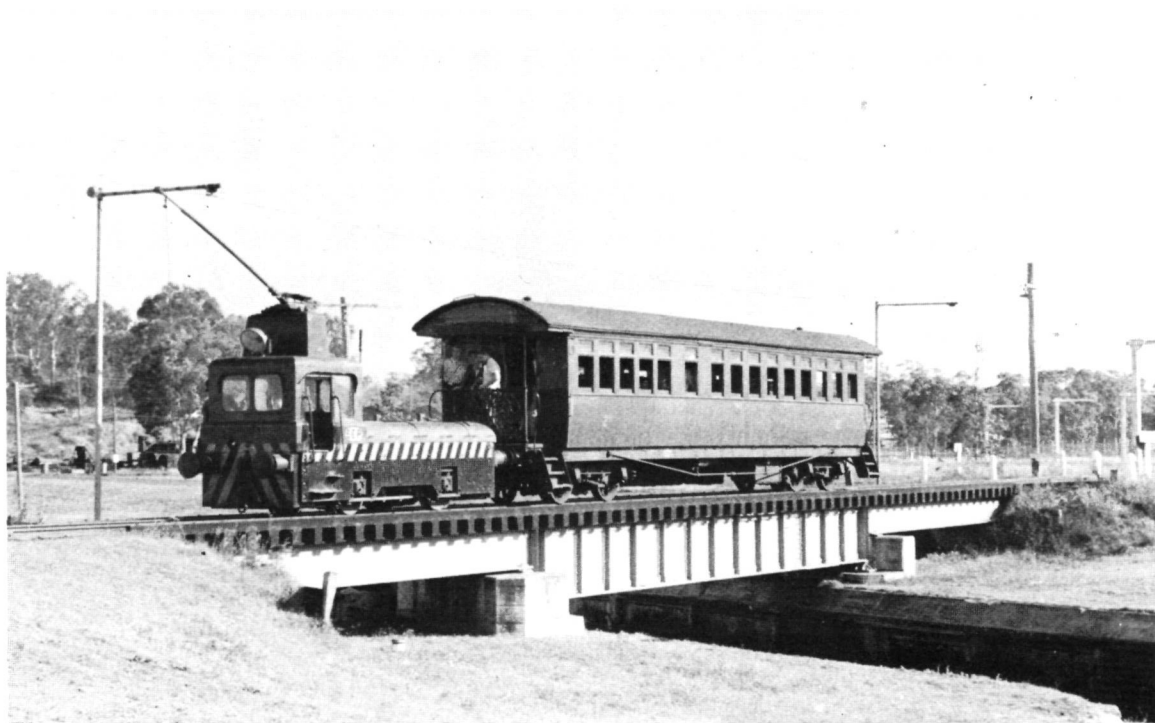
Down at the workshops, the front of the building has been clad in colourbond and the swing doors across the three tracks completed. Workshop track 1 is currently being realigned and relaid using steel sleepers encased in concrete. Internal wiring is complete and we now have an excellent facility for overhaul work.

The title to the former Bulimba Powerhouse Goodman electric locomotive has been transferred to the Society by the Australian Narrow

Gauge Railway Museum. A 3 ft 6 in gauge track has been laid near the sub station and both locos placed on it. Work is planned for the near future to provide a roof to cover these unusual vehicles.

Immediate construction plans include an inspection pit in no. 1 depot, relaying the depot access curve, a start on the running line to Samford Road and initial overhead work. When completed the museum will be operational. A time scale for this is difficult to predict as it depends upon money and labour being available. However, with the start of electric train services and the expected influx of visitors, especially for the Deferred annual convention of the AETA, on the 17 November, it is hoped to have other items of electric traction interest available for this time.

The Goodman Electric loco working at Bulimba. Passenger services were not normally worked on this line, the occasion being a SPER tour. This loco is a converted mining machine.



ST KILDA . . .



Australian Electric Transport Museum

Glenelg Golden Jubilee Projects

As the date draws nearer for the Golden Jubilee celebrations of the Glenelg tramway in December, the AETM has been busy with a number of associated projects. On 29 July a production team from television station SAS 10 spent the whole day filming for a series of transport history documentaries which are to be screened at the time of the Jubilee. Cars featured included 1, 111, 173, 192, 282 and 381. Both STA staff and AETM members participated in the filming and interviews.



Melbourne W2 car 294 has been selected as one of the museum cars to be run on the Glenelg line. Its interior restoration is now well advanced and it has proved possible to return the drop centre ceiling to the original varnished condition. The end saloon ceilings will remain in colour fleck for the time being unless a late reappraisal shows that this can be safely completed before the car goes into the City. External filling and surface preparation has now been completed and one motormans cabin has been repainted. The car is being restored to approximately 1960 era style and has many characteristics no longer seen on W2 cars.

The STA recently arranged for Marlestone Technical College to make a pattern for brake shoes for F1 type car 282. It is intended to cast a new set of shoes before this car returns to the City for the celebrations. Some composition shoes are currently in use on the car.

Drawings have been prepared by the STA for the fitting of wheel sets from an H car to horsecar 18 in place of the original horsecar wheels. Although it stayed on the grooved track in King William Street for the Centenary trip last year, considerable difficulty was experienced getting it in and out of the depot and its operation over the open pits was considered unsatisfactory. The horsecar wheels have virtually no flange. After the journals have been turned down to size on a set of wheels worn to the condemning line (29½ in diameter) by the ANR at Islington, the wheels will be fitted to the horsecar at St. Kilda by the STA.

Birney In Traffic

Following the refitting of the air operated safety equipment on car 303, it returned to traffic at the beginning of August. As one of the motormans valves borrowed from the STA for this car had to be returned due to the very limited availability of spare parts for H type cars, a replacement Westinghouse valve (as

Veteran STA Inspector Bill Sinclair talks about his tramway days to Adelaide television personality John Schofield on the platform of D 192 at St. Kilda. - John Drennan

used on H1 381) has been fitted. As this does not have ports for door operation, a temporary door valve has been mounted on the floor at each end of the car. Following the completion of pneumatic work on 303, the fitting of the expanded pneumatic system on the works car 354 has commenced.

Maintenance Continues

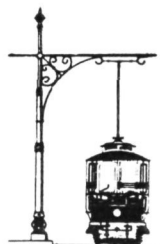
General Manager Mark Skinner has been continuing with several maintenance projects through the winter months. Sleeper replacement has been carried out between the Museum and Mangrove Loop and additional ballast has been laid. Following the successful replacement of

the main tram depot roof earlier this year, the roof of the members lounge has also been replaced. Additional stove accommodation has been installed. This will allow the separation of drying and revarnishing of electrical equipment from the warming of member's lunches.

Recent spring cleaning at the STA has produced some extra equipment for the Museum. Items discovered include a motormans valve from an F type car, two trolley pole towers from F type cars and some H1 type headlights. The favour was returned when the Museum was able to supply some spare headlight switches for use on the H cars as City Depot stocks of this item had become very low.

LOFTUS ...

South Pacific Electric Railway



Goninan motor car C3006 and Com Eng driving trailer D4084 returning from The Royal National Park pass Sydney tramcar P 1497 at the South terminus of the Sydney Tramway Museum line.
- Vic Solomons

The depot has received a long awaited exterior repaint. A group of younger members tackled the job in an organised manner with pleasing results. Needless to say the building is still green. It has always been green but as it previously has been done in many stages we have had fence green, roof green and building green but more often than not, disposals green!

The rear bogie has been permanently fitted to trolley bus 19 which now looks slightly more like a vehicle and less like a dinosaur skeleton.

Preliminary discussions were held with Sutherland Council planners on 7 August as a prelude to lodging the development application for the new museum complex at Loftus.

Although funding arrangements are not yet complete work will start on stage 1 of the project as soon as the formalities can be completed. This initial stage, which will cost about \$100,000 will comprise fencing, approximately half of the main building, which is a combined display hall and running shed, and the minimum

amount of track and power supply necessary for operation.

An inspection of the Eveleigh Carriage Works was held on Saturday 11 August. This followed from the visit to Elcar in March. Although basically concerned with country stock, suburban electric cars have been repainted here in recent years. Of particular interest were three CPH railmotors undergoing major rebuilding and overhead inspection car AL 20 which was receiving some modifications and having the cupola replaced. It is believed that this was damaged as a result of passing under the coal stage at Lithgow.

ALBION PARK . . .



Illawarra Light Railway Museum Society

Locomotives

With regular monthly open days for the public, more time has now to be spent on track and motive power maintenance. During late July the vertical stationary boiler and the two working 2 ft gauge locos, *Kiama* and *Cairns* had to be prepared for their annual boiler inspections.

The removal of the boiler plugs and man holes from the Davenport loco *Kiama* revealed a considerable quantity of scale and mud. This loco was only partly retubed before being steamed at Albion Park so this muck is the accumulation of almost 40 years of disuse. Due to its now regular monthly steaming this problem is expected to diminish with time.

The three boilers passed the annual inspection without any problems, while the air vessels on the museum property were recertificated at the same time.

The inspector also reported on the boilers of the Perry Locomotive *Tully 6* and the Hawthorn *Burra* and, as expected, major work will have to be undertaken on both units before they can eventually be steamed.

Cosmetic restoration continues to proceed slowly on Shay no. 2 (*Lima 2097*). During July and August work continued on wiring timber lagging around the boiler shell adjacent to the cab, while the long side footboard planks were refitted to both sides of the frame.

Rolling Stock

A most interesting arrival on 9 June was a

four wheel 2 ft gauge enclosed box waggon.

This was one of several similar items of rolling stock used at the South Australian Magazines near Magazine Road Dry Creek. These waggons were hauled by horses, generally in trains of two or three cars, with the driver perched on the roof. This operation ceased around 1962. Thanks are due to the Committee of the AETM for negotiating for this interesting item.

The proprietor of B & W Steel of Wollongong has offered to construct a second bogie underframe for the museum of similar dimensions to the end loading carriage already in use. This will enable a California type car to be built using the old International bus body as the centre saloon and the seats retrieved from former Sydney O type tramcar 1197 last January on the open section. (See TW page 26 August 1977).

A second four wheel waggon underframe is nearing completion. This is being constructed by member Peter MacDonald using metal components obtained some time ago from Moreton Central Mill in Queensland.

Around The Museum

With regular operation, track maintenance had become a regular task. The mobile compressor and ballast tamping tool has eased the amount of manual labour required in this job. Track crews have also been occupied with replacing the light dog spikes with larger fastenings while fish plate nuts and bolts are receiving

ing regular attention.

Between the June and July open days the track leading to the engine compound was cut where it crosses the wide watercourse at the edge of Croom Road. This was constructed with sleeper boxing, which has recently suffered under the passage of the two heavy locomotives. With the aid of Ray Robinson's backhoe the culvert track was lifted out of the way, the adjacent earth excavated and concrete box culverts, donated some time ago by Monier, located in position. The new track was installed on 7 July in time for the regular operation on the following day.

Labour Saving Devices

About two years ago the local branch of Kaiser Refractories donated to the ILRMS the parts of a 150 ton capacity hydraulic press and electric driven pump. The restoration and erection of this device was completed in early July and it has been located in the loco compound on a concrete bed in a position where rail lengths can be readily positioned on its anvil.

The 2 ft gauge explosives van from Dry Creek, South Australia in the loco compound at Albion Park soon after arrival in June 1979.
- K. McCarthy

Cane Inspectors Car

The four wheel petrol powered cane inspectors car of World War 1 vintage is being restored and assembled by junior members. Believed to be of Drewry manufacture, the vehicle once operated on the large Victoria Mill railway at Ingham Queensland. The petrol engine has been thoroughly reconditioned and work is well advanced on straightening the chassis frame members and assembling the running gear.

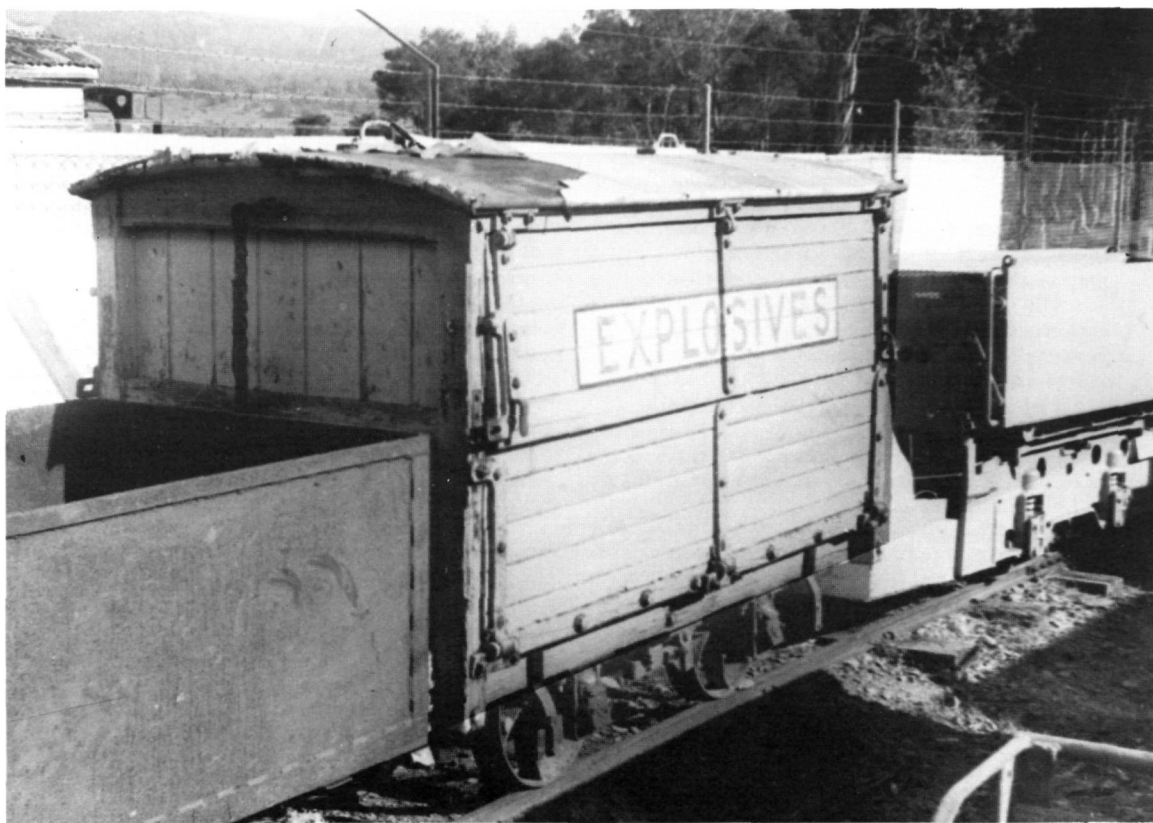
Open Day Patronage

Patronage continues to be pleasing on the regular open days on the second Sunday of each month. Riding figures on the steam trains amounted to just under 600 on the June day, but on 8 July just under 700 tickets were sold. Since the first regular operating day in February 1979 almost 5000 people have been carried on the ILRMS railway.

ILLAWARRA LIGHT RAILWAY MUSEUM SOCIETY Albion Park N.S.W.

Museum open on the second Sunday of each month between 11 am and 5 pm.

Correspondence: The Honorary Secretary,
Box 1036, P.O. Wollongong
N.S.W. 2500



MUSEUM DIRECTORY

SYDNEY TRAMWAY MUSEUM Princes Highway, Loftus N.S.W. (South Pacific Electric Railway Co-op. Society Limited).

Electric trams from N.S.W., Queensland and Victoria.

Tram rides Sundays and Public Holidays (Except Christmas Day and Good Friday) 10.30 am — 5.00 pm.

5 minutes walk south from Loftus Railway Station.

Correspondence: The Secretary, SPER,
Box 103 G.P.O., Sydney.
N.S.W. 2001.

TASMANIAN TRANSPORT MUSEUM SOCIETY, Glenorchy, Tasmania.

Comprehensive transport museum under construction

Correspondence: The Secretary, T.T.M.S.,
Box 867J, G.P.O.,
Hobart. Tas. 7001.

VICTORIA'S TRAMWAY MUSEUM Union Lane, Bylands, Victoria. (Tramway Museum Society of Victoria Limited.)

Horse tram rides, museum site, trams, photos and other items on display, Sunday 11.00 am to 5.00 pm.

Correspondence: The Secretary, TMSV,
Box 4916 Mail Exchange,
Melbourne, Victoria. 3001.

STEAM TRAM & RAILWAY PRESERVATION (CO-OP) SOCIETY LIMITED Parramatta Park Steam Tramway, Parramatta N.S.W.

Steam Trams are operated on the 3rd Sunday of every month, from 1.30 to 4.30 pm.

The Society possesses 1 steam tram motor, 2 steam locomotives and 5 various trailer cars.

The surrounding parklands are suitable for picnics, barbeques, etc. and contain historical buildings.

Public transport is available. Rail to Westmead station then walk across parklands to the depot.

Correspondence: (SAE would be Appreciated)
The Secretary, S.T. & R.P.S.
Box 108 P.O., Kogarah.
N.S.W. 2217

AUSTRALIAN ELECTRIC TRANSPORT MUSEUM (SA) INC. St. Kilda, South Australia.

Trams — Trolley Buses — Electric Locomotive

Trams operate Sundays & Public Holidays 1 — 5 pm. (Except Christmas Day and Good Friday)

Groups may arrange inspections on Saturdays by appointment. No public transport available. Interstate visitors please contact AETM if transport required.

In emergency phone (08) 297 4447.

Correspondence: The Secretary, AETM (SA) INC.,
Box 2012 G.P.O., Adelaide,
S.A. 5001.

BALLARAT TOURIST TRAMWAY

Ballarat Botanic Gardens, Wendouree Parade, Ballarat, Victoria. (Ballarat Tramway Preservation Society Limited).

Tram Rides, Static display of trams, photos;
Sales Department etc.

Operates Saturdays, Sundays and Public Holidays (Christmas Day excepted) and most days during Victorian School holidays and the Ballarat Begonia Festival 11 am — 5 pm.

Telephone: Tram depot (053) 34 1580,
Bungaree House (053) 34 0296

Correspondence: The Secretary, B.T.P.S.
Box 632, P.O., Ballarat.
Victoria. 3350.

BRISBANE TRAMWAY MUSEUM SOCIETY McGinn Road, Ferny Grove, Queensland

Static Display of trams and trolleybuses

Correspondence: The Secretary, B.T.M.S.,
McGinn Road, Ferny Grove,
Queensland. 4055.

WESTERN AUSTRALIAN TRANSPORT MUSEUM (INC).

Tramway Museum and Bus Operation, Castledare Boys Home, Watts Road, Wilson. W.A.

London RTL Double deck bus rides 1st Sunday in month 1.00 pm to 5.00 pm.

Correspondence: The Secretary,
Box 33, P.O. Maylands,
W.A. 6060.

BACK COVER: The last of the two Sydney trolleybus systems, that centred on Kogarah, closed on 29 August 1959. Now twenty years later when oil fuels are neither plentiful or cheap their return to the streets of Sydney has been forecast. The fleet of twentyone vehicles was more than adequate to operate the system but all survived until the closure. The large three axle double deckers are portrayed here in some of the lesser known locations of the system —

TOP: 19 is about to turn out of Napoleon Street into Ida Street enroute to Dolls Point and thence to Kogarah and Rockdale.

CENTRE: 15 and 16 pass in Regent Street Kogarah whilst running between Rockdale and Kogarah.

BOTTOM: 15 turns on the loop at Kogarah Station on a Saturday morning short working.

