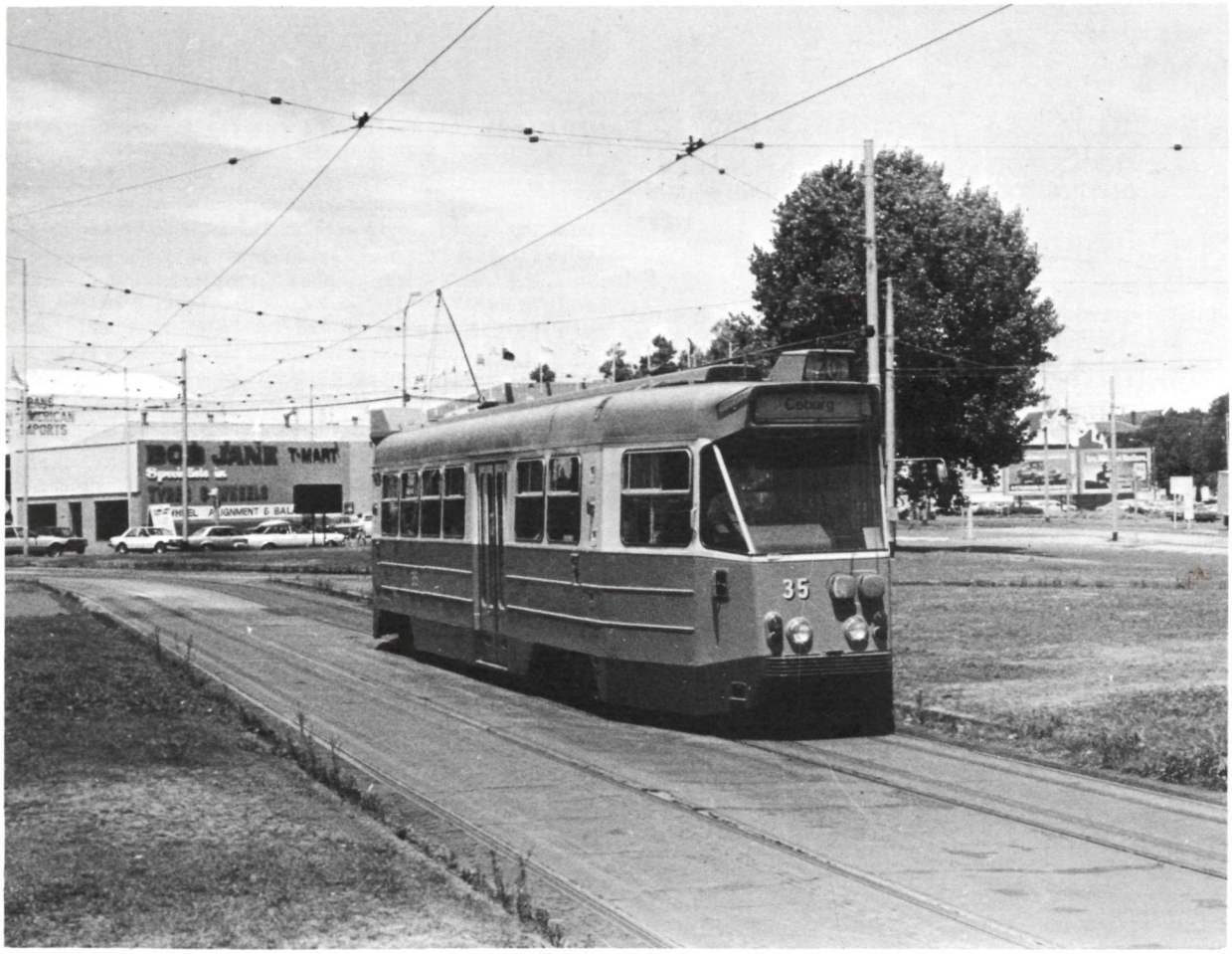
TROLLEY WIRE

Journal of
AUSTRALIAN TRAMWAY MUSUEMS

NUMBER 195
AUGUST, 1981
ISSN 0155 - 1264



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Registered by Australia Post — Publication No. NBH 0804

TROLLEY WIRE

AUGUST 1981
Vol. 22 No. 4
Issue No. 195

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Published by the South Pacific Electric Railway Co-operative Society, Limited, Box 103 P.O. Sutherland N.S.W. 2232.
Printed by Newey and Beath Printers Pty. Ltd., 10 Belford Street Broadmeadow N.S.W. 2292.

Subscription rates for six issues per year to expire in December:

Australia	$7.50
Overseas	$9.00

$1.25 Recommended selling price.

All correspondence in relation to *Trolley Wire* and other publishing and sales matters should be forwarded to:
Box 103 P.O. Sutherland N.S.W. 2232.

TRAMWAY OPERATION IN THE ILLAWARRA DISTRICT OF NEW SOUTH WALES

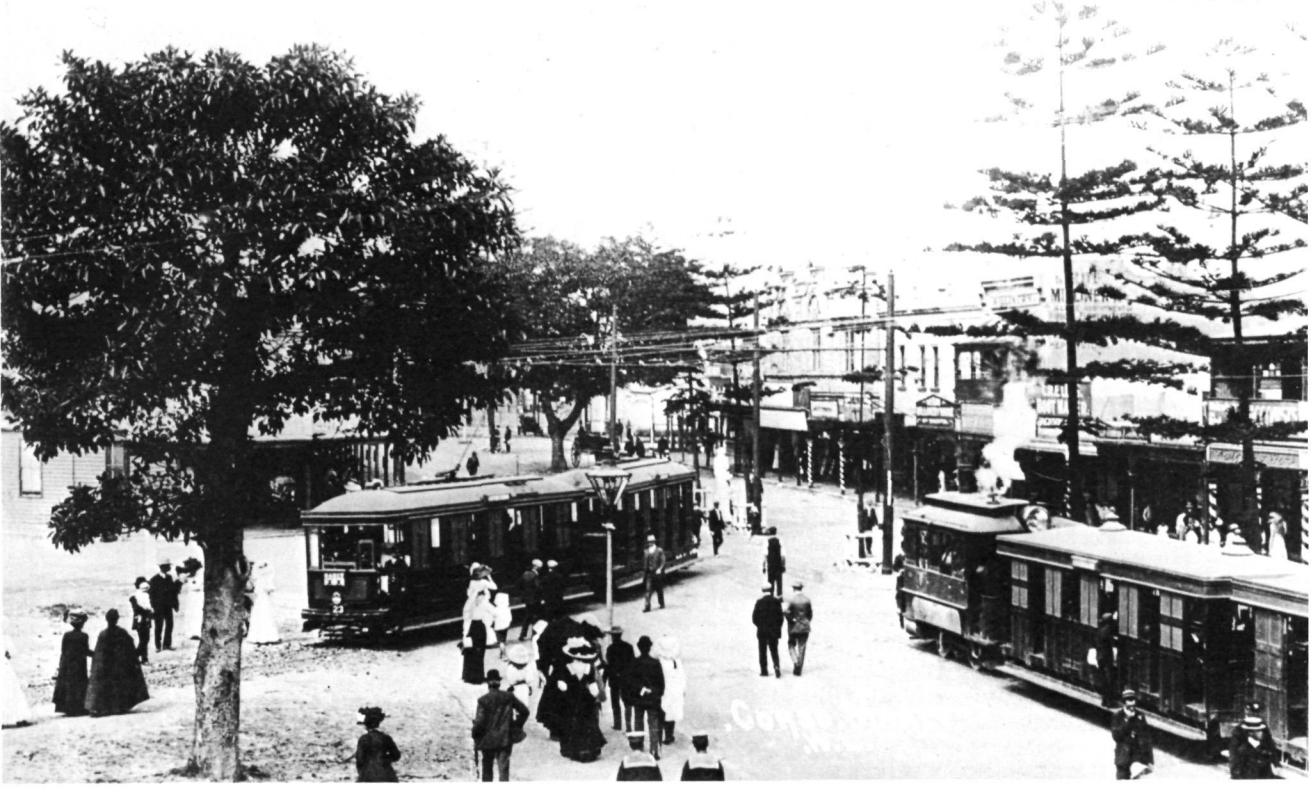
Wollongong and the adjacent municipalities form the largest urban area in Australia never to receive a street tramway system. In spite of this, several tramway proposals were considered and at least twelve former Sydney and Newcastle steam tram motors and three rebuilt former Sydney electric trams operated on industrial trackage in the region.

Ken McCarthy and others have delved into the complexities of the railway networks in the Illawarra and from this Ken has compiled the first comprehensive account of the tramway proposals and vehicle operation. The first part of this account will appear in *Trolley Wire* for October 1981.

CONTENTS

FRONT COVER: *Brunswick depot presently operates thirtyseven Z1 cars on Elizabeth Street services. Z1 35 is seen leaving the City for Coburg.* - Peter Hallen

BACK COVER: *42u in its early days as a railway overhead line car. Still owned by the tramways it is operated by a tram driver and bears the number 42ss (special service) in this view of Museum station looking north towards St. James. 9 November 1926. Note the air hose on the front; this was used for charging the air resevoir from the sinalling supply. In latter years the car was hand braked only.* - S.R.A.



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

C. 1910-1911 THE INTRODUCTION OF ELECTRIC TRACTION

By K. McCarthy

Previous accounts of the history of the Manly tramway system, published in the October 1979 and December 1980 editions of this magazine, covered the period 1903-1910. During that time steam trams worked the short Manly to North Manly route between 14 February and 19 July 1903; horse operation followed until 30 September 1907; improved patronage enabled the reintroduction of steam traction from 1 October 1907.

On 16 April 1910 an extension of the steam tramway from North Manly to Brookvale initiated a period of major tramway construction in the Manly Warringah area, which, in the following four years resulted in the introduction of electric traction and the expansion of the short, single track line serving Manly Pier into a major network connecting with the large North Sydney system.

Although the main expansion of the Manly tramway was planned to be northwards to Pittwater, pressure groups agitated at the same time for a steeply graded branch line between Manly and The Spit to eventually link with the North Sydney tramways.

Manly to The Spit Tramway Proposals

What seems to be the first proposal for a tramway between North Sydney and Manly emerged in the "Sydney Morning Herald" for 21 September 1893 in the report of the opening of the Military Road electric tramway on the previous day. This event was recorded in the first part of this brief history[1] where speeches conducted at the Spit Road terminus suggested that this extension to the North Sydney system should be seen as the first stage of a through tramway to Manly.

On 3 April 1897 the Sydney press[2] reported that on Wednesday 31 March Mr. Young, the Minister for Works, had been driven overland to Manly by Mr. D. Thomson (M.L.A. for Warringah) along the route of the proposed tramway between

ABOVE: *J23 and J25 with steam motor hauling trailers A3–6 class 149B and C2 class 10B in the Corso at Manly Wharf. 1911.* - N.S.W. Government Printer

Snudden's Hotel at Mosman and Manly by way of The Spit at Middle Harbour. On arrival at Manly the Minister met the Mayor and aldermen where the financial viability of the tramway, together with matters concerning the proposed Manly sewerage scheme and the recent subsidence in the sea wall near the new pier, were discussed.

The Manly to The Spit tramway scheme was again raised by the local Tramway League and/or the Manly Council on the following occasions:-

a. August 1901. Deputation to Hon. E.W. O'Sullivan who gave a sympathetic reply and expressed the opinion that the proposal could be proceeded with if funds allowed of such action in the next Tramway Vote.
b. During March 1902 a deputation awaited the Minister for Works and presented a petition of some 8,000 names in favour of the tramway.
c. In November 1904 a deputation from the Manly Tramway League resulted in the Minister for Works preparing a fresh estimate for the work as it was felt that the quotations prepared in 1902, which amounted to £38,000, were too high. The Minister had fresh estimates prepared, one by the Government road, the other through the Halloran estate. Mr. Halloran paid for this survey and was willing to hand over to the Tramway Department a strip of land 66 feet wide if it passed through his subdivisions.
d. As a result of further deputations the Minister for Works called for a further report on the matter from the Railway Commissioners in May 1906, but this report did not favour the scheme.
e. The Minister for Works visited Manly on 11 May 1907 accompanied by local member Dr. Arthur, the Mayors of Manly and Mosman where, at a gathering of local representatives a forceful case was presented for the Manly to The Spit tramway. At this stage traffic figures on the horse tramway between Manly Pier and North Manly were showing a significant improvement while the residents along the proposed tramway were willing to subscribe a guarantee of £300 per year for three years against any loss.

The political climate was now ripe for the venture to be considered, while the rapidly growing popularity of surfing, especially at Manly Beach, would mean that the tramway may be a viable venture.[3]

Referral to a Parliamentary Committee on Public Works

State Parliament debated a Bill for the construction of The Spit to Manly Tramway on 19 December 1907. Against some opposition the then Minister for Works, Mr. C. Lee, was successful in having the project referred to the Works Committee for investigation. Mr. Lee scorned opposition to this matter and stated "I wish I could come back in 50 years time and see the results of my work" . . .[4]

The investigating committee consisted of seven members of state parliament, three from the Legislative Council and the balance from the Assembly. They met under the Chairmanship of the Hon. Frederick Flowers between 28 January 1908 and 25 June 1908 when 52 witnesses answered a total of 4642 questions.

The work of the committee concluded on 5 August 1908 when four of the committee members voted in favour of the scheme . . . "it is expedient the proposed Electric Tramway from The Spit to Manly, as referred to them by the Legislative Assembly, be carried out".

The estimated cost of the undertaking was expected to be:-

Excavation in rock	£3,505
Excavation in track	£577
Ballast	£5,104
Sleepers	£1,458
Perway (80lb and 83lb rails)	£4,382
Twin overhead wire and span poles	£3,087
Thermit welding of joints	£2,288
Electric power and feeders	£5,900
Rollingstock	£1,100
Land resumptions	£2,650
Giving a total of	£30,051

The committee's report, however, stated that the complete cost was expected to reach £36,354 which must have included incidentals which did not appear in the breakdown listed above.

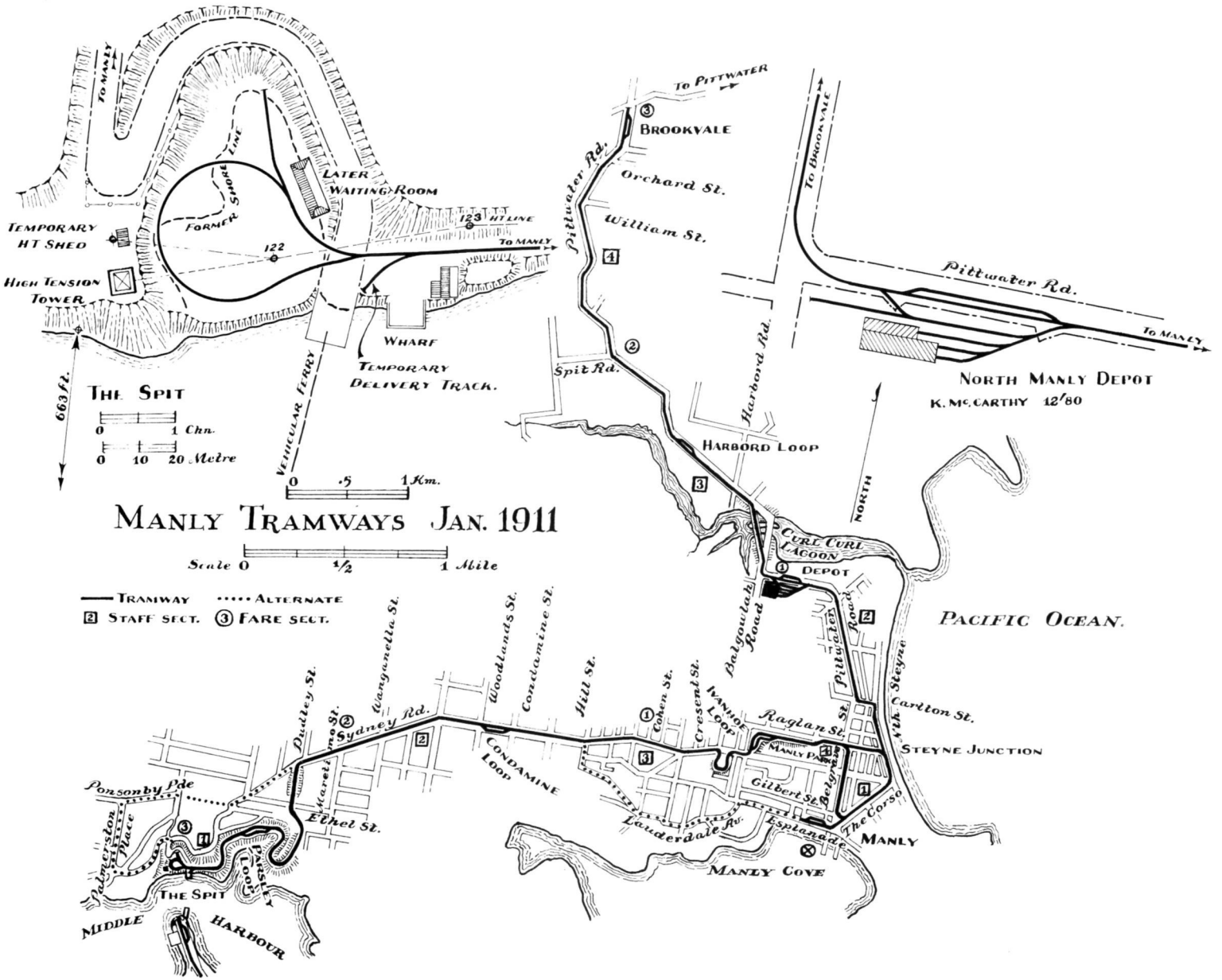
Contracts and First Sod Ceremony. On 8 December 1909[5] the contract for the construction of the permanent way between Manly and The Spit, over a distance of 3 miles 1½ chains, was awarded to W & S Moonie at a cost of £20,520-16s-3d, the planned completion date being 20 December 1910.

On Wednesday 12 January 1910, the Minister for Works, the Hon. Charles Lee, turned the first sod in Manly Park. Over 200 people witnessed the wielding of "a massive silver spade for the task".[6]

In spite of inclement weather, which soon brought about state wide floods, the "band played to dispel the mantle of gloom". The Mayor, Alderman Bonner stated that the years of agitation had been in vain until Mr Lee was installed in office. This "brought Mr Lee to the supreme moment and struggling hard for 10 seconds he triumphantly raised aloft a buffalo (grass) clod and manfully held it while the band played God Save the King in full refrain".[7]

The party adjourned to refreshments in the marquee where the Minister announced details of the current contract as well as that for the electrification of the Manly to Brookvale steam service which "ultimately would be taken to Pittwater".

Arguments for The Spit to Manly tramway generally included the opinion that the ferry journey


MANLY TRAMWAYS JAN. 1911
Scale 0 ½ 1 Mile
TRAMWAY ····· ALTERNATE
2 STAFF SECT. 3 FARE SECT.
THE SPIT
0 1 Chn.
0 10 20 Metre
663 ft.
0 .5 1 Km.
TO MANLY
SLIPPE LINE
LATER WAITING ROOM
FORMER SLIPPE LINE
TEMPORARY HT SHED
HT LINE
HIGH TENSION TOWER
WHARF
TEMPORARY DELIVERY TRACK.
VEHICULAR FERRY
TO PITTWATER
BROOKVALE
Orchard St.
William St.
Pittwater Rd.
Spit Rd.
Harbord Rd.
TO BROOKVALE
NORTH MANLY DEPOT
K. Mc. CARTHY 12/80
HARBORD LOOP
NORTH
CURL CURL LAGOON
DEPOT
Balgowlah Road
Pittwater Road
PACIFIC OCEAN.
Dudley St.
Wangenella St.
Sydney Rd.
Woodlands St.
Condamine St.
Hill St.
Cohen St.
Crescent St.
IVANHOE LOOP
Raglan St.
Carlton St.
STEYNE JUNCTION
CONDAMINE LOOP
Gilbert St.
Belgrave St.
The Corso
Lauderdale Av.
Esplanade
MANLY
MANLY COVE
Ponsonby Pde
Ethel St.
Palmerston Place
PARSLEY LOOP
THE SPIT
MIDDLE HARBOUR

across the heads was one fraught with danger, not to be taken lightly by the casual traveller. Mr Lee announced that he had not taken any notice of that argument, but he felt it was important that the growing Manly system should be linked with the North Sydney tramway.

Mr Lee concluded that he hoped to see Manly's population double in a year or two due to the tramway development.

Tramway Construction. Two alternative routes at the Manly end were considered for the tramway. One route was to leave Sydney Road at Hill St as it approached Manly, to proceed via Lauderdale Avenue to Manly Pier. The alternative, and the one adopted by the Minister for Works, was for the tramway to skirt Manly Park down a steeply graded right-of-way to Raglan Street, along which the tramway could proceed to join the existing Brookvale line at the Ocean Beach at North Steyne.

The Lauderdale route was expected to amount to 3 miles 15 chains of single track to cost £28,389 but this would not give passengers direct access to the Ocean Beach, so the steeply graded alternative was adopted.

The original proposal for the Manly to The Spit electric tramway envisaged the line terminating at the Ocean Beach in Raglan Street at the North Steyne corner, while a temporary car shed would provide accommodation adjacent to the new route until the Brookvale steam tramway was electrified at a later date to give access to North Manly Depot. A report dated 30 August 1910 recommended that the steam tramway, as far as North Manly depot, be electrified, thus avoiding the cost of £1,100 on a temporary shed. This same report revealed that the Minister for Works had recently approved the electrification of 35 chains of the steam tramway along North Steyne and The Corso at a cost of £725.

An additional contract for £2,370 was also approved at this time which authorised the construction of a single track of 20½ chains along Belgrave Street, between Raglan and Gilbert Streets enabling The Spit electric service to traverse the Manly business and holiday area around a large balloon loop.[8]

The poles and overhead wire erection was carried out by day labour, the whole project reached completion towards the close of December 1910.

Route Description. Physical connection between the terminals of the North Sydney and Manly tramways on each side of Middle Harbour at The Spit was made by a specially designed tramcar ferry, but this was not constructed in time for the opening in January 1911. The tramway from The Spit gained the heights of Balgowlah by climbing to an elevation of 200 feet above sea level in a distance of 60 chains. This was achieved through heavy cuttings on private right of way on continuous 1 in 15 gradients with some 55ft radius curves.[9]

For the next 130 chains the tramway traversed the undulating ridge along Sydney Road to reach the heights above Manly. The tramway descended through 150 feet on an average grade of 1 in 15 for 35 chains to reach level terrain just above sea level in Raglan Street.

Just before leaving Sydney Road, to scout the western and northern boundaries of Ivanhoe Park, the tramway made a 10 chain deviation through 70ft radius curves between Cresent and George Streets to avoid a steep descent in Sydney Road.

Girder rails of 100 lb and 109 lb weight were employed on the construction on straight or moderately curved sections of the route while 60. lb and 80. lb tee section rails were used on curves. The 100. lb plant was joined by Dr. Goldschmidt's Thermit welding process while other track joints were made with fishplates.

Loops. At crossing loops the tracks were constructed at 10 feet centres to allow 1ft clearance between the footboards of the passing tramcars. Passing loops were constructed on the Manly to The Spit tramway at Ivanhoe Park, Condamine Street and at the head of Fisher Bay near Clontarf. The new electric line was divided into four staff sections:-

Seaforth (The Spit) to Parsley Loop	No. 1
Parsley Loop to Condamine Loop	No. 2
Condamine Loop to Ivanhoe Loop	No. 3
Ivanhoe Loop to Belgrave Street Junction	No. 4

With the opening of the Manly to The Spit electric line, the staff sections on the Brookvale tramway were renumbered:-

Esplanade (Manly Pier) to Steyne Junction	No. 1
Steyne Junction to Depot Loop	No. 2
Depot Loop to Harbord Loop	No. 3
Harbord Loop to Brookvale	No. 4

Power Supply. To work the tramway a temporary sub station was erected at Condamine Street. A report dated 30 August 1910 from Superintendent J. Kneeshaw, Electrical Engineer O. Brain and Civil Engineer G. Cowdery to the Commissioner revealed that land had been purchased at the corner of Condamine Street (Kentwell Rd) and Pittwater Road as a cost of £400 for a permanent substation suitable for extensions as far as Narrabeen. To provide a temporary substation for The Spit to Manly tramway at the corner of Condamine St and Sydney Rd an additional £2000 was added to the estimates. The construction of the permanent substation near Brookvale at that stage would have amounted to £6025 while the electrical energy loss was estimated to reach £20 pa if the Brookvale steam tramway was not converted to electric traction at that stage.

The additional cost of £2000 for the temporary

Sydney Road showing the steep descent from Crescent Street to Manly. The tram track near the centre of this view can be seen sweeping to the right to make a horse shoe curve to avoid the steep grade to Manly Park. - K.Magor collection

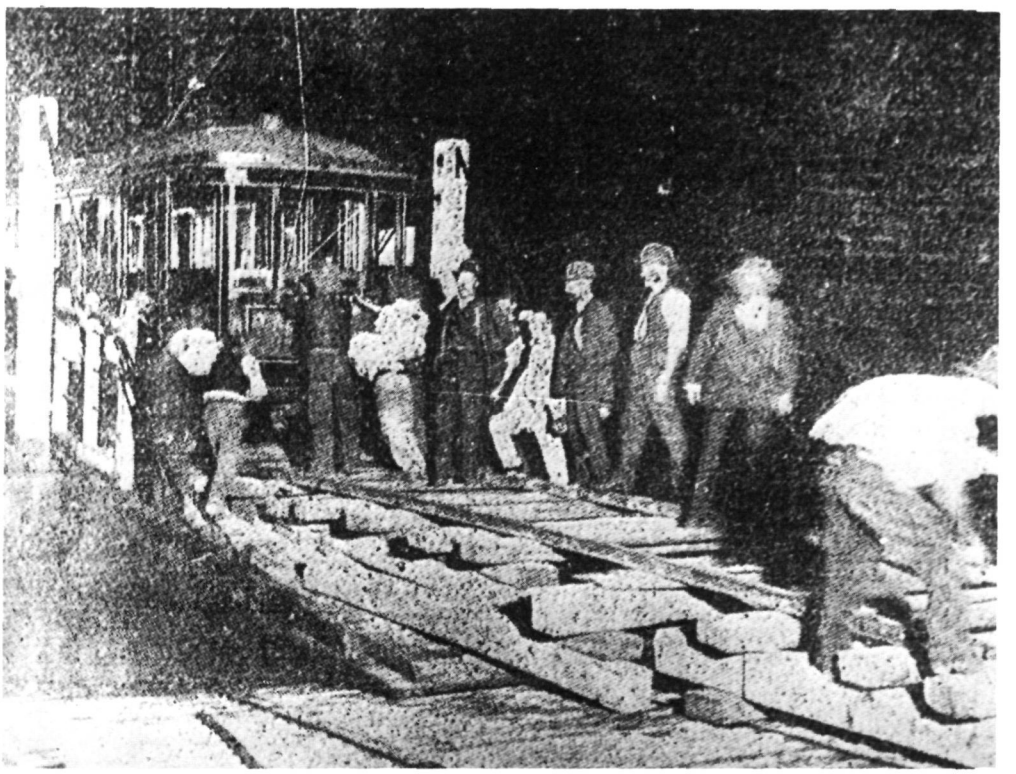
substation at Sydney Rd. was approved while the fitting of track bonds and trolley wire over the Brookvale steam tramway from Manly Pier to Curl Curl (Nth Manly) Depot via The Corso and North Steyne at a cost of £2265 from Public Works Funds also received approval.

The temporary substation building was estimated to cost £185 while an additional £100 would be required later to transfer the equipment to the permanent structure. Three phase 6,000 volt power was transmitted to Condamine Street from Ultimo power house by way of Ridge Street substation in North Sydney. This high tension current was carried on overhead lines from Ridge Street to The Spit where it passed under Middle Harbour by a submarine cable. From that location transmission continued by overhead wires to Condamine Street where the power was converted to 600 volts DC through rotary converters. High towers were erected on both sides of The Spit so that temporary wire could be strung clear of shipping across the waterway if the submarine cable was damaged.

By 15 December 1910[10] all the high tension poles had been erected to the temporary substation while the cables had been strung, except for some 10 chains at the North Sydney end. Two temporary huts had been constructed where the overhead lines linked with the submarine cable at The Spit. Current was to be available to dry out the substation equipment on 20 December while DC traction current could be supplied on 26 December. The trolley wire was expected to be completed by that date to receive the first electric tramcars soon after.

The draft timetable framed on 11 November 1910 required the first electric tram to depart from Manly Depot at 6.58 am and the last vehicle to enter the sheds at 11.08 pm. This meant that current would be required from 6.55 am to 11.10 pm. Shift allocations in the estimates only made provision for the substation to be manned between 7 am and 11 pm and it was feared that electric operations outside of these times would necessitate the employment of an additional attendant and junior at £250 p.a.[11]

This problem was overcome by the provision of a battery which would be able to cater for overnight trips between 11 pm and 7 am once these accumulators were charged up. On 14 November 1910 Noyes Brothers had requested the use of a ballast wagon to transport the battery from Manly Wharf to the substation. John Kneeshaw informed this firm that even if a ballast wagon was available the battery would have to be transported between the pier and the tram, while a similar problem would be faced between Condamine Street loop and the substation as no sidings were provided at either location.



J class car being loaded onto The Spit vehicular ferry, on the evening of Tuesday 3 January 1911, when the first six electric cars were being transferred to the Manly system.
-Daily Telegraph clipping, C.Woodside collection

Electric Rolling Stock

On 16 August 1910, Mr Hermann, Eastern Superintendent, informed Traffic Superintendent Kneeshaw that either 45 seat (E cars) or 50 seat (J cars) trams would be suitable for The Spit to Manly tramway. At that time there were 14 coupled sets of these vehicles at Dowling Street Depot which could be replaced by new 80 seat (O cars) trams.

John Kneeshaw passed on this information to the Commissioner on 19 August recommending that the six permanently coupled 50 seat (J type) cars numbered (2nd) 23, 25, 38, 39, 101 and 110 should be fitted each with a second controller so that they could operate coupled during busy periods and singly during slack times of the day at Manly. The conversions were expected to cost £275 and this was approved by Commissioner T. Johnson on 24 August 1910 to be completed by mid December.(12)

Plans and specifications for a special tramway transfer punt were prepared during 1910(13) but this craft, expected to cost £4000, was not available in time for the initial rolling stock transfer. As a result, the vehicular ferry had to be fitted with temporary track, while loading and unloading sidings were required on both sides of Middle Harbour. These sidings were prepared during the Christmas holiday period.(14)

The first part of the laborious transfer operation, which was to result in the transfer of the J cars from Sydney to Manly, commenced on Sunday 18 December 1910 when the six Manly cars, together with an additional four trams being transferred to North Sydney, left Botany Road Sidings at 1.30 am, 2.30am and 3am behind steam tram motors in trains of 4, 3 and 3 cars respectively. On arrival at Hornsby, after travelling along the main northern railway, the first steam tram motor returned light to the Meadowbank Manufacturing Company's plant to pick up two new O cars for delivery at Sydney by 12.50pm. The other trams were remarshalled at Hornsby to form two trains of 5 cars each behind the remaining two steam motors to continue the trip to St Leonards yard where the physical railway-tramway connection with the North Sydney tram-

way was made. These two steam tram motors returned to Sydney, via Hornsby, by 1pm.[15]

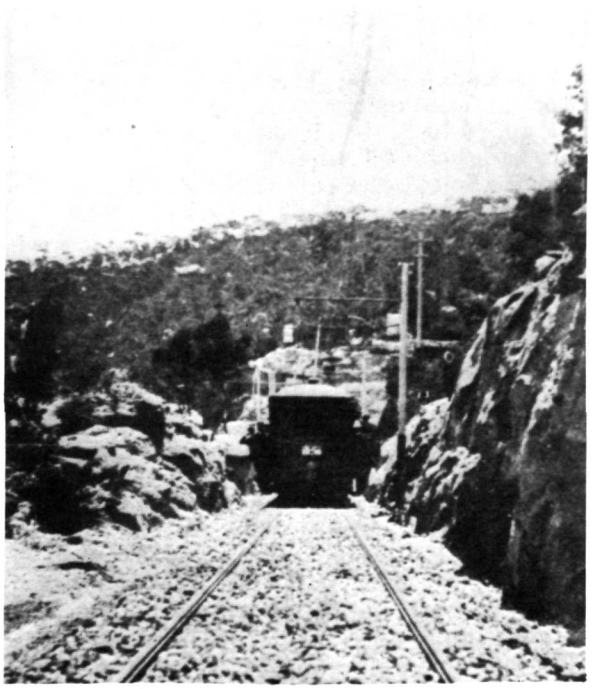
The next stage of the transfer took place on the evening of Tuesday 3 January 1911.[16] Shortly after 8pm all vehicular traffic on The Spit punt ceased, and under the light of dozens of torches, the temporary tracks were rapidly laid on the deck of the ferry. The six tramcars arrived from North Sydney, followed by a breakdown car, and by midnight all six vehicles had been transferred to the Manly side of Middle Harbour. The services of the breakdown vehicle was not required and it remained on the North Sydney side of the operation.

At 11pm the first coupled set of electric cars left for Manly, arriving at the Pier at 11.35pm as the last steamer was leaving for Sydney. The second pair followed soon after, and the last pair remained overnight at The Spit in readiness for the official trial trip on the following morning.

The "Evening News" reporter wrote about this feat in glowing terms on Wednesday 4 January 1911:-

> "Once upon a time when London was fast asleep, the whole of the Great Western Railway, running from the Metropolis to Cornwall and Devon was converted from broad gauge to a narrow gauge and the people marvelled.

10 am Wednesday 4 January 1911. J 23 (possibly coupled to J 25) commences the climb towards Manly from The Spit on the official trial.
- K.Magor collection



Since that day it has been customary to undertake similar engineering feats at night time so that traffic is not interfered with unduly.

On Tuesday night The Spit was the scene of a very interesting little bit of engineering, the portage across Middle Harbour of trams for the new Manly to The Spit extension. In all there were six cars shipped in three lots of two, the cars being of the 50 seat variety. The first couple were safely hauled across on the pontoon a little after 8pm, the next couple shortly after 10pm and the third lot about midnight.

During the day about a chain of extra railage had been added to the terminus to connect with the pontoon on which rails had been laid and the chief engineering difficulty was in bringing the two sets of rails together and making the join an even one over which the trams could run smoothly. The work on The Spit side of the harbour had to be duplicated on the Manly side, and on the steep incline the cars had to be handled by block and tackle. It was only for a few yards however, and then contact was made with the overhead wire, and the cars ran easily into position as though a sea journey of this sort was quite an everyday occurrence.

The scene was a most interesting one with a suggestion of weirdness about it, for light was supplied by a number of kerosene torches or braziers, the flames of which blew this way and that by puffs of wind, throwing zig zag reflections across the harbour, on adjacent buildings or on other objects with startling clarity accentuating the blackness beyond the scene of illumination.

The operations were under the superintendance of Mr. Strickland (Assistant Electrical Engineer) Mr. Hermann (of the Construction Department) Mr. Silcocks (Chief Inspector of Permanent Way). Senior Sergeant Gumlay being in charge of a few police. The latter, however, were not really needed, there being only a handful of spectactors. The most interesting part of the whole performance was the rapidity with which the men employed did their work, under Gangmaster George Woods, riveting, bolting, carrying sleepers, levering rails and so forth. There was no hitch in any way and everying is now in apple pie order for the running of the new tram service to which Manly residents have so long being eagerly looking forward".

Trials and Driver Training. The official opening of the new tramway was gazetted for Monday 9 January 1911 and in the meantime trials and training had to be carried out. From the evening of 3 January the shedman at Manly had to inform the substation attendant at North Sydney by telephone when the last car reached the depot so that the power could be cut off.

2.30 pm Monday 9 January 1911. A coupled set of J class tramcars, believed to be 110 and 101, departs from The Spit terminus for Manly with the official Ministerial Party bound for the opening ceremony at Manly. The high tension tower can just be seen in the left hand top corner, while the temporary terminal shed for the submarine cable can be seen to the right.
- Manly – Waringah Historical Society

The official trial trip took place at 10am on Wednesday 4 January 1911 when the third coupled set landed on the previous evening left The Spit for Manly. Mr. Austin Diamond, the officer in charge of erecting the overhead wires for the Public Works Department was on the leading tramcar accompanied by Mr. R. Dixon, Assistant Electric Engineer for the Railway and Tramway Department.[17] Also on board were Messrs. Brain, Kneeshaw and Hermann of the Tramways Department and a representative for contractors Messrs. W & S Moonie.

The cars successfully traversed the route from The Spit to Manly Pier, then proceeded up the Corso, around the Steyne Hotel past Raglan St. to the tram sheds at North Manly.

Staff training took place on Friday 6 January and Saturday 7th and all was judged in order for the opening on Monday 9 January.

In the meantime the old steam cars used on the Brookvale line were removed from Manly shed "and left in the weather to make room for the more elaborate and up to date substitutes".[18]

Time Table for The Spit to Manly Tramway

Commencing Monday 9 January 1911.
Operating from Manly to The Spit via Belgrave St. and returning via Raglan St., The Corso and The Esplanade.

Monday to Fridays.

From Manly:- 7.11, 7.40, 8.13, 8.43 and at 13 and 43 minutes past each hour to 2.13pm, 2.40, 3.10, 3.38, 4.15, 4.40, 5.24, 5.52, 6.23, 7.1, 7.40, 8.10, 8.40, 9.10, 9.40, 10.10pm.
From The Spit:- 7.42, 8.15, 8.45 am and at 15 and 45 minutes past each hour to 2.15pm, 2.42, 3.12, 3.40, 4.2, 4.42, 5.11, 5.54, 6.25, 6.48, 7.42, 8.12, 8.42, 9.12, 9.42, 10.12, 10.35pm.
Fares:- 1d. each section for adults
1st Section: Manly to Cohen Street.
2nd Section: Cohen Street to Maretimo Street.
3rd Section: Maretimo Street to The Spit.

Official Opening

The new service commenced with the 7.11am departure on 9 January from Manly Pier, the official ceremony, however, was not held until 3pm on that afternoon at Manly Oval.

The Ministerial party, accompanied by Dr. Nash MLC, Dr. Arthur and Mr. R.T. Ball M's. L.A. were conveyed in the government launch "Eva" to The Spit where they joined the official decorated tramcar. On reaching Raglan St. at Ivanhoe Park,

Manly, the wife of the Minister for Works, Mrs. Griffith, cut the ceremonial ribbon with scissors presented by the Mayor, Alderman J. Bonner.

The Ministerial party then moved to the marquee adjacent to the bowling green for refreshments, where the Mayor proposed a toast to the present Minister for Works Mr. Griffith and the former Minister Mr. C. Lee "who had done much towards tramway expansion in Manly".(19)

Responding to the Toast to Parliament, Mr. Griffith stated that it was now up to those people who expressed opinions at the enquiry to build homes along the new tramway and not hold up land sales for fancy prices.

At this function Mr. Walker, secretary of the local Tramway Committee, compared the existing fare to Sydney by direct ferry for 4d. with the round about tramway fares of 7d. Dr. Arthur added to this remark by expressing the opinion that the tram fares on the new line were too expensive.

Routine Operation

A traffic return made on Wednesday 11 January 1911 indicated some overloading on the new tramway on these trips from The Spit:- 10.15 am-65 passengers; 10.45 am-55; 11.15 am-93; 11.45 am-65; 12.15pm-94; 12.45pm-55; 2.15pm-70.

To cater for the remaining summertime traffic and the expected crowds at Easter, single truck, 50 seat, open tourist cars (H class) 739 and 740 were transferred from North Sydney to Manly on 25 January 1911. Both cars had entered traffic on 25 March 1907, and 739 was transferred to North Sydney on 22 September 1907 to work a tourist service from Mosman to The Spit, Gore Hill and on to Milson's Point for the 1907-8 summer season while 740 operated a similar service from the City to Watsons Bay Signal Station.

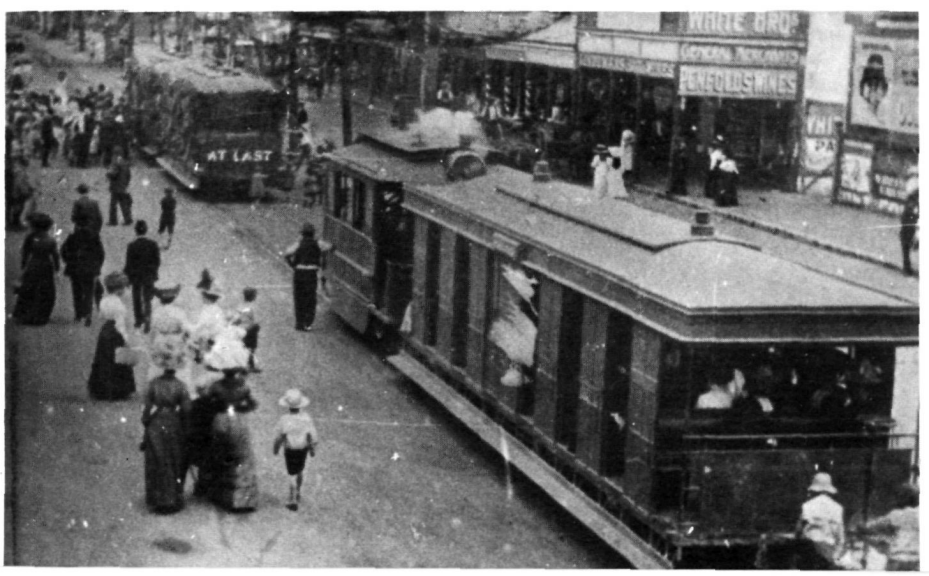
This tourist operation was not repeated during 1908-9 at North Sydney but 740 continued with the Watsons Bay operation. On 29 October 1910 H car 740 joined 739 at North Sydney on the Neutral Bay line, and both cars worked at Manly from 25 January 1911 but were shown as attached to North Sydney Depot again by March 1912.

The overcrowding on the Manly to The Spit tramway caused some difficulties with the operation of the Brookvale steam service along North Steyne and The Corso. For part of the day on Saturday 14 January the electric cars were kept away from the Ocean Beach and were diverted directly to Manly Pier along Belgrave Street. This caused considerable complaints from passengers who had to walk the last block to the beach, but it did help to ease the congestion and delays caused to the Brookvale service on both Saturday and Sunday 14 and 15 January.(20)

With the opening of The Spit to Manly tramway the administration of this new route, as well as the Brookvale line transferred to North Sydney Depot. On 8 January 1911 all tickets and revenue were returned to Fort Macquarie Depot by the Manly Ticket Examiner, and North Sydney tickets were issued from the following day.

The steam trams continued to carry out the narrow destination boxes but the new electric trams were fitted with front and rear coloured symbol destination rolls using the North Sydney type black and white destination symbols.

The Corso at Manly Wharf, just after 3 pm Monday 9 January 1911. The coupled set of J cars which had just delivered the Ministerial Party to Manly Park for the opening ceremony of The Spit to Manly tramway can be seen ahead of the regular steam tram on the Brookvale service. - M.Broadhurst, W.A.Bailey Collection



The next part of this history of the Manly tramway system will deal with the following areas:-

1. The electrification of the Manly to Brookvale steam tramway.
2. The first alteration to the Manly terminus on 12 December 1911.
3. The commissioning of the tramcar ferry. Official documents state that the punt commenced operations on 28 July 1912, but the Sydney press reported its inauguration 6 January 1912.

The late Mr. P. Gledhill, Messrs. C. Woodside, V. Solomons, K. Magor, R. Willson and Rev. C. Thomas are thanked for the valuable assistance they have given in the preparation of this part of the series.

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18. "Sydney Morning Herald" p8 5-1-1911.
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*Coupled J cars 38 and 39 at The Spit terminus on the Manly system in 1911. The vehicular ferry can be seen to the right while the temporary junction and delivery track, by which the elctric cars were unloaded from the vehicular ferry, can be seen near the wharf. - V.*Solomons

Brisbane Electrification

Since the inauguration of electric train services in Brisbane, between ferny Grove and Darra, on 17 November 1979, several enhancements have been made to the system. The purpose of this brief article is to describe some of these and to give an indication of the present status of the system.

Initially only platforms 2 and 3 at Brunswick Street and 6 and 7 at Roma Street were wired, and only the Up and Down Suburban tracks west of Roma Street. The extra tracks westwards to near Cribb Street and the remaining suburban platforms at Roma Street (4,5 and 8) were wired prior to inauguration, while platform 1 and then 2, at Brunswick Street were converted (very slowly) afterwards. Part of the northern relief track from Brunswick Street has also been wired but is not yet available for electric use since it is incomplete.

The first extension to the system occurred on 20 September 1980, when the section between Darra and Ipswich was officially opened. The weekday service since that time has been half hourly until approximately 9.30 pm, then hourly to 11.30 pm. Weekend service is hourly. Extra trains, some of diesel loco hauled stock, are provided in peak hours. An experiment with all night services from January to March 1981 attracted insignificant patronage.

All the electric cars are being built by Walkers ASEA Pty Ltd at Walkers Maryborough works and are hauled south to Brisbane in three car sets by diesel locos. Up to 9 August 1981, 21 three car sets were in traffic with a further set in Brisbane undergoing commissioning. Orders so far placed comprise 60 three car sets. The sets are permanently coupled – driving motor, non driving motor, driving trailer – with Scharfenberg couplers at the outer ends. The pantograph is mounted on the centre car at the end nearest the driving trailer. The second series cars, set 14 onwards, differ slightly from the first series in that the corrugations on the foof are continued down to the tops of the windows. The seating arrangement is also different.

In service either one or two coupled sets are used depending on the loadings. Coupling

Set 05 approaches Toowong station from the west bound for Ferny Grove. The leading car is a driving trailer. Note the smooth curve on the roof, a sign of a first series, 01 to 13, set.

Set 14 approaches Toowong station from the east en route to Ipswich. The corrugations on the sides of the roofs, which indicate the second series cars, are clearly visible. The leading car is a driving motor and is identifiable as such by the traction motor air intake vents beside the doors and the oil cooling pipes, for electrical equipment, below floor level, features which also appear on the non driving motor. - Both, Dennis Campbell

and uncoupling occurs at platforms in traffic as required. At night individual cars in a set are locked off and the lights extinguished to concentrate the passengers in the remaining car(s). By this method and initial saturation serveillance vandalism has been all but eliminated.

Work is well ahead of schedule on the electrification of other lines. With the exception of a few individual locations all masts are now in place for the Kingston project, with catenary erected from Kuraby back to Fairfield. Between Kuraby and Kingston, round slightly tapering concrete poles have been used as an experiment. Duplication is underway from Woodridge to Trinder Park. All masts are in place on the Exhibition line and the Shorncliffe line beyond Northgate. Masting is in progress on the Petrie line beyond Northgate, while some have been erected between Northgate and Toombul.

The method of erecting masts used on the first lines – viz, boring hole, pouring concrete around a foam core, dissolving the core and grouting the mast into the void – has now been all but abandoned. Masts are now stood directly in the hole supported by a light frame and the concrete poured around them. The top of the concrete is shaped by a reusable formwork collar.

The present substation at Corinda is being supplemented by a duplicate at Mayne. Either of these will be capable of feeding the entire proposed system should the need arise.

On 7 July 1981 work officially begun on the re-instatement of the line from Lota to Thornside, removed when the Cleveland line closed in 1961. The present construction schedule calls for this to be opened to diesel traffic in 1982 and then electrified with the Lota line in 1983.

The other recently proposed new line – from Petrie to Redcliffe – shows all the signs of disappearing into the political wilderness.

CITY SECTION

News of the Melbourne and Metropolitan Tramways Board

BUSES

The outbound route of the free city bus (from Batman Avenue car parks) was changed from Friday 5 June 1981, due to traffic congestion in Elizabeth Street. It now runs west along Lonsdale Street, south via Queen Street and Queens Bridge, then east and across the Swan Street bridge to its starting point.

As from Monday 29 June 1981, the Doncaster Shopping Town to East Templestowe bus service was extended to Greensborough, with an hourly service from 9.40 am to 3.20 pm.

Leyland National 822 has appeared in the deep yellow colours as used on the Z3 trams.

The compound on the south side of Brunswick Depot now holds 18 stored AEC Mk6 buses.

The first five AEC Mk6 buses, which like the AEC Mk4 are 8ft 6in wide, to be narrowed by Ansair have been sold to Northern Bus Lines a private operator in the Fawkner/Broadmeadow area.

TRAMCARS

At late July 174 was the latest Z3 in service, although 170 had not been commissioned; the last body received at Preston was 177.

A big effort is being made to overtake an accumulation of surplus trams rendered thus by new Z type cars. A virtual production line (perhaps in reverse) has been set up at Preston Workshops to strip reusable components. Bodies of W2 trams are still for sale to the public but increasing numbers are going to scrap dealers.

Seven more Z type trams commenced running from Essendon Depot on Monday 20 July 1981 on the Airport and West Maribyrnong routes.

Several SW6, W6 and W7 cars have recently entered service after major overhaul with new sliding doors. These feature large glass panes in the top and bottom sections, the former having a flat, instead of the standard curved, top. It is understood the new doors are aluminium instead of wood.

WORKS

Work progresses with the tram/bus interchange in Queens Parade Clifton Hill, with the installation of barrier kerbing.

Elizabeth Street Terminus – Excavation of the existing trailing crossover and stub terminal started on Monday night/Tuesday morning 22/23 June 1981 and the main work was carried out on Saturday/Sunday 27/28 June. An asymetrical crossover was laid south of Flinders Lane with the east track ending before the Flinders Street building line and able to hold two Z type cars. The west track swings towards the kerb and can hold one Z type car. It only allows one northbound traffic lane against the kerb. There is a large space between the tracks and it is understood that a roofed passenger terminal will be built when agreement can be reached with the City Council. An overhead contactor operated point changing mechanism was installed for inbound trams a few days later.

CONTINUED ON PAGE 17

SW2 275, fresh from an overhaul, stands at Footscray Station, nearly 19 years to late to be able to reach Williamstown Road.
-David Featherstone

Melbourne: Shooting for the Squizzy Taylor film underway at the corner of Swanston and Flinders Streets on Sunday morning 19.7.81. From left to right: X2 676, V 214, L 106, L 104. - K.S.Kings

M&MTB BUS FLEET ALLOCATION AS AT 1 JULY 1981

TYPE	CLASS	DONCASTER	FOOTSCRAY	NORTH FITZROY	STORED	TOTAL
MAN SL200	J	90	40			130
Volvo B59	H			92		92
Leyland National	G	9		21		30
AEC Regal Mk6	F		15		79	94
AEC Regal Mk4	E				1	1
AEC Regal Mk3	D				1	1
AEC Regal Mk3	C2				2	2
Total		99	55	113	83	350

Notes: 1. Eight Volvo B59 buses are on loan to the Victorian Railways for use at Sandringham and are excluded from the above figures.
2. An additional 30 MAN SL200 buses are on order for delivery later in 1981.
3. Six AEC Regal Mk6 buses were sold during the year and four more have since followed.

The active bus fleet is thus 267 (plus 8 with the VR). This is a reduction of 17 from the 1980 total.

M&MTB TRAMCAR FLEET ALLOCATION AS AT 1 JULY 1981

Class	BRUNSWICK	CAMBERWELL	ESSENDON	GLENHUNTLY	KEW	MALVERN	EAST PRESTON	S. MELBOURNE	Special	Training	Stored	Workshops	Total
L											6		6
PCC											**1**	1	2
V									1				1
W2	11		34	30	42	34	13	17	2	5	34		**222**
SW2			1	1	1	2	1						**6**
W3											**3**		**3**
W5	12		37	13	22	16	10	11					**121**
SW5			2		6	4							**12**
SW6	**8**		14	23	20	37	2	16					**120**
W6	**8**		4	7	6	6	2	4					**30**
W7	**1**		5	9		5	17	3					**40**
X2									1				**1**
Y										1			**1**
Y1										2	2		**4**
Z1	37	24	10				**29**						**100**
Z2		7					**8**						**15**
Z3		25					32						57
Total	70	56	107	83	97	104	114	51	4	8	46	1	741

Notes:
1. Z1 class includes ZC.
2. East Preston Depot includes North Fitzroy.
3. There are 21 W2 trams in traffic that are recommended for storage and disposal.
4. There are 30 W2 trams in traffic that are recommended for storage in operating condition for the time being.
5. The VR class became extinct during the year.
6. The main active classes of passenger trams are:

W2, SW2	187
W5	121
SW5, SW6, W6, W7	202
Z1, Z2, Z3	172

There are 682 cars normally available for traffic, 5 fewer than in 1980, with the remainder stored or only used for special purposes. This does not take into account cars which are at the Workshops for repair or overhaul.

This list has been compiled from M&MTB official records and grateful acknowledgement is made to the Board for permission to use same.

CONTINUED FROM PAGE 15

GENERAL

A further transport study was presented to the Government in July. Some recommendations were similar to the Lonie Report, such as increased fares and route closures.

During July the MMTB supplied trams to help a TV film company take scenes as part of a film on Squizzy Taylor, a Melbourne underworld character of the 1920s and 1930s. The big tramway day was on Sunday 19 July 1981 at the Swanston/Flinders Street corner outside the Flinders Street railway station. The City Council removed street lights, traffic lights and safety zone railings. The camera angled from west to south across the station entrance. Vintage cars, trucks, motorcycles and a 'road repair gang' with steam roller helped set the scene. Recently repainted in chocolate, L 104 and 106 were in Flinders Street, with V 214 and X2 676 in Swanston Street. Although the trams are not accurate to those of the era of the film, they are the nearest available and looked good mixing with the other vintage road traffic.

ADELAIDE

STATE TRANSPORT AUTHORITY

COMPOSITION AND LOCATION OF BUS FLEET AS AT 30 JUNE 1981

SERIES, MAKE, YEAR & COLOUR SCHEME				HACKNEY/CITY	MORPHETTVILLE	PORT ADELAIDE	ST. AGNES	ELIZABETH WEST	ALDGATE	LONSDALE	Total Active	Total Stored
100 AEC Regal Mk6	1963	Circle	31–46	1	1						2	14
		Silver	117–130									14
200 DAIMLER	1969	Silver	201–235	1							1	34
400 AEC Swift	1970	Beeline	1–7	7							7	
		City Loop	8–14	7							7	
		Silver	401–556,564–692	109	61	47	20	27			264	14
700 AEC Swift	1977	Silver	701–766	29	15	11	6	5			66	
800 LEYLAND Worldmaster	1958	Beeline	801–807									6
		Silver	808–816					1			1	7
900 LEYLAND Worldmaster	1958	Red Ned	270	1							1	
		Promotions	939	1							1	
		Coastal Clipper	111									1
		Silver	901–946		3						3	7
1000 VOLVO B59	1977	Silver	1001–1291	125	58	49	31	20		10	293	
		Circle	292–307	8	6						14	
1350 VOLVO Articulated	1980	Brown	1350–1385					16		18	34	
1400 VOLVO B58 Hills	1980	Brown	1400–1420		10				10		20	
1450 VOLVO B58 Express	1980	Brown	1451–1495		15			2	13	15	45	
PROTOTYPES		Silver	240,250,260		1						1	2
		Brown	290					1			1	
EX PRIVATE		Various	7101–8511	14	6		2	2	4	6	34	39
TOURIST COACHES		Orange	51–81		21						21	
		TOTALS		303	197	107	59	74	27	49	816	138

NOTES: The three active 900s (926–928) are classified as tourist coaches.
All stored buses are at Regency Park or ETSA Angle Park except 103, 111, 118, 573, 905 at Hackney, 8423 at Morphettville, 605 at Elizabeth West.
Private buses in Hackney charter fleet are renumbered 101–110.
Museum buses stored at Hackney bodyshop are excluded from the table.

COMPOSITION OF TRAM FLEET AS AT 30 JUNE 1981

		CITY DEPOT	
		Active	Stored
H type	Red	351,357,358,363–376,379	
	Silver	378,360–362	355,356
	Gold		377#
	Art		380*
		22 active	4 stored

Notes: # Under body repair
* Under refirbishment

H365 in the then current silver livery, waits in Victoria Square Adelaide before another trip to Glenelg in October 1969.

THE SYDNEY SCENE

Transport News from the Sydney Region

RAILWAYS

Previously unreported was the sighting of profile car SPC1 and brake test car 3595 at Mortdale car sheds on Saturday 28 February 1981. These single deck cars were rebuilt from parcel vans, which in turn were conversions of 1921 type motor cars; they normally operate out of Punchbowl car sheds.

Comparative tests between electric and diesel hauled coal trains on the Illawarra line were held in the early morning on Thursday 18 June 1981 when 8501 and 8505 and three GM diesels hauled 1500 ton trains from Darling Harbour to Waterfall. Due to power supply limitations only one 2 car double deck suburban train was to be operating south of Sutherland whilst the 85s were there. The Illawarra line carries a heavy volume of coal traffic at present and this is expected to increase substantially in the near future, which is the subject of much concern over dust and noise by residents along the line. As this increase will probably occur before electrification is extended to Port Kembla consideration is being given to operating these trains electrically as far as Waterfall as an interim measure. The installation of additional sub stations and wiring the goods lines from Wardell Road to Meeks Road will be necessary before this working can commence. It is also intended to install twin contact wires on the down lines. Results of the tests are unknown, but the electric hauled train would have passed almost unnoticed while the Gutless Machines would have howled their heads off. A single unidentified 85 class ran to Waterfall on Monday 15 June 1981.

Single deck stock still ventures occassionally on to the Illawarra line where all regular services are operated by double deck stock. One eight car single deck train is stabled at Rockdale during the day. Single deck as well as double deck suburban and interurban trains are used for driver training on the Royal National Park branch. However, during July a single deck interurban used for driver training worked out of Waterfall.

The last two cars of the prototype air conditioned suburban double deck eight car train, C3504 and D4099, were received on 22 June 1981. These two car sets have been numbered R1 to R4 and during July two sets were stabled in Prince Alfred sidings for driver training.

New country and suburban timetables were introduced as from Sunday 5 July 1981. Except for the Illawarra/Eastern Suburbs lines changes were only minor. Peak hour short workings to Martin Place have been extended to Bondi Junction. The weekday daytime off peak fast Waterfall service from Sydney Terminal has been replaced by a service from Bondi Junction with a varying stopping pattern. The Wollongong services which previously connected at Waterfall have been extended to Sydney Terminal.

Five electric cars were taken to Metal Recyclers, who use the Commonwealth siding adjacent to Lord Street Botany, for scrapping on Saturday 15 August 1981. Three cars, C3825, C3877 and D4017 are burnt out suburban double deckers; the other two, CF5038 and TF6018, accident damaged single deck interurbans. The latter two cars were on their own bogies, whilst the double deckers were on N type bogies from single deck suburban cars, the air ride bogies having been removed.

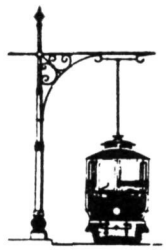
Rear view of new Goninan double deck air conditioned suburban driving trailer showing partly enclosed pantograph. - R.E.Hall

ABOVE: *The hand operated gates and the lower quadrant semaphore signal, with fixed distant, at the Grand Avenue crossing at Camellia on the Carlingford line will disappear when work in progress is finished. (See TW June 81).*

BELOW: *The forlorn line of hulks soon after arrival at Botany on Saturday 15.8.81. l to r - 5038, 6018, 3877, 4017, 3825.*

★ Museum Notes and News

LOFTUS . . .



South Pacific Electric Railway

TWENTYFIVE YEARS AT LOFTUS

On Sunday 26 August 1956 survey pegs were put in at Loftus for the eartworks for the tram depot. This site was parallel to the National Park railway and covered the area now partly occupied by the substation. During the week it was discovered that a water main passed under the area and so on the following weekend work started again, this time on the site of the first stage of the old Loftus depot.

Prior to the above stage being reached about ten possible sites had been investigated since the previous October; these covered an area from Picton and Helensburgh in the south to Lambton in the north and were mainly old tramway and railway formations (including tunnels).

When work commenced the total membership was 25, with a nominal active membership of 16. The building was 120ft x 40ft with four pairs of double doors at the south end. Only three of the intended four tracks were initially laid, using 60lb rail in extremely bad condition which was recovered, by members, from the La Perouse end of the long abandoned Botany – Yarra Bay tramline. Pole type construction was used, the poles being obtained from Victoria Road Gladesville where they formally supported the overhead on the Ryde tramline. Very secondhand corrugated iron sheets from the roofs of the city markets provided rudimentary walls; there was no roof at this time.

Original plans called for a second depot building adjacent to the Royal National Park station. However, owing to complex circumstances, due in part to political considerations, which still plague the society, this plan could not be carried out and extensions were added to the original building which in the meantime had been roofed, by again using secondhand materials which were obtained from the Wolli Creek tramway perway yard by demolishing a wartime building. The outcome of this is an irregular shaped building 152ft long by 66ft wide with 4, 6 or 5 tracks, two of which entered from the north end. While all this was going on the entire structure of the original building was replaced; steel columns were used in place of the wooden poles as it was necessary to raise the roof height to provide a safe clearance for the overhead wire. Some wooden poles remain in newer sections of the building. The skillon roof has in part been replaced by a pitched roof of pleasing lines with a gable over the main doors. With the necessity to move becoming more inevitable a higher skillon was used on the remainder of the building. Altogether six separate extensions were made.

With only the minimum of facilities available the first trams arrived by road from Randwick Workshops in March 1957. These cars arrived on the dates shown and were placed on the tracks listed in order from the south (front) end.

Monday 18 March 1957 – Road 2
F393 948 N728
Tuesday 19 March 1957 – Road 3
Dummy LP154 K1296 C290
Wednesday 20 March 1957 – Road 4
24s E529 E530

The cars were unloaded onto temporary track at th north (back) of the depot, which was moved overnight. The next arrivals wer O1111 and 99u on Monday 19 January 1959 which were placed on 1 road which had been hurridly laid for their recption. Temporary track was this time laid out the front of the depot.

Pointwork was obtained from Randwick Racecourse early in 1960 but this was subsequently stolen and in replacement a single slip

and two turnouts were obtained from the Moncur Street siding near Waverley depot. This was in place for the arrival of the next batch of trams, P1497, R1740, D134s and weedburner 144s on Monday 14 August 1961. A rotary convertor, transformer, switchgear and auxiliary equipment came from the Gray Street trolleybus substation at Kogarah arrived at the same time. The indoor equipment was stored in the back of the depot until 15 June 1962 when the new brick substation building was ready to receive it.

The museum was officially opened as a static exhibition by the then Commissioner of Government Transport, Mr. A.A.Shoebridge on Saturday 23 December 1961 to coincide with the centenary of the opening of the Pitt Street horse tramway. Prior to this overhead had been erected over the depot fan, but as the poles used had been cut off at ground level when recovered the wire was only 14ft 6 in high.

The need for rails and sleepers lead to four years of near continuous work in removing and transporting these items to Loftus, then laying the main line south and its northern extension.

Sleepers were obtained from the army lines at Moorebank in May 1962. The campaign then turned to the main yard at Randwick Workshops in August and September 1962. Despite the quantity of track and pointwork available only a small amount of rail and a few turnouts proved to be re-usable. Randwick was revisited from February to May 1964 when rail was lifted from the repair shop. Despite these major undertakings the big job was yet to come. Between November 1965 and July 1966 the one mile single track, with runround loop, railway line between Regents Park and the Water Board pumping station at Potts Hill was lifted, stacked at the pumping station and then transported to Loftus. This was followed by the recovery of some grooved rail from the Ascot racecourse line, at that time contained within the boundaries of Mascot Airport, and pointwork, including a scissors crossover. from Rozelle depot. A small quantity of rail was purchased from the Australian Government and much later in 1975 RED Scheme labour was used to lift the remains of the SMP siding at Auburn.

The mainline headed south towards Temptation Creek, at this point a smaal watercourse, but only reached approximately 1000ft from the depot by September 1963 which still remains the southern terminus. A left hand turnout, facing trams returning to the depot, was installed just south of the depot yard and the mainline extended nothward, eventually reaching the Princes Highway on 10 December 1966. This junction was later realigned to a Y turnout.

A fourwheel Cadilac railmotor arrived from the Richmond Vale railway on 26 October 1963 and was made operational on Saturday 2 November 1963. Regular service with this vehicle commenced on Wednesday 1 January 1964.

Work was progressing on providing 600V DC power. As the rotary convertor required an 11000V supply which was financially beyond the reach of the society alternatives were sought. These eventually culminated in the construction of a motor generator set which operated from the 240V supply. This was supplemented by a second set which had supplied the swing span of the old Gladesville bridge after the tramway supply ceased. Still later a third set was constructed. The Gladesville set is now with the AETM at St. Kilda. The remain-

Loftus depot Sunday 27 September 1964 and O 1111 is about to depart on its first trial run. D134s and R 1740 are already operational. - Trevor Glenn

When all the world was fairly new! Well maybe the sleepers are not. Looking uphill from South terminus in December 1964. C290 is in the distance. - T.Glenn

ing two sets are now on standby, regular supply being from a silicon diode rectifier. First power from the MG set was supplied by a (very) temporary connection on Saturday 27 June 1964 when during an ARE visit D134s was positioned in front of the depot with lights and compressor operating. The first tramcar movement under power took place at 4.27 pm on Sunday 19 July 1964 when LP154 was driven in the depot yard on a wandering lead, the overhead having been removed prior to re-erection at a proper working height.

The first part of the permanent overhead was used on 6 September 1964. The wire reached South terminus on 25 October 1964. LP154 with a scaffold on the roof was was used to erect the mainline overhead, coasting down to the terminus. The big test of the power supply came when it was successfully started on the 1:27 grade and driven back to the depot. Meanwhile the Cadilac continued to run as electric cars were restored and put into operable condition. However at 4.12 pm on Sunday 3 January 1965 the Cadilac failed at South terminus with a blocked fuel filter and D134s was sent to rescue the passengers and tow the railmotor back to the depot.

The tramway was officially opened on Saturday 13 March by the Hon. P.D.Hills, Deputy Premier of New South Wales. LP154 was used as the official car. Rides were free for the afternoon. K1296 operated the first regular trip the next morning. Prior to the opening the following cars were operational from the dates shown:

LP154	19 July 1964
D134s	16 August 1964
R1740	26 September 1964
O1111	27 September 1964
C290	18 October 1964
K1296	6 December 1964
P1497	13 December 1964
99u	Prior to 20 December 1964

It will thus be seen that at this date eight of the fourteen cars at Loftus were operable. Two of these fourteen cars, 24s and 948, still do not operate whilst C290 and E529–530 are not regularly used.

By this time two further cars, O1030 and Brisbane 180 were stored at Randwick Workshops. These subsequently arrived at Loftus on Monday 3 August 1964 but, although the first extension had been added to the depot, it was necessary to store them in the substation yard.

The fleet has continued to grow. The body of PR1 1573 arrived on 18 December 1965 and was mounted on a pair of Melbourne 1B bogies. These required considerable modification to be fully compatable with the car, work which still continues. Other arrivals at Loftus have been:

C29	16 July 1966
99u	12 July 1967
Brisbane 71	26 June 1968
Brisbane 295	3 October 1968
Grinder	15 September 1971
Ballarat 12	16 September 1974
Brisbane 548	14 October 1974
Ballarat 37	14 October 1974
R1 1979	14 October 1974
Cable Trailer 3	3 July 1976
O957	17 March 1978
R1 1971	9 March 1979
OP 1089	31 May 1979
42u	29 July 1981

Not including the counterweight dummy, the weedburner (144s) and the grinder, which can be classified as other vehicles or rail mounted machinery, the tramcar fleet after 25 years thus stands at 30. The foregoing listing, however, simplifies the activity involved. 93u as obtained had been cut down to a flatcar trailer; 1089 was a body only. The Sydney cars came from backyards and farms as well as Randwick and Eveleigh workshops. 548 arrived in Sydney on 9 June 1969 and was stored in the railway yard at Petersham until it was moved to the loco depot at Enfield where it was joined by Ballarat 37 on 29 September 1971 and R1 1979 on 17 August 1972. 1089 was stored at Ingleburn from 1 February 1974. The fleet, however, has never

been intact at the old Loftus site as C29 left on lease on 24 August 1972 and 42u has been delivered direct to the new depot. The present total of 28 trams is the maximum that has been at the depot at one time.

As has been related in these pages, N728, D134s and O 1111 have all been away for varying periods.

Buses have also been added to the collection and at present are represented by:

AEC double deck trolleybus	19
Leyland halfcab single deck	1275
Albion doubledeck	1615
AEC doubledeck	1694
AEC doubledeck	2619

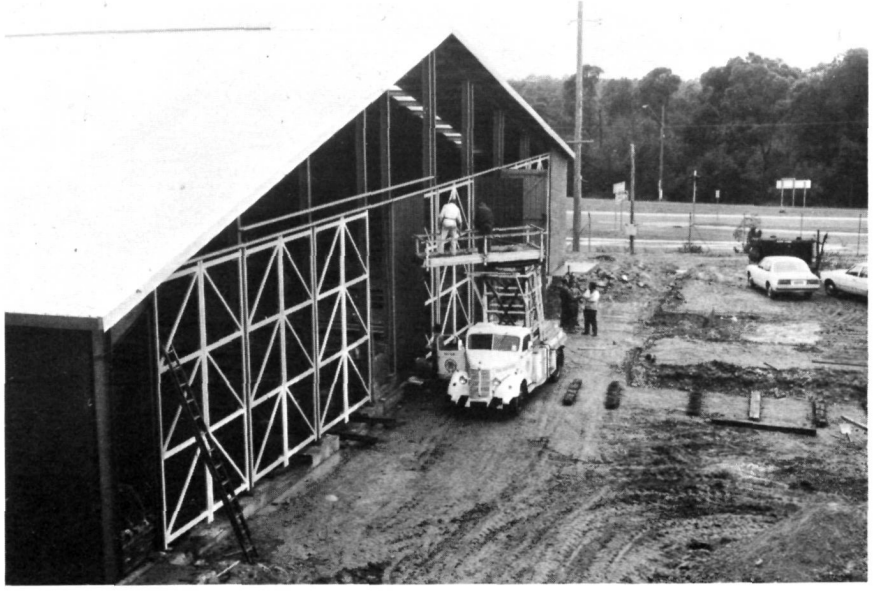
Many other items and vehicles have also been collected; prominent among these are the signal box from the corner of Elizabeth and Market Streets, the waiting shed from Miranda and the waiting shed and signal box from Railway Square.

The commencement of passenger operation did not decrease the level of other activities, what it did was to severely strain the human resources available. On the civil engineering front, besides the continual work on the depot building and the obtaining of rails and sleepers, the main line south of depot junction was relaid and reballasted during 1971 and 1972 and some re-alignment made on the northern end. The two depot tracks which entered from the north end remained unconnected to each other or the main line. These were connected by a three way frogless stub point with a headshunt across Lady Rawson Avenue in time for the arrival of Ballarat 12 and the mainline junction was fully usable by 30 November 1974. This line is known as the East branch.

Tramcar restoration and maintenance is continual with the results usually only noticed when a car has been repainted. Much work has gone into keeping the canvas covered wooden roofs watertight and footboards require constant attention. The really unseen work has gone into the mechanical and electrical equipment. Motors compressors, wheelsets and bogies have been changed, overhauled and rebuilt, usually at the depot where the still limited facilities make improvisation a necessity. A wheel lathe, press and gas rings and various machine tools are on hand awaiting installation, which will now be at the new site.

The reasons why the museum is moving are varied and complex and date back over 15 years. The nominal reason is the proposed construction of a freeway through the old site. This matter has been related in this magazine at various times. Many sites both near and far were considered until the one adjoining Loftus station was obtained, mainly through a process of attrition. First enquiries about the new site were made in February 1971. This uncertainity inhibited the orderly development of the museum and the new development has serverely strained financial and other resources. Very little contract work was undertaken at the old site during the past 25 years. However circumstances change and the major work to date on the new site, which involved heavy earthworks and erection of the basic building, was undertaken by contract. The fitting out of the building and track laying is at present being undertaken by members. Many lessons have been learned after 25 years and most are being applied to the new site; unfortuneately not everyone can change and a few problems have surfaced, but overall the next 25 years can be looked forward to with a degree of confidence.

Work is rapidly proceeding on the doors and infill panels on the south end of the new depot prior to the arrival of 42u. - R.E.Hall



42u Arrives at New Site

42u, also known as *L707*, the *Battery Truck* and *Gentle Annie*, arrived by road from Eveleigh loco/carriage depot and was unloaded at the new Loftus depot on Wednesday 29 July 1981. Despite the awkwardness and out of balance nature of the car (due to the batteries at one end) the move proved to be one of the easiest undertaken. The body and bogies were separated for the move and after an uneventual journey the car was unloaded and put in the depot in about 20 minutes. Bob Cowing and Mal McAulay prepared the car for moving and supervised the loading and unloading.

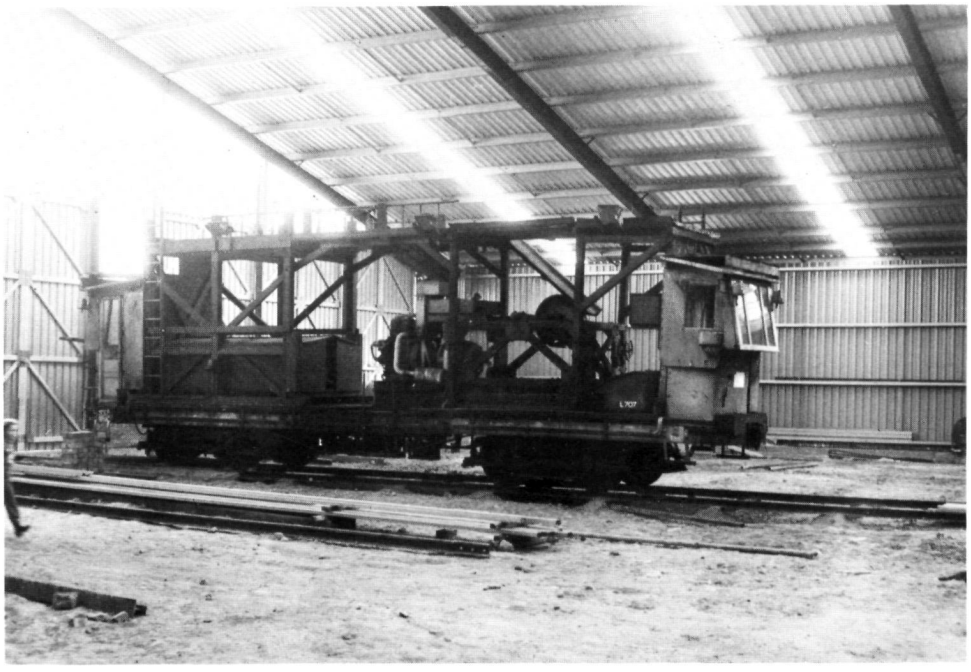
42u entered service in 1906 and saw over 70 years of service. It served its intended purpose as a ballast motor only until 1926 when it was transferred to the railways and used as a battery powered overhead line car. It is now the oldest fourmotor tram in Australia. The exact date it was last used is not known but it was unavailable for use on the ESR in 1978.

It had been hoped to move this car on its own wheels, if not under its own power (using a motor generator set, not the batteries), to Sutherland. Negotiations to this end started in November 1980 but had not reached any meaningful stage when it became necessary to move the car from Eveleigh.

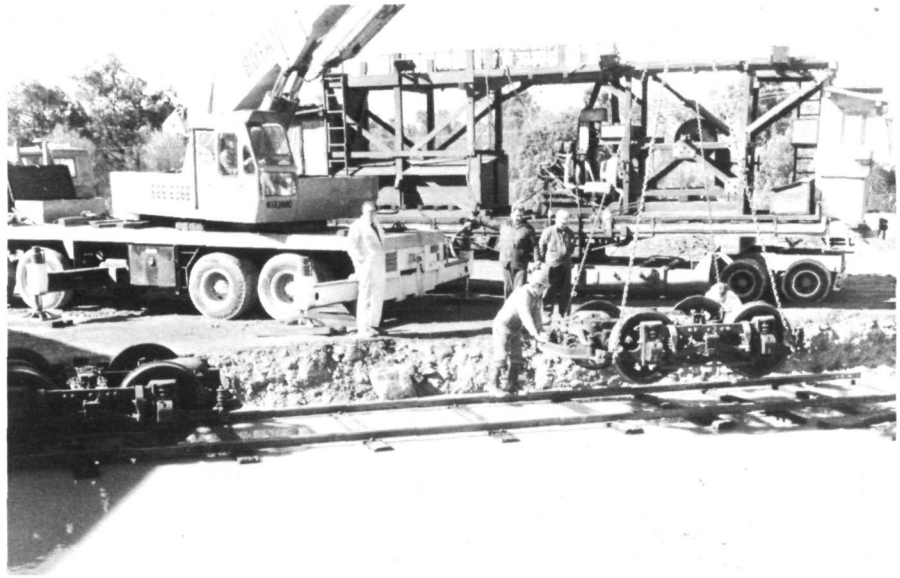
The urgency of the move produced a rapid increase in work on the new building; in the preceding two weekends the eight pairs of doors and infill panels across the southern end of the depot were finished to a reasonably secure lookup stage and track 4 (or 7 – see *TW* June 1981) was extended outside the building to allow the car to be unloaded.

42u was not alone when it arrived as the tower waggon became the first occupant of the new depot, being left there whilst work on the doors was under way. Albion decker 1615 stayed from Saturday 15 July when, whilst in use as the staff bus, it suffered battery trouble.

The south end gable above the doors is still to be covered and work is continuing on the two brick panels.

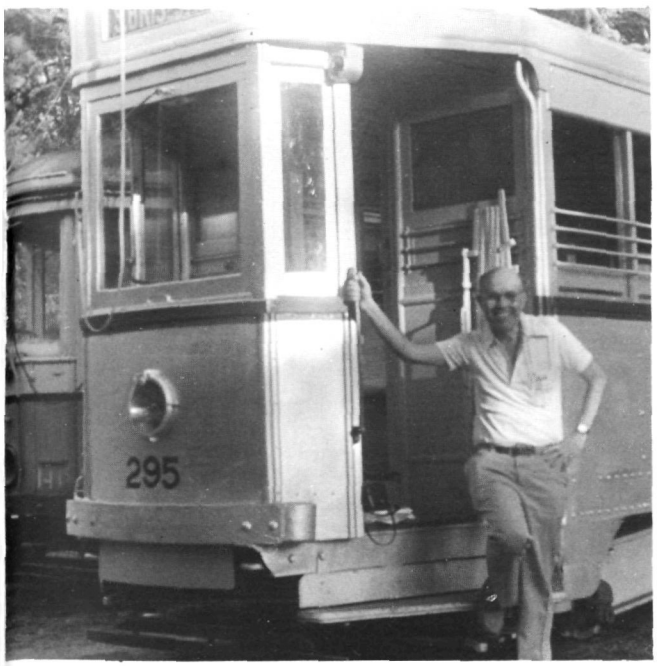


42u stands inside the new Loftus depot. - R.E.Hall



ABOVE: *The Brill 27G bogies from 42u are carefully positioned on the track at Loftus prior to being reunited with the body of the car, seen in the background. The car was turned around during unloading so that the batteries are at the down end, the same orientation as at Eveleigh.*

BELOW: *George W. Hilton at Loftus.*



Board Appointments

The resignation, retirement and defeat at election of three directors has resulted in a major change for the Board of Directors. At the first board meeting after the Annual General Meeting the following executive positions were allocated:

Chairman	Bob Cowing
General Manager	Dave Rawlings
Secretary	Dick Jones
Treasurer	Col Gilbertson
Commercial Manager	Michael Balk
Curator	Bob Casey
Technical Services Manager	Bill Parkinson

The total management structure has been revitalised and includes several very welcome new faces and greater use will be made of a limited number of committees. It is expected that these changes will result in a new dynamic approach to the operation of the society and it is hoped that the members will actively support this new approach over the next few years.

Overseas Visitor

Well known historian and writer on shipping, railways and tramways – particularly cable cars, Professor George W. Hilton from the University of California, Los Angeles, came to Australia for two weeks in April for a conference in Canberra. Whilst in this country he also visited Sydney, Brisbane, Melbourne, Ballarat and Hobart. A planned trip to Adelaide and the Glenelg line did not eventuate due to an airline strike. His first call was at Loftus as guest of Ken McCarthy, a long time correspondent. He also visited the BTPS. A first time visitor to this country, Professor Hilton also sought out breweries as well as tramways, although not necessarily to sample their wares.

FERNY GROVE . . .

Brisbane Tramway Museum Society

Dropcentre 277 glides down to the front gate whilst on brake and electrical trials. - Tom Carter

Works

Recent work has included the installation of overhead troughing over road two in no. 1 depot, using material recovered from Ipswich Road depot. The enrire length was erected in one day, however when road one is erected it will be necessary to use troughing that requires repair and will take longer. The wire was erected and tensioned at the same time for later connection to the overhead in the depot yard.

A start has been made to provide the signal cabin with 240 volt power and an intercom to allow the gatekeeper to communicate with the officer–in–charge when open to the public. A trench has been dug from the caretakers house to the workshop building and most of the way to the signal cabin, stopping short at the track in the terminal area. Two conduits have been laid and covered.

The new section of concrete track from the workshops points to the existing concrete track in the depot curve has been finished and placed

Combination 47 undergoing testing on the newly concreted section of the depot curve. Sunday 15 March 1981.

in service. This work eliminates the problems experienced with the soft underlying ground at this point.

The first stage of the revised track plan for the terminus area has been installed, work accelerated by the discovery of a broken rail weld at the bottom of the hill at the start of the turn into the terminus. The section of track between the points for the curve to Samford Road and the curve into the terminus has been relaid using grooved rail, new sleepers and tie bars. The points originally in this section leading to the double track turnout into the terminus have been lifted and the inside curve removed. The work was completed in two weekends and traffic was disrupted for only one of these.

Progress on gauging and spiking the extension to Samford Road is moving slowly.

Restoration

Work on dropcentre 341 is continuing. Presently, screwholes and irregularities are being filled and sanded, and masking is being applied in preparation for the first undercoat. The end aprons have been removed, repainted with protective rust paint and the rechromed headlight reflectors refitted. Two sections of anti climber have been obtained from Melbourne and Peter Burden is planning modifications to fit them to the bumpers on the car.

Preliminary work has begun on hand brake drop centre 231 with sanding back of the woodwork over the windows and centre section. It is intended to repaint this car in the red and chocolate colour scheme.

A mechanical inspection of combination 47 revealed that the axle brasses are modified drop centre brasses and that all will have to be replaced. Due to the difficulty in obtaining Peckham truck patterns in Australia, help from overseas sources is being sought.

Miscellaneous

The Council of the Society recently held a social barbecue for the executive of the Ferny Grove Progress Association at the museum. They appeared to be most impressed and expressed willingness to assist with regular Association work parties, an offer that was gladly accepted.

It is with regret that we must record the death of Mr. D.R.C. Harding, the Manager of the Brisbane City Council Transport Department. Mr. Harding was respected by all society members and, through the years, did a great deal to assist the development of the museum. He was an extremely capable and most approachable administrator, and v ill be sadly missed by those who knew him.

ST KILDA . . .

Australian Electric Transport Museum

Max Fenner installing the first true tramway hanger on the St. Kilda depot overhead.
- John Radcliffe

Depot Development

Development of the new tram depot has been continued with the connection of electric power to it from the sub station. Preliminary excavations have been made towards installing the first turnout to connect this depot to the main line.

Winter Chores

The onset of winter, one of the wettest in South Australia for many years, has resulted in the customary chores of grass mowing and poisoning of weeds being carried out. As an aid to weed control, a new tractor driven spray unit has been developed and this has been used to spray a new area to be used for outside storage east of the present stores area. The new unit has also been used to spray sections of track. Further tree planting has also been undertaken around the museum environs.

Overhead Work

Apart from the units supplied by BTMS and SPER for use at Mangrove loop, the overhead on the St. Kilda tramway has been suspended without use of conventional tramway insulated hangers. Almost all the line has made use of large 'german helmet' fittings obtained from the long defunct BHP Iron Knob electric railway. Recently, the STA in Adelaide has begun to upgrade fittings in use on the Glenelg tramway. For many years, the line has been kept operating with a variety of fittings salvaged from the former street tramway and trolleybus systems, but new fittings are now being installed. This has made it possible for the AETM to secure some surplus authentic tramway hangers. After checking their resistance and cold galvanising the metal components, the first were recently installed on the depot fan overhead.

Birney Doors Reconverted

When Birney 303 operated on the Glenelg line in 1979, the door engines were controlled through the motorman's brake valve as had been the case when they were first built. This was only possible by borrowing a valve from an H car while the Birney was in town, but this was returned to the STA when the car returned to St. Kilda as only very limited spares are available for the cars on the Glenelg line. As a result, a separate door valve was fitted to 303 when it re-entered traffic at St. Kilda. Recently, it proved possible to secure components which will allow conversion of its H1 type brake valve for door operation, and accordingly, this facility is being restored.

Items Loaned For Exhibitions

The AETM has contributed artifacts to several recent exhibitions in Adelaide.

When the Art Gallery of S.A. recently staged an exhibition 'Adelaide 1881J in commemoration of the founding of the Gallery in that year, it sought help for a special segment on horse trams which were then in a phase of rapid growth in the city. The AETM provided a number of photographs, horse tram items and associated information for use in the exhibition in the Historical Museum on North Terrace.

Similarly, Christopher Steele accepted an invitation from the Burnside Corporation to mount a transport exhibit in association with the 125th Anniversary celebrations of that municipality and drew extensively on the AETM's collection for display.

BYLANDS . . .

Tramway Museum Society of Victoria

In late June the State Electricity Commission of Victoria delivered onto the Bylands site two large concrete poles and have proceeded with fitting brackets, insulators and on the pole nearest the substation, the transformer stand. Due to the heavy rainfall experienced at Bylands, in common with most of Victoria, this winter these poles cannot be erected; until the ground dries out adequately, the machine which the SECV uses to sink the holes and install the poles cannot gain access.

All plans and drawings of the total wiring at Bylands which the SECV requested have been submitted. Work in the substation is progressing with most of the equipment now in place with final panel wiring in hand.

Greasing, oiling and preparation of W3 667 and W4 674 has been completed. Final testing will take place once power is connected.

The Victorian Railways have been replacing sleepers between Wallan and Kilmore on the main line and the Society has been able to obtain at a reasonable price, sleepers to complete track laying in the depot fan.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