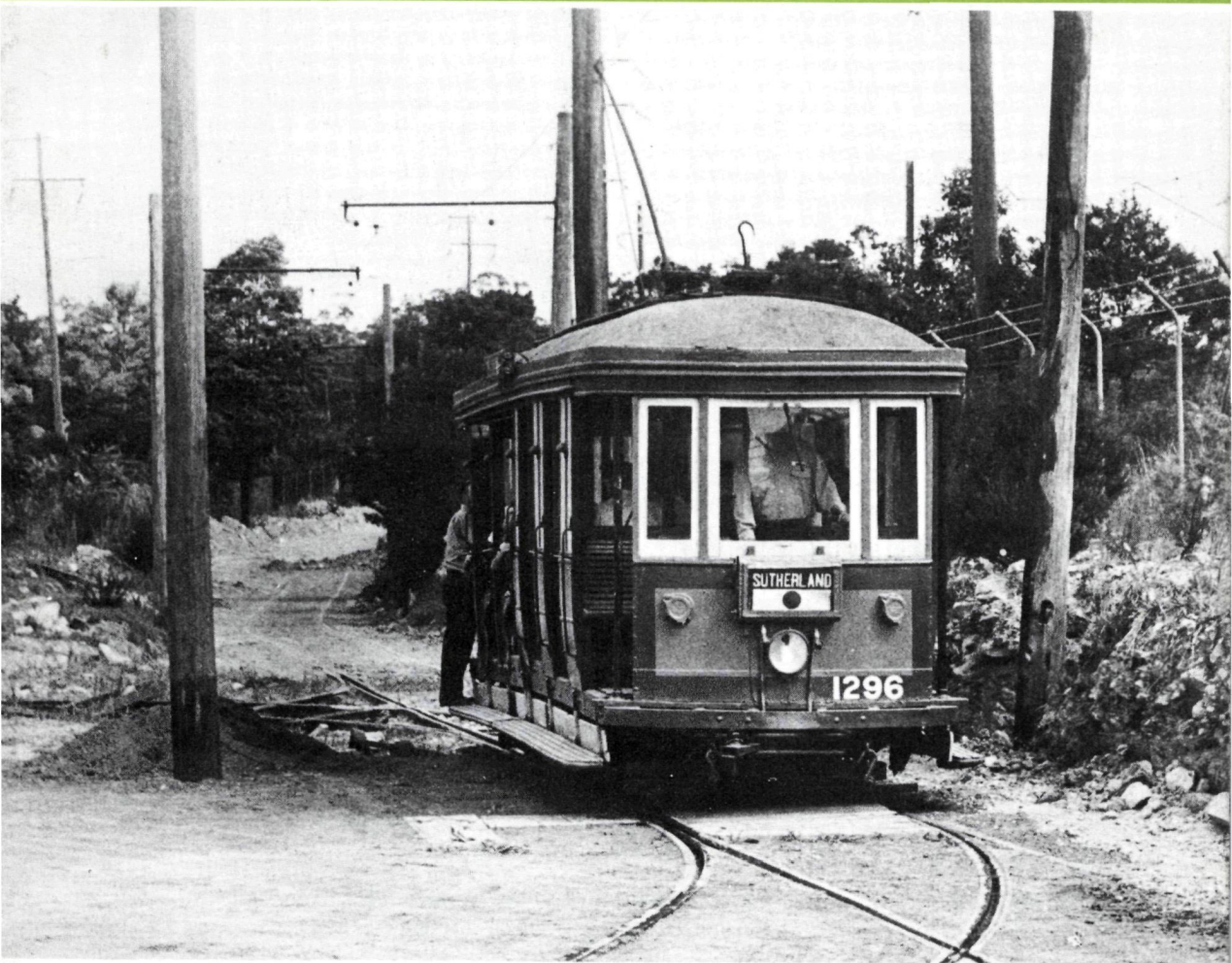


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# TROLLEY WIRE

*JOURNAL OF . . .*  
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**April 1986**  
ISSUE No 223



**NORTH SYDNEY CABLE TRAMWAY CENTENARY**

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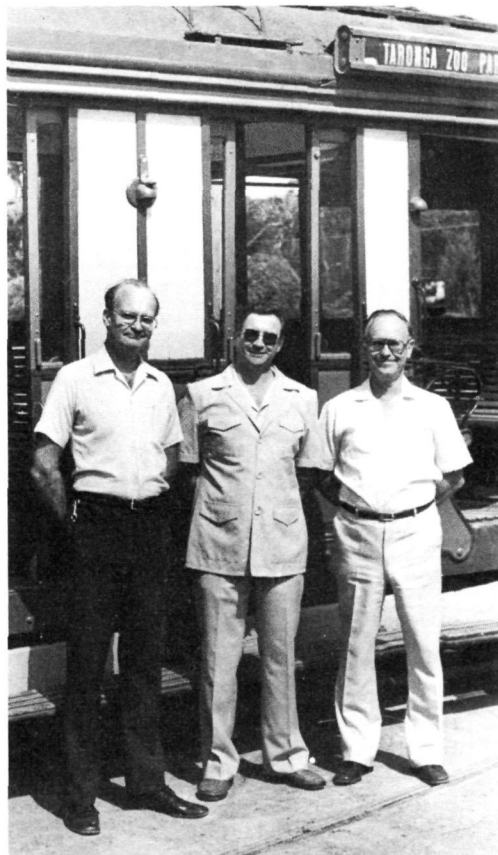
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*Since its establishment as a separate museum  
society in 1955, the South Pacific Electric  
Railway Co-operative Society Limited (Sydney  
Tramway Museum) has been guided by the  
efforts of only three General Managers. These  
three members posed for posterity on 22 February  
1986 at the new museum depot. Left to right:  
Robert Merchant, David Rawlings and Norman  
Chinn.*

K. McCARTHY

## FRONT COVER

*K1296 prepares to enter the yard at the new Loftus Depot on its run with the party of  
invited guests during the afternoon of 22 February, 1986.*

K. McCARTHY

## BACK PAGE

*Newly repainted L/P 154 stands in the old Loftus Depot yard with P1497 before  
re-entering service on the afternoon of 22 February, 1986.*

K. McCARTHY

# NORTH SYDNEY CABLE TRAMWAY CENTENARY

by K. McCarthy

*The North Sydney cable tramway, linking the Milson's Point ferry wharf with the heights of St. Leonards, opened for traffic on 22 May 1886. The adoption of this new form of tramway traction enabled the NSWGT to extend tracks down the steeply graded shore to a ferry terminus for the first time . . . a feat barred to steam tram motors due to their poor hill climbing characteristics.*

*This Sydney cable line was constructed at the same time as the first Melbourne route to Richmond was being built . . . George Duncan being the consulting engineer to both undertakings.*

*The golden era of cable tram construction in Australia only extended from 1885 to 1894, by which time electric traction, as applied to tramways, ceased to be just an experiment. Never the less, not until October 1940 was the last cable tramway in Australia closed.*

\* \* \*

Until the completion of the Sydney Harbour Bridge in 1932, the Sydney urban area was

divided into two major isolated regions, the north side and south side suburbs, while a third smaller settled region was located in the hinterland to Manly. Land transport between these areas was along routes which made lengthy deviations to avoid the harbour. Ferry transport provided the only direct and fast mass communication between these suburbs.<sup>1</sup>

The steep nature of the harbour shores presented difficulties for horse drawn vehicles to provide transport for large numbers.

By 1863 Circular Quay was the main Sydney ferry and Waterman terminus. The horse tramway opened in December 1861 was able to link the Quay with the Redfern railway terminus by transversing the gently graded Pitt Street along the Tank Stream valley. The regular bus services at that period, however, mainly used Wynyard Square as their city terminus so these vehicles did not provide a direct link with the ferries.

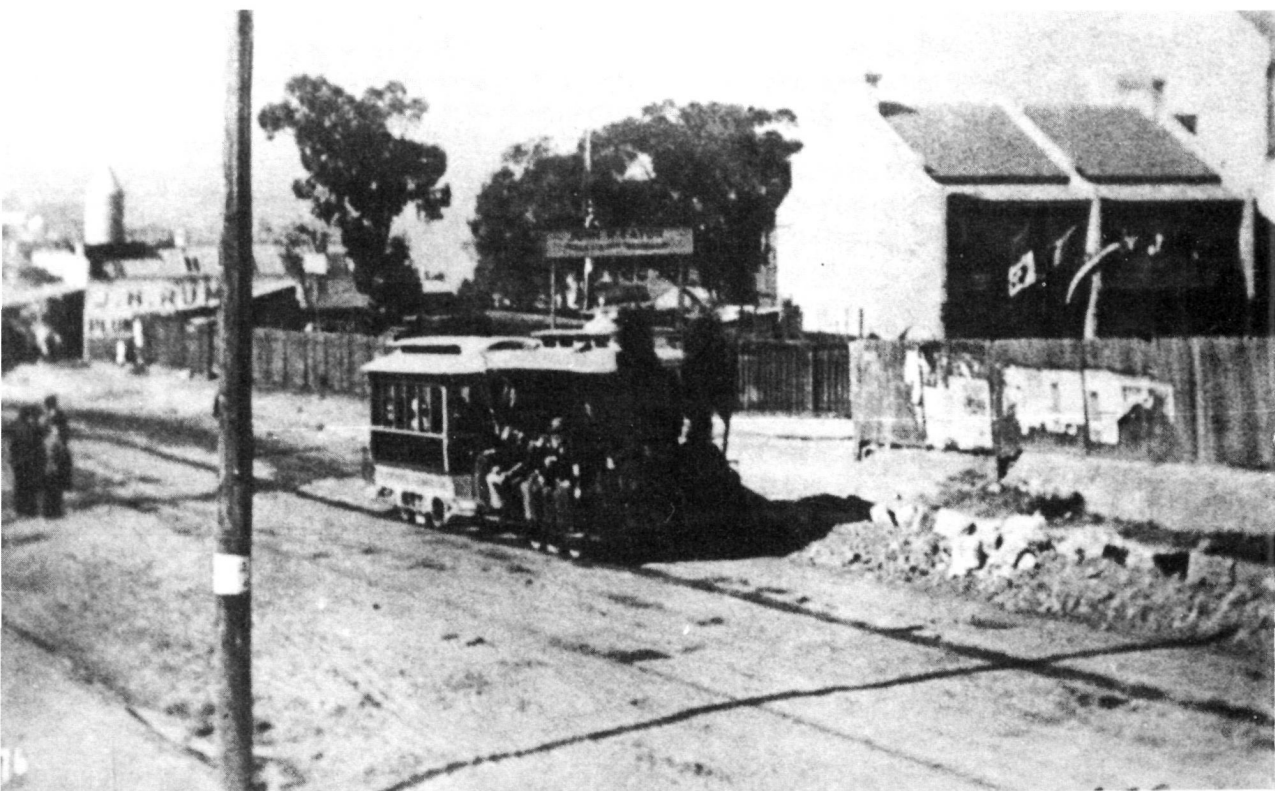
The main services serving the Sydney suburbs in 1863 were:<sup>2</sup>



*Grip car and trailer No 1 of the North Shore Tramway near Ridge Street car shed. This is believed to be an opening day scene taken on 22 May, 1886.*

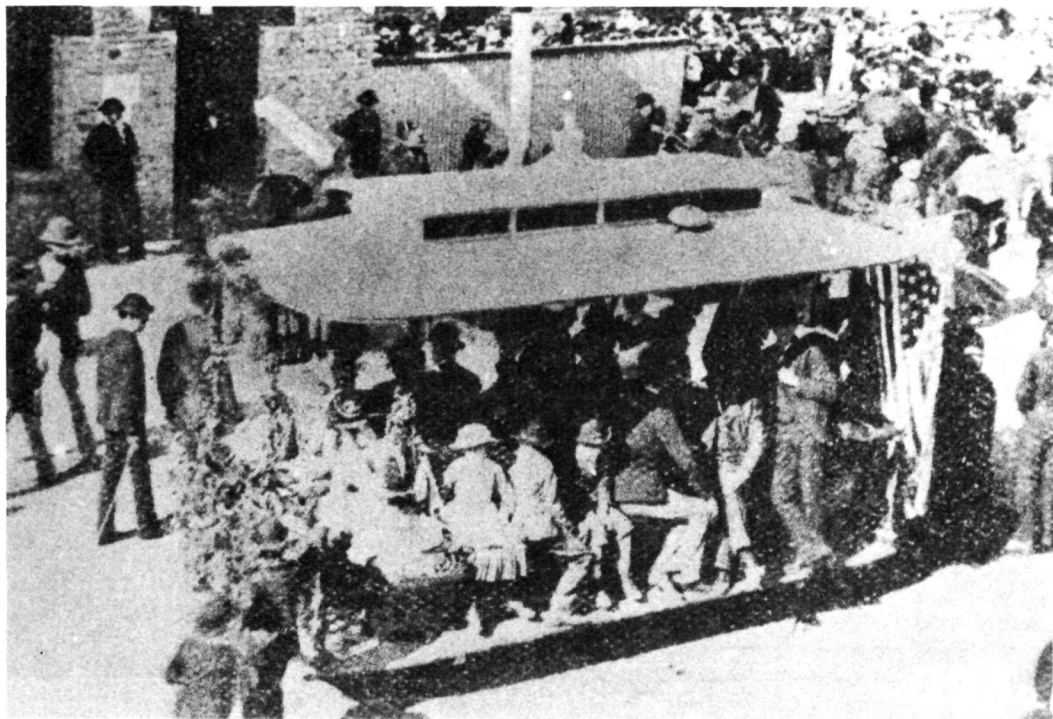
C. B. THOMAS COLLECTION

<i>City Terminus</i>	<i>Suburban Destination</i>	<i>Mode</i>	<i>Fare</i>
Wynyard Square	Waverley Retreat-Botany Road	Horse bus	n/a
King Street	Woolloomooloo	Horse bus	6d
Circular Quay	Redfern Station	Horse tram	3d
Wynyard Square	Newtown	Horse bus	6d
Sydney ?	Petersham	Horse bus	1/-
Wynyard Square	Paddington	Horse bus	6d
Wynyard Square	Randwick	Horse bus	n/a
Wynyard Square	Redfern	Horse bus	6d
Wynyard Square	Surry Hills	Horse bus	6d
Wynyard Square	Waverley	Horse bus	n/a
Sydney P.O.	Botany	Horse bus	2/-
Sydney ?	Camperdown	Horse bus	6d
White Horse Hotel George Street	Cooks River	Horse bus	1/-
King Street	Coogee (Sundays only)	Horse bus	1/-
King Street	Darling Point	Horse bus	6d
Wynyard Square/King St.	Double Bay	Horse bus	6d
Lower Fort Street	Glebe	Horse bus	6d
Wynyard Square	Glebe Point	Horse bus	6d



*A cable car set decorated with greenery for the official opening on the afternoon of 22 May, 1886. Although the official opening was not performed until 1pm, this scene in Miller Street at the McLaren Street intersection was certainly photographed around 9am as evidenced by the shadow angle.*

C. B. THOMAS COLLECTION



*A grip car being shunted at the Ridge Street terminus during the opening day ceremony, 22 May, 1886. The 'Stars and Stripes' flag is possibly displayed in recognition of this United States invention.*

C. R. G. FIELD COLLECTION

After the closure of the Pitt Street tramway in December 1866<sup>3</sup> trams did not return to Sydney until September 1879. Steam traction was employed on the new project and the only main city thoroughfare available for mechanical operation was Elizabeth Street. This resulted in the trams terminating in Treasury Gardens at the corner of Bridge and Phillip Streets. The final 300 metres down the 1 in 12 grades to Circular Quay had to be made on foot. Although by the late 1880's the steam tram routes had reached some beaches as well as Botany Bay, this form of transport was unable to reach the major ferry terminals on the inner harbour.

Mass transport connections with the ferry wharves had to await the introduction of cable tramways in 1886 and the expansion of electric traction after 1893.

#### North Sydney Tramway Construction

The first tramway connection with a ferry wharf was made on the North Shore. This was a cable tram route which extended up steep grades for 1 mile 31½ chains from Milson's Point to Ridge Street near St Leonards Park.

Tenders for the construction of this tramway closed in January 1885. The successful quotation had been lodged by Woods Carson of U.S.A. and this firm was awarded the contract on 21 January 1885.<sup>4</sup> This amounted to £35,500 and entailed the construction of a double track tramway built to 4'8½" gauge to the Hallidie System, the provision of rolling stock, engine (winding) house, car sheds, as well as a maintenance period over the first six months of operation.

Prior to the inauguration of the tramway project, no single wharf on the near North Shore had developed into a central terminus, but Milson's Point now achieved this responsibility.

The tram route commenced at Milson's Point, almost opposite Circular Quay. It moved in a northerly direction along Alfred Street for 36 chains before turning in a generally western direction along Junction and Blue Streets. The main North Sydney thoroughfare of Miller Street was traversed northwards for the final 40 chains to a terminus at Ridge Street where the car shed and winding house was located.



*A grip car and trailer No 1 at the Ridge Street terminus of the North Shore Tramway taken soon after the opening day in May 1886.*

“THE STAFF, MAGAZINE

The maximum grade on the route was 1 in 13 while some 50 chains negotiated gradients of 1 in 15 or steeper.

Woods Carson, working as the Tramway Cable Construction Company, commenced construction in June 1885 with George Duncan as engineer. Duncan had been the engineer for the Dunedin system in New Zealand in 1880 and also occupied the position of engineer to the Melbourne Tramways Trust.

As the tramway construction progressed the North Shore Steam Ferry Coy. erected the arcade terminal and ferry landing. In addition, the new ferry “*Bunya Bunya*” entered traffic in October 1885 to cater for the expected increased traffic between Circular Quay and Milson’s Point.<sup>5</sup>

The double track tramway was constructed with 42 lb/yard rails. Seven curves ranging from 100 ft to 264 ft radius were situated along the route. The trackwork was completed by 13 October 1885. The winding gear, engines and cable were not ready, however, until March 1886.

The car shed contract, won by Gatty and Company at a cost of £1496-10s-5d was not completed until 30 November 1886, seven months after the tramway opened for service.

### Rolling Stock

As in Dunedin New Zealand, and Melbourne Victoria, the rolling stock consisted of open grip cars and enclosed saloon trailers.

Eight grip cars were constructed by Stansfield and Carey for £220 each. This firm was established in Sydney to carry out this work, having performed similar contracts in Melbourne and Dunedin. During this period Stansfield and Carey were also successful in winning contracts for the manufacture of steam tram trailers. These grip cars were given numbers 1 to 8.<sup>6</sup>

JM Jones of New York constructed the first four saloon trailer cars for £260 each. Some reports of that period suggest that John Stephenson Company of New York had received the contract, but photos clearly show the Jones builder’s plates so it is possible that Stephenson sub-contracted this contract due to an excess of orders at that time.

Four similar trailers were constructed locally by Thomas Wearne of Glebe at a cost of £240 each.<sup>7</sup> This contract was awarded on 25 January 1886, the first two cars to be delivered by 25 March and the balance by 27 April. The Jones trailers received Nos 1 to 4 while the others carried 5 to 8. During December 1883 Hallidie

had provided the Tramway department with a working model of a cable tramway. Approval was finally given on 22 June 1887 for payment of £275 to be made for this apparatus.<sup>8</sup>

The final payment claimed by Woods Carson was £41030-7s-6d which included £1760 for grip cars and £1040 for the imported trailers.

### Tramway Controversy

During January 1885 a number of letters to the editor in the daily press revealed dissatisfaction with the use of steam motors on the main Sydney tramway system. It was pointed out that the authorities guaranteed that the motors would be noiseless when they were introduced in 1879.

A S Hallidie, the inventor of the cable tramway system, which he introduced in San Francisco in 1873, visited Sydney in February 1886 when in Australia to inspect the pioneer Melbourne cable line to Richmond. (See *TW* p12 October 1985).<sup>9</sup>

On 26 February 1886 the "*Sydney Morning Herald*" published a leader protecting the Sydney steam tramway system and warning readers that the cable systems did not produce the quality of

public service claimed by their principals! The "*Herald*" claimed that the "cable tram experiment" in Melbourne had not been a complete success. After three months operation the cable had to be removed. A life of 9 months for the £1000 cable had been expected by the Melbourne Tramway and Omnibus Company.

The article stated that cable tramways in general were not giving entire satisfaction and compressed air trams were to be tried in San Francisco. It was claimed that "hard things are said about our trams by our neighbours . . . it is monstrous to allow (steam) motors on our streets and the design of cars are subject to ridicule".

The newspaper claimed that even though the Sydney system seemed defective it was clearly more successful than the service being provided in Melbourne by the cable line.

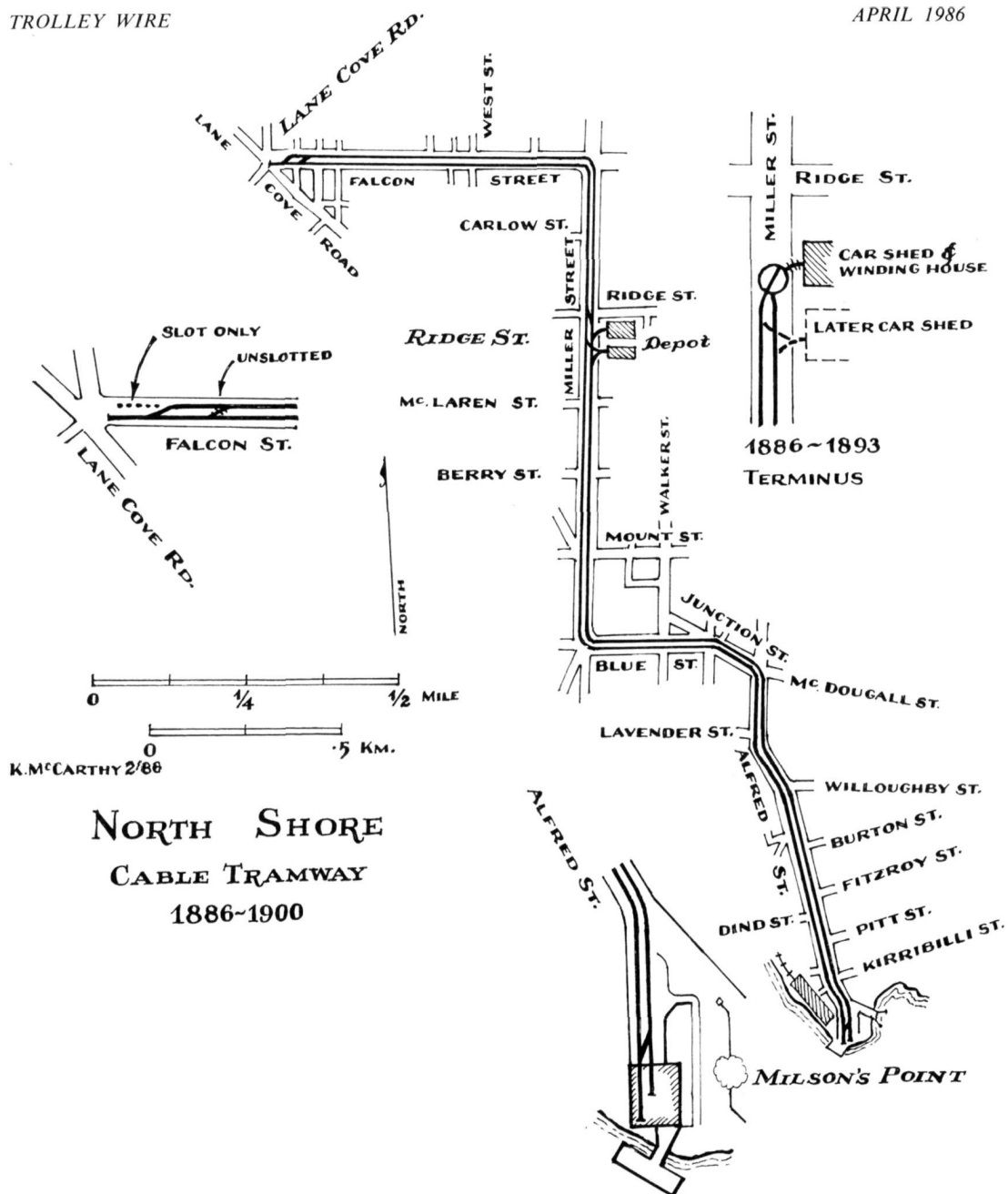
The "*Herald*" concluded that the steam system was capable of improvement while no further improvement was possible in the cable system.

These were fighting words and on the following day a reply from A S Hallidie appeared in the "*Sydney Morning Herald*". He stated that no San Francisco company was experimenting with the



A female pedestrian is well shaded from the late morning sun as a grip car and trailer set approaches the Milson's Point terminus.

C. B. THOMAS COLLECTION



K. MCCARTHY 2/86

## NORTH SHORE CABLE TRAMWAY 1886-1900

compressed air principle as a replacement for the cable system. He claimed that George Duncan, then in Sydney, would support his statement that the Melbourne cable had not worn out after four months operation. It had suffered from a broken strand and that "rope" would be used on another section of tramway when it was repaired.

He concluded that it was 12 years since he first introduced the cable system to San Francisco and in that time not a single failure had occurred.

Hallidie wrote that he was departing for Melbourne on that evening and he would observe the Flinders Street tramway for himself.

No wonder Hallidie made a scathing attack on the Sydney tramway system during March when he addressed an official dinner in Melbourne.

### Cable Details

The cable or "rope" used on the North Sydney tramway was 15,000 feet in length and provided

by Messrs Bullivant and Company of London. This was made from the best crucible steel,  $3\frac{1}{2}$  inches in circumference, consisting of 114 wires grouped into six strands. At the Milson's Point terminal the rope ran around a 10ft diameter sheave under the wharf arcade roadway. On straight sections of track the cable was supported by a vertical 10 inch diameter sheave spaced every 36 feet while on the curves horizontal pulleys guided the rope at spacings ranging between 8 and 16 feet.<sup>10</sup>

One delay in the early completion of the project was the difficulty in providing a water supply at the Ridge Street winding house. This problem was solved by installing plunger type pumps at Brisbane House near Lavender Street activated by the motion of the down and up rope. At that period reticulated water was only available at the lower levels of North Sydney. These pumps were able to deliver 6,000 gallons of water to the engine house every 12 hours through a 4,660 feet pipeline with a vertical rise of 180 feet.

In 1889 these pumps were removed when a reliable water supply system was extended to the St Leonards Park area of North Sydney.

The cable operated at 8 miles per hour while the geometry of the system permitted the grip cars to pick up the cable automatically at the terminals.

### Winding Engines

Two horizontal single cylinder engines (18 inches diameter and 3 feet stroke) powered the cable. These were manufactured by John Fowler and Company of Leeds and provided 140 IHP at 80 lbs/squ.in. boiler pressure. One engine and boiler was designed to operate the system while the other unit was on stand by.

Transmission was through three 10 feet diameter spur gear wheels and two driving drums of the same diameter around which the cable passed. The cable drums were fitted with wooden blocks which formed the working face against the rope. The cable passed around a tension wheel mounted on a trolley which moved up and down a track in the winding house basement as varying loads were applied to the rope. The tensioning trolley was automatically balanced by a counterbalance weight.

The boilers were manufactured by Messrs G Fletcher and Company of London. Hartnel's Patent Automatic Expansion Gear controlled the winding engines.

### Preparation for Opening

By early May 1886 two senior officers from the Public Works Department were working with the



*Grip car No 2 with two trailers including No 11 wait their turn to shunt on the inwards track at Milson's Point terminus, circa 1890.*

FROM THE COPY IN THE MITCHELL LIBRARY

contractors in order that the tramway could be opened for public service as soon as possible.<sup>11</sup>

When the trial was conducted on Friday 7 May 1886 several unrevealed problems emerged of a minor nature. These were corrected on Monday 10 May enabling running trials to be conducted.

The official opening of the tramway was announced for Saturday 22 May 1886, the first day of the Queen's Birthday holiday weekend. At the same time the North Shore Ferry Company introduced the new steamer vehicular ferry "*Benelong*" to the cross harbour service to assist the passenger ferries in handling the expected crowds travelling to the North Shore for the ceremony. A special temporary landing stage had to be erected to receive this new ferry.

### Opening Ceremony

Lord Carrington, the Governor of NSW performed the opening ceremony at 1pm on Saturday May 22. The wharves at Circular Quay and Milson's Point were decorated for the occasion while the municipalities through which he travelled synchronised their celebrations and decorations.

The Governor left Circular Quay by steam launch at 11am and then made his progress through North Sydney by horse drawn carriage, being welcomed by the mayors as he crossed municipal boundaries.

At 1pm Lord Carrington was escorted into the Ridge Street Winding House, where, accompanied by the Superintendent of Tramway Rolling Stock, he opened the steam valve and placed the winding engines in motion.

After being guest of honour at a public luncheon in the nearby reserve, His Excellency boarded a cable tram with his party and returned to Milson's Point Wharf.<sup>12</sup>

### Operation during First Week

Contemporary reports stated that the new system had much to recommend it. The passenger was spared the lubrication smells, cinders and whistles found in the steam system.

The noise of the cable gave some cause for concern. In some places it was loud enough to indicate excessive friction. The engineers felt that this would decrease as the pulleys were run in after a few days operation.

Some fears were expressed about derailments but an incident during the first afternoon of operation showed that the cars could be easily lifted back into the grooves.

During the first week two stoppages occurred due to defects in the operation. These occupied over an hour. Such problems were expected until the grip men became acquainted with the skill of applying and releasing the grip. Several derail-

ments were recorded due to cars being driven too rapidly around the curves.

Between 22 and 29 May 14,400 passengers were carried providing an income of £130. During the weekend as many as 7,000 were carried on a single day but this fell to only 1,800 on a wet weekday later in the first week. The Tramway Department needed an average of approximately 3,000 passengers to use the line each day while an income of £180 per week was required to cover expenses.

The reporter in the "*Sydney Mail*" predicted that traffic would gradually increase on the tramway as "beautiful heights had been opened up which hitherto had been difficult to reach".

### Fare Structure. 1886-1893

#### 22 May 1886

1st section	Milson's Point to Alfred Street (Junction) — 2d.
2nd section	Alfred Street to Mount Street — 1d.
3rd section	Mount Street to Ridge Street — 1d.

#### 1 June 1887

as above but 1d extra if conductor paid by cash rather than by pre-paid ticket.

	By prepaid ticket	By cash
1st section	2d	3d
2nd section	1d	2d
3rd section	1d	2d

#### 1 December 1888

Journey reduced to two sections:

- 1st section — Milson's Point to Mount St.
- 2nd section — Mount Street to Ridge Street

#### 1 December 1892

Three sections reintroduced but fare reduced:

- 1st section — Milson's Point to Alfred Street
  - 2nd section — Alfred Street to Mount Street
  - 3rd section — Mount Street to Ridge Street
- Each section 1d by prepaid ticket or 2d if cash tendered to conductor.

### General Working

During the early years of operation each gripman operated his own dummy car and each conductor was attached to his individual trailer. Each employee was responsible for the cleanliness of his car and pushed his vehicle in and out of the depot on taking up and concluding a working shift.

During periods of light loadings many runs were made with a single grip car. One or two trailers were coupled to the grip car as loadings demanded. The Milson's Point terminus consisted of a facing crossover. As the grade fell to the dead end the terminating tram halted on the down hill track just clear of the crossover where the grip car was uncoupled from the trailer. The grip car then moved forward by gravity crossing over the

“down” or uphill departure track. The cable would then be engaged and the grip car drawn forward. The trailer then traversed the crossover under the control of the conductor working the hand brake. The grip car would then fall back onto the trailer and recouple, the set was then ready for departure on the uphill track.

The Ridge Street terminus stood on a falling grade of 1 in 132 towards the terminus. Rolling stock here was hand shunted by the crews. The grip car gravitated onto a turntable and when aligned to the “up” or inwards track, it was pushed ahead to make room for the trailer which was shunted separately in the same way. The turntable also served an unslopped track into the car shed.

The original cable supplied by the contractor from Bullivant and Coy. ran in traffic for a period of 52,414 miles from May 1886 until September 1887 when it was replaced by a second rope provided by Whitecross Coy. for a cost of £825. During 1887 a third cable was purchased through Drysdale and Coy. of Sydney. This was a standby rope manufactured by Ryland Bros. of Warrington.<sup>13</sup> A truck was also obtained during 1887 for transporting and removing cables.

The first eight months of operation resulted in a loss of capital of 1.63% but for the calendar year of 1887 the tramway earnt a small profit of £415. At that stage the capital cost of the North Shore Tramway totalled £71,504, made up of £62,582 for construction costs and £8,922 for rolling stock.

During 1887 the trams operated a total of 69,033 miles in traffic over a route length of 1½ miles.

### Additional Rolling Stock

J Morrison was awarded the contract to construct two saloon trailers for the North Sydney tramway on 13 February 1889 at a cost of £188 each. These two tramcars, numbered 9 and 10 were in traffic by 25 August 1889.

On 27 July 1889 Benjamin Carne won a contract for four further trailer cars for £197 each. These were delivered by 23 January 1890 and were given trailer numbers 11 to 14. This same firm constructed two grip cars and another four trailers at a total cost of £1225 on 16 January 1891, the order being completed by 14 January 1892. These grip cars carried numbers 9 and 10 while the trailers received 15 to 18.

The last batch of rolling stock was constructed during 1893 by Hudson Brothers. An order for three grip cars and five saloon trailers cost £1340. The contract was awarded on 30 December 1892 and completed by 2 May 1893. The grip cars were numbered 11 to 13 and the trailers 19 to 23.

The saloon passenger trailers seated 16 passengers on longitudinal seats while the grip cars provided seating for 22 on the outward facing perimeter benches.<sup>14</sup>

. . . TO BE CONTINUED



*Grip car 3 and trailer depart from the Milson's Point Arcade terminus while an incoming cable tram set prepares to shunt under the arch. The rocky outcrop at the right was removed to make way for the railway station opened in May 1893.*

C. B. THOMAS COLLECTION

# VICTOR HARBOR HORSE TRAMWAY

by John Drennan

The proposal to restore the Horse Tram service between Victor Harbor and Granite Island was first raised during 1983 through the Recreation and Festivals Committee of the South Australian Jubilee 150 organisation. Trams last ran to Granite Island in 1955. It was thought that return of the trams would be an excellent way to celebrate the State's 150th Birthday.

Some considerable difficulty was experienced in the first instance in getting an organizer to take on the construction and operation of the proposed service. After some time chasing potential organizers the District Council of Victor Harbor agreed to a study being made of the potential of the tramway with a view to its operation. Subsequently, the decision was made by the Council to proceed with the construction of trams and laying of track. Operations were to be solely vested in the hands of the Council.

A grant of \$50,000 was allocated by the Jubilee 150 Board and considerable effort was put into a C.E.P. proposal to use unemployed persons in the construction of the trams and the laying of the tracks. A C.E.P. grant was obtained in excess of \$200,000.

The Department of Marine and Harbours concurrently did a study of the conditions of the timber Causeway and spent more than \$170,000 in upgrading it to an axle load of at least 9 tonnes.

Council itself put in a considerable amount of money and the total cost of the project rose to slightly in excess of \$500,000.

Australian National agreed to provide a Ganger from its Murray Bridge Division to supervise the unskilled labour to be employed in the laying of the track on the Causeway and on Granite Island.

The Metal Industries Association agreed to allow the construction of trams to take place in the Jubilee Ship 'Falie' workshop when the 'Falie' activity ceased. ('Falie' is a restored Dutch-built ketch at present visiting South Australian ports as a re-creation of the grain trade shipping of the early 1900s.) Fortunately, the end of the 'Falie' project coincided perfectly with the starting time of the Horse Tram project. The 'Falie' workshop facilities were found to be ideal for Horse Tram construction.

The Victor Harbor Council, as owner/operator, appointed a full time technical officer the oversee



*The C.E.P. track gang at work not far from the future terminus of the Victor Harbor horse tramway on Granite Island. The passing loop is located between the hillside and the piles of earth seen on the point in the background.*

BOB MERCHANT



*Rails and fishplates are transported to the site using trollies towed by a front end loader. The line is unballasted at present but will be packed with earth to provide a suitable path for the horses. The road train, which now operates the passenger service can be seen in the middle of the timber causeway, 11 March, 1986.*

BOB MERCHANT

the project and when the work is completed he will be employed on normal Council activities.

Clydesdale horses will be used to pull the trams and four horses have been hired from Dud Bunker of Hahndorf. Dud will be employed full time by the Council to drive and look after the horses at Victor Harbor.

The initial operation is expected to commence with two horse trams on 10 May 1986 and subsequently a further two trams will be introduced to service. In peak summer operations it will be possible for two trams to cross on Granite Island where provision has been made in the track for a passing loop.

It is envisaged that at a later stage the horse trams would run around to Hindmarsh River and in turn on to Chiton Rocks. A third stage under consideration involves the construction of a tractor-mounted engine on a bogie which would have sufficient power to pull two fully laden horse trams to Port Elliott and, if necessary, Goolwa. The tractor unit would be "dressed" to give the appearance of the Steam Tram "Eureka" which ran on the Port Adelaide and Glenelg railways up to about 1900.

The "Eureka" ersatz replica would be useful in hauling trams for shunting and at times when

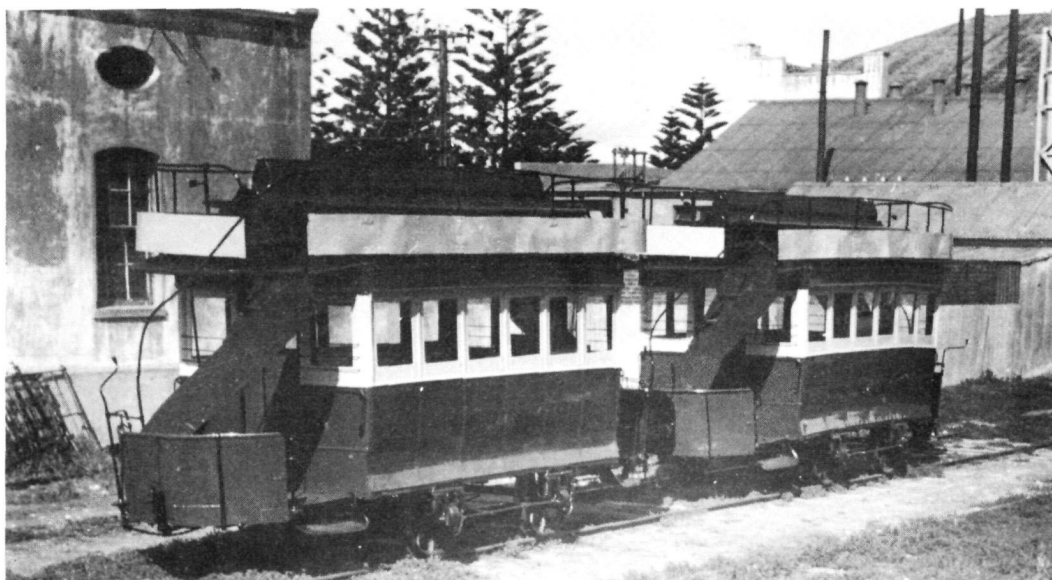
weather conditions made it undesirable to use horses.

The trams will be of modern steel welded construction employing roller bearings in the wheels to make it easy for the horses to pull and will be clad with plywood and timber battens to give the appearance of an 1880 horse tram.

Design drawings have been found from South Australian Railways and M.T.T. records and as far as possible the appearance of Victorian era trams will be retained. The trams have been designed to seat 50 passengers. There will be no roof upstairs because of the high winds experienced over the Causeway. A traditional canvas roof would act as a sail raising the possibility of a capsizing. It was always the practice for Victor Harbor trams to operate without a canvas roof and this practice will be maintained.

The trams will be stored in the Victor Harbor railway station goods shed and serviced and maintained on the site. Major work will be done in the Victor Harbor Council Workshops. The trams can be easily loaded onto four-wheel road trailers and towed by Council truck to their workshops near the Inman River.

Timetables have been prepared for a number of operating options and it is likely that in the peak of



*South Australian Railways tramcars Nos 5 and 6 on the tramway siding at Victor Harbor station about 1950.*  
FROM ORIGINAL NEGATIVE IN C. B. THOMAS COLLECTION

summer a 12 minute service will operate over the Causeway. It is proposed, at this stage, that passengers will board the trams at the Victor Harbor Station goods shed and travel to the kiosk on Granite Island, a distance of approximately 1.8 kilometres. The journey time is estimated to take 12 minutes. Horses will cross at a point near the junction of the Causeway and the Island with about 700 metres from that junction to the kiosk.

The Council has agreed to operate the trams every day of the year in order to make them a viable tourist package for tour operators and the Department of Tourism in Adelaide.

It is understood that apart from the tourist tramway on the Isle of Man, and weekend Tram Museum operations, the Victor Harbor Horse Tram service will be the only daily public transport horse service anywhere in the world.



## TRAMS

A videotape showing Australian tramway systems is now available. The total running time is over 2 hours 40 minutes. The approximate contents of this full colour tape are: Sydney 40 minutes, Melbourne 35, Adelaide 30, Brisbane 25, Ballarat and Bendigo 25 and Albion Park 10 minutes.

It is available in either VHS or Beta for a price of \$40 including postage to any Australian address.

Cheques, made payable to SPER, should be mailed to:

Richard Youl, 8 Godolphin Street, Bulli 2516.

It should be noted that these tapes have been taken from standard 8 movies, particularly in the Sydney segment, the cameraman's hand was occasionally a little unsteady, but subject matter such as a ballast motor in the Botany Sand Siding and glimpses of decorated cars of the 1954 Royal Visit should more than compensate.

# VINTAGE RED BACK IN SERVICE

by Don Potts

The restored 4-car Tait set (381M, 230D, 208T, 317M) made a triumphant return to regular service when it was rostered to displace modern suburban rolling stock on three Sundays during January.

The idea originated from a recommendation by ElecRail to MetRail to promote Summer Holidays Sunday Train Travel in general, and in particular, to The Hills (Dandenongs and Puffing Billy) and The Beaches. Coupled with these attractions was the celebration of the 76th birthday of the building of the first Tait cars in 1910.

Promotion was based on the theme "Love them or hate them, the old Red Tait Trains have been just as much part of Melbourne's heritage as green W2 trams, Holden cars, meat-pies-n-sauce and Australian Rules Football".

The trips were a MetRail-ElecRail partnership. ElecRail was responsible for the custody of the train, providing two volunteer officials for each of the 4 cars. They were not just "going along for the ride". To the contrary, they worked hard — nearly 10 hours on one occasion. Apart from busily answering passenger's questions they added some old fashioned courteous service by helping little

old ladies with heavy shopping buggies, mothers with prams and scores of bikes negotiate the narrow Tait doorways.

The train again survived a gruelling test run to Broadmeadows which includes the ascent and descent of the notorious Glenroy Bank on 18 December after being in storage for 7 months.

The 76 year old restored electric train attracted attention comparable to that of a steam train. Thousands of people of all ages along the line-side stopped whatever they were doing to watch and wave it past. Hundreds of passengers and people inspecting the train commented favourably on the high standard of restoration and the idea of using it periodically in regular service. The trips also fostered good staff relations with some crews wearing old style uniforms for the occasion.

The first trips were on 12 January on the Sandringham-St Kilda and Port Melbourne lines. There were heavy loadings from Port Melbourne with 268 boarding on the first afternoon trip and similar numbers later, due to a Greek Religious Festival at Station Pier.

The Ringwood-Belgrave shuttles on 19 January were the most heavily patronised of the series. Ringwood reported a 400% increase in sales for a



*Old and new: The restored Tait set poses alongside a new Comeng train at Jolimont Electric Running Depot prior to operating Sandringham-St. Kilda-Port Melbourne services on 12 January, 1986.*

DON POTTS

Sunday, aided by local bargain-priced Neighbourhood Travel Cards being only 75¢ adults and 40¢ children which enabled up to three return trips for less than the cost of an icecream or can of coke. On 26 January, Australia Day, on the first arrival at Frankston, a terminal station where all passengers usually alight, most clung to their seats awaiting for the return departure when there were passengers standing. On 15 February the restored Tait set was utilised by ElecRail for a tour Bothways to Werribee. An exciting feature of the return trip was parallel running between Werribee and Laverton with a regular Comeng train. The Vintage Red then returned to storage at Jolimont Electric Running Depot, formerly known as Jolimont Workshops.

### Errata and Corrigenda

#### *February Issue, Page 9*

The photographs on this page have been transposed.

#### *February Issue, Page 13*

The photo captions in this page have been transposed.

#### *February Issue, Page 26, Late Note*

The W2 cars the PETS has obtained are 329 and 392, not 393 as stated.

#### *February Issue, Page 30*

The photo of the top deck of trolleybus 19 should have been credited to Dennis O'Brien. Sorry, Den.

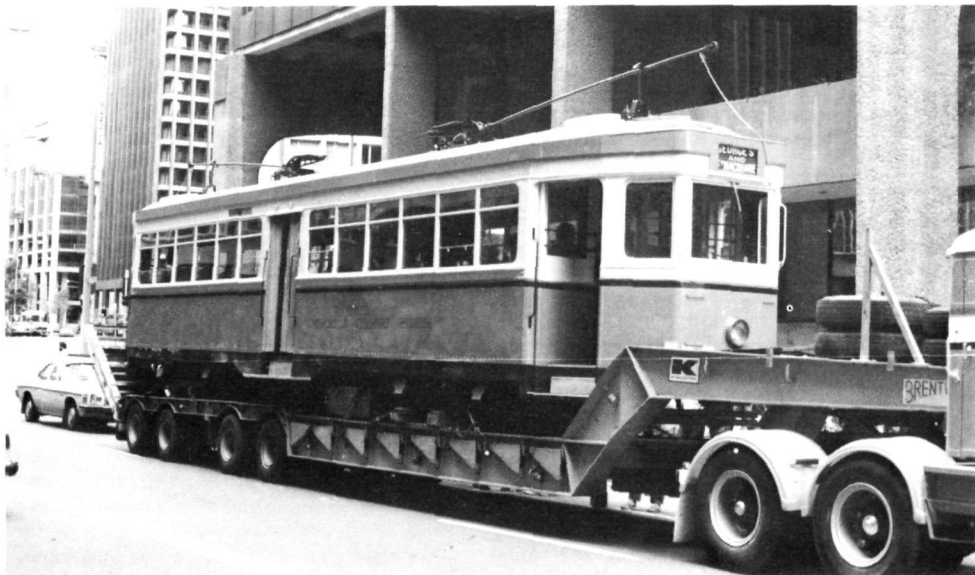
## HERE AND THERE

### NEWS ITEMS OF INTEREST FROM ALL OVER

*NSW Transport Minister Barry Unsworth breaks a bottle of champagne over the front of interurban power car DIM 8089 to launch the first official through electric train from Sydney to Wollongong on 4 February, 1986.*

BOB MERCHANT





*R1 1995 standing at the corner of Hunter and Elizabeth Streets, Sydney on 23 February, 1986. The last service tramcars in Sydney departed from this location on the afternoon of 25 February, 1961, 25 years ago.*

*Left: R1 1995 parked on the site of the former balloon loop at La Perouse on the afternoon of Sunday, 23 February, 1986. The tram followed the approximate route of the last journey of 25 years ago and terminated its nostalgic trip outside Randwick Workshops.*

BOTH: BOB MERCHANT



*W2 441 in its Happy Birthday Victoria livery for the State of Victoria's 150th anniversary during 1985. It is seen here at South Melbourne Depot.*

BOB CLARKE



### Rockhampton News

By the close of 1985 the Purrey steam tram restoration project at Rockhampton was on schedule. The local TAFE college classes, under the guidance of teachers Max Crane and John Ebb, had fitted the floor frame, end aprons, compartment division uprights and perimeter roof frame to the chassis. Meanwhile the tandem compound under floor steam engine was being overhauled by the Maryborough (Q'ld.) firm of Old and Sons. This factory specialises in castings. A crack has been discovered in the original engine and at that stage a decision had to be made whether to repair the original engine or cast a new component.

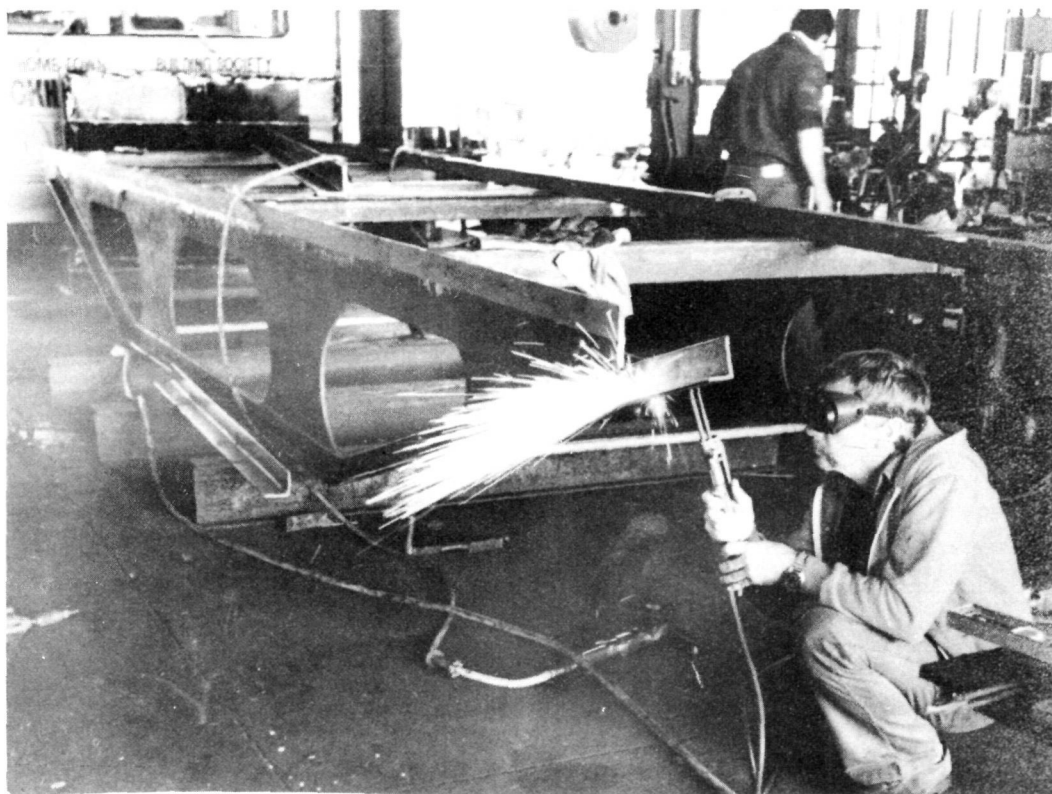
The Seonee Scout Camp at North Rockhampton continues to be a source of old tram parts. After the closure of the Rockhampton tramways at least two cars were delivered there as sheds. The body of No 3 power car and parts from No 10 trailer have already been retrieved from that location. During December an acetylene lamp with "Purrey" engraved on the reflector was located in the bush at the scout camp. Norm Lacey, a senior teacher at the TAFE college, was

pleased that this relic appeared, as new parts can now be made to the original specifications.

During November, 77 year old Cecil Murphy visited the tram at the TAFE college. Mr Murphy drove the trams for 21 years and he had no hesitation in declaring the new tram as "looking like the real thing" as he jumped up onto the front driving platform and tried the hand brake gooseneck.

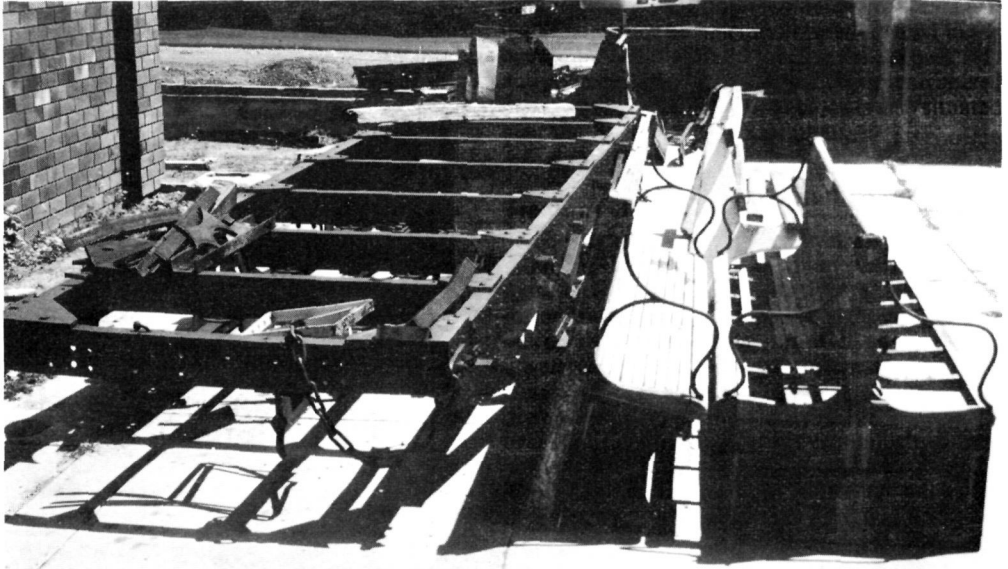
The Tramway Restoration Committee and the Rockhampton Council plan to have the tram completed by late next year. This will allow sufficient time to correct any problems which emerge in the running trials so that it can enter service in 1988.

On 12 November the tar-covered tram tracks caused some problems at the corner of Dagmar and Ward Streets in the suburb of The Range on the former Gardens tram route. Telecom linesman Ray Powell wondered what he had struck with his pick when preparing the road for a phone cable. About two metres of track was uncovered before the historical significance of the find was realised. The Rockhampton Telecom sales manager, Mrs Beth Cox said that it was the first time for many



*Work progressing on the fabrication of the steam tram underframe at Rockhampton City Council bus workshops, September 1985.*

STEAM TRAM RESTORATION COMMITTEE

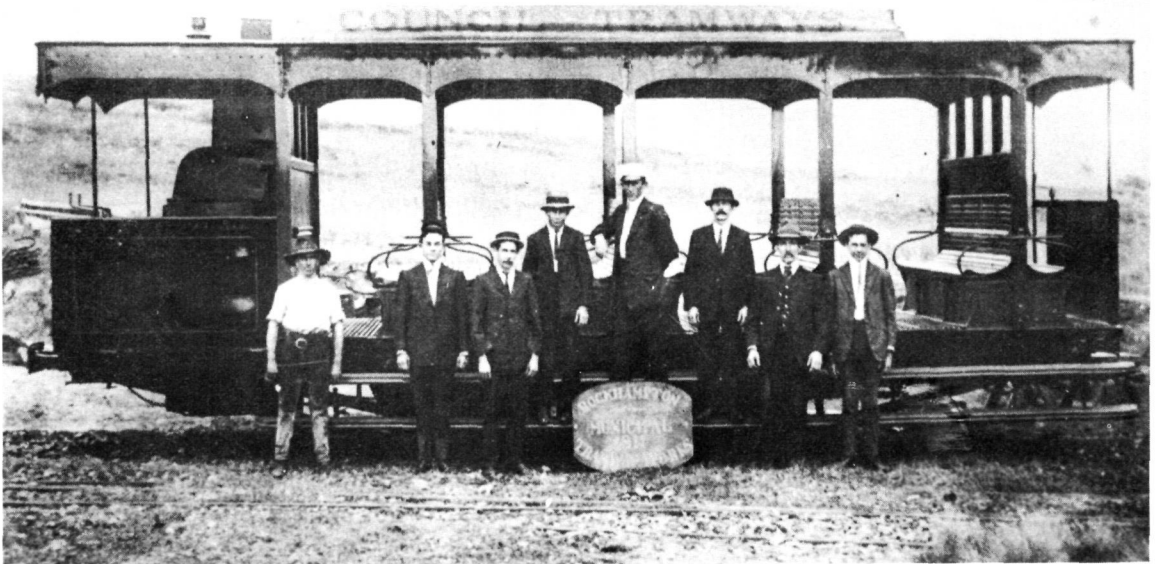


*Steam tram relics at the bus workshops. In the foreground is a Purrey trailer underframe and some crossbench seating while in the background can be seen an apron, coke hopper and part of a firebox from the steam cars.*

ALAN BRADLEY

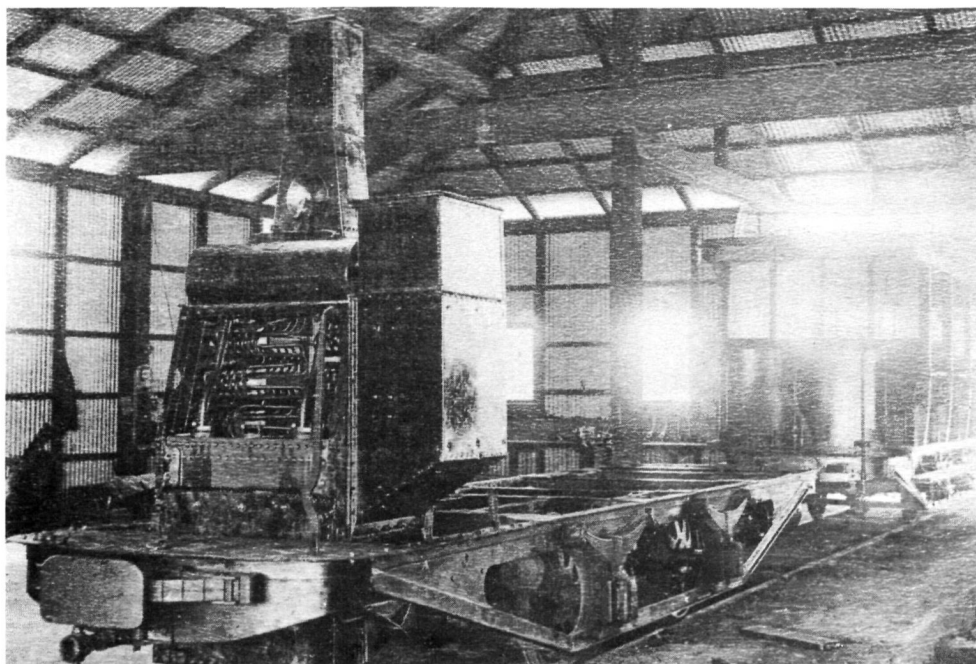
years that the tram tracks had been uncovered. "It's too long for current workers to know anything about it," said Mrs Cox.

In just over two years time a steam tram journey will again be a commonplace but nostalgic reality after almost an absence of 50 years!



*Rockhampton steam car No 5 posed outside the tramway workshops in the Canning Street depot yard prior to entering traffic for the first time. 1911.*

COURTESY MRS. BALLARD, ROCKHAMPTON



*One of the original Purrey steam trams is shown being erected in the new Rockhampton tram depot while a toastrack trailer stands, newly completed, at the rear. This view dates from 1909.*

C. MURPHY COLLECTION COURTESY MRS. B. McKAY

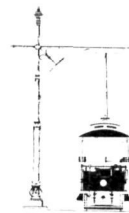


*Purrey steam tram fitted with side tipping hoppers in the Rockhampton Depot yard during the initial construction period in 1909. It is believed that this ballast car was later fitted with a passenger body to become No 4.*

C. MURPHY COLLECTION COURTESY MRS. B. McKAY

# LOFTUS . . .

## South Pacific Electric Railway



### New Site

All points in the depot yard area, leading from the ladder track and including the three-way point, have now been connected to the ex-AIS wharf point levers.

The running rails of the curved leg of the triangle down Cross Street have been fitted with tie bars and are now ready for the installation of check rails as soon as the remaining holes have been drilled.

Further earthworks were carried out in the vicinity of the headshunt at the northern end of the site, beyond the boundary fence, on Saturday 11 January, using Alex Canini's new earthmoving machine. However, the size of the sandstone rocks was almost too much even for this machine.

Funds were recently allocated for the purchase of a new circular saw to replace the previous one which collapsed due to overwork, having been utilised for the construction of the depot yard trackwork and finally for the cutting of the rails for the diamond crossing which was fabricated for the intersection of No 4 Road and the Cross Street track.

Progress at the new site over the six weeks to the middle of February has been unprecedented. The first few weeks of February saw the greatest amount of progress and the greatest achievement since work commenced at the new site almost six years ago.

On Thursday, 6 February, Bob Cowing arranged and supervised the erection of five poles ex-Pagewood Bus Depot, and on the following Saturday, 8 February, poles appeared to be popping up every sixty minutes until twelve poles were in position between the depot yard and the southernmost point of our area.

Saturday, 8 February also saw further earthworks carried out at various parts of the site while the ladder track was spiked for its entire length and earth filled to the tops of the rails.

Early that morning, the former railway LCL container was fitted out as a temporary substation. It was moved into position on the railway side of the shed near the side doorway. The ex-Murray Street (Darling Harbour) transformer was placed inside with a combination of crane and brute force and the rectifier was then installed, together with all other essential electrical equipment.

The first span wire and overhead ear was erected near the junction of the ladder track and the points leading to Roads 1 to 3 and, further down the line, the first bracket arm was installed.

Later that day work concentrated on cleaning up the yard in front of Roads 1 to 4, road base was spread and compacted, and the build-up of clay around the three-way point removed.

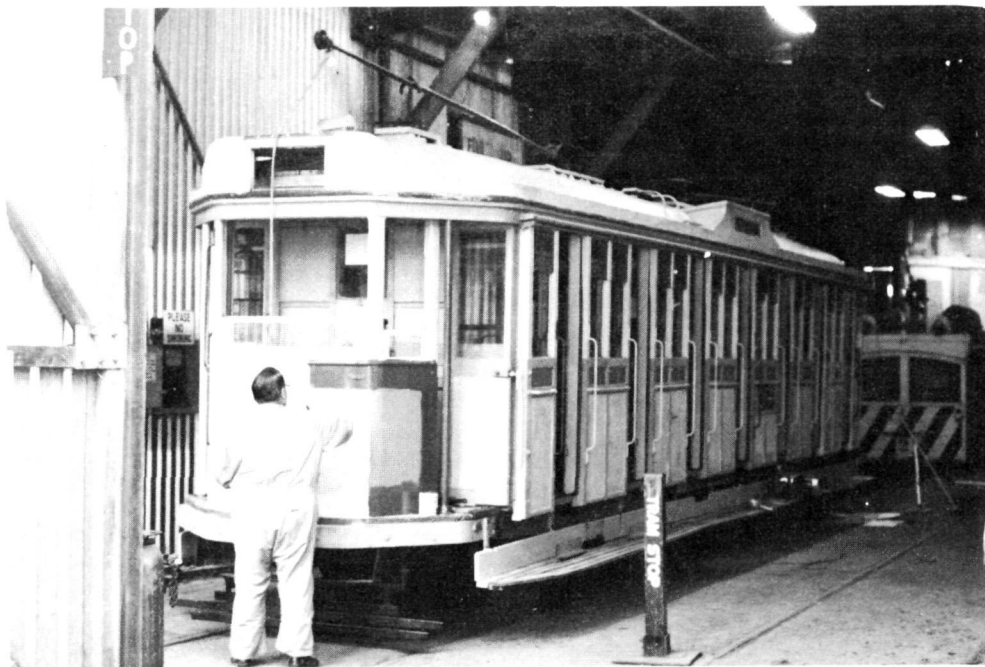
Finally, as a fitting climax to a day of intense activity, the wandering lead was connected up to the circuit breakers at the front of the shed and hooked over the trolley wheel of K class car 1296. At 5.12pm the circuit breaker was closed and the old girl sprang back into life for the first time since March 1982, when this car was transferred from the old site to North Sydney for the Harbour Bridge 50th Anniversary celebrations and returned to the new site.

With a full 80 lbs air pressure in her tanks and with Norm Chinn at the controls, the signal was given and 1296 started on a short but historic journey from No 3 Road to the ladder track, just beyond the three-way point.



*Santa Claus and a group of "Speranian Littlies" during the Christmas Open Day on 13 December, 1985.*

BOB MERCHANT



*Bill Lacrosse at work on the painting of L/P 154 on 31 August, 1985.*

DICK JONES

Although limited at that time by the length of the wandering lead, the opportunity was taken to negotiate all of the depot yard trackage plus portion of the ladder track. Although a minor problem was discovered with a check rail, which was subsequently remedied, all went well.

On Saturday, 15 February another mammoth effort took place with further side bracket arms, which had been prepared at home by Laurie Gordon, being erected. A section insulator was fitted above the doorway to No 2 Road and overhead wiring strung almost to the end of the track. A further two lengths of rail were added to the ladder track and, during the preceding week, the inside of the shed doors painted.

With the overhead wiring erected, there was naturally a great temptation to use it, even though it had not been tensioned. K 1296 was shunted from Road 3 to Road 2 and the pole placed on the wire at 7.27pm. With Dave Rawlings doing the honours the car proceeded to the end of the track, as far as the overhead extended, arriving at 7.30pm. Subsequent trips took considerably less time!

As our special guests for the 25th anniversary commemoration of the last Sydney tram were to visit the new site on 22 February, a special effort was made to have the overhead wiring properly tensioned and aligned with pull-offs for the



*K 1296 outside the depot of the new Loftus site, 8 February, 1986.*

DICK JONES



*Derek Butler tamps road base in the new depot yard on 15 February, 1986 while Bill Denham and Dave Rawlings erect bracket arms in the background.*

BOB MERCHANT

occasion. To achieve this, a number of members attended the usual Tuesday night work party and completed the task, working late into the night.

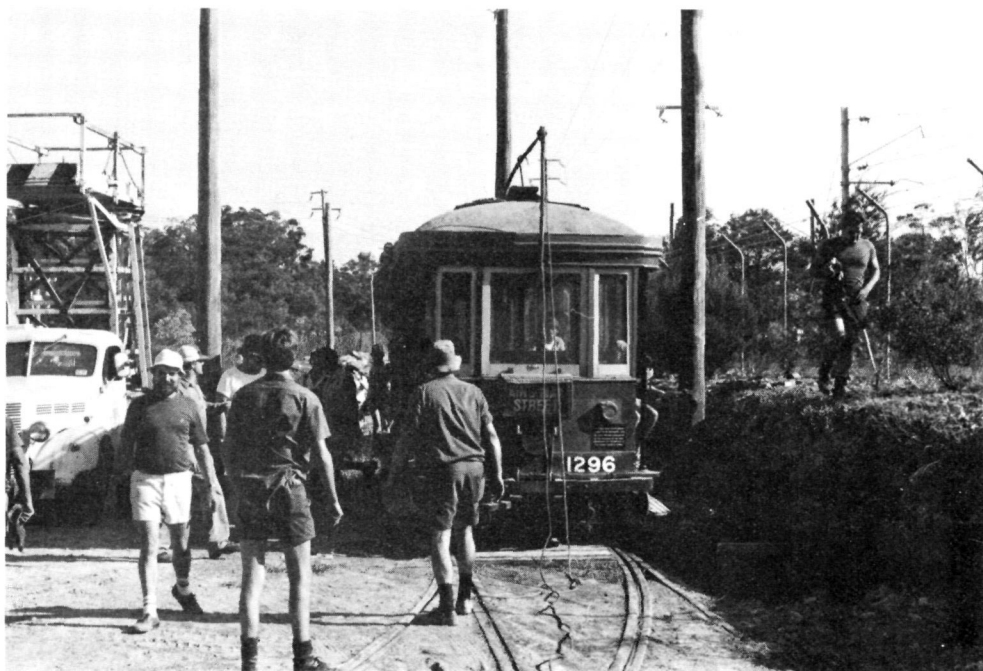
Several other members managed to use flexi-days to assist in completing the cleanup of the site and make final adjustments to the overhead on Friday 21 and thus ensured trouble-free operation of 1296 for our visitors on 22 February.

All members of our workforce involved in the abovementioned activities are to be congratulated for their supreme effort in the three weeks from 1 to 22 February, as in that brief period we progressed from a messy construction site to a neat, tidy and operational tramway. It has even been suggested that we can now claim the title of the first and second operational electric museum tramways in N.S.W. and the first such group to have two operating electric tramways at the same time!

### Old Site

While a major effort was focussed on the new site, work continued on maintenance of the tramcars at the old site and the repainting of L/P 154.

Despite setbacks with the supply of the correct colours required for repainting 154, our painting team managed to have the car sufficiently presentable for operation on 22 February, which meant several days leave for Vic Solomons and



*K1296 operates under power with the aid of the wandering lead, the first tram to operate at the new Loftus site, 8 February, 1986.*

DICK JONES

afternoons for Bill Lacrosse during the preceeding week.

On Friday 21 February, cars 1740 and 1979 were given a general cleaning and had their floors painted while stalls were set up for the following days' activities.

### 25th Anniversary of the Last Sydney Tram

At 4.26pm on Saturday 25 February 1961, R1 class car 1995 passed through the gates of Randwick Workshops and in doing so, became the last tram to operate through the streets of Sydney. In recognition of the part which the tramways played in the development of the city and suburbs of Sydney, it was decided to have a special public Open Day at the old site.

A number of special guests were invited to be with us on this occasion. Some of those invited were unable to attend due to other commitments and the Minister for Transport could not attend due to the recent Cabinet re-shuffle. However, we were fortunate in having as our guests Mr Robert Tickner, Federal Member for Hughes and National Liaison Officer for Bicentennial Projects; Mr Maurice Keane, State Member for Woronora; Councillor Allen Andrews representing Sutherland Shire Council; Mr Stan Murthen of the Sutherland Shire Bicentennial Committee; and an old friend, a long time

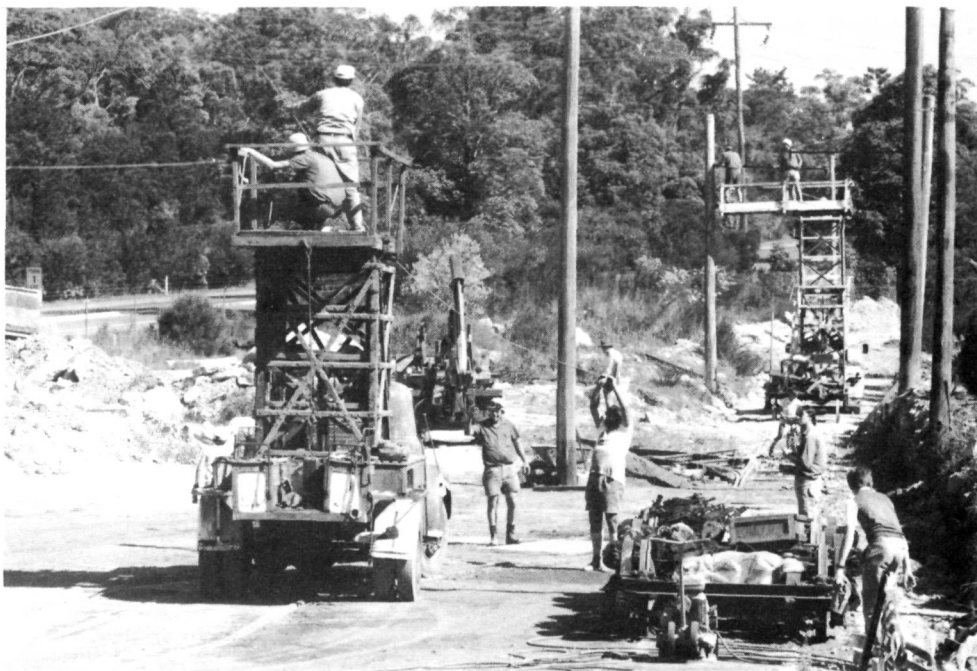
supporter of the Society and former Minister for Transport, the Hon. Milton Morris.

The day commenced with the arrival of our first visitors shortly before 10am and a steady stream of visitors continued to arrive throughout the day until as late as 7pm as we had advertised that operation would continue until 8 pm.

The focal point of the day was the parade of Sydney tramcars at about 2.30pm with L/P 154, N728, P1497, R1740 and R1 1979 taking part. The interstate tramcars were relegated to the back of the shed for the day. L/P 154 looked really good in its fresh coat of paint and was released to traffic just for the day. Although not readily apparent, the repainting was not complete as several more coats have yet to be applied and 154 returned to the paint shop after its moment of glory. Bill Lacrosse and his team are to be highly commended for their workmanship.

Following our parade the invited guests were transported in AEC bus 2619 to the new site for refreshments, site inspection and a ride on K1296. All appeared to be impressed with the progress made to date. Special thanks are extended to the wives for preparing and serving the refreshments to our guests.

A rather different touch at the old site on this occasion was the provision of three outside stalls



*The Museum's two tower wagons are at work in this scene on 15 February. The nearest wagon is being used to erect overhead wiring while the other is being utilised to attach bracket arms to the poles.*

DICK JONES



*All aboard! Invited guests are aboard and K1296 prepares to take the visitors for a trip along the line. Robert Tickner and Milton Morris have claimed the best seats, the ones behind the driver!*

DICK JONES

selling tea and coffee, souvenir items and books, and soft drinks, sweets and chips. These were arranged by Paul McDonald who also organised a raffle and arranged the printing of special certificates for sale to visitors who rode the trams on our Last Tram anniversary open day. Three young sons of two of our Directors volunteered to operate the soft drink/sweets stall. They remained at their post all day without complaint and, we believe, without lunch!

The trams ran in convoys of two for most of the afternoon, this being justified by the large number of visitors at the Museum during the 'peak hours' between midday and 4pm. A camera team from Channel 2 News was present during the afternoon and coverage was given on Saturday nights' news.

Perhaps this open day could be regarded as a dry run for our Last Trams at the Old Site celebrations which could be held later this year. This would, of course, tie in with the First Trams at the New Site celebrations when the transfer of our traffic operations is effected.

#### **C.E.P. Grant Approved**

General Manager David Rawlings was informed verbally by Mr Robert Tickner, MHR, on 24 February of our successful application for a

Community Employment Programme (CEP) grant for construction of our new main line from the Museum site to Sutherland. The grant is for \$65,000 and is to be used to employ six persons for a period of six months.



## ST. KILDA . . .

## Australian Electric Transport Museum



## Toastrack 42

Car 42 has made several runs to the beach to test its new air brakes. The braking system uses a copy of Ballarat 21s brake rigging with allowances being made for a slightly different car height. Car 21 (ex Adelaide 10) had been fitted with air brakes by the State Electricity Commission of Victoria in 1936. Air compressors from Melbourne have been fitted to the ex-Brussels 21E truck under car 42, replacing the original ones — copies of General Electric compressors — which were found to be slightly worn. A new air tank has been manufactured specifically for this tram and it has been placed under the seat behind the western end motorman's bulkhead. Resistance grids and the linebreaker are mounted on opposite sides of the truck at the eastern end. This varies from the original position of resistance boxes on Adelaide single truck cars and has been brought about by the positioning of the air compressors.

A new floor has been fitted to the car and given a protective coat of red lead.

## Dropcentre 264

The metal panels for the southern side dropcentre section and gangways have been primed and undercoated. The "dirty orange" colour which appears on the inside of the panels is being applied before fitting as the position of the seats in the car make it rather difficult to paint these panels after they have been fixed to the tram.

Red lead has been applied to the saloon floors in readiness for the fitting of the floor slats. The eastern end fascia has been installed, primed and undercoated, and the roof has been sealed and painted. The roof ventilators have also been painted.

The air tanks are now mounted under the car in diagonally opposite corners of the dropcentre. Previously these tanks were located under the dropcentre seats. The ex-Melbourne linebreaker is mounted where the PC5 underfloor controller used to be.

## Car 1

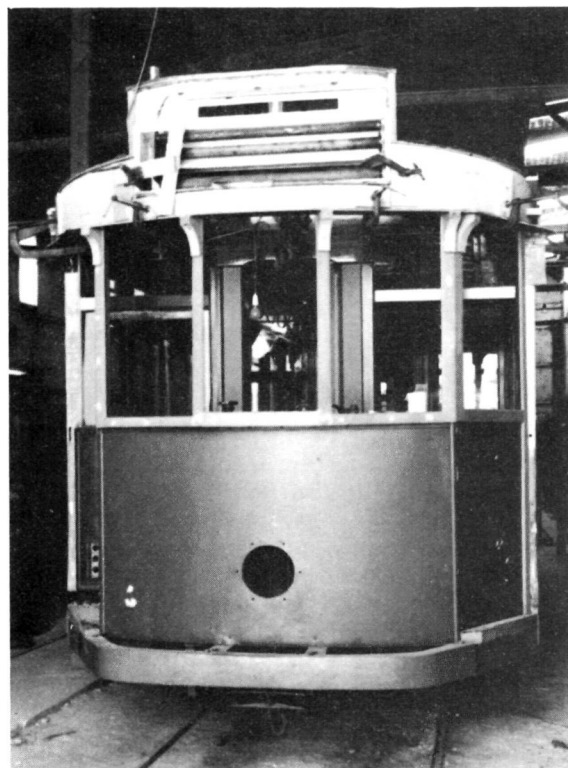
Match striker plates have been fitted in the former smoking sections of the tram. These interesting items were used by smokers for striking

wax vestas before the introduction of the now familiar safety matches. The plates were installed to prevent smokers from striking their wax vestas on the varnished woodwork of the car.

The western end controller has had its top polished and painted, a task not previously attended to during the car's refurbishment.

## Toilet Facilities

The long awaited toilet block has been erected in the Museum yard. The ferro-cement structure is circular in shape with a pinnacle roof. It was constructed off-site with the final finishing and painting being carried out by Museum members. A light olive paint scheme was used and the



*The new fascia being fitted to the western end of dropcentre 264.*

PAUL SHILLABEER



*The restored tram stop beacon at St. Kilda showing the timetable, civic message and historic details.*

PAUL SHILLABEER

building includes a shower facility for members' use. The improved amenity is situated next to the operations building/bookshop on the car park side and replaces an authentic Australian galvanised iron outhouse. A public toilet block is also situated near the St Kilda Beach terminus.

### Tramway Beacon

The recently re-installed tramway beacon is attracting the attention of many visitors to the museum. Tramstop beacons were installed at major tram and bus stops throughout Adelaide during the early 1950s. As well as displaying advertisements they also provided a timetable and were originally fitted with electric clocks. Power disruptions caused the clocks to show incorrect times and they were replaced eventually by suburb names. The beacons were illuminated at night. The last remaining beacons were removed by the time the last street tramways closed in 1958.

Displays on the beacon include a locality map of the Museum and tramline, tram timetables, authentic 1950s advertising and a civic message.

### Other News

Trevor Triplow has prepared and installed a new photographic display in the operations building depicting tramway scenes.

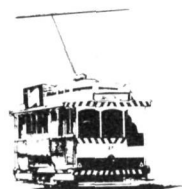
The tramway safety zone on display in the yard is being repaired and painted.

Jack Pennack continues to upgrade the Museum surrounds by planting many more trees.



# BALLARAT . . .

## Ballarat Tramway Preservation Society



### Horse Tram

Since its arrival at the BTPS depot, preliminary work has been undertaken on the restoration of car No 1. The corrugated roof covering the body has been removed. A small section of back-to-back seating has been placed on the roof to give the viewing public some idea of what the seating will look like when completed. The panels covering the windows have been removed revealing the wooden shutters, most of which are still in place. Parts of the paintwork have been cleaned down to reveal old lining and lettering. The Society is currently seeking funds to enable restoration to proceed.

Several weeks after delivery of the horse tram, Society members had to perform an unusual task — erecting a garden shed! As part of the deal to procure the horse tram, the owner, Mr Jack

Leviston, requested a shed be made available to replace the storage space lost with the removal of the tram. The shed parts were delivered, a contractor laid a concrete base, and Society members took on the task of erecting the shed.

### Museum Display

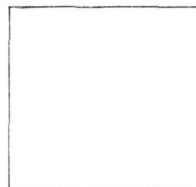
The Society's museum is currently housed inside single truck car No 11. The Society will use the two \$2000 grants from the Victorian Ministry for the Arts to convert bogie tram No 39 to house part of the museum. The plans include removal of one of the end platforms, one of the saloon walls, and the dropcentre pillars on one side. Work has already begun on this conversion with the stripping of brake rigging and other parts from underneath the body, and the removal of the end platform previously mentioned.



*Single truck car No 26 showing the progress made to date in its conversion back to a California combination car.*

ALAN BRADLEY

# HADDON . . .



## Melbourne Tramcar Preservation Association

### Electrification

The assembly and wiring of the AC and DC control panels has been completed, and they have been installed in the substation. A protective cage and access gate have been constructed to isolate the high tension area of the sub. Work is now proceeding on the control and signal wiring from the main panels to the various contactors and relays.

In the workshop, a lockable cabinet has been built into the North wall in which to house the remote operation panel. In the running shed, the large protective cover over the road selector switch has received lockable access doors, and has been painted.

### Trackwork

During December, the fabrication of the depot fan was completed, with the installation of the 3 to 4 road points. All three depot roads, plus mainline lead now only require concreting. Work is now concentrating on the points from the North terminus to the workshop road, and already the castings are in place. Survey work has been completed for a drainage system from the point areas, with material now being acquired.

### General Works

The front driveway wing walls have received additional coats of paint, and a new letter box constructed, as the old one was far too small to

handle the volume of mail being received at the Museum site address.

The annual grass slashing has been completed at long last, after three previous attempts had to be cancelled due to Victoria's very wet December.

### First Aid Instruction

During December, First Aid instruction classes were commenced, with the purpose of training all Branch leaders and supervisors. This is being done so that all work parties will have in attendance one or more persons with First Aid training. These classes are being conducted by member, Mandy Gipps, who is an Officer in the St John's Ambulance Brigade. With safety being of paramount importance in the development of the Museum, Mandy is to be congratulated for initiating these training classes.

### Equipment Swap

Recently, the Association made available to the Perth Electric Tramway Society two sets of substation DC circuit breakers, plus related switchgear, in exchange for various overhead fittings.

We have also received enquiries from two other Societies regarding these ex "Tait" train breakers, so it would appear our actions in acquiring a large quantity at the time of the "Tait" cars were being disposed of, were justified.

## ALBION PARK

## Illawarra Light Railway Museum Society



### Community Employment Project

The announcement was made on 28 January 1986 that 221 projects in the Illawarra Region had been approved for CEP funding. The Illawarra Light Railway Museum's project was successful in this 1986 round and will receive \$108,742 to employ seven tradesmen. Although final approval details are still awaited, it seems that a supervisor will be employed for 11½ months while tradesmen

will be involved in the project in two sessions, 3 for the first six months and a further 3 for the second six months' period.

The work in which these employees will be involved will mainly involve restoration in the metal trades areas. It is hoped that the two locos, "Burra" from Corrimall Colliery and sugar mill engine "Tully No 6" will be returned to traffic under this programme while the restoration of one

of the two Shay locos (Munro & Coy No 1 and 2) should be partially undertaken during this period.

### Workshop Facilities

By the end of February the entire wall cladding of the 18m × 6m workshop had been fixed into position. During January the flooring and staircase was fitted to the mezzanine store in this building and in February a security mesh wall and permanent three phase electric wiring were being installed.

### Traffic

During December and January the museum operated on six steaming days. Patronage amounted to almost 3,200 rides, this high figure being assisted by the Oak Flats Bowling Club Children's Christmas Picnic held at the museum on 1st December.

### Electric System

Three miners' tramcars (man cars) are now available for use on the overhead wire tramway. In

addition to the open Excelsior Colliery car, the three compartment enclosed car and an old cross bench open vehicle, both from Metropolitan Colliery, have been restored and are regularly hauled by the Gemco tunnel electric loco. The last named vehicle was available for traffic on a new 2ft gauge underframe on 30 November.

During the summer months the overhead wire has received major maintenance. New ears have been fitted, span and pull-off wires replaced, insulation improved, several side brackets used to replace plain poles and the working height of the trolley wire increased.

The ornamental span poles and brackets at the museum entrance have been rubbed back to the base metal, primed and repainted.

### Stationary Engines

The large vertical boiler which once powered the Brownhoist railway mobile crane No 7 at the Port Kembla Steel Works came into regular use on 7 December providing steam to two engines. It is



*An unusual combination. The former 3ft 6in gauge Queensland railmotor trailer 119P couples up with former 4ft 8½ in gauge Melbourne cable trailer 430 on 2ft gauge tracks at Albion Park. November 1985.*

K. McCARTHY

## TROLLEY WIRE

planned to overhaul the other stationary units under the CEP programme before these are connected to the boiler in the new machinery display shed.

### New Shed Track

During January the new road, which will be the first of two in the planned carriage shed extension, was connected onto the compound lead-in track. The access points utilised blades previously used in that location, but a new point frog using 45 lb rail was manufactured in the museum workshop.

### Signal Box

The former Otford signal box of c. 1888 vintage arrived at the museum on 13 November. The Albion Park Apex Club excavated, poured and floated the 5.5m × 3m concrete slab and later constructed a 1m high brick foundation wall to support the building.

The signal box was lifted onto its foundations on 14 December at the western end of the main station loop. The box contains an 18 lever frame and the foundations have been designed to allow those interested to view the interlocking and frame mechanism when it is fully restored.

The influence of inflation is seen in the purchase price! In 1975 the former Yallah station building cost the Society \$20. The Otford signal box cost \$50 ten years later!

### Davenport Loco on Display

Davenport 0-4-OST loco "Kiama" (1596 or 1917) appeared in the street parade in Wollongong to mark the opening of the local suburban electric service on 15 December. At the time of writing, negotiations were proceeding to display this loco on a low loader in Kiama during Heritage Week on April 20.

## PORT KEMBLA . . .

### Port Kembla Museum Project



The way is now clear for a feasibility study to commence on the Social-Industrial Museum project to be located at Port Kembla. Some difficulties were experienced by the Museum Committee during 1985 when the 1914 power house was demolished in great haste during September and the c.1950 extension followed during early December. The alternative site at the former Kaiser brickworks adjacent to Port Kembla Station was sold to a carrying firm as an eventual overnight truck parking area.

Two other historic structures were rapidly demolished in Wollongong during December: the three storey Wollongong Hotel and the retort house of the Wollongong Gas Works which possibly dated from 1884.

An area of almost 2 hectares is available for the initial museum development near the Eastern Breakwater, at Port Kembla Harbour.

During September 1985 the Steel Industries Assistance Programme advised the Museum Committee that development of the museum proposal should continue as further funds could be available in the future, while during October the Wollongong City Council stated that assistance would be given to the Museum to obtain sites and funds for the project.

In July and August 1985 the Port Kembla Chamber of Commerce combined with the Wollongong City Council on a business district study for the future. This was coupled with the developments which could be expected when Port Kembla Station was reconstructed as the electric railway terminus. The contribution which the museum development as well as a tramway could make to a revitalisation of the shopping centre was given high priority in the study.

Throughout 1985 a group of volunteers from the Chamber of Commerce renovated the tunnels in the abandoned Hill 60 World War II fortifications at Red Point and it is hoped that the original gun, which is presently stored at Port Wakefield may be returned to this location. The Industrial museum is seen as a link in a tourist chain of heritage attractions in the Wollongong-Kiama district and the current feasibility study will investigate the viability of the proposed museum and an electric tramway of 1km which will initially link the museum with the Hill 60 tourist development.



