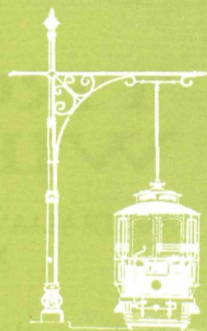


TROLLEY WIRE



NO. 230 AUGUST 1987 \$4.00*

Registered by Australia Post — Publication No.NBH0804



RESTORED W1 RUNS IN MELBOURNE

TROLLEY WIRE

AUSTRALIA'S TRAMWAY MUSEUM
MAGAZINE

No.230 AUGUST 1987 Vol. 28, No.3
* Recommended Price ISSN 0155-1264

CONTENTS

END OF AN ERA — 50 YEARS AGO	3
ILLAWARRA RAILWAY CENTENARY	8
HERE AND THERE	13
MUSEUM NOTES	22

Published by the South Pacific Electric Railway
Co-operative Society Limited, Box 103 P.O.
Sutherland, N.S.W. 2232.

*The opinions expressed in this publication are
those of the authors and not necessarily those of
the publishers or the participating societies.*

Typeset and printed by Meulen Graphics,
Phone 649-8224.

Subscription Rates (for four issues per year) to
expire in December:

AUSTRALIA \$15.00
OVERSEAS \$18.00

All correspondence in relation to "Trolley Wire" and
other publishing and sales matters should be for-
warded to:

BOX 103 P.O. SUTHERLAND 2232

COPYRIGHT

EDITOR Bob Merchant
PRODUCTION Bob Cowing
SUBSCRIPTIONS Norm Chinn
DISTRIBUTION Peter Hallen
BULK SALES Laurie Gordon

FRONT COVER:

*Restored W1 427 gleams in the sunlight during a tour on 4 April 1987. It was
photographed in Dandenong Road near Hawthorn Road.*

STEVEN ALTHAM

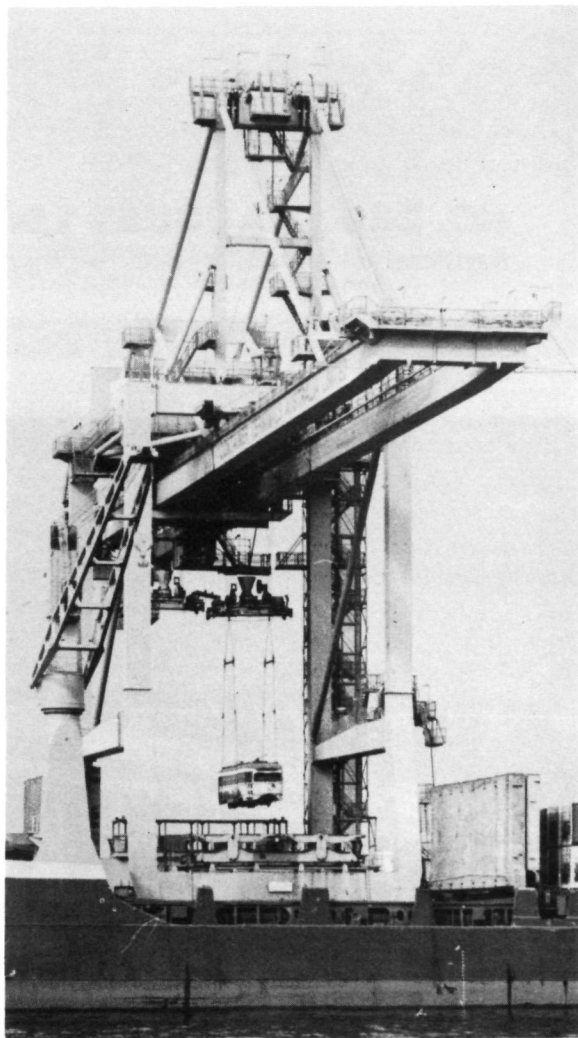
BACK PAGE:

*Top: Brisbane open crossbench car 65 being driven over the new trackwork at
Ferry Grove.*

TROY THOMAS

*Bottom: Bendigo Trust's latest restoration is Birney 11, seen approaching Charing
Cross in June 1987.*

DENNIS BELL



*PCC 1014 is dwarfed by the container crane
lifting it ashore at the CTAL container terminal,
Port Botany on Sunday, 7 June 1987.*

IAN DUNN

THE END OF AN ERA — 50 YEARS AGO

CLOSURE OF THE KOGARAH TO SANS SOUCI STEAM TRAMWAY

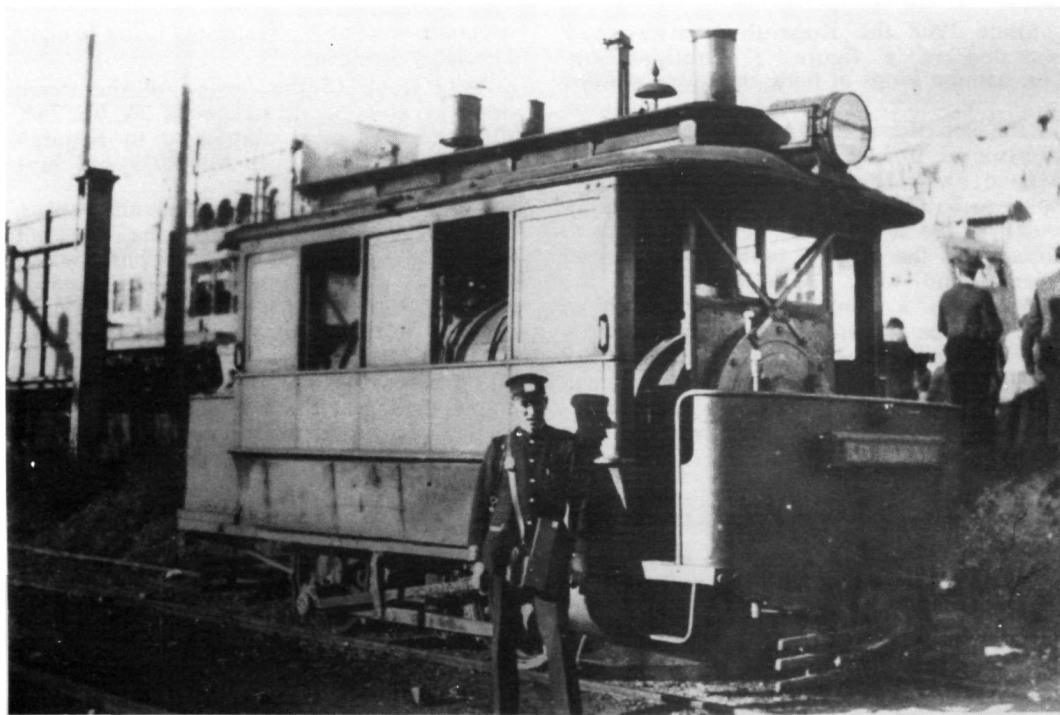
By K. McCarthy

It is now 50 years since the last Government operated steam tramway closed for traffic at Kogarah and was replaced by trolley buses on 4 July, 1937. Although conventional steam trams continued to operate on the Sydney Ferries line from Parramatta Park to Redbank Wharf until 31 March 1943, the Kogarah conversion marked the end of 58 years of steam services by the NSW Tramways Department (by that stage the Department of Road Transport and Tramways).

The Kogarah steam tramway had operated on 'borrowed time' for almost 12 years. With the electrification in 1926 of the Illawarra Line suburban section in Sydney and the resulting

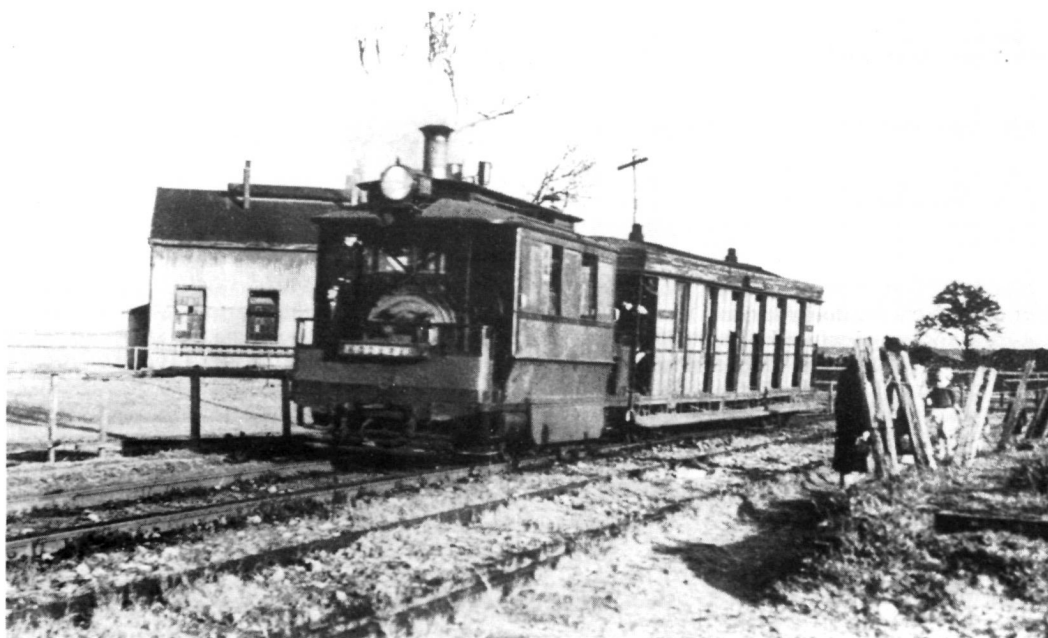
increase in train frequencies, the Kogarah tramway operated an intensive service with ten minute headways connecting with the new electric trains.

The electrification of the Kogarah steam tramway was due to be carried out in the late 1920s on the completion of the Newcastle project. Two rotary converters were purchased for this scheme and were housed in the cramped Rockdale Tramway sub station. These eventually were replaced by a mercury arc rectifier when they were transferred to the Gray Street sub station at Kogarah in 1937 for the trolley bus conversion.



A conductor poses beside steam motor 125A in Kogarah Station yard on the afternoon of Saturday, 3 July 1937 as the spectators on the embankment behind the engine view the trolley buses passing in the official opening parade.

K. MCCARTHY COLLECTION



Motor 6A steams past the Sans Souci motor shed during 1937. The unused track laid for the tramway electrification can be seen in the foreground. K. MAGOR COLLECTION

Since 1908 the Kogarah tramway had operated in a figure '8' configuration. The balloon loops at both ends were worked in an anti-clockwise direction. In preparation for the electrification 2.5km of new track was constructed from Loop Junction at Russell Avenue along Rocky Point Road via Sans Souci to Sandringham. This formed a duplication to the steam route. It was planned to abandon the steam route along Russell Avenue and work the outer end of the tramway as a double track J instead of traversing the 3.3km outer balloon loop. This new track was never commissioned as it was constructed to fine tramway wheel flange tolerances whereas the Kogarah steam tramway was constructed to railway tread and flange contours.

The disused track was eventually lifted from the roads in 1948 and finally used in George Street, Sydney during the then current re-railing project.

Due to the deterioration of the steam tramway rolling stock a further appraisal of the future of the Kogarah tramway was conducted in 1934. Consideration was given to transferring the wooden framed metal clad former tram depot at Northmead to Ritchie Street in which 16 single truck K type trams or E cars could be housed. Alternative timetable

structures were also investigated using 10 eight wheeled P type trams.

As a result of this review of the steam tramway situation steam motors 2A, 6A, 78A, 79A and 92A were transferred to Kogarah from Newcastle between July 1933 and June 1934.

During July 1935 The Hon. Bertram Stevens, Premier of NSW, informed the Kogarah Council that double decker petrol buses would be used to replace the steam trams. Tramway electrification was then estimated to cost between £50,000 and £120,000 (\$100,000 to \$324,000)! The reason for this large variation of estimates was not revealed. The Premier emphasised that the operation loss on the trams at Kogarah had amounted to £140,000 (\$280,000) during the previous ten years. The conversion cost to double decker bus operation was not revealed in the report.

A press release dated 28 March 1936 revealed that Road Transport Commissioner S. Maddocks favoured double decker trolley buses as a replacement mode for the Kogarah steam trams. It was expected that the change-over would take from 3 to 6 months at a cost of £59,000 (\$118,000). A deputation which met with Mr. Maddocks and Mr. R. Ross, MLA on 1 April 1936 also learnt that the trolley bus system was to be extended beyond the tramway territory northwards to Rockdale Station.

Initially 12 buses were considered adequate for the conversion but Ritchie Brothers of Auburn were awarded the contract to construct 21 double decker trolley buses, 11 on Leyland chassis (Nos 6 to 16) and 10 on AEC underframes (17 to 26). A gradual conversion from December 1936 was planned, but as a considerable portion of the tramway route was on reserved track and some distance from the new trolley bus wires, this gradual conversion was not feasible.

Ritchie Brothers delivered the buses in the following groups: 6 to 9 (April 1937), 10 to 16 (May 1937), 17, 18, 20 to 23 and 25 (June 1937), 19, 24 and 26 (July 1937). These vehicles were stored at the trolley bus training circle at Kensington Racecourse and the first electric bus trials were conducted at Kogarah on 9 June 1937. Although this bus returned to Randwick Workshops, buses 6 to 18, 20 to 23 and 25 were delivered to the new Ritchie Street depot at Sans Souci soon after these trials.

On the afternoon of Saturday 3 July 1937 the Premier The Hon. (later Sir) Bertram Stevens officially declared the trolley bus system opened. Over 6,000 people witnessed the

ceremony when trolley bus 7, followed by Nos. 17, 23 and three others departed northwards from Kogarah Station on an official tour of the new network.

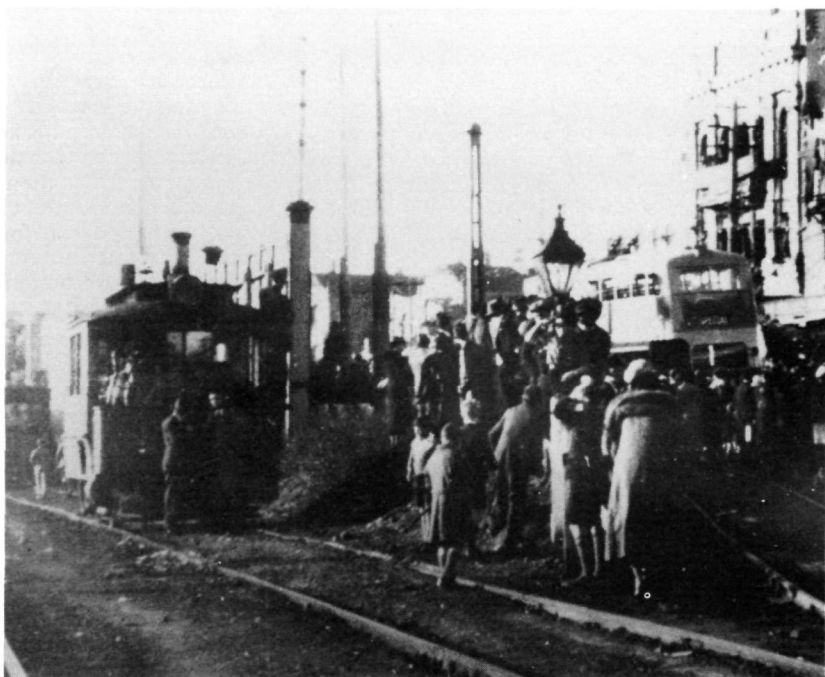
Tramway operation continued throughout that Saturday, motors 5A, 6A, 31A, 84A, 97A, 103A and 125A being noted in service. Most of the tramcars were fully loaded with well-wishers hanging on to the footboards throughout the Saturday afternoon. Shortly after midnight the last tram consisting of motor 84A hauling three heavily laden trailers departed from Kogarah for Sans Souci. The Gray Street grade proved too much for the load and 64A, which had been stationed at Kogarah on standby duties, had to assist the last tram.

Twenty-six steam motors had been available for the operation at Kogarah during the last months of steam operation. These were: 1A, 2A, 4A, 5A, 6A, 121A (ex 10), 25A, 28A, 64A, 71A, 75A, 78A, 79A, 82A, 83A, 84A, 85A, 92A, 97A, 101A, 103A, 104A, 31A (ex 107), 125A, 126A and 129A.

Twenty 70 seat C2 type trailers were available at Kogarah during 1937: 10B, 11B, 56B, 69B, 73B, 80B, 82B, 84B, 92B, 104B, 108B, 110B,

A steam motor receives attention in the Kogarah Station yard while a trolley bus in the official opening ceremony passes by in Railway Parade on the afternoon of Saturday, 3 July 1937.

F. MOAG COLLECTION



126B, 135B, 144B, 158B, 160B, 162B, 181B. 19 of these were parked in the open at Sandringham Loop after the introduction of trolley buses. During early September the unemployed were given permission to strip these trailer cars of their woodwork. On 16 September fourteen of these stripped cars were burnt to enable the scrap iron to be retrieved while the press report revealed that a further 5 cars still remained to be burnt.

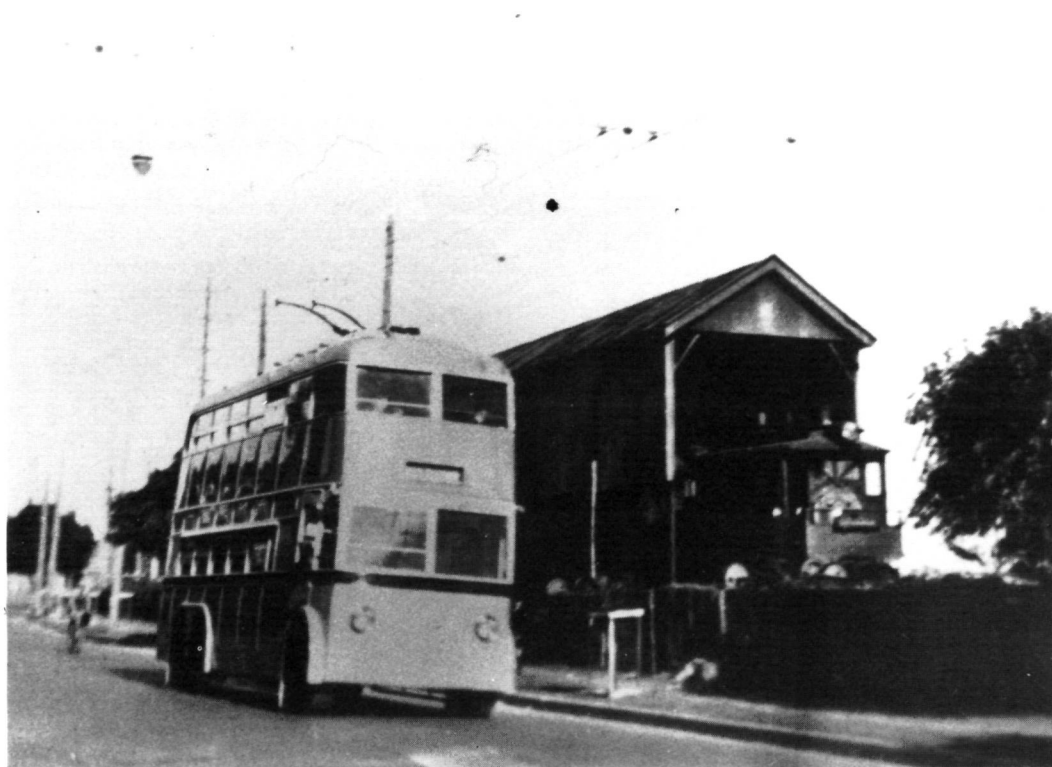
The steam motors were transferred to Randwick Workshops, motor 103A being the last to leave Kogarah a week after the closure. Motor 1A made its last revenue operation on 30 June 1937 and was transferred to Randwick Workshops soon after. After appearing in the Sesqui-centenary parade in Sydney during

January 1938 motor 1A was donated to the Museum of Applied Arts and Sciences in December 1939 for preservation.

There is now some doubt if this preserved steam tram motor is No. 1 (1A)! It is possible that the unit consists largely of 28A (Henry Vale manufacture) with components of several motors which operated through to 1937.

Trolley buses 19, 24 and 26 did not reach Ritchie Street Depot at Sans Souci until January 1939 being in store at Kensington and Randwick Workshops during the intervening 18 months.

The Rev. J. Green and Messrs. R. Willson, D. Greenwald, F. Moag and V. Solomons are thanked for their assistance in the preparation of this brief article.



Trolley bus 18 passes the Kogarah motor shed several days after the introduction of these buses on the Sans Souci route, July 1937.

LATE C.R.G. FIELD



Steam motors stand outside the Sans Souci motor shed. The track laid for the planned electrification can be seen on the left.

K. MCCARTHY COLLECTION



The official handbill placed in tramcars advising passengers of the introduction of the trolley buses and the withdrawal of the steam tram service.

REV. J. B. GREEN COLLECTION

DEPARTMENT OF ROAD TRANSPORT AND TRAMWAYS, N.S.W. No. 40

Introduction of Trackless Trolley Buses and Withdrawal of Steam Tram Service

Kogarah—Sans Souci—Doll's Point Line

Commencing Sunday, July 4

The steam tram service in operation between Kogarah Railway Station and Doll's Point will be replaced by trackless trolley buses.

The trolley bus service will run between Rockdale Railway Station, Kogarah Railway Station and Doll's Point via Sans Souci and Sandringham.

For fares, stopping places, and particulars of Service, see public timetable pamphlets and sheet timetables, dated 4th July, 1937, obtainable at Chief Traffic Manager's Office, 119 Phillip St., Sydney, Rockdale and Kogarah Railway Stations.

Railway Print—1881

JOHN BULL AND THE ILLAWARRA RAILWAY CENTENARY

by K. McCarthy

Wollongong and the surrounding Illawarra district settlements were in festive moods on 21 June 1887. The Golden Jubilee (50 years) celebrations of Queen Victoria's reign were being supported by the opening of the NSWGR Illawarra Railway.

The NSW Colonial Government was not in favour of inaugurating what was seen as a premature service on the railway. The initial section was isolated from Sydney and through operations could not commence until the major tunnel construction work between Waterfall and Clifton (Scarborough) was completed. The tunnel projects were to take a further 16 months so with some reluctance the Railway Department opened the Clifton to Wollongong section on 21 June 1887 and the Wollongong to North Kiama (Bombo) line on the Prince of Wales birthday holiday, 9 November 1887. The total route of this isolated railway amounted to 56 km.

Prior to 1888 passenger communication with Sydney from the Illawarra district was conducted by the efficient Illawarra and South Coast Steam Navigation Company or by a very rough coach route between Wollongong and the Southern Railway at Campbelltown. The escarpment which encloses the Illawarra Plain averages 300 metres in height and this physical feature provided a barrier to inexpensive land connections to Sydney.

During 1872 a private group planned a 2 ft gauge railway between Cooks River and Bomaderry. An isolated part would transport passengers between Cooks River and Sans Souci from where the passengers would be ferried across the Georges River to join a narrow gauge train on the main section for the 150 km journey to the Shoalhaven River.

In 1875 a standard gauge railway survey was completed between Campbelltown, Brokers Nose (Corrimal) and on to Albion Park via Wollongong. The Government of the day, however, recognised the value of a railway skirting the western shore of Botany Bay in opening up that district for suburban settlement. This was the route finally selected.

By 1881 surveyors were pegging out the route between Georges River and Stanwell

Park and tenders were received at that time for the first construction stages. The scheme was subjected to delays in 1882 when the detailed survey plans were destroyed in the Garden Palace fire in Sydney.

The sections on the Sydney end were opened for traffic on the following dates:—

MacDonalddown to Hurstville 15 October 1884; Hurstville to Sutherland 16 December 1885; Sutherland to Waterfall 9 March 1886.

Work commenced on the Wollongong section of the railway during early January 1884 when excavations commenced at the 'rear of Ross' premises at Bulli'.

Newcastle and Wollongong both planned openings of major transport undertakings as the main components of the Jubilee Day celebrations. Both towns were faced with major problems involving motive power. The obdurate, cast off, self contained steam trams sent from Sydney to Newcastle, as well as incomplete permanent way, prevented the opening of the Newcastle to Plattsburg tramway until July 1887. The Wollongong railway celebrations would have followed a similar path but for the tenacity of the local Jubilee Committee. The government engine which was unloaded at Wollongong Harbour on 15 June 1887 was found on assembly to have incorrect injectors. The organisers arranged for contractors and colliery locomotives to operate the initial services so Wollongong 'won the day'.

Railways were not new to the Illawarra coast in 1887. A gravity and horse worked line was constructed between Wollongong Harbour (Belmore Basin) and Mt. Keira Colliery in 1859-60 while steam locomotives were introduced to the district in 1867 on the Bulli Colliery railway.

On 14 May 1887 the Wollongong Jubilee Committee petitioned Alderman W. Poulter (Mayor of Wollongong)

"To consider the most suitable mode of publicity celebrating the Jubilee Year of Her Most Gracious Majesty's Accession to the Throne, and, as part of the rejoicing, to request the Honourable the Minister for Mines to open the Illawarra Railway on



Scale 0 1 2 3 4 5 Km.

K. MCCARTHY 1/84

that day from Clifton to Dapto and as far beyond as can be got ready for traffic."

A first class carriage had earlier arrived at Wollongong on 29 January 1887 on the S.S. *Kurrara*. This was to accommodate the Governor, His Excellency Lord Carrington, when he made an overland trip to Wollongong on 2 February 1887 using a coach between Waterfall and Clifton. The contractor's locomotive hauled the Vice Regal party along the Illawarra railway.

On 15 June 1887 the S.S. *Karrara* delivered a Government Railway locomotive, a passenger carriage and several D trucks to Belmore Basin. Later on that same day the S.S. *Kanahooka* delivered an additional carriage and several luggage trucks. The main railway system could not spare any further rolling stock for the Jubilee Day holiday so the local press lamented that the most had to be made of one first class, two second class carriages while the six D trucks would be prepared for passenger accommodation.

The first passenger train departed from Wollongong to Clifton at 7am on that gala day, Tuesday 21 June 1887. The normal timetable provided for two trains each way per day between Wollongong and Clifton with an additional trip on Wednesdays and Saturdays. On Jubilee Day five trips were made to Clifton

with an additional run for school children as far as Bulli during the afternoon. F. Woodward, MP performed the opening ceremonies.

The opening day fares were adults 1/- (10¢) and children 6d (5¢) return. The normal fares were adults first class single 3/- (30¢), 2nd class single 2/- (20¢) which *The Mercury* reporter felt were '50% too high'.

Contemporary reports reveal that over 7,000 people participated in the Jubilee Day and railway opening ceremonies in Wollongong.

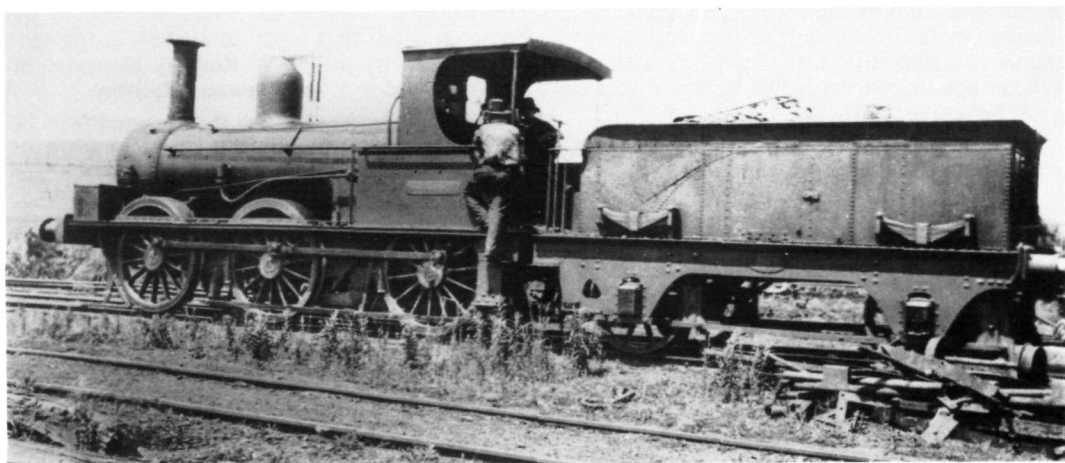
On 23 June 1887 *The Mercury* reported that only four carriages were available during the greater part of Jubilee Day. During that afternoon two more were landed from the S.S. *Kurrara* and used in the service. The crowd was so great that these additional cars did not seem to have any effect in relieving the crush!

The entry of these two carriages into service must have required a major effort. Delivery of the government rolling stock was made on the Mt. Keira Colliery railway between Wollongong Harbour and the Government line crossing at the Gas Works. A physical connection was not constructed at that location until 1890 so all rolling stock transfers were made at the crossing by jacking and slewing. This transfer would have been carried out amidst a very busy main line traffic schedule, on Jubilee Day.



Spectators gather on Garden Hill (Hospital Hill) at Wollongong to view the opening day railway service between Wollongong and Clifton on Jubilee Day, 21 June 1887.

LATE C. B. THOMAS COLLECTION



0-6-0 Beyer Peacock locomotive "Gladstone". This contractor's locomotive hauled passenger trains on the opening day of the Illawarra railway, 21 June 1887.

LATE G. H. EARDLEY

The *Mercury* reporter continued that the Government Railway locomotive was on strike all day (on Jubilee Day). It arrived at Wollongong only a day or two ago and on the afternoon of the 20 June was found useless until different injectors could be obtained from Sydney. These arrived overland on the afternoon of Jubilee Day. Mr. Logan fortunately placed his locomotive *Gladstone* (Beyer Peacock 1585 of 1875) at the disposal of the railway authorities and this provided the Clifton service. One of the two Mt. Keira Colliery locomotives operated a return trip to Dapto and Marshall Mount Road (Yallah) on the Wollongong to Shellharbour contract being constructed by Mr. Logan. Passengers were accommodated in Logan's open contractors wagons.

The Mt. Kembla Coal Company provided their locomotive and passenger carriage and, with additional seats made available on contractors wagons, a branch line train was run between Mt. Kembla, American Creek and Wollongong.

By mid July the patronage on the Illawarra railway between Wollongong and Clifton amounted to 113 first class and 344 second class passengers for the week.

The identity of the government engine which arrived at Wollongong on 15 June 1887 has been cloaked in mystery, but it appears that this was the rejected Sydney steam tramway motor *John Bull*. This unit was built by Beyer Peacock of Manchester (2464 of 1885) to the Wilkinson design. Compared with the standard American Baldwin steam motors in

Sydney it was a failure. The fuel consumption was higher, the exhaust arrangements restricted performance and the top speed proved unsatisfactory.

The railway authorities continued to use *Gladstone* for the main trips between Wollongong and Clifton but on 23 June 1887 this engine collided with Mt. Pleasant Colliery locomotive *Illawarra No. 2* on the North Wollongong crossing. *Gladstone* was not available for service again until 25 July 1887.

In the meantime steam motor *John Bull* struggled with the service. The contractor Messrs. Monie and Coy completed the track-work between Albion Park and North Kiama during early July 1887 and on 13 August *The Mercury* expressed fears about *John Bull*.

"It behoves the people to be up and doing. The engine at present in use between Clifton and Wollongong should be entirely abandoned and two new and more suitable locomotives substituted. Those who travel to Clifton must have noticed that *John Bull* has to take water, not only on the outward journey but also on the return journey. On the trip to (North) Kiama it would never do to waste five minutes about every eight or ten miles taking water . . ."

The locomotive used by Monie and Company was *Bogan*, an 0-6-0 tender loco (Beyer Peacock 2072 of 1881) of the NSWGR A93 or later Z19 class. This hauled 1,500 adults and children from Bombo to Albion Park on 14 September 1887 on a picnic excursion. With the completion of the North Kiama contract

Bogan was purchased by the NSWGR on 2 November 1887 and used as the main motive power on the Illawarra Railway with the official opening of the North Kiama extension on 9 November 1887.

By that stage the total rolling stock on the isolated Illawarra Railway amounted to:—

- 2 locomotives
- 2 first class cars
- 4 second class cars
- 2 brake vans
- 1 cattle truck
- 1 fruit van
- 5 goods trucks (D type)

With the completion of the long Coalcliff tunnel, Illawarra trains were extended northwards from Clifton to Coalcliff from 23 July 1888. The first through train between Sydney and Wollongong worked through the Otford tunnel on 17 September 1888 and the Sydney to North Kiama railway was officially opened

for through working on 3 October 1888. This date, and not that of 21 June 1887, is the one recognised by the NSW Railway Department as the opening of the Illawarra Railway.

It is interesting to relate the eventual fates of the locomotives involved in the operation of the Illawarra railway during its isolated period:—

Gladstone Beyer Peacock 1585 of 1875. 0-6-0 tender loco. Seized by Mt. Kembla Colliery at Logan's quarry Unanderra in 1888 to cover alleged debts. Worked on the Mt. Kembla to Port Kembla colliery railway until 1936. Sold for scrap during September 1940.

Keira No. 1 and 2. Nasmyth Wilson 198 and 199 of 1878. 0-6-0 tank locos. Arrived at Wollongong Harbour February 1879. Worked the Mt. Keira Colliery railway until its closure on 5 November 1954. Both identical locos cut up for scrap during January 1955.



Beyer Peacock tram motor "John Bull" steaming along the Promenade tramway at Blackpool on 29 September 1985.

M. R. TAPLIN

Bogan Beyer Peacock 2072 of 1881. 0-6-0 tender loco. Bought by NSWGR from Monie and Company 2 November 1887. Used as the main motive power on the Illawarra Railway until 17 September 1888. Became NSWGR No. 386. Renumbered Z19 1958 in 1924. Used on the A I & S steelworks railway at Port Kembla at various times between 1939 and 1959. Withdrawn from NSWGR service in August 1961. Scrapped March 1964.

Port Kembla/Mount Kembla. Black Hawthorn locos 548 of 1881 and 682 of 1883. 0-4-0 saddle tank locos. One of these was used to carry passengers from Mt. Kembla to Wollongong on Jubilee Day 21 June 1887. *Port Kembla* withdrawn from Mt. Kembla Colliery railway and scrapped during 1932. *Mount Kembla* withdrawn after 1932, sold for scrap September 1940.

John Bull. Beyer Peacock 2464 of 1885. 0-4-0 tram motor. Wilkinson pattern. Arrived

at Sydney in 1886 on approval for comparison with Baldwin tram motors. This unit was unsuccessful so transferred to Wollongong, possibly on 15 June 1887. Used on Illawarra Railway until September 1888. Believed then used at Metropolitan Colliery, Helensburgh. Returned to Beyer Peacock plant at Manchester 1889 where it was used as works shunter No. 2.

This tram engine was received at National Tramway Museum, Crich, U.K. on 19 May 1962.

Operated in steam at Blackpool during the centenary celebrations of that town's tramways on 29 September 1985.

It is perhaps ironic that the only locomotive which played a part in the early days of the Illawarra Railway and which has been preserved, is the unsuccessful and unpopular tram motor *John Bull*.

HERE AND THERE

NEWS ITEMS OF INTEREST FROM ALL OVER

New Light Rail System for Kuala Lumpur

An Australian consortium backed by the Australian Trade Commission has won the project management contract for building the \$60 million first stage of the Kuala Lumpur Metrolink Light Rail System.

The consortium comprises prominent transportation consultants Pak Poy & Kneebone of Adelaide and Econsult of Sydney with John Holland as the construction manager and the Metropolitan Transit Authority of Victoria as the technical and operational adviser.

Unlike most tramway systems Metrolink will be a totally private sector enterprise with capitalisation, management and operation all at commercial risk.

The value of the project management contract represents over \$8 million within Australia's packaged offer of light rail goods and services for the first stage of the Metrolink which will convert little used suburban rail lines and empty city property in eastern Kuala Lumpur into a modern electric light rail system with associated building developments.

About half of the Australian content is represented by the light rail vehicles which will be similar to Melbourne's latest articulated tram. The LRV's are to be built by Comeng, will be fully airconditioned and will run on metre gauge tracks.

Adelaide Restores the Good Old Days

The State Transport Authority of South Australia has rebuilt and upgraded 58-year-old Glenelg H car 361 as the prototype for restoring several trams to 'better-than-new' condition.

The decision to rebuild Adelaide's historic H cars, both a popular tourist attraction and a commuter necessity, will defer the need to purchase new vehicles at three times the cost.

STA Chief Mechanical Engineer H. K. Ng said the STA considered three options for the Glenelg trams: new vehicles, rebuilding existing trams with new technology, or a minimum rehabilitation.

The chosen solution is somewhere between options 2 and 3. It involves refurbishing and

minor upgrading without any new traction technology to gain at least ten years additional service.

In addition to improving operation safety for staff and passengers the restoration programme aims at upgrading the bodywork to reduce maintenance and better resist the weather while keeping the appearance as original as possible.

During the rebuild each tram is completely stripped of all mechanical and electrical components.

The exterior and interior panels are removed enabling any rotten or deteriorating timber to be replaced.

All exterior panels and the roof are replaced with fibreglass and the reconditioned interior panels replaced after clear-coating with polyester.

The main frames, which tend to droop with age at each end, are strengthened and straightened.

All mechanical and electrical components are checked, repaired or overhauled as necessary.

Passengers boarding or alighting will be protected by interlocks which prevent the tram from moving while any weight rests on sensitive mats covering the steps.

All control and lighting circuits, other than traction control circuits, have been changed from 600V dc to 24V dc to increase safety to all personnel and enable standard components to be used.

Fluorescent lighting has been installed and standby lighting is provided for passenger security during a blackout.

Headlights have been upgraded and tail lights incorporating stop and flashing warning lights have been provided.

An automatic spring-applied parking brake has been installed which is more reliable and effective than the existing manual unit.

Automatic brake slack adjusters have been installed in place of the existing manual adjustment facility providing consistent braking characteristics and reduced maintenance.

Roller bearings have replaced the original journal bearings and much harder wearing plates are used on bogie horns and axle boxes.

The work is being carried out by the STA at their Regency Park Workshops. Car 358 is expected to be completed shortly, with 357 to follow.



Motorman's cabin of refurbished H car 361 (ex 363) showing the electrical console containing speedo, digital clock and light, as well as windscreen wiper, door, point selection and pantograph adjustment switches.

JOHN RADCLIFFE

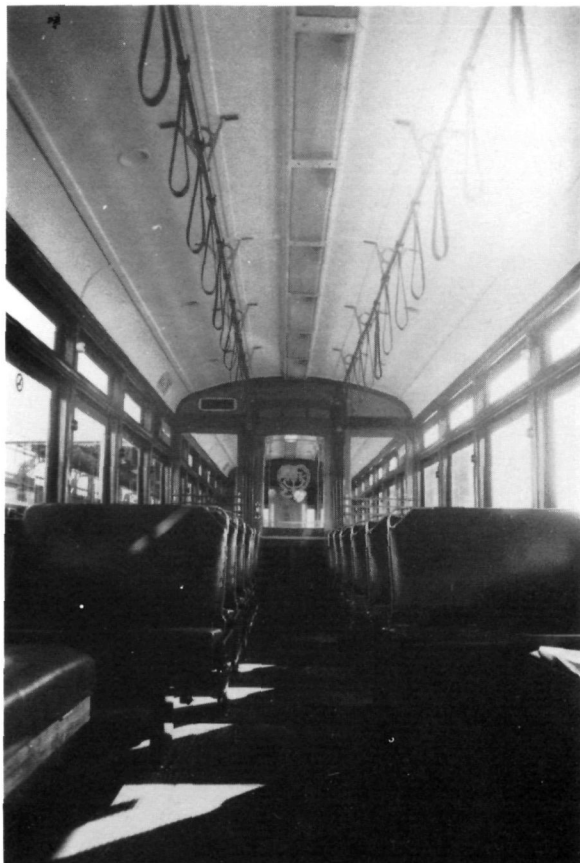
The main changes are summarised as follows:

- The small fixed hopper windows above the saloon windows have been positioned in the vertical position instead of the 30 degree angle previously.
- Roof is fibreglass and repainted in near the original 'Dirty Orange', as is the pantograph. The colour samples were supplied by the AETM.
- 'Once only' passenger stop buzzers fitted, similar to those on STA buses.
- 'Car stopping' indicators installed on the left hand upper bulkhead when facing the direction of travel, similar to those on buses.

- 'Continuous' communication buzzers fitted for conductor's use only.
- Single line of interior fluorescent lights fitted.
- Fluorescent lights fitted to end destination boxes.
- Motorman's bulkhead panels dished and repositioned back four inches to provide more leg room. The back panel above the motorman's seats has been padded.
- Improved ventilation in the motorman's cabs through vents which replace the small windows next to the destination boxes. The front windows no longer open.
- 24 volt bus type headlights fitted.
- Standard MAN bus tail-light assemblies, including hazard lights, fitted alongside headlights.

Interior view of H361 showing the fluorescent lighting and the 'car stopping' indicator mounted above the left window of the bulkhead.

JOHN RADCLIFFE



- Electric windscreen wipers replace air operated wipers.
- Motorman's electrical console fitted containing speedo, digital clock, and switches for lights, windscreen wiper, doors, depot point selection and pantograph adjustment.
- Handbrake wheel removed and replaced with spring loaded parking brake fitted to the underframe.
- All electric door interlocking system replaces air cocks and piping.
- Key switch indication light fitted on apron under the kerbside motorman's cab window; a small amber light which lights up if car has to be driven on key switch to override the door interlock.
- STA logo on side panels replaces the old MTT logo which had continued to be used on previous refurbishment programmes.

Extensive testing and driver training is to be carried out before the car enters regular passenger service.

All 21 cars are to receive modified trucks with roller bearings. Five trams have so far been fitted. It takes about four weeks for a set of trucks to be reconditioned and fitted with the new bearings and this work is being carried out by an Adelaide engineering firm.

Trolley poles and bases have been completely removed from all cars, with cars 367-368 being the last cars to carry them.

Other Adelaide News

Track replacement continues in a number of small areas not included in the recent major track relay programme.

Converter Station No. 18 inside the former City Depot has now been completely shut down, its place being taken by the new lineside transportable station west of Greenhill Road (Bartley Crescent).

Errata and Corrigenda

May 1987 Issue

Page 14: The second sentence should read as follows:

"Mr. McAuliffe's horses were never known to knock up on a trip. He found that corn was better than oats for stamina and horses of this nature hauled their vehicles and loads to Wallsend Racecourse."

Page 31:

"Metropolitan Tramways Trust" should read "Municipal Tramways Trust".

Bundoora Extension Opens

Melbourne's newest tramline, the 3km extension from Latrobe University (Kingsbury Drive) to Bundoora (McLeans Road) was officially opened on Thursday 23 April 1987. The programme began at 10.30am with speeches by the Transport Minister, Mr Tom Roper and the Victorian Premier, Mr John Cain. The Premier declared the new tramline open and drove Z3 class tram 224 through a large paper banner. Mr Cain then drove the official guests in tram 224 along the new extension to the terminus where more speeches were made and a commemorative plaque unveiled.

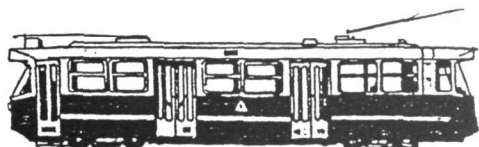
Car 224 was followed by car 229 conveying interested members of the public.

The new terminal arrangements enable passengers to transfer to buses without crossing traffic lanes; buses use special interchange lanes on either side of the terminus.

A free shuttle service operated from Kingsbury Drive to the new terminus from 7.30am to 6.30pm. The first revenue car entered service on the new line on Sunday morning, 26 April.

The cost of this third and final stage of Melbourne's newest tramline cost \$12 million and also involved \$16 million worth of roadworks. Fifteen passenger shelters have also been erected along the new route.





Opposite top: Premier Cain declares the new extension open.

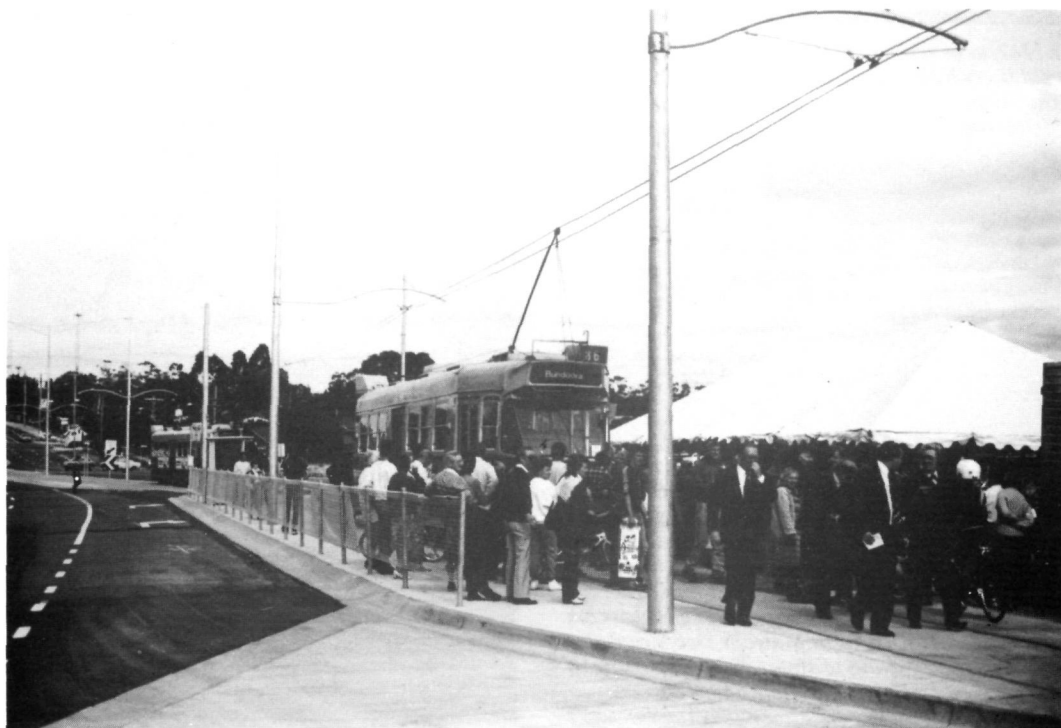
Opposite lower left: The paper banner stretched across the track.

Opposite lower right: John Cain at the controls of 224 after breaking through the banner to mark the opening of the extension.

Right: Car 224 arriving at Bundoora. The Premier drove 224 the full 3 km length of the new line.

Below: The scene at the terminus. The southbound bus interchange lanes are on the left. The refreshment marquee occupies the northbound bus lane. Car 224 has been readied for the return journey and car 229 is arriving in the background.

ALL PHOTOS DALE BUDD





L1162, to be restored to the original proud blue and gold livery by ElecRail, and the vintage Tait train at Traralgon, the eastern end of the wires, 158 km from Melbourne on 30 May 1987.

JOHN DARE

Trackwork in progress in Melbourne. New double curves are being installed around the south-east corner of Glenferrie Road and High Street, Malvern. This view is looking west down High Street. These new curves were installed over the weekend of 2/3 May 1987 and enable cars running to Glen Iris from Malvern Depot and vice versa, to avoid having to shunt on the crossover in High Street, west of Glenferrie Road.

PETER DUCKETT



Rockhampton

At the March 1987 Steam Tram Sub-Committee Meeting, a critical time path was presented which aims at conducting the initial steam trials of the reconstructed Purrey steam tram during January 1988 and holding the recommissioning ceremony on 5 June 1988. This will be 49 years to the month when steam trams last operated on Rockhampton streets!

As mentioned in the previous report, 1987 is the year when the major components of the reconstructed tram body, chassis, engine unit and boiler will be assembled.

During November 1986 the main engine casting was transported from Fidax Foundry in Sydney. Since then the machining of the main engine casting has been completed by Central Queensland Fabrications while the bearings and eccentrics have been machined by Central Queensland Cement Coy. W. Ohls and Sons of Maryborough (Q) were working on the manufacture of valves, pistons, rods etc. for this engine unit during March.

At the same time patterns had been prepared of the reversing shaft brackets and brake ratchets and these were in the hands of W. Ohls for the manufacture of castings.

The water tube boiler construction has been progressing at Burns and Twigg. By March two council employees were engaged in this part of the project and the fitting of boiler tubes was

progressing. The TAFE College had welded the top header tank and this was in the process of being tested at Gladstone.

An Open Day for public inspection of the project was conducted on 28 February. The opportunity was taken on this occasion to award Community Support Certificates to firms and individuals who have contributed so far to the success of the project.

On 2 March 1987 an order was placed with Reynold Australia Pty. Ltd. for the supply of two 30 teeth sprockets and two 18 teeth sprockets for the chain drive between the engine unit crankshaft and the wheels.

The estimated total cost of the project amounts to \$142,500 of which \$97,299 has already been expended. To 3 March grants and donations (both in cash and labour) had reached \$71,203 while a large donation of \$20,000 pledged by "The Morning Bulletin" will assist the project in a major way.

Various options as to where the tram will operate permanently in Rockhampton are still being investigated. The official opening, however, will be held on the railway track situated in Denison Street.

Mrs. Claude Fogarty of the France-Australia Association has prepared a brochure on the project and this was being distributed in France to promote the Purrey Steam Tram Restoration Project.



Purrey steam tram 6 in East Street crossing the Fitzroy Street intersection bound for Showgrounds, circa 1938.

PUFFING BILLY PRESERVATION SOCIETY ARCHIVES

Skitube to Open in July

The first section of Australia's first rack railway was expected to open in July. The 8.5km line is located in the Snowy Mountains in southern New South Wales and commences below the snow line at Bullocks Terminal in the Thredbo Valley.

After some 2.7km of surface operation, the railway climbs at 12.5% (1 in 8) through a 3.3km tunnel to an underground station at Perisher Valley ski resort. It then continues underground, with more climbing at 12.5%, for a further 2.5km to a terminus at the new Blue Cow ski field, 780 metres above Bullocks Terminal. The total running time is 15 minutes.

The railway has been built for the Skitube Joint Venture, comprised of Transfield, Kumagai and Bilston Welding Engineers Pty Ltd. The principal contractor has been a consortium of SLM, Brown Boveri and Comeng.

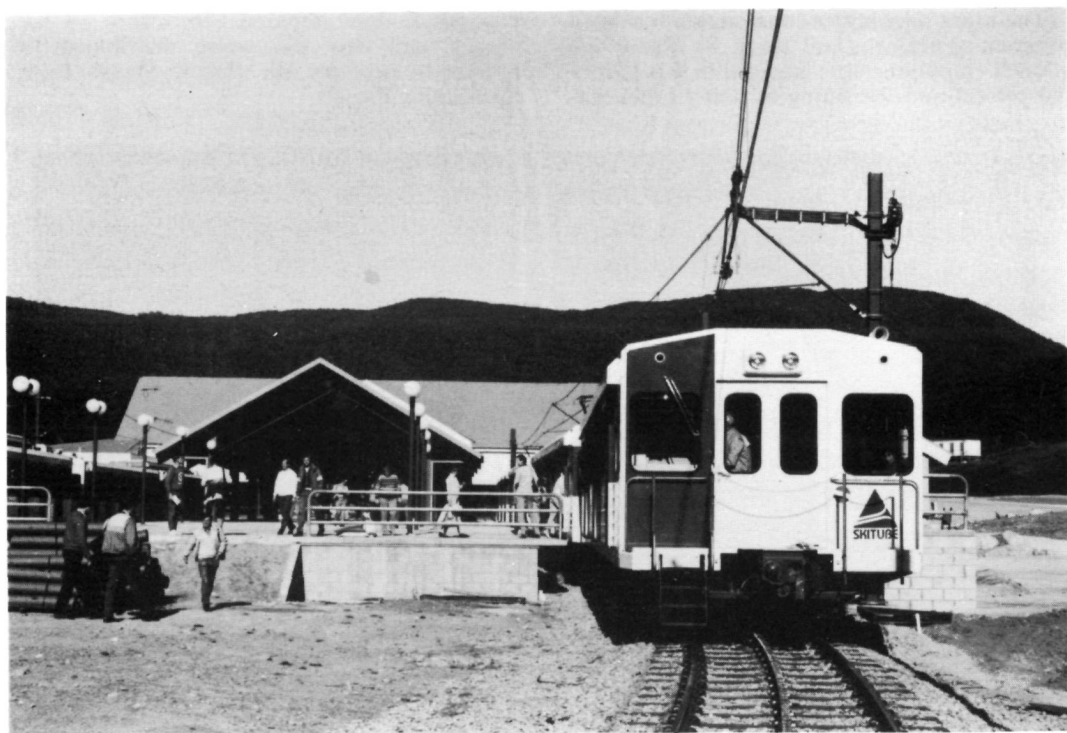
Adhesion is by a Von Roll rack, and power is supplied by catenary at 1500 volts dc. The rails used are second-hand 60lb rail, recovered from the Narrandera area. The rails are in

perfect condition and show no signs of wear. They were rolled in Sheffield between 1881 and 1883, and are thus more than 100 years old. They are thermit welded before being laid on steel sleepers at the Skitube.

The line's four motor cars, three intermediate trailers and four driving trailers are believed to be the world's widest passenger cars, at 3.8m. Two 4-wheel wagons, will carry containerised freight to Blue Cow, to which the Skitube is the sole means of access. The two wagons are based on former SRA of NSW S trucks modified and built out to the same width as the passenger cars.

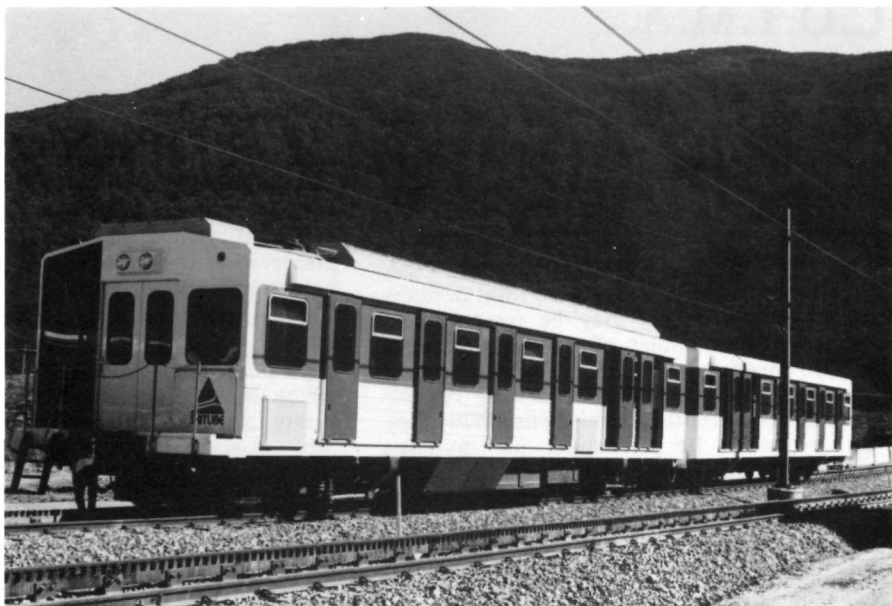
Initially, trains of up to four cars will carry 3175 passengers per hour on the single track line with (initially) two loops. Later, 8-car trains will be used and an extra mid-tunnel crossing loop will be opened.

The initial section to Perisher Valley is being commissioned some 13 months behind schedule as a result of unexpected tunnelling difficulties. The extension to Blue Cow will follow shortly after. The line is opening in the midst of the ski season and will operate all year round.



Scene at Bullocks Terminal in the Thredbo Valley. The extreme width of the cars is evident in this view and gives the cars a squat appearance.

DALE BUDD



A 2-car skitube train near Bullocks Terminal during an ARHS inspection of the line on 26 April 1987. The cars are painted in a red and white livery.

DALE BUDD



An unusual working occurred at Victor Harbor on 8 March 1987 to mark a visit by the Australian Railway Historical Society to the horse tramway. Cars 2 and 3 were coupled together and pulled by two horses in single file. The photo shows the trams leaving the Granite Island terminus. Note that car 3 differs from car 2 (and 1) by having bars instead of decency panels on the upper deck. Is this operation multiple unit, direct control or simply double heading?

DOUG COLQUHOUN

C.O.T.M.A.



Council of Tramway Museums of Australasia

From Bill Kingsley, Executive Officer

Those folk who were at the COTMA Conference in Adelaide last year (and perhaps many who were not) may be interested to know that the Minutes of our very energetic Council Meeting held at that Conference have now been circulated to all Museums. Far too voluminous to reproduce in *Trolley Wire*, they can probably be borrowed for studious contemplation from your local tramway museum secretary or COTMA delegate. Keith Kings is the author and we thank Keith for his scholastic effort.

A revised co-ordinated list of requests for complete vehicles has been sent to the Metropolitan Transit Authority in Melbourne. It is very satisfying to be able to report that, with the excellent co-operation of the museums, no tramcar has more than one

applicant. Some tramcars are required for preservation by the MTA itself, so our needs have been dovetailed around these.

Following a request from COTMA, the MTA have offered through us to the museums some nine 'Bundy' clocks. These are the clocks which have long adorned many Melbourne safety zone or kerbside and record the time of passing of a tram or bus when a special key is 'punched' into them. Distribution of these clocks to museums will have been determined by the time that you read this report.

COTMA continues to express its great appreciation of the sincere helpfulness of Mr Kevin Shea, Managing Director of the MTA, and of the eager assistance of his Officers, in supporting the Australasian tramway museum movement in so many and diverse ways.

BALLARAT . . .

Ballarat Tramway Preservation Society



Cable Car Set

The cable tram set, comprising Newton Williams' replica grip car and Daryl Hawksworth's restored cable trailer, operated again on Wendouree Parade on Easter Sunday. Heavy rain prevented the set from running until 3 pm, but 156 people rode the set on five trips. This was more than the number of passengers carried on the electric car for the entire day. The cable car ran between the Gardens Loop and the depot fan, as was done during the Begonia Festival in March.

The trailer has now been returned to its home at Daryl Hawksworth's hotel at Blampied, while the grip car resides in our depot.

Horse Tram No. 1

The horse tram has been dismantled. Due to the poor condition of the underframe and

rocker panels, the lower framing of the tram will be completely rebuilt. A new underframe has been constructed on the truck of a cable tram trailer and end platforms attached. New corner posts will also be made for the rebuilding.

Meanwhile the roof, side panels, window frames and shutters have been stored pending their refurbishing ready for use in the rebuilding of No. 1. Back-to-back seating has been built for eventual installation on the top deck.

An appeal was conducted last year to acquire funds for this restoration job and although not obtaining the amount we would have liked, several companies are assisting the Society in the restoration.

These companies include Telecom Australia, Coles Myer Ltd., Haymes Paints, Hospi-

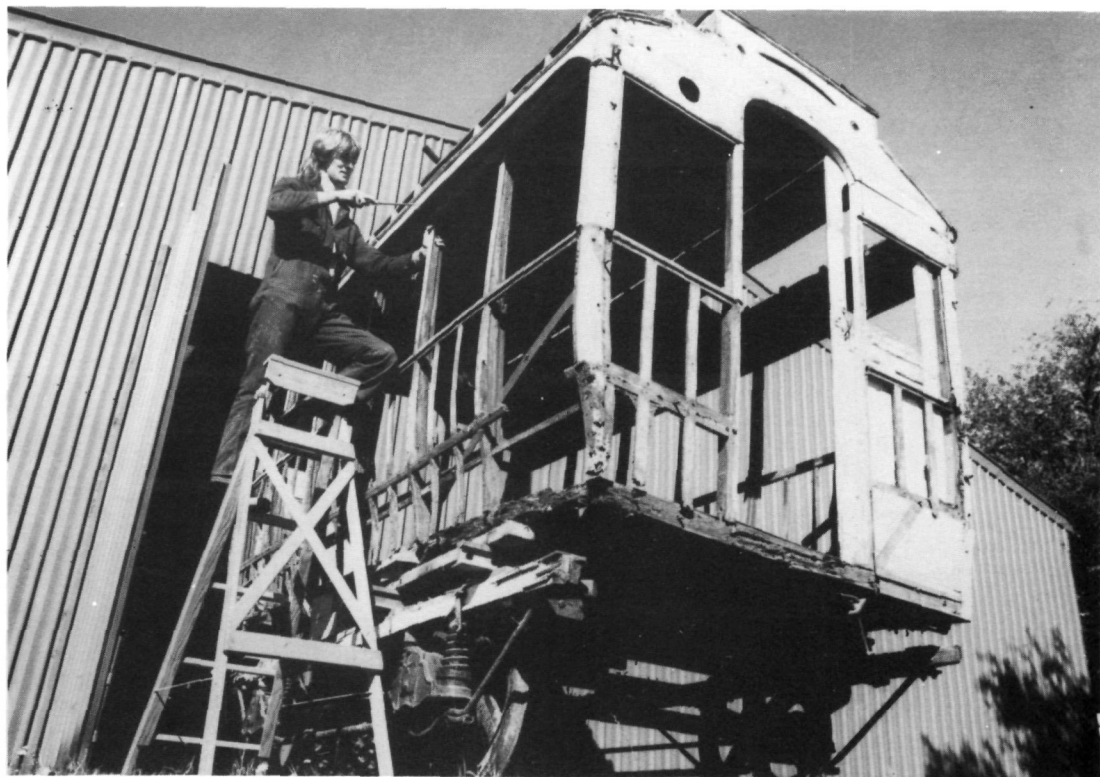


tal Benefits Association, ANZ Bank, Bendix Mintex and the Ian Potter Foundation. The Society appreciates the assistance of these companies in this important restoration project.

December 1987 marks not only the centenary of Horse Tram No. 1 but also the Ballarat Tramways and marks a significant point for the Society. The restoration team are working towards having the horse tram ready to help celebrate the occasion.

Cars 661, 27 and 40 operating services in Wendouree Parade.

BOB MERCHANT

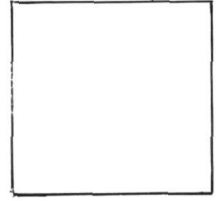


Gary Wood works on the dismantling of horse tram No. 1.

COURTESY "BALLARAT COURIER"

BENDIGO

THE BENDIGO TRUST



A baby tram — No. 10 — is the newest addition to the Bendigo Trust's fleet. No.10 is approximately four metres long and 1.5 metres wide. It is mounted on a 'Mini' sub-frame with 'Mini' wheels and tyres assembled to resemble a four-wheel tramcar truck.

Little No. 10 was originally built for a Melbourne service club raffle and was designed from a postcard of a Bendigo tram. The raffle winner had no use for a pint sized tram and subsequently donated it to the Berry

Street Babies Home in Melbourne. For three years kids climbed over it, under it and through it, until it became so damaged that the home decided to dispose of it.

It was brought to Bendigo by Bendigo Trust members where, after many hours of restoration work, it was returned to its former glory. No.10 appeared successfully in the Easter street processions this year and it is envisaged that the 'tram' will be used in promotional activities for Bendigo and our trams.



Bendigo Trust motorman Dennis Bell poses with No. 10 in the Bendigo depot yard.



The Bendigo Trust's latest acquisition "No. 10" taking part in the Easter Parade on Saturday, 18 April 1987.



Five restored Birney cars! Newly commissioned No. 11, carrying the American flag in recognition of the country of its builder, J.G. Brill, leads sister cars 15, 30, 302 (ex 29) and 28 along Arnold Street on 12 December 1986.

E. EWERS

PARRAMATTA PARK . . .



Steam Tram and Railway Preservation Society

Restoration of Steam Tram Motor 103A

Society members gathered at the tram depot on Saturday, 14 February to welcome our local Federal Member of Parliament (and Minister for Tourism), the Hon. John Brown. The Minister presented Society Chairman Frank Millier with the first instalment cheque of £25000 as a part of a Bicentenary restoration grant to restore the steam motor 103A.

On 28 January the motor was transported to the New South Wales Rail Transport Museum's workshop at Thirlmere. The RTM will undertake the overhaul of the steam motor. As at the end of March the body had been removed and the water tank lifted off, preparatory to further work. At the same time the Society's spare tram boiler was also moved to Thirlmere. This boiler will replace that on the motor.

KA 778

The Society and its guests were in attendance at the State Rail Authority's

Apprentice Training College at Chullora on Thursday 30 April for a special ceremony to mark the completion of the restoration of the KA class tramcar and its handing-back to the Society.

The car was originally built by Hudson Bros. in 1891 as No. 141. Subsequently re-numbered 778, the car was used at Yass, operating between Yass Junction and Yass Town. The car ended its days being used for various purposes, the last being the 'Office of the Steam Shed Inspector' at Cootamundra.

The Society received KA 778 from this location on 9 March 1972 and it was stored at Parramatta Park until transferred to the Apprentice Training College on 17 March 1981.

KA 778 was returned to the tramway on 1 May last.

To the assistance of the officers and apprentices at the College, thank you for a really splendid job.



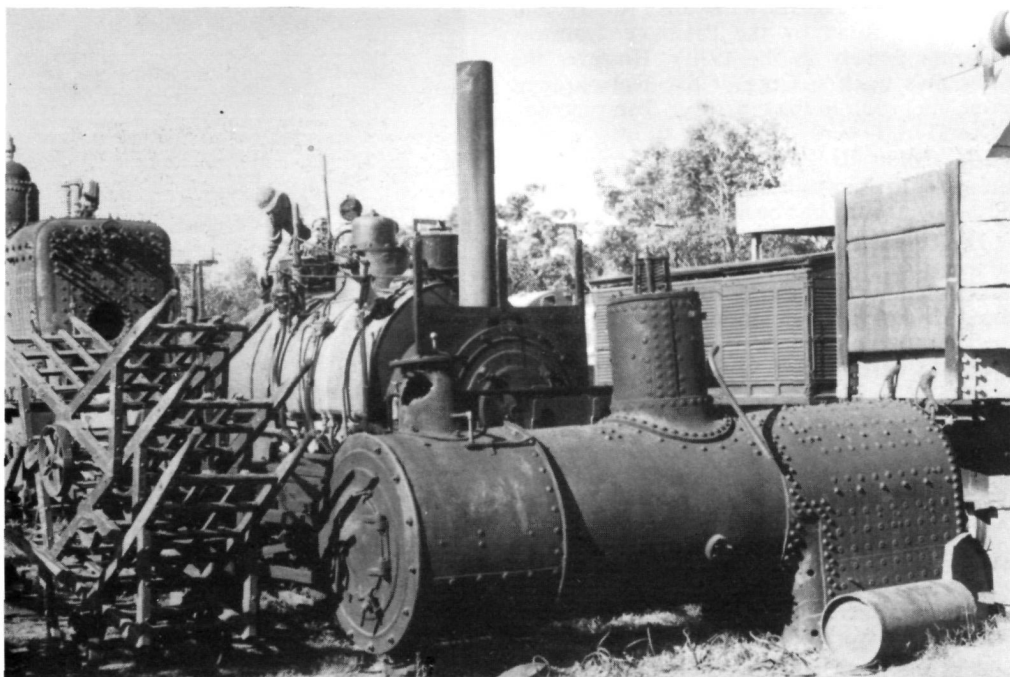
The Hon John Brown presents the first instalment cheque to Society Chairman Frank Millier for the Bicentennial grant to assist the restoration of motor 103A. Also present was Parramatta City Council Alderman Chris Worthington.

PETER STOCK



A view of the hand-over ceremony at the SRA/UTA Apprentice Training College at Chullora. Deputy Chairman Frank Moag is describing the history of the car to the audience.

PETER STOCK



The spare steam tram boiler at the Rail Transport Museum, Thirlmere on 30 March 1987. The motor 103A, minus cabin and other embellishments, is behind. Deputy Chairman Frank Moag is seen dismantling operating controls prior to lifting off the saddle tank.

FRANK MILLIER

FERNY GROVE . .



Brisbane Tramway Museum Society

In the last six months work at Ferny Grove has concentrated on the inner terminus area of the Museum's future right-of-way through the park site that surrounds the Museum. As usual, the extensions to the permanent way have been laid in mass concrete in accordance with the original specifications of the Brisbane City Council's Tramway Department. The Brisbane tramway system pioneered the use of mass concrete for trackwork and it is thus an appropriate method of construction for the Museum to use.

On 7 March 1987, the Lord Mayor of Brisbane, Sallyann Atkinson, opened the new track extensions. The inner terminus track extensions total 120 metres of track and consist of a double track terminus, together with a left-hand crossover. The crossover was removed from the Salisbury line at the corner of Compo Road (now Evans Road) and Beaudesert Road by the Brisbane Tramway Museum Society in the 1970's. However the Museum's track spacing of five feet required some alteration to the crossover. Two pieces of grooved rail were curved to fit the special work. Naturally, all the new track has sufficient tie-bars to hold it in gauge. Drainage of the pointwork has been catered for.

The crossover special work was laid in mass concrete in a single pour, which totalled 42 cubic metres of concrete with a strength of 25 megapascals. The remainder of the new track work was set in concrete as well, but the size of the pours were smaller.

With the track laid in concrete, work could recommence on the overhead. Installation of the trolley wires and the depot branch line curve were completed a matter of days before the Lord Mayor's visit.

At the same time as the track and overhead were being built, considerable landscaping was underway. As the terminus area is intended to recreate a typical Brisbane street of the 1940's work on the kerbing, channelling and footpath was incorporated into the busy works schedule. The Museum was fortunate to acquire from the City Council surplus porphyry channel stones, which were recut by the Museum, to be used as stone kerbing along the street. A concrete footpath was constructed



Member Sel Churchward makes a few fine adjustments on the recently re-erected overhead in the depot curve utilising International tower wagon No. 1.

TIM ATHERTON



The Lord Mayor of Brisbane, Alderman Sally-Ann Atkinson, addresses invited guests, members and their families from the front platform of ten-bench 65 during the opening of the new terminus area on 7 March 1987.

TROY THOMAS



Appropriately wearing a foreign legion cap, the Lord Mayor tries the controls of 65 closely watched by Museum President Tim Atherton and Vice-President Peter Burden.

TROY THOMAS

from the front gate, around the Valley signal cabin up to the terminus area, a distance of 85 metres. The area has been turfed and a line of palm trees planted along the footpath to our 'street'. Ultimately the space between kerbstones and the track will be sealed in bitumen.

Street furniture includes the terminus waiting shed, tram stop post, bus stop post, Electricity Authority junction box and "Hail Trams Here" sign.

Other work undertaken before the Lord Mayor's visit included the repainting of the old caretaker's cottage and the Valley signal cabin. The waiting shed at the terminus requires cladding and its seat before it will be complete.

Crossbench car 65 was used as the official car for the opening ceremony. Speeches were made from the driver's platform by the Lord Mayor and by Society President Tim Atherton. The Lord Mayor then cut a blue ribbon

stretched across the track. The official party boarded the tram and were conveyed to No.1 Depot where morning tea was served.

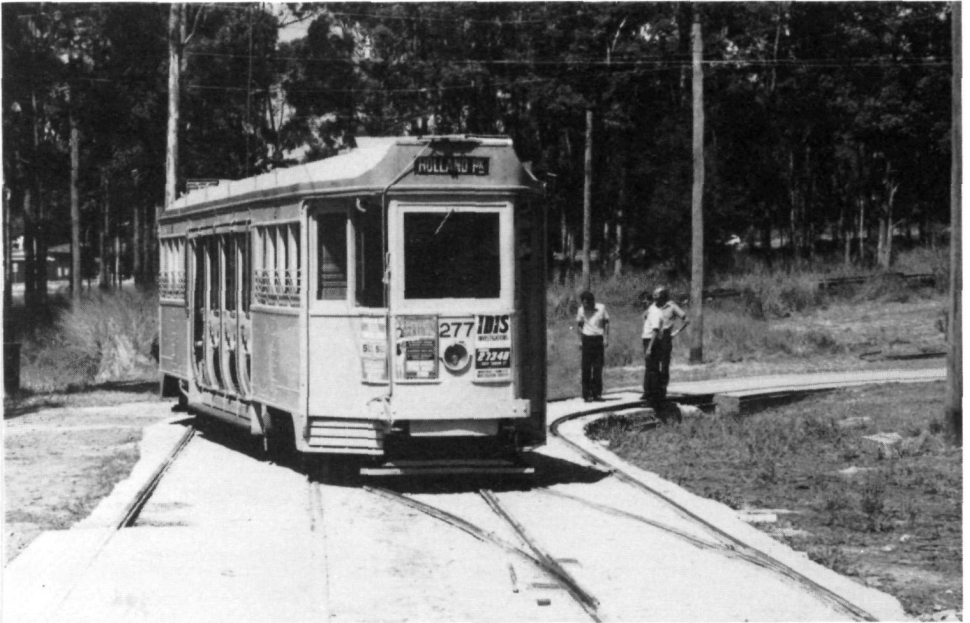
The Brisbane City Council recently announced the construction of a three lane bus tunnel under Queen Street, to be incorporated into the extensions to the Queen Street Mall and the new Myer Centre. Queen Street between Albert Street and George Street was closed to traffic and the old tram tracks were lifted in early April. Frantic negotiations between the Museum Society and the contractors resulted in the Museum being allowed to cut up the rail at the scrapyard to retrieve the steel sleepers and rail clips in return for an equivalent amount of scrap steel from the Museum. Queen Street was relaid in mass concrete in 1933 and was due for relaying in the late 1960's. Although the railhead was terribly worn, when torn up the sleepers and the web of the rail were found to be in very good condition.



The Lord Mayor cuts the ribbon to open the Museum terminus area extensions on 7 March 1987.

IAN MARTIN

**COTMA CONFERENCE — SYDNEY 1988
TO BE HELD AT CREST HOTEL — 2 TO 5 SEPTEMBER 1988**



Drop-centre 277 sits on the new crossover at the Museum entrance in the terminus area. The track up to the depots swings off to the right while the park line, now under construction, will run through the trees in the background.

TIM ATHERTON



Later in the day the complete operational fleet was lined up in the new terminus for members' photographs. This view looking towards the front gate shows the new waiting shed, porphory stone kerbing and the entrance footpath. In the near future the roadway will be bitumen surfaced.

TROY THOMAS



Dropcentre 277 waits for passengers at the new terminus on 5 April 1987.

TROY THOMAS



Full public operation has commenced to the new terminus. Glen Thorley prepares to change ends as museum guests rush to grab the best seats on ten-bench car 65.

TROY THOMAS

BYLANDS . . .



Tramway Museum Society of Victoria

W1 427

As readers will recall, the TMSV took delivery of W2 427 in October 1985. The Society's car committee recommended that, as 427 was the best of the early W1 cars left in the MTA fleet it was the ideal candidate for eventual conversion back to a W1.

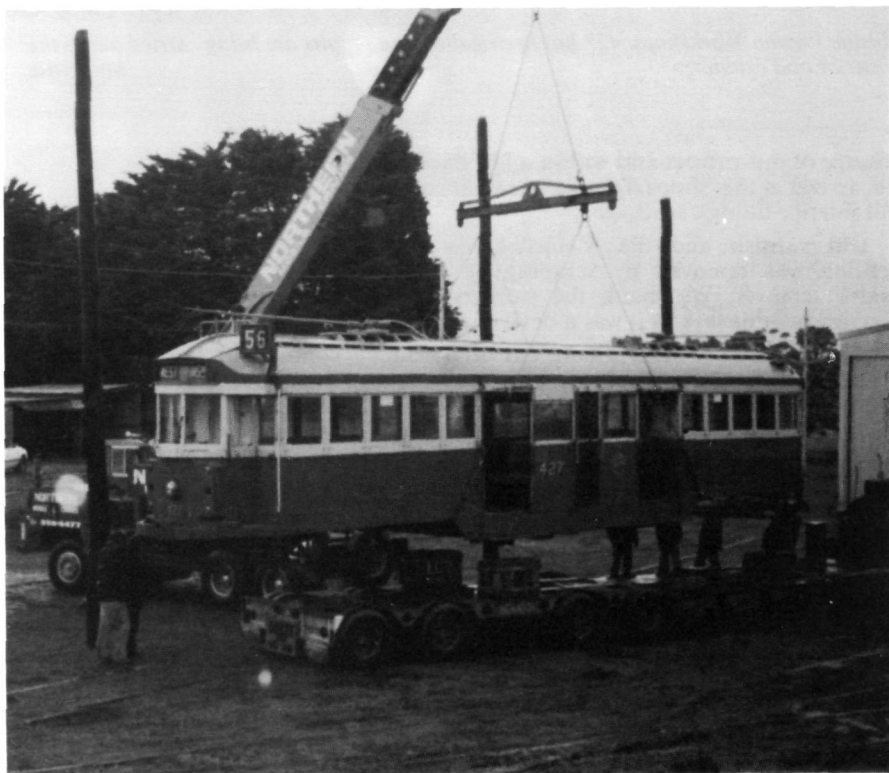
W1 427 was built by Preston Workshops in 1927 and converted to W2 class ten years later.

W2 427 entered service at the Bylands site and it was during this period that the Society's General Manager, Andy Hall conceived the idea of approaching the MTA Board with the proposal that W2 427 be restored to its W1 condition by Preston Workshops.

To everybody's delight the MTA Board agreed that the conversion would be an excellent project. It is here we offer our most grateful thanks to Mr Kevin Shea, Managing Director of the MTA, and to Mr Norm Maddock, MTA Board Member and Federal Secretary of the Tramway & Motor Omnibus Association. These gentlemen put the proposal to restore 427 to the Board of the Metropolitan Transit Authority.

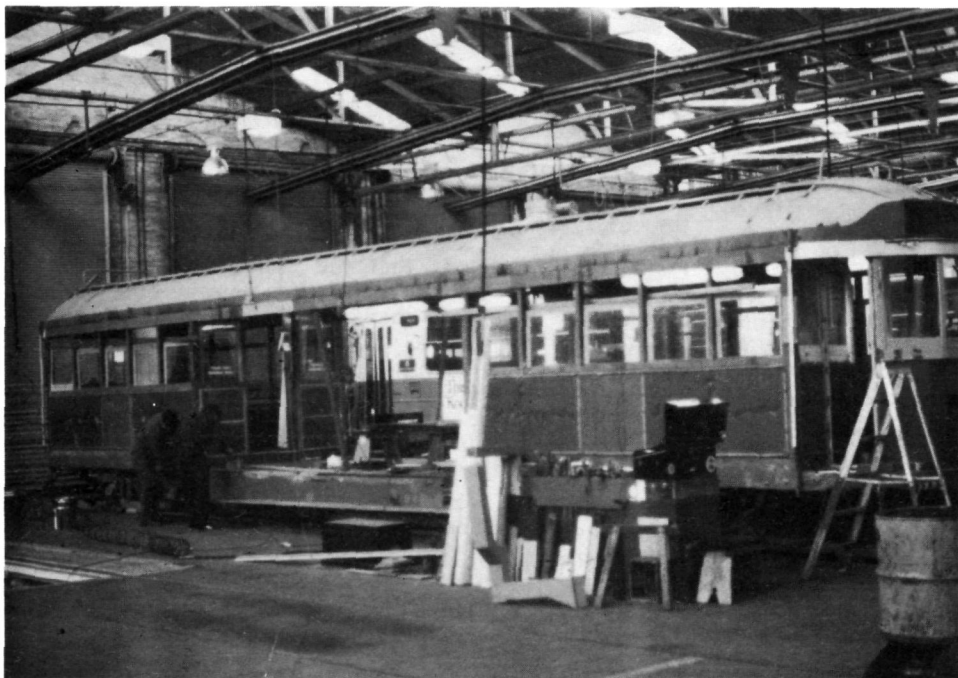
Arrangements were made with Mr Les Jeans, Acting Workshops Manager for 427 to be delivered to Preston Workshops from Bylands on 2 October 1986.

Mr Graham E. Jones of Preston's Production Planning Group was requested to take



W2 427 being loaded at Bylands for transfer back to Preston Workshops on 2 October 1986.

STEVEN ALTHAM



Inside Preston Workshops. 427 has been gutted and repairs are being carried out to the interior and exterior.

STAN VINE

charge of this project and within a few days of its arrival at the 'shops 427 had been gutted of all interior fittings, seats, etc.

Old varnish and the 'Colorflek' on the ceiling was removed by scraping or using paint remover. We thank the workers who carried out this task as it was a devil of a job.

Two drop-centre seats which had been sent with 427 were cleaned up and revarnished, as were a number of other woodwork pieces.

Under the direction of Brian Carter, Paint Shop Foreman, the colour scheme of chocolate and cream with black was applied to the body, followed by lining out and signwriting.

The open drop-centre seats and the original wooden seats in the saloons were re-installed — a first-class restoration job had been done on 427.

As a final touch, Len Millar spent many hours preparing new destination blinds for the car.

The Society has manufactured a special plaque to commemorate this great event and Melbourne's one hundred years of trams. The plaque has been installed in W1 427 to mark this centenary year project.

W1 Outings

The first great outing with the newly restored tram was on Sunday 8 March 1987. Unfortunately, some electrical problems arose and it was necessary to terminate the tour at South Melbourne Depot.

A second outing on 5 April was in complete contrast to the first trip. The weather was superb — just made for a W1 open drop-centre. The tram ran superbly and the performance of 427 delighted everybody. Our thanks to the platform staff on both occasions.

Handing Over W1 427

Tony Sell describes the handing over of W1 427 as follows:

"On Friday 24 April 1987, in a simple ceremony at Preston Workshops, the Minister for Transport (and Patron of the Society) the Hon Tom Roper handed back the magnificently restored W1 car 427 to the Society.

Guests then sampled the joys of Melbourne's glorious autumn weather, and MTA champagne and chicken, whilst travelling into the City and back.



W1 427 at Kew Depot on 5 April 1987 with A2 car 285 behind. Roof details conform to the car's W1 configuration.

STEVEN ALTHAM



The Society's General Manager Andy Hall with W1 427 at St Kilda Beach terminus.

TONY SELL

Mr Roper mentioned in his speech that he is awaiting with interest a report from the MTA on what Melbourne's tramways could do for the City's tourist effort. The subject was raised in a limited way by the then Lord Mayor of Melbourne, Cr Tom Lynch, last year, and the Society made a submission to the relevant authorities proposing operation to the Zoo and St Kilda with historic cars. The City of St Kilda has been strong in its support of this idea, and the City of South Melbourne is interested. It is understood that the MTA is establishing a committee to prepare this report, and that the Society will have an involvement in the process.

On behalf of the Society, presentations were made to the Workshops and certain notables as a gesture of appreciation for the way in which the MTA undertook and carried out the project. The workmanship of the car is absolutely first-class; it looks a picture and runs like a charm. It has attracted considerable public attention on the few times it has been out on the tracks.

We are all very grateful to the MTA for its support.

Our Patron also presented to Mr Norm Maddock (MTA Board Member: ATMOEA Federal Secretary) the Certificate recognising him as a Benefactor of the Museum."

Cable Trams of Melbourne 1885-1940

Member Mr J. Jack-Cranston is the author of an in-depth book, titled *The Cable Trams of Melbourne 1885-1940*. The book, due for release in August, is being printed in quarto size, oblong, about 200 pages, and includes pictures, drawings, tickets, etc.

Museums should direct inquiries to Jack Jack-Cranston (note hyphenated name) at 35 Loxton Avenue, Wantirna South 3152 or phone (03) 221-8836.

Archives

In 1985 the Royal Historical Society of Victoria sought co-operation of local historical societies to provide data for a Victorian Memorials Register as part of the Victorian Sesqui-centenary celebrations. Our Archives Officer, Robert Green, offered to record on behalf of the TMSV, and to find, examine, photograph and record details of all tramway type memorials, excluding foundation stones.

He has completed his task and records the following:

1. Box Hill-Doncaster Electric Tramway: Cairn at corner of Station Street and Whitehorse Road, Box Hill.
2. Box Hill-Doncaster Electric Tramway: Plaque in Doncaster Shoppingtown precinct marking the northern terminus of that tramway.
3. Centenary of Melbourne Tramways: Plaque erected on 673 Bourke Street, Melbourne. (Plaque sponsored by the TMSV and located on the former Head Office building of the Melbourne Tramway & Omnibus Co. Ltd.).
4. Centenary of Melbourne Tramways: Plaque set in Bourke Street Mall, corner of Elizabeth Street.

Ballarat 43

The Museum Board is pleased to announce that the City of Newtown has made Ballarat 43, ex Geelong 40, available to the Museum. This car has been on display in Queens Park, Geelong for at least fifteen years.

The car was built in 1914 by Duncan & Fraser for the Prahran & Malvern Tramways Trust as their No. 40. After the Trust was taken over by the Tramways Board (MMTB) in 1920 car 40 became E class No. 40. It was sold complete to the State Electricity Commission



W1 427 during the tour on 5 April 1987. The car is crossing the Alamein railway line in Riversdale Road en route to Wattle Park.

IAN STANLEY

of Victoria for use on their Geelong system where it retained its original number. After the closure of the Geelong system in 1956, No. 40 was transferred to Ballarat where it became No. 43. Car 43 was available for service in Ballarat on the last day of the Ballarat system but was not required. It ran empty from the loop in Sturt Street to the Depot.

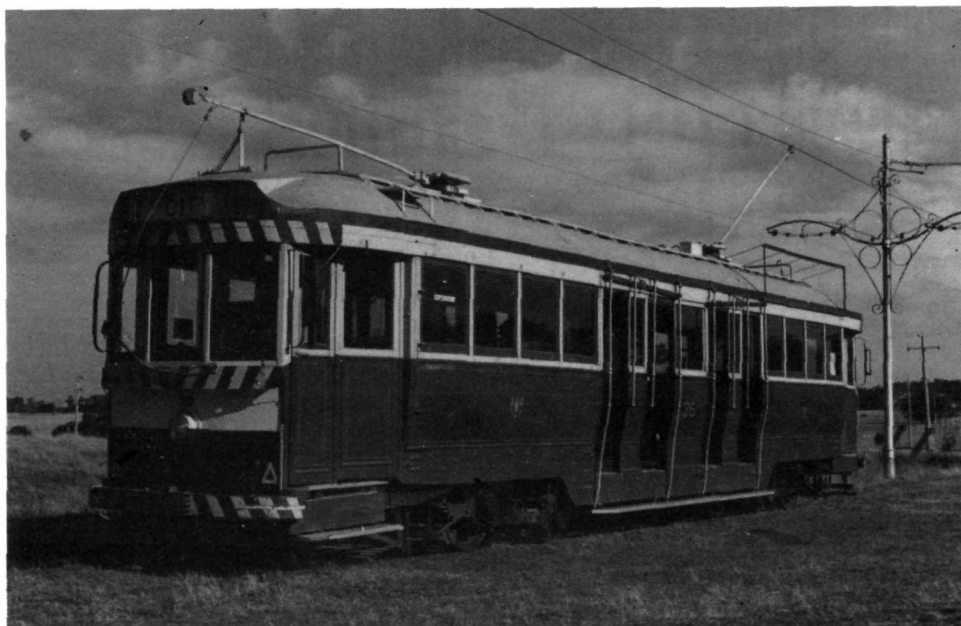
The Society wishes to thank Keith Kings and Tony Sell who maintained close contact with the local council.

Ballarat 36

Maximum traction car No. 36 from the SECs Ballarat Tramway has been test run at Bylands and, except for one problem, has come through with flying colours.

Shed Extension

Work has commenced on extending the Bern Hurren shed by some 120 feet. The cost of the extension will be about \$22000.



Maximum traction car No. 36 from Ballarat undergoing test running at Bylands.

RON SCHOLTEN

ST. KILDA . . .

Australian Electric Transport Museum



Car 186

Restoration has now commenced in earnest on our Bicentenary project, C type tram 186. Ian Seymour has been modifying its Brussels 21E truck. His work has included making new brake rigging components. As both our Brussels 21E trucks were designed for single end operation only, the original brake rigging

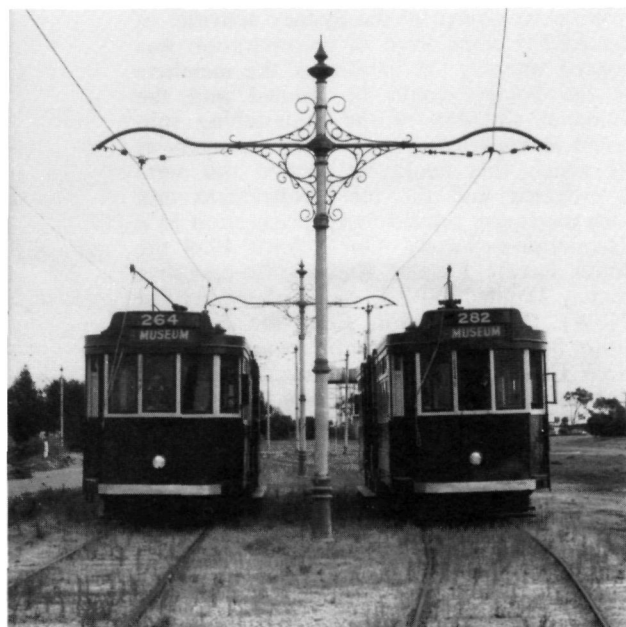
of the truck under 186 was used to convert car 42's truck to double ended operation. Two completely new units using one inch thick steel plate bolted together have been constructed. A brake operating lever has been bent to requirements using a jim crow. The brake shoe hangers and return springs have been stripped down, cleaned and reinstalled.



The three MTT tickets are from a photographic copy of the first tickets issued on the first regular trip by an MTT electric tram on the morning of 10 March 1090, operated by car 37 which left the depot at 5.47 am. The wine firm of B. Seppelt & Son had advertised a prize for the first tickets. They were purchased by two enterprising tramway inspectors before the car left Hackney depot and they claimed the prize. Seppelts retained the tickets in a special frame for many years — the tickets are now preserved by the STA.

The new AETM tickets were designed by Max Fenner using the original MTT tickets as a model. Typesetting was by Kent Rayson with the overprinting in red as on the MTT tickets. The AETM tickets are on (from left to right) pink, yellow, white and blue paper. Our previous tickets were illustrated in the October 1974 issue of this magazine.





The two drop-centres at Mangrove Loop ready to return to the Museum on family picnic day, 3 May 1987. The ornate centre poles once stood in King William Street.

TREVOR TRIPLOW

The original compressor appears to be in good order. The truck has been cleaned down and its top steel section, which supports the body, has had a section cut from all four corners to enable the drop ends of the carbody to sit at the required height.

Our cabinetmaking friend, Ron Bowden has manufactured new end floor and window sills, and window sashes for the six motorman's windows. A local fastener company has manufactured special bolts for structural work.

Jim Burke has dismantled both ends of the chassis and has begun reassembly using some new timber. The new end summers have been fitted, and bumper supports made and fitted. Peter Keynes is preparing electrical switchboards; Chris Andrews is rebuilding the saloon window sashes; Chris Steele has scraped the old malthoid from the roof; John Radcliffe is restoring the drop-end seats; while Ron Jenkins has arranged for much of the sundry ironwork to be grit blasted off site. As can be seen, a real team effort is required on this important project.

A recent trip to sister tram 171 at Spalding, north of Adelaide, has provided many useful

parts. Although the body has badly deteriorated, its steelwork is almost complete. Steel parts missing from our two C bodies on site, 173 and 186, were found to be good enough to reuse on 186. These parts include gutters, downpipes, beading for exterior panels and an end apron.

New Tickets

A new issue of Museum tram tickets has been delivered incorporating a new design — the first change in design since operations began in 1974. As old stocks run out, tickets of the new design will replace them, beginning with the blue Concession Exchange issues, which are in use now.

The former paper colours have been retained, but the general appearance is quite different from the earlier issue. The design is based on that of the first issue of tickets for the Kensington line in March 1909. Typefaces, etc., resemble those of the originals as closely as possible, the only significant departure being the appearance of the letter 'A' in front of the number.

It is probably easiest to punch the central column, as shown on the examples, though the 'Down' and 'Up' columns were usually punched during the MTT era.

30th Anniversary of the AETM

The AETM is celebrating two milestones this year. The first of these is in the formation of the AETM thirty years ago.

Only the older readers perhaps realise that the successful AETM Museum was once a branch of the Sydney AETM (now SPER). On the Australian Electric Traction Association's Convention held in Adelaide during Easter 1956, several Sydney Museum members, including Bob Young and Ben Parle, accompanied by John Radcliffe and Mac Alexander of Adelaide, discussed tramcar preservation and the availability of spare parts with the Municipal Tramways Trust authorities. In October 1956 the Sydney AETM received word from the MTT offering Adelaide cars A class 1, E1 111, D 192, F1 264, H 380 and H1 381 for eventual preservation. The AETM-Sper policy has always been that preference should be given to having tramcars preserved in their home cities and to investigate this possibility John Radcliffe and Mac Alexander were appointed AETM representatives in Adelaide on 6 January 1957.

These two gentlemen wasted little time in setting up an active group and immediately launched a search for a suitable museum site

in the Adelaide region. Some of the sites investigated were:

1. Belair National Park. 1.5 mile route between the railway station and sporting area. Lease refused as such a grant would create a precedent.
2. West Beach Trust. Not available.
3. Shepherd's Hill Reserve. Not available.
4. St Kilda on five acre site. Salisbury District Council approved the lease on 24 March 1958.

The first exhibit obtained by the AETM was the experimental trolleybus 216 (1932-1934) which was purchased from the MTT on 9 July 1957.

Due to the demolition of portion of Hackney tram depot, cars 1, 111 and 192 were conveyed to the Morphettville Racecourse sidings on the Glenelg line on 3 January 1958, with A2 class car 42 joining the other cars in open storage there in April. The Society was given until March 1958 to vacate this site but this was later extended until 18 July 1958, so the St Kilda lease was only obtained at the last minute. Low Loaders Ltd. transferred the four trams to St Kilda over a period of six days commencing 8 August 1958 at a cost of £145.

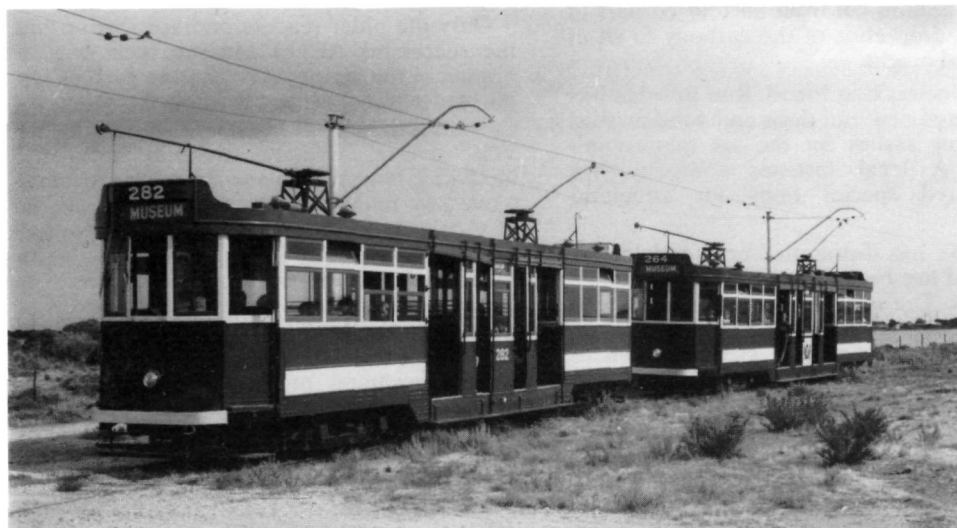
Car 282 remained at City Depot until 28 February 1959 when it was driven to Glenelg and loaded onto a semitrailer for its journey to St Kilda. This tram had been selected instead of 264 because of its better condition at that time.

With the growth of the Sydney activities of the AETM some form of incorporation was needed whereby the liability of the members of the Society could be limited and the financial situation of the undertaking subjected to compulsory audit. Various methods by which this could be carried out were investigated and the most convenient and least expensive proved to be registration as a Co-operative Society. On 2 April 1959 the South Pacific Electric Railway Co-operative Society Limited (SPER) replaced the AETM (NSW), this separation from the Adelaide group being a compulsory pre-requisite as the NSW Co-operative Act prohibited affiliation with any interstate organisation. The AETM (SA) followed into local incorporation in 1960 as a separate society.

A 20th Anniversary

Twenty years ago the Beatles released their famous 'Sergeant Pepper' album, but more important to some of us was the opening of the St Kilda Museum as a static display after tens years hard work. This is how *Trolley Wire* for August 1967 recorded the event:

"A crowd of visitors and guests, estimated at three hundred, assembled at the St. Kilda site of the Australian Electric Transport Museum (SA) Inc. on Saturday 22 July to witness the official opening of the Museum's depot for public inspection.



A view of cars 282 and 264 at Samphire Road. Differences to be noted are the unusual position of the right hand saloon standee window and Jubilee 150 logo on the cream painted centre panel of car 264.

TREVOR TRIPLOW



Car 264 is standing on the main line just past the main depot fan (Roads 2 to 6) while Car 282 is standing on the switch for Roads 7 and 8 just before the main line connection. Car 1 can be seen in the left background.

JOHN_RADCLIFFE

"Among the guests were officers of the Municipal Tramways Trust, members of the Australian Railway Historical Society and the President and Secretary of the Tramway Museum Society of Victoria, Bob Prentice and John Fitzsimmons. Former TMSV Secretary Keith Kings and three other members were also present. Representing the SPER was General Manager Bob Merchant together with Mal McAulay and South Australian member Brian Andrews.

"At 3.00 pm, the Museum's President, Dr John Radcliffe welcomed the visitors and invited the Mayor of Salisbury, Mr Harry Bowey to open the proceedings. After praising the Museum's activities, the Mayor introduced the Leader of the Opposition and Member for Gouger Mr R. Steele Hall* who congratulated the Executive Committee and members of the AETM on their efforts and declared the Museum open.

"After the ceremony, those present adjourned for afternoon tea and to inspect and photograph tramcars 1 and 381, the first and last electric trams built for Adelaide, which were on display outside the depot building. Inside the depot the remaining four trams and

the three trolleybuses also received attention from the inspecting crowd during the afternoon.

"The AETM is the smallest of the three Australian electric traction museums, having about twenty members, whilst their workforce rarely reaches five at any one time. Despite their lack of members, this active little group has completed a 50ft by 105ft depot with attached 14 3ft by 28ft storeroom/workshop, externally restored their signal box and Adelaide's first trolleybus, completely restored A class tram No. 1 which, on 30 November 1908 became the first electric tram to run in Adelaide, and have commenced the restoration of F1 class drop-centre tram 282. Particularly praiseworthy is the varnished ceiling and woodwork in the saloon of 282, which must look just as it did when the car left Pengelley's works in 1928."

It took another seven years before regular public operation commenced. The AETM now has 17 tramcars (14 of them in operating condition), four trolleybuses and one diesel bus, plus many other tramway relics. The Saturday workforce is still not much of an improvement on five, although we now have 77 members. The AETM is now one of the larger of some 12 Australian tramway museums. We've come a long way in thirty years!

Annual General Meeting

The Annual General Meeting of the AETM was held on 10 April 1987 and the following officers were elected:

President: Colin Seymour, *Vice President:* Paul Shillabeer, *Secretary:* Trevor Triplow, *Treasurer:* John Hoffman, *Operations Manager:* Max Fenner, *Site & Safety Manager:* Jack Pennack, *Rolling Stock Manager:* Chris Andrews, *Track & Overhead Manager:* Peter Keynes.

No Trustees were required to retire this year. The current Trustees are Christopher Steele, Max Fenner and Ron Jenkins.

After the meeting Trevor Triplow showed videos of car 264 operating on the Glenelg line and the Perth Electric Tramway Society's operations at Whiteman Park.

Errata and Corrigenda May 1987 issue

Page 36:

Ken Coleborne's name was spelt incorrectly. Our apologies, Ken.

* The Hon. Steele Hall is now a Liberal Senator in the Federal Parliament.

LOFTUS . . .



South Pacific Electric Railway

New Site

The long awaited commencement of construction of the Workshop/Restoration Building took place on 13 April and all footings were completed by 14 May. It had been necessary to dig down to a depth of two metres in some places to obtain a solid footing, due to the depth of the fill placed on the site some ten years ago. A strike by crane drivers caused a delay in the erection of the steel framework and heavy rains did not improve the situation. Steel erection commenced on 8 July and was completed on Sunday 12 July 1987.

Work is proceeding well on the display area in the main depot building. A photo display and small exhibits display area has been constructed along the eastern wall next to

Road 8 and comes complete with its own lighting. Layout planning for the photographic display is being carried out by Norm Chinn, Vic Solomons and Bob Merchant with ideas from others welcome.

Norm Chinn has been continuing his tramcar painting programme and R1 2044 has been repaired with the damaged (north) end being repaired by Bill Parkinson. This damage occurred during the movement of the car from its previous location at Bowral but traces of an earlier accident were also revealed. A temporary fascia has been fitted by Derek Butler to replace the missing and rotted sections. The white with blue and gold livery the tram now carries is the one worn by R1 1992 during the Royal Visit of 1954. Ballast



John Brown, Federal Minister for Sport, Recreation and Tourism, paid a special visit to the Sydney Tramway Museum on Friday, 16 May 1987 with Robert Tickner, MHR, Federal Member for Hughes, and met with members of the Museum Board. From left to right are: Bob Cowing, Howard Clark, John Brown, Robert Tickner, Norm Chinn, David Rawlings and Peter Kahn.

COURTESY "NORTHERN NEWS"



More rock breaking and trench digging in Tramway Avenue on 13 June 1987.

BOB MERCHANT

Motor 99u has had a repaint and Prison car 948 has undergone a partial restoration and repaint, complete except for the application of the car numbers on the end aprons.

Mick Giddey has completed the construction of the pointwork at the southern end of the site which will join the main line to the depot line. Work has resumed on the scissors crossover, again under the supervision of Mick Giddey and Wayne Armitage. Repairs to the damaged section of this complicated piece of special work are taking top priority as it forms the missing link in the main line from the headshunt at the south end of the site to the (temporary) terminus at the Sutherland Railway Substation.

Old Site

Ben Parle has been continuing his ongoing task of ground improvement and the area is looking neat and tidy as a result.

Tramcar maintenance is becoming less demanding for Richard Youl and his assistants, Chris Wyrznski and Bob Aspinall, with the reduction of the tramcar fleet at the old site but it is still necessary to maintain the remaining cars to the usual high standard, as there are fewer spare cars available.

Saturday 23 May saw an event which could be described as the beginning of the end for the National Park location, when the first track was lifted inside the carshed. Space limitations at the new site, caused by the transfer of the four cars on 7 March and the need to clear Road 2 for construction of the inspection pit, meant that some of the road motor vehicles would have to be stored elsewhere.

Consequently, a reshuffle of the cars at the old site made Road A of the Annexe available and the track was lifted, as it was not required.

Old Site Deadline

As reported in *TW* for October, 1986, the Society received advice from the National Parks & Wildlife Service to the effect that we were required under the terms of our licence to vacate the Royal National Park site by 30 June 1986.

However, as we had not been informed of this condition and we had actually been operating for a number of years without a licence, it was necessary to do some hasty negotiating.

As a consequence of a meeting between officers of the National Parks & Wildlife



R1 2044 and Prison Car 948 nearing the completion of their repainting.

BOB MERCHANT

Service and the Society earlier this year, the Minister for Planning & Environment approved the granting of a licence to the Society, to expire on 31 March 1989. Under the terms of this licence all track and buildings are to be removed from the site by that date.

We are therefore committed to the planned opening of the new site and transfer of traffic operations from the old site by March 1988 to allow sufficient time to restore the old site to the required condition.

This will also require additional under cover storage at the new site, either in the form of a secondary operations building, or the completion of stage 2 of the Depot/Display Building for which an application for a Capital Works Grant was submitted.

State Government Grant

The Society was successful in obtaining a \$20,000 Capital Works Grant from the NSW Government through the Minister for Arts, toward stage 2 of the Depot Display Building. We are required to match this amount dollar for dollar. The cost of completion of stage 2 will be far in excess of the combined total of \$40,000 but it does enable a start to be made.



Mike Giddey and assistants at work on the south end junction pointwork on 20 June 1987.

VIC SOLOMONS



Ben Parle continues to keep our operating fleet at the old site in spick and span condition. Here Ben gives Brisbane 548 a wash on 4 July 1987.

BOB MERCHANT

Annual General Meeting

Over sixty members attended the Annual General Meeting which was held this year on Saturday 27 June, giving members the opportunity to inspect the work at the new site and, in particular, inspect PCC 1014 and ride on the newly electrified depot main line.

The election of Directors resulted in all four retiring Directors, Howard Clark, Richard Jones, Peter Kahn and David Rawlings returned for another two years.

The barbecue after the meeting was equally well attended and most qualified drivers had the opportunity to test O class 1111 for the first time since it left the old site in April 1982.

Type D PCC 1014

San Francisco PCC 1014 commenced its longest journey on Wednesday, 13 May, when it departed Oakland for Sydney on board the ACTA container ship *ACT 11*.

The *ACT 11* berthed at the CTAL Container Terminal, Port Botany early on Sunday, 7 June, a few days later than originally expected. Special PCC lifting brackets had been made for us by apprentices at the Hunter Valley Training Centre from drawings made by Bill Parkinson whilst in San Francisco earlier this



Preparing to erect overhead wiring to the southern-most point of the site. Dick Jones and Wayne Armitage prepare to attach the wire to the terminal pole.

BOB MERCHANT

year, and the brackets fitted perfectly. The car was lifted from the ship's hold by container crane and lowered onto a waiting trailer with four TV stations covering the action.

Due to its size, the car was not permitted to be transported during daylight hours and it was accommodated overnight at the UTA's Port Botany Bus Depot. It was transported to our new site at Loftus early on Monday morning, 8 June, the Queen's Birthday Holiday, arriving about 7 am.

Naturally, it was hoped to test the car but when the time came to drive it into Road 1 of the depot, the inadequacy of our temporary power supply to handle 1014's power requirements was clearly demonstrated when it pulled the power. It was left to Ballast Motor 99u to push 1014 into the shed about 2.30 pm.

Modifications to the power supply saw the car finally move under power on the morning of 27 June and visitors to the site were also treated to a ride.

Bill Parkinson has commenced work on restoring the car to full double ended operating condition and although a considerable amount of work will be required to completely restore 1014, it will most certainly be available to participate in our opening ceremonies on 19 March 1988.

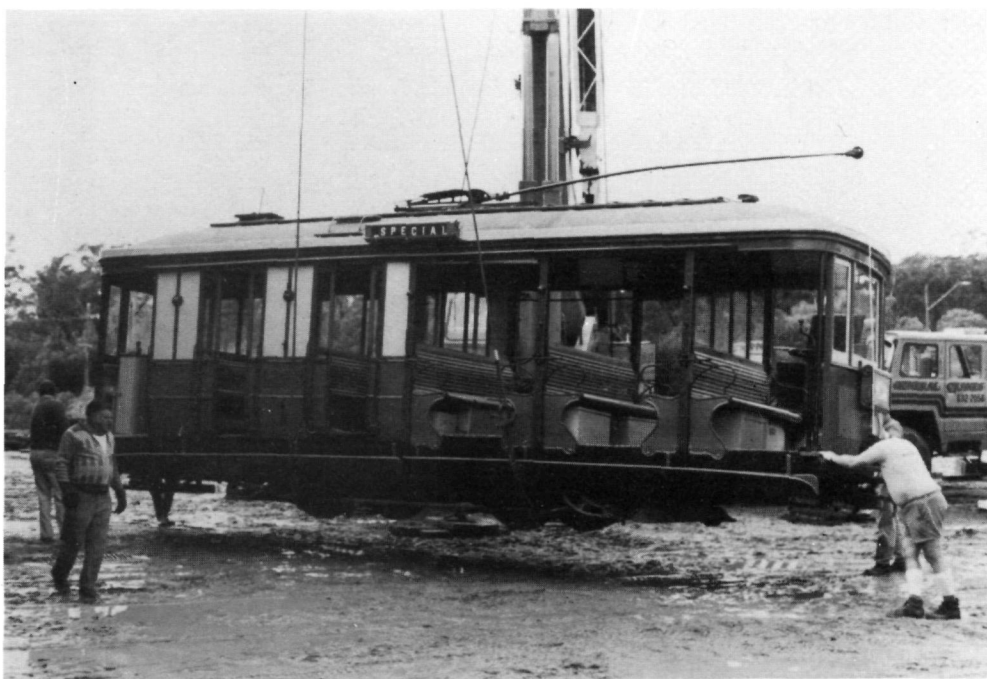
Derek Butler works on the photo display area along the eastern wall of the depot. The photos shown are not the permanent display but are being used to provide a layout effect.

BOB MERCHANT



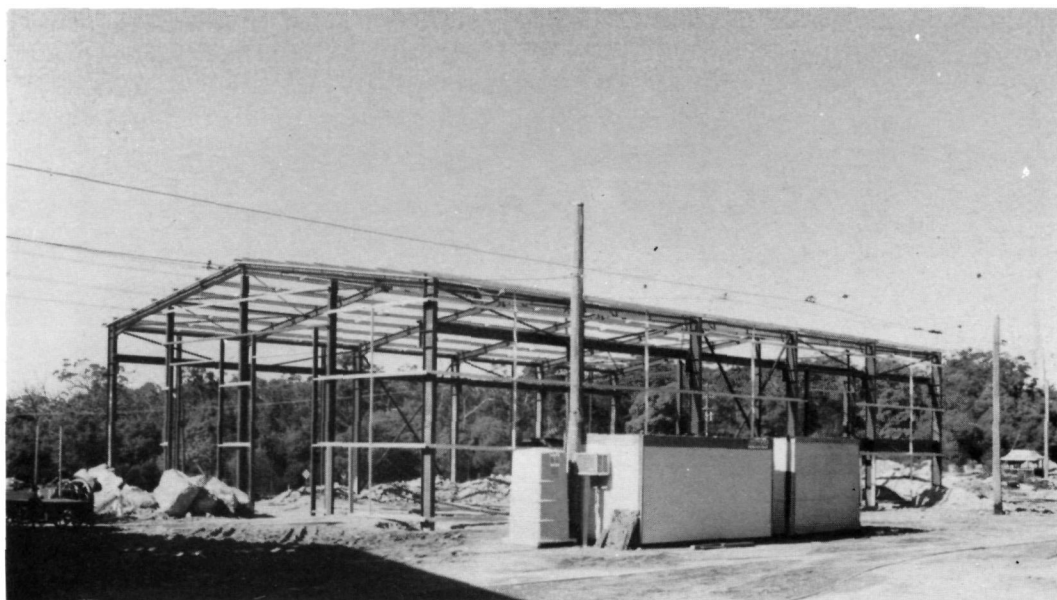
The scissors crossover as it appeared in January 1987.

BOB COWING



K class 1296 swings over a sea of mud as it is transferred from the depot fan to Road 6 on 8 June 1987. A traverser will connect Roads 5-8 and the two Restoration Building tracks with the depot fan at Road 4.

BOB MERCHANT



The steel framework of the Restoration/Workshop Building was completed on Sunday 12 July 1987.

DICK JONES



PCC 1014 being lowered by container crane onto the low loader at the CTAL Container Terminal, Port Botany on Sunday 7 June 1987.

HOWARD CLARK



1014 spent its first night in Australia at the UTAs Port Botany Bus Depot. The chimneys of the old Bunnerong Power Station, under demolition in the background, have since been removed.

BOB MERCHANT



1014 on Aussie track for the first time. The 'offside' doors were partially boarded over for the sea voyage and the lifting lugs, seen hanging in the bogie arches, have yet to be removed. Loftus railway station is in the background.

BOB MERCHANT



A new green and cream face at Loftus. PCC 1014, O 1111 and P 1497 line up outside the new depot.

BOB MERCHANT

ALBION PARK . . .



Illawarra Light Railway Museum Society

The Museum Committee feared that progress at the Albion Park Museum might lose momentum on the conclusion of the third CEP session in March. This has not been so. An average of 15 members have been present at the regular Saturday work days while 6 to 8 members attend the Tuesday and Thursday sessions each week.

Rolling Stock

During early June the new body on the ex-Victoria Sugar Mill Drewry Inspectors Car was completed with the fitting of canvas to the wooden roof. The single cylinder petrol motor was overhauled several years ago but the radiators and engine ancillaries have to be refitted before the unit returns to traffic.

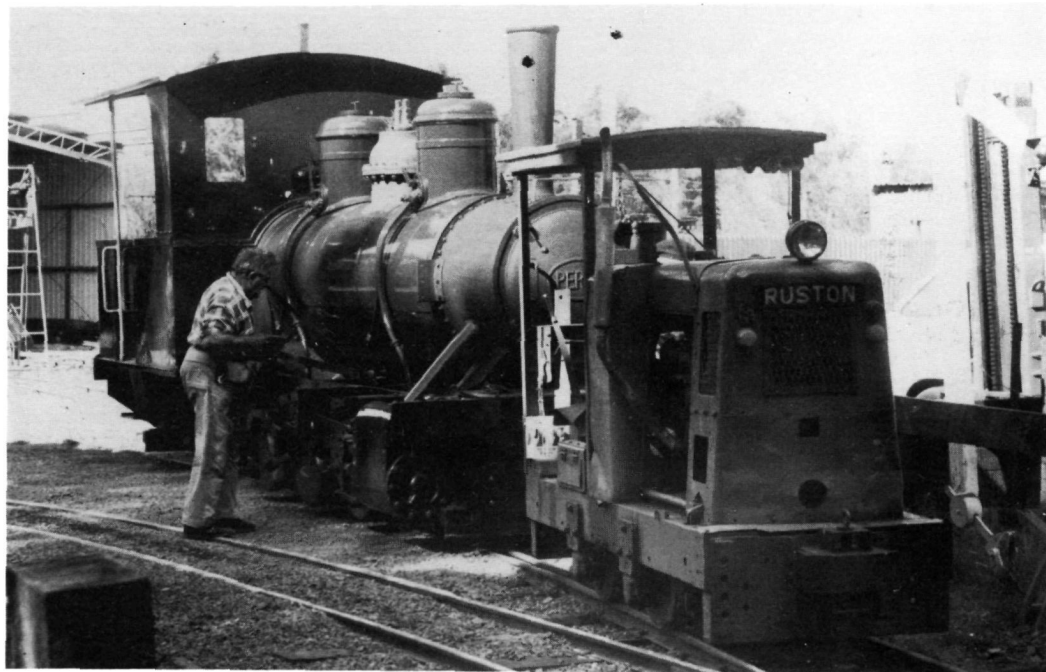
With the recent shed extensions all locomotives, wooden passenger cars and

timber clad non passenger vehicles are now housed under cover.

Locomotives

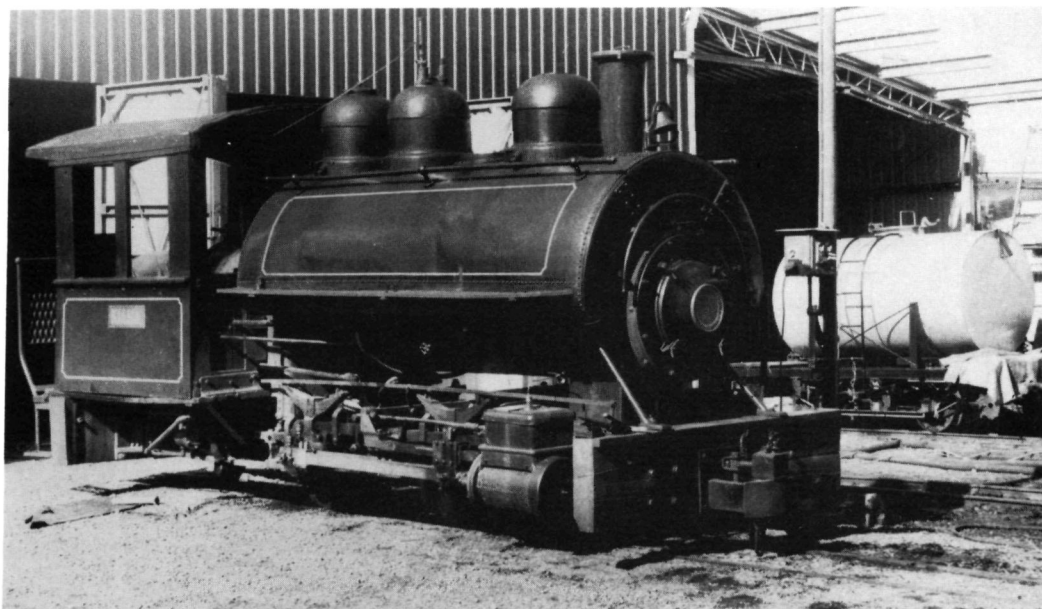
The new side tanks were fitted to 0-6-2T loco "Tully No.6" on 16 May (Perry 7967/49/1) and since then work has proceeded on painting the interior of the driver's cabin and refitting such ancillary items as boiler feed water valves and plumbing, injectors, drain cocks and cab fittings. The application of the green and black livery has been completed and by late June only the linework and builder's plates had to be applied to complete the external restoration.

The professionally fabricated wooden cabin for 0-4-OST loco "Kiama" (Davenport 1596 of 1917) was received from Krauss Kitchens of Dapto during early May. This has been constructed from Tasmanian Oak and has



Perry locomotive 'Tully 6' being hauled into the engine shed yard at Albion Park by the Ruston Hornsby loco on 16 May 1987.

K. MCCARTHY



Davenport Locomotive 'Kiama' stands on No. 1 road at Albion Park loco shed on 16 May 1987. The driver's cabin and back verandah have now been removed to receive the new cabin constructed under a Bicentennial Grant.

KEN McCARTHY

been clear varnished. The old cabin was removed from this engine in late May and a start made on fitting a new steel rear buffing frame, plate steel floor and an angle iron surround on which to mount the new cabin.

On 19 May a tender body was delivered from the Belbin Family of St. Ives. The ILRMS appreciates this gesture and thank Mr. Graeme Belbin who purchased the item from Bruce MacDonald (ex. Goulburn Museum) over ten years ago. The four wheel tender was constructed by Plane Creek Sugar Mill to extend the working distance of 0-6-OT "Billy" (Maffei 3677 of 1911). The original underframe was removed at Goulburn for another project, but a new four wheel underframe and extended footplate will be fitted at Albion Park so that the tender can be used with "Kiama". At the ILRMS "Kiama" was fitted with a railed cab platform in 1978 to protect the crew from the dangers of the unsafe cabin doorway. The tender will enable the platform to be removed and fuel to be kept clear of the new cabin.

Work commenced during May on dismantling the various bogie components of the A & D Munro Shay locos (Lima 906 of 1904 and 2097 of 1907). The castings will be overhauled, new bearing brasses manufactured, corroded steel work replaced and the recondition bogies reassembled.

Accommodation

By early June an additional 6.5m bay was added to the 6m × 19m carriage shed. Columns and footings have been prepared for the final three additional bays and when this section is completed a total track length of 148m will be under cover.

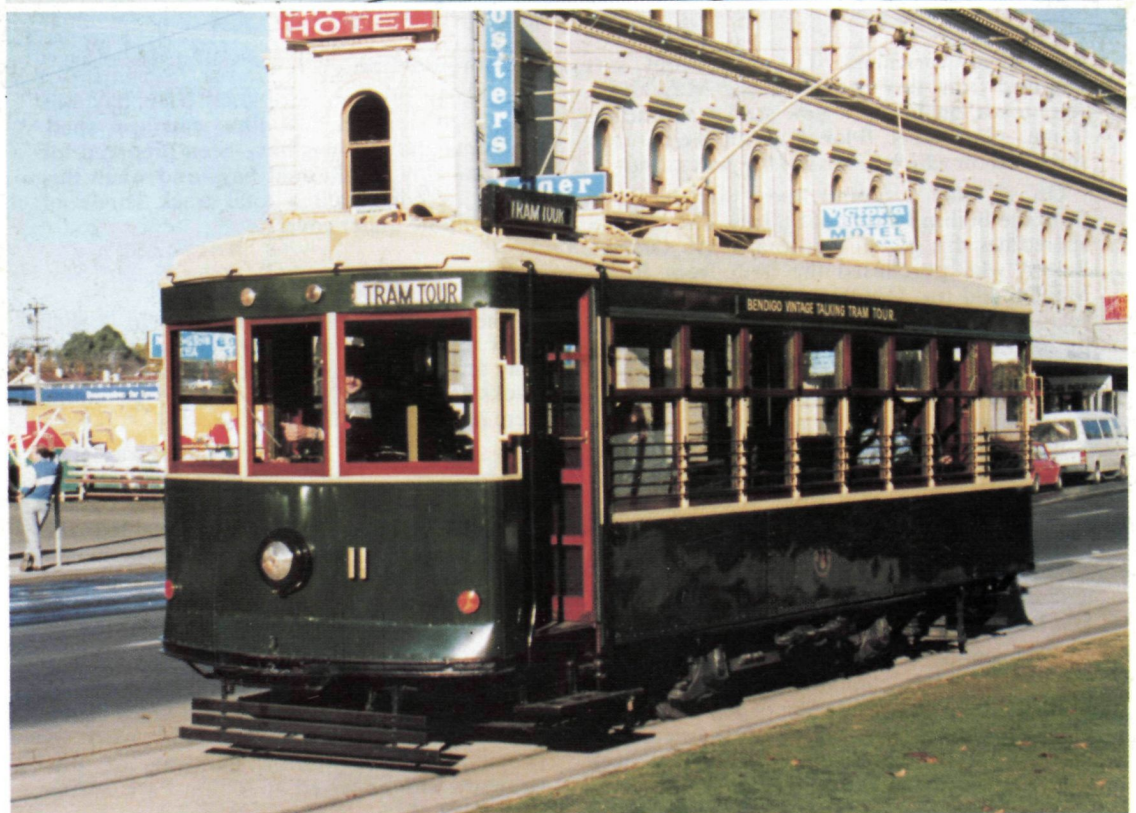
Trackwork and Associated Plant

The points connecting the new No. 1 shed road to the main line were completed on 9 May and by mid June the compound enclosure tracks consisting of 5 roads and 2 back shunts were nearing completion.

By early June a total of 13 tramway style side brackets had been placed in position from building columns or new steel poles on the electrified tracks. These have enabled the overhead wire to be lifted to a working height of 3.1m. A further eight brackets are needed before the reconditioning of the trolley wire is completed.

Around the Museum

The lever frame in the former Otford signal box has been reassembled and work is progressing on interior painting of this structure which arrived at Albion Park during December 1985.



a sper magazine