

TROLLEY WIRE

Journal of
AUSTRALIAN TRANSPORT MUSEUMS

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FEBRUARY 1974



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TROLLEY WIRE

Journal of

- SOUTH PACIFIC ELECTRIC RAILWAY
- AUSTRALIAN ELECTRIC TRANSPORT MUSEUM
- WESTERN AUSTRALIAN ELECTRIC TRANSPORT MUSEUM
- BALLARAT TRAMWAY PRESERVATION SOCIETY
- ILLAWARRA LIGHT RAILWAY MUSEUM SOCIETY
- STEAM TRAM PRESERVATION SOCIETY
- TRAMWAY MUSEUM SOCIETY OF VICTORIA

FEBRUARY 1974

New Series

Vol. 15 No. 1

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ABOUT THIS ISSUE

THIS ISSUE of TROLLEY WIRE marks a further milestone in the history of the magazine. In this, the 150th issue, we are pleased to welcome the Tramway Museum Society of Victoria to official participation in the magazine, thus strengthening the position of TROLLEY WIRE as Australia's transport museum journal.

There are probably readers who are not familiar with the TMSV activities in Victoria, but this situation will be rectified in coming issues of this magazine. The joining of the TMSV with TROLLEY WIRE is not without a touch of sadness; the TMSV had for some ten years produced its own illustrated magazine - 'Running Journal' - which had fallen foul of the spiralling publishing costs which one-by-one are "knocking out" the small circulation enthusiasts' magazines. Running Journal will not disappear entirely -- the name will be transferred to a regular issue local newsheet for TMSV members.

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The SPER had planned to introduce a "new look" to the magazine this issue, but 'the best laid plans, etc...' and the delivery of our new typing machine was delayed longer than anticipated and no time was left to prepare the typescript in the new format. However, in keeping with our new image of a "national" magazine, the new cover layout was introduced to keep this issue uniform with the remainder of the volume. Other major changes will be introduced as circumstances permit over the next two or three issues.

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FRONT COVER: Trolleybus No.4 posed near Wylde Street terminus. The square panel above the destination sign was to carry a route number (Route 3) which was removed to avoid confusion with fleet numbers.

--Vic Solomons collection

THE "Q" BUSES

The "Q" Type Bus in NSW.

by Ken McCarthy



It has often been stated that the Q-class tramcars in New South Wales were the trolley buses which were controlled by the Tramway section of the Transport Department, issued tramway style tickets and were staffed by tramway men. The trolley buses were, however, classless; the letters "I" and "Q" were avoided in the NSW classification scheme as were these letters on the NSW car registration plates until 1970 when these letters were belatedly introduced into the scheme to enable the range of 3 letters + 3 numbers to be extended.

The notion that the trolley buses were classified as "Q" vehicles was brought about by the fact that three of the buses, double deckers Nos.3, 4 and 5 were mounted on AEC-"Q" type chasses.

The Q-type chasses are believed to have been applied to a total of 336 single deck motor buses, 23 double deck motor buses and 5 double deck trolley buses. Of the world wide total of 364, New South Wales accounted for three trolley buses and three double deck motor buses.

The aim of any public passenger vehicle manufacturer is to fit as many passengers as possible in comparative comfort in as small a road area as possible and to have as much of the floor area of the vehicle available for fare

paying passengers as possible. This aim was achieved as early as the 1880's as far as electric tramcar design was concerned, in fact in this regard the four wheel double deck British tramcar was supreme. Until 1919, however, the typical motor bus had about one quarter of the chassis occupied by the motor followed by a cross seat for the driver. Fare paying passengers had seats provided in the small space remaining.

The London General Omnibus Co's "K" and "N" type double deck buses of 1919 and 1920 were the first to place the driver at the side of the engine, thus providing an additional four seats on each deck for passengers. (In the early buses the top deck was not cantilevered beyond the boundaries of the lower saloon.) At this stage internal combustion engines were growing more reliable but as valve adjustments and decarbonising had to be carried out every five to ten thousand miles, any further enclosure of the engine would have hindered the regular maintenance chores.

In the early 1930's, AEC of England (Associated Equipment Company) developed a two axle bus chassis with the engine mounted pannier fashion the off side (right hand side) of the chassis behind the driver's seat extending to a point about halfway along the 26 ft long chassis. This was known as the "Q" type and first entered service in late 1932 powering a front entrance single deck bus (fleet No.Q1) of the London General Omnibus Co. on the Liverpool Street to Shepherd's Bush route. It carried registration No.GX5395.

In 1934, the newly formed London Passenger Transport Board continued the LGOC experiment with the Q-type chassis by placing in service four double deck motor vehicles carrying fleet Nos. Q2 to Q5. The first two of this batch had 60 seat Metropolitan Cammell Carriage and Wagon Co. bodies with front entrances while the others were by Weymann's with centre entrances and staircases. These London "Q" buses were stored during World War II, Q2, 3 and 5 were sold to private operators in 1946 while Q4 was destroyed by bomb damage in 1941.

The NSW Department of Road Transport and Tramways commenced bus operation on 26th December 1932 and soon expanded its bus activities in Sydney and Newcastle by the absorbing of private undertakings and their vehicles. By October 1934 the Government bus service had 167 buses in its fleet, all but ten of which were a conglomeration of non-standard single and double deck designs inherited from the private companies and their different characteristics were a fleet owner's nightmare.

Of the ten buses constructed on the order of the DRT&T up until October 1934, three were front entrance, petrol engined double deckers, with Syd. Wood (Bankstown) composite bodies costing £958-10-0 (\$1917) each on AEC "Q" type chasses amounting to £1439 (\$2878) each delivered in Sydney. These chasses were available for £Stg1200 each in



Sydney "Q"-chassis motor bus 165 in Eddy Avenue, near Central Railway.

--NSW Railways

England which was £150 to £200 more than the standard front engine chassis of that period.

Details of these three buses are:-

Reg. No.	Fleet No.	Chassis No.	In Service	Converted to diesel	Sold
MO 1163	163	761021	15-10-1934	Aug. 1937	19-3-49 £600
MO 1164	164	761022	19-10-1934	Dec. 1937	19-3-49 £150
MO 1165	165	761018	19-10-1934	Mar. 1938	19-3-49 £500

Centre entrance "Q"-bus of Grimsby Corporation Transport, c. 1937.



The offside engines in these Sydney buses were located under the front staircase while the ducting behind the motor was concealed under some longitudinal seats. The 7.4 litre, 120 bhp petrol engine had a conventional forward radiator, but the cooling air was drawn from under the bus and passed out through a side grille waist high, half way along the offside of the lower deck. In an attempt to overcome chronic cooling problems, No.164, then renumbered 1164 was fitted in 1946 with a small AEC style exposed radiator on the front panel, to replace the concealed side type.

The Q buses, attached to Burwood Depot, were most frequently seen on the former tramway route between Summer Hill Station and Hurlstone Park, but their presence has also been noted on local runs radiating from Burwood Station. Withdrawn from active Government operation in 1946 the three Q motor buses joined the Rover Motors fleet in the Cessnock-Maitland area in 1949 where former MO 1163 and 1165 re-entered service with MO 1164 being progressively dismantled as a source of spare parts to keep the other two on the road.

One difficulty experienced in England with the Q-type buses was that of inadequate motor ventilation. This must have also been experienced in Sydney as one of the three double deckers was experimentally fitted with air intake ducts located low down on the front panels. This adaptation was not made to the other two vehicles and the altered bus was the one used for spare parts at Rovers.

On reentering service in the South Maitland district, one bus carried registration No.MO 3884 and fleet No.4, while the other received private vehicle plate CB 314, possibly while awaiting a bus "MO" plate.

The Q motor buses were scrapped by Rovers in the 1950's to provide engine and transmission parts for other vehicles in the fleet but these retrieved items were found to be of little use as the "Q's" carried left handed motors suitable for left hand drive conventional buses with auxiliaries mounted on the right hand side of the motor. Gear box components and other items were back to front when compared with conventional right hand drive bus engines, while, it is reported, the engines rotated in the reverse direction to the units employed in the rest of the fleet. So even as scrap the Q motor buses proved to be unconventional.....

As mentioned earlier, the AEC-"Q" type chassis was used under five trolley buses. In February 1934, a double deck demonstration trolley bus on a Q chassis was on hire to the Bradford (England) Corporation Transport Department and this vehicle was bought by that undertaking at the close of 1934 for £Stg1697. The bus was fitted with an English Electric body with front entrance and staircase and photos reveal that it carried registration No.KY6210 and fleet No. 633. The vehicle was powered by an English Electric type 405 motor and equipped with regenerative braking. The bus

was ultimately sold in 1942 to South Shields Corporation Transport. A second double deck vehicle was sold to South-end on Sea Corporation Transport, this vehicle also being fitted with an English Electric body.

The other three known trolley buses constructed on AEC Q-type chasses were buses 3, 4 and 5 in the Sydney fleet of the DRT&T. These were practically identical to the Bradford bus.

The Sydney trolley bus route between Hyde Park and Wylde Street, Potts Point, was opened by two single deck buses on 23rd January 1934 and with the extension of the City loop a further three blocks westward to George Street the first of the three AEC "Q" double deck vehicles was added to the fleet. This bus entered service of the opening day of the extension on 30th September 1934. The new bus, which received number 3, was fully imported from England at a total cost of £3375 (\$6750) and carried a Park Royal body. Two further buses of this type on Q chasses but fitted with bodies constructed by the Sydney firm of Syd. Wood, entered service on 8th April 1936 and 24th June 1937 and cost respectively, £2633 and £2759 each. (= Bus 4, £1684 for chassis and £949 for body; Bus 5, £1634 and £1125).

The Park Royal bus (No.3) was the first NSW trolley bus to be scrapped, in June 1948, after it had crashed out of control into the Australian Museum fence in College St. The Wylde Street trolley bus service was replaced by diesel buses on 12th April 1948 and during March 1949 the two single deck buses (1 & 2) and the two remaining double deck vehicles (4 & 5) were transferred to the Ritchie Street depot on the Kogarah trolley bus network, south of Sydney,



Another view of Trolleybus No.3, at the corner of George and Bathurst Streets, Sydney.

--Vic Solomons collection

with their trolley wheels replaced by trolley shoes. In this location they were mainly employed on limited peak hour service.

During 1953, bus 5 received a thorough body rebuild at Randwick Tramway Workshops which resulted in the fitting of new aluminium body side panels, the strengthening of the composite body by diagonal members and windows at the ends of the lower deck, and the substitution of the standard NSW omnibus horizontal sliding panes in place of the half drop British style windows. This was the only former Wylde Street bus to be rebuilt in this manner.

On 13th December 1956 tenders closed for the disposal of the four former Wylde Street trolley buses. No.4 was sold for £85 on 14th March 1957 and No.5 for £50 on 13th April 1957.

Although four motor buses on "Q" chasses are known to be preserved in the U.K., the two Sydney trolleybuses are believed to have been the last of the double decker variety available for regular public service.

AEC withdrew the "Q" chassis from sale in 1936, largely because the unusual design was ahead of its time. In the NSW Government bus fleet the engines remained in the front of the standard buses until the arrival of the imported demonstration White underfloor motor bus (MO 2500) in 1950, followed by an underfloor Leyland with local body (MO 2520) in June 1951. The large fleet of underfloor, single deck motor buses now operated by the Public Transport Commission in Sydney and Newcastle has resulted in better chassis and road area utilisation than the front engined vehicles, but the Sydney "Q" type trolley buses, which could carry 63 seated passengers in a body only 26 feet long has still to be surpassed.

FURTHER READING

1. "The Government Bus" - Hayes. History of the NSW motor bus fleet.
2. "Development of the Trolley Bus" ---H. Brearley. Oakwood Press
3. "History of Bradford Trolley Buses - 1911-1960" ---H. Brearley. Oakwood Press
4. "New South Wales Trolley Bus Era" Parts I and II. "Electric Traction" August and September 1962, February and March 1963. Contributed by R. Willson, R. Field, D. Greenwald, N. Chinn, D. Keenan, C. Woodside, K. Charlton, K. Winney and K. McCarthy.

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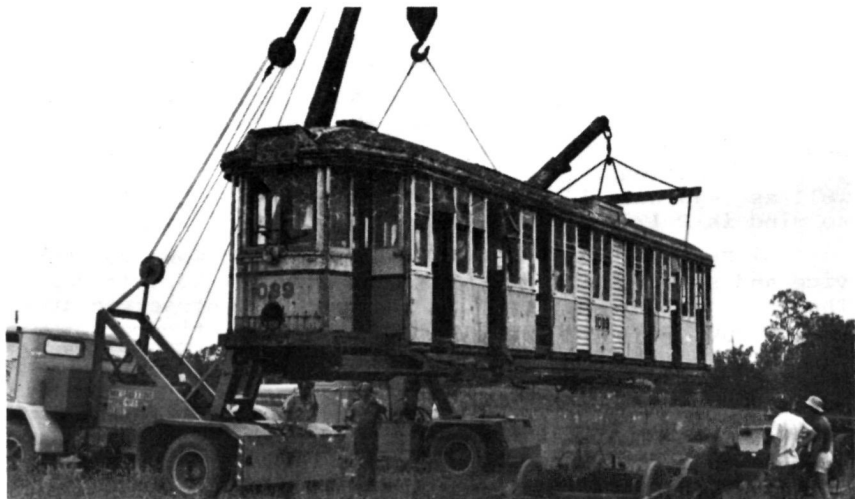
Thanks are extended to Messrs Magor, Upton, Solomons, and Bullen for assistance in the preparation of this article.

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SPER - Notice of Meetings

The next general meetings of the South Pacific Electric Railway Co-operative Society Limited will be held in the Railway Institute, Devonshire Street, Sydney at 7.30 pm.
on Friday, 22nd February and Friday, 26th April 1974.

SYDNEY OP-CLASS TRAM 1089



SPER's latest tramcar acquisition, Sydney OP class car 1089, is lowered onto bogies at Ingleburn. --Rob harvey

A gap in the SPER collection was filled on 1st February 1974 with the delivery of the body of O/P-class car 1089.

The "P" type car, of which museum tram 1497 is an example, was devised in 1916, but the first example of which, car 1480, did not enter traffic until September 1921. Ultimately 258 "P" cars were constructed and the "P" type body was also employed in the conversion of 250 L-class to the "L/P" design as well as one "N" car and ten "O" trams which suffered extreme collision and/or fire damage.

The first tramcar to receive the new "P" type body was "O" 1170 outshopped on August 26th 1918, followed by No.1007 on September 25th 1918 and "L" 274 on November 18th 1918.

Car 1089 appeared as an "O/P" type on June 15th 1920 having originally entered traffic as an "O" car on June 14th 1912. It received a body style similar to the first seven conversions (855, 935, 943, 1007, 1089, 1170, 1241) between 1918 and 1920, having low sill lines, vertical tongue and grooved timber strip side panels, roof mounted and internally illuminated front and side destination boxes, and canvas pull-down side doorway blinds. 1089 and 855 re-entered traffic on the same day, as "O/P" cars, having been involved in a fire at Rozelle depot on July 17th 1919.

The later O/P conversions which took place with cars 1372, 1383, and 1451 between 1931 and 1946 saw the

retention of the "O" type front with apron mounted destination boxes, "P" type composite metal and wood side body panels and concertina pleated canvas doors. (Note: "O" car 1443 was never classified "O/P" although operated for some years with minor partial conversion, while No.961 only received the conversion to the open smoking compartments.)

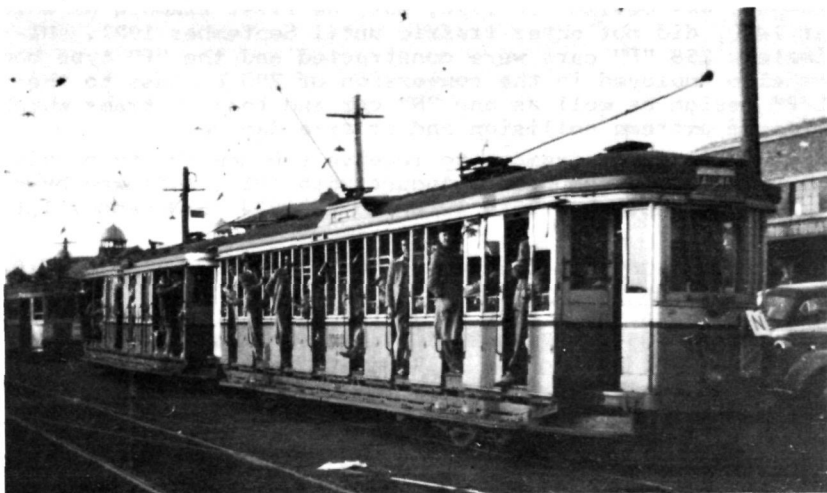
O/P-class cars 1089 and 855 are perhaps best known for their Ultimo services during the 1940's when the Ultimo Depot "Yard Man" had an eye for symmetry and favourite coupling combinations. He regularly coupled 855 with 1089, as well as 1443 with 1451 and another combination which comes to mind is P 1732 + P 1734.

By May 1957, O/P 1007 had been withdrawn from service and stood on the external store road at Rozelle depot. The SPER debated whether this car should be preserved at that stage; but the huge building and restoration program which faced the then small membership caused the preservation of an "O/P" type to be postponed.

Car 1089 entered Randwick Workshops for the last time on October 9th 1956 and was sold on 27th November for use as a shed at Glenorie. The possibility of preserving this car was investigated some time ago, but the transfer of the body to private storage at Ingleburn for eventual restoration has seen the gap in the SPER collection closed.

The body is in reasonable condition considering its years as a shed, and is presently sitting on a pair of bogies from the bogie 'farm' at Enfield loco, and is sitting on rails salvaged by the Society - see Museum notes.

The 'twin' car, 855, was sold on September 17th 1954, its body also seeing further service as a shed.



OP 1089 at the Sydney Showground.

Ted Davies collection

PRO BONO PUBLICO - FOR THE PUBLIC GOODOR WAS IT?

At a public meeting on transport held at West Wallsend in 1966, the Minister for Transport, Mr. M.A. Morris, MLA, made known his feeling that the closure of the NSW tramways between 1948 and 1961 had possibly been a mistake; especially in districts where the tracks were off the public street. The districts he had in mind were the eastern and south-eastern suburbs of Sydney and most of the Newcastle tramways. So traumatic has the change to bus transport been in some districts that at this 1966 meeting, older residents of West Wallsend were still complaining of the substitution of buses for that districts' steam trams in November 1930!

Mr. Morris has continued to be a champion of the return of trams to Sydney, and possibly other NSW areas, and in the wake of the successful release of Melbourne's new tram, 1041, to limited service, Mr. Morris announced on September 12th that preliminary economic and engineering studies would be launched on the possibility of reintroducing trams between Central Railway and the Quay in Sydney (for the third time since 1861) using the old route in Pitt and Castlereagh Streets with modern electric trams gliding through pedestrian malls, out of bounds to private motorists. This plan was taken one step further on October 17th with the announcement that tramway engineers from Melbourne would be invited to participate in the investigation panel.

After a quarter century of crying in the wilderness on the topic of the superiority of trams over all other mass transportation methods in certain suitable localities, the fifteen original SPER members, who were active in the early 1950's on the drawing up of the Newcastle Transport Report on invitation of the Newcastle Council and on other active tram protection, modernisation and retention schemes, are somewhat elated, but still, at this stage, reticent, that what they were saying all along is at last being recognised as being true.

Of all the popular daily papers in Sydney at that time only one, "The Daily Mirror" shared the pro-tram view... all the other papers expressed extreme anti-tram sentiments and the "Daily Telegraph" especially (now under new management) was not only against the retention of trams in any form as a public carrier in Sydney but was against the establishment of any type of operating tramway museum!

What of all these instruments of advice now? All the newspapers hailed the announcement on September 12th as a great step forward, but not one, as far as we can see, has placed "their money where their mouth is" and owned up to the fact that they helped mould public opinion against the tram and the associated equipment established in Sydney and were partially indirectly responsible in having it destroyed, at expense to the taxpayer!

What of the experts that visited these shores in pro-

fusion from overseas climes where their own local transport systems left much to be desired? All we can say is that a person who names himself an expert is either a genius.... or a fool! We suppose they were like the Kaiser's retinue during World War I. They only told their master what he wanted to hear.

The lesson to be learnt is that if you deeply feel that your cause is the correct one, you should never despair -- Nil desperandum.

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* MUSEUM Notes & News

from BYLANDS

TRAMWAY MUSEUM SOCIETY OF VICTORIA

The decision by the TMSV Board to cease publication of "Running Journal" and to use TROLLEY WIRE as the official periodical for the TMSV will mean regular news for TW readers of Victoria's Tramway Museum. It also means that TW has taken yet another step towards being the national "mouthpiece" of tramway and transport preservation groups in Australia. Economically, all readers of TW and former "Running Journal" readers will benefit. By combining the two mailing lists, a more economical "print run" results, and the savings will go towards countering the steadily rising paper, printing and postage costs.

The TMSV is thus pleased to join TW and present regular reports of its activities and progress.

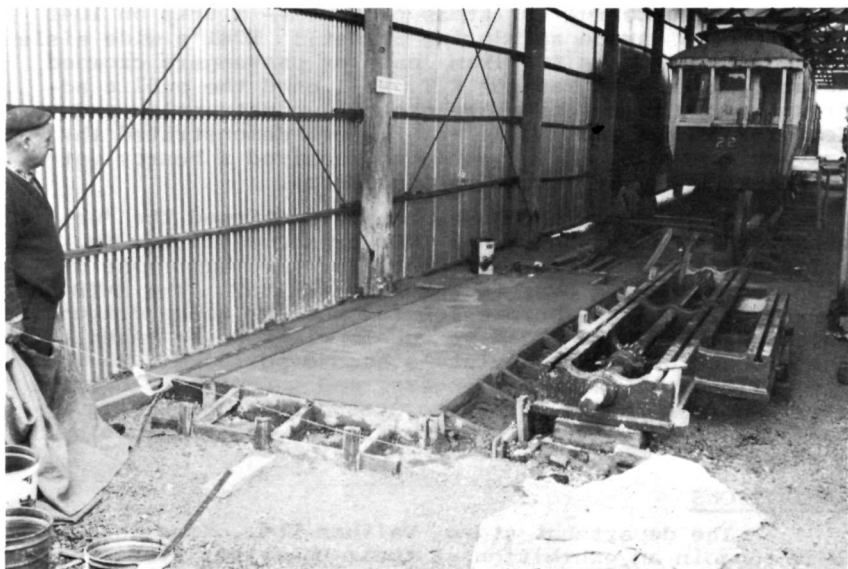
DEPOT AND WORKSHOP

Since the article in the October 1973 issue of TW on Tramway Historical Park, Bylands, work has progressed at a good pace, concentrating on the depot. By the end of September seven of our trams were on site and housed under the shed roof. Following the visit by the bi-ennial conference of the Royal Historical Society of Victoria, erection of the walls began in earnest and this is now more than half complete. Both the shed roads were completed in December, and the workshop area was looking interesting. The concrete base for the ex-Ballarat wheel lathe was poured in November and a mobile crane used to assemble the major components. Three truck loads of "tailings" have been spread to build the floor level up to rail height for the rear two bays of the shed. This will facilitate work in the area and enable the tower wagon to be garaged under cover again.



Ex MMTB Grinder No.1, and X2 class car 680 under cover and sheltered by walls at Bylands, December 1973.

--Graeme Breyden



Caretaker George Willcock surveys the newly poured concrete for the wheel lathe bed at the rear of the depot, 24th November 1973.

--Keith Kings

TMSVCAR RESTORATION

The wheel and axle sets for Geelong No.22 have been placed at the end of No.1 road preparatory to assembly of its Radiax truck (ex MMTB No.182). Wednesday night work parties have commenced at Malvern Depot to continue the re-painting of No.180.

(The TMSV No.180 is a Radiax truck-equipped four-wheel saloon car formerly in use by the MMTB and should not be confused with the SPER No.180, the bogie centre-aisle car from Brisbane, also the subject of recent night work parties.)

TOURS

The annual "Golden Sunset" tour, traditionally held on Boxing Day (afternoon and evening) was brought forward three days. The reason was that the prototype W-class car No.219 was 50 years old on 23rd December. A good roll-up of patrons on the tour which used 219 made it possible to run a second car, No.653, the last W2-class car built. (219 was introduced to traffic as a W-class car but was subsequently rebuilt and re-classified W2.) The itinerary included many interesting features, including a visit to Preston Workshops to place 219 (and 653) alongside Melbourne's newest tram, No.1041. And then the unexpected happened -- Assistant Traffic Manager N.C. Elliott (present to supervise 1041) offered the tramway enthusiasts in attendance a wonderful Christmas present -- a trip on 1041 (to Victoria Parade and Spring Street)! 1041's wide aisle proved its worth as two tram loads of passengers crowded aboard. Workshops Manager K.T. Hall used the public address system to describe the genesis, construction and features of the car, while Mr. Elliott demonstrated the driving controls. Both gentlemen received a hearty vote of thanks upon our return to the 'Shops.

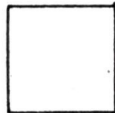
Sunday morning, 13th January continued the "unexpected tours season", when TMSV preserved Birney No. 217 ventured out of Malvern Depot for the first time since being handed over to the AETA in 1957. The MMTB had courteously granted permission for the car to be driven to photogenic Dandenong Road to enable views to be taken for the production of the Society's second postcard. We were also allowed to carry passengers, and seven shuttle trips were run from Chapel Street to Orrong Road and return. Needless to say, it was a wonderful and most memorable morning.

EXHIBITIONS

The department store, Waltons Ltd., have invited the TMSV to join an exhibition at their Doncaster store to launch a series of plastic wall plaques of vintage vehicles. We have been allocated a 25 ft x 7 ft area, and permission to operate the Sales Department! The display runs from 11th to 23rd February. Our annual tramway exhibition, held

during Moomba week, will be a little different this year. It will be held at Cameron Hall, at Kew Depot, instead of Tramway Hall, Malvern Depot. Also, it will only be open from Friday 8th March to Monday 11th March between 10.00 am to 10.00 pm each day. There will be a mixture of "usual" and new features.

from St. KILDA



AUSTRALIAN ELECTRIC TRANSPORT MUSEUM

The Official Opening of the St. Kilda Tramway will be performed at 2 pm on Saturday March 23 1974 at St. Kilda by the South Australian Chief Secretary and Minister for Lands (Hon. A.F. Kneebone). After the opening ceremony, a procession of trams will take the official guests from St. Kilda to the Museum and return. The opening ceremony will be the principal event of the St. Kilda Centenary Celebrations to be held the same day. Other festivities will be a display by local marching girls, an athletics competition, model aircraft flying, a boat display by St. Kilda boatowners and various stalls operated by local groups. An interesting transport display is planned for the Museum grounds. A tram service will operate between St. Kilda and the museum from 10 am to 5 pm except during the opening ceremony.

Bus transport is being organised between Adelaide and St. Kilda and return for interstate visitors wishing to come to the opening day. Details may be obtained from the secretaries of the SPER, TMSV and BTPS, or by writing directly to the AETM Secretary (Ron White) at Box 2012, GPO, Adelaide, SA 5001. It is probable that a special tram tour will be organised on the Glenelg line for Sunday March 24 1974.

The AETM has been conducting trial public operations from the Museum to Mangrove Loop since December 1973. Cars used have been Nos. 1, 21, 34 and 111. By agreement with the Corporation of the City of Salisbury, the trial operation was not publicised, but following its discovery by a reporter from the Adelaide "Advertiser", and subsequent publication of a picture of car No.1 in traffic, heavy crowds have been carried.

Special tickets for operating the St. Kilda Tramway are currently being printed, whilst a new museum booklet will also be available for the opening day.

Museum General Manager John Pennack is completing final wiring of the solid state rectifier for upgrading the Museum's power input from 45 amps to 150 amps expected to be completed by late February.

Museum members have been busy erecting overhead for the reverse curve across Mangrove Street into Shell Street.



While visitors inspect the St. Kilda display, Graeme Kaines (left) and Christopher Steele continue work on installing the turnout to depot road No.3.

--John Radcliffe



Heavy crowds have visited St. Kilda since the public learned that trial operations had commenced. Father Christmas was among the visitors when the Railcar Drivers Social Club held their Children's Christmas Party at St. Kilda.

--John Radcliffe

This difficult job was hampered on the first day by half an inch of rain, and subsequently by century temperatures. Fittings for the erection of overhead to the terminus have been prepared, while final tensioning of the overhead along the lake has been completed. Wiring has been provided to depot road 3, while the track connection to road 1 has been completed except for the crossing block.

from LOFTUS

SOUTH PACIFIC ELECTRIC RAILWAY

A steel framed building was obtained at Mascot and was dismantled during the second week in December and transported to Loftus. It is proposed to re-erect the building on a new site as soon as possible. In the meantime it joins the ever-increasing stockpile of materials stored at Loftus at the edge of the car park.

A quantity of 80 and 94 lb rail was obtained from the Department of Supply and after lifting was transported to storage at Ingleburn. The rail came from St. Marys, and was moved on 10th January.

The body of OP car 1089 was moved from its resting place at Glenorie to private storage at Glenorie (see article - this issue).

Our thanks to member Mal McAulay for successfully handling the organisation of these three removal projects and to his father and to Bob Harvey for assistance in the preliminary work involved in the demolition of the steel building.

Work at Loftus on Tuesday nights continues, with recent weeks being occupied on finishing off the new meal room. The original mealroom was demolished some years ago to make room for car No.295 from Brisbane. Although the new area had been in use for some time and was probably an improvement over the earlier area, in the interim, the resident possum family had grown, and being of somewhat less tidy habits than desirable, the new mealroom required to be made "possum-proof". The habit of 'nesting' on top of the bookshop store shelves has also been discouraged by making this area also possum-proof.

Minor work continues outside the depot; regular grass cutting around the building is carried out, while on 16th December last, the pointwork linking No.3 and No.1 road received attention in the form of new sleepers.

Car repairs were halted briefly during depot construction, but has now recommenced, mainly on cars 295 and 728.

The Annual Members' Day and Dinner held on 8th December 1973 was voted a success. The pride of place was,

of course, taken by Brisbane car No.180, but a surprise was in store for those present -- all the trams in the main shed were taken out, including the freight car, and lined up for a photo taking session along the main line. This has not been possible for one reason or another for some years.

Also present were two ex-Sydney double deck buses, one still in Sydney colours, while an ex-Adelaide former three-door bus was also on show. Mac's Carnival Organ made a welcome reappearance.

The dinner, held at the Sutherland School of Arts Memorial Hall attracted some 100 persons who were treated later to the usual film show. Our thanks to Bill Turnbull for his effort.

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In keeping with tradition, some ten days before the Society took delivery of 1089, a new edition of the SPER guide was delivered from the printers. But don't let that deter you.

Titled SYDNEY TRAMWAY MUSEUM - HANDBOOK OF EXHIBITS the new publication is available at the Bookshop at Loftus or by post from the SPER at the Sutherland address.

60¢ per copy (plus 15¢ for post) and it has 32 pages same size as TROLLEY WIRE.

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from PARRAMATTA



STEAM TRAM PRESERVATION SOCIETY

A recent visit to Parramatta Park revealed that the track gang had continued to be active at the railhead and that the line had reached the maximum extent for the time being. Trams are now able to operate along the whole length of the line which terminates at the edge of the roadway some 100 or so feet west of the backyard to the Old Government House. The next stage will be to lay in the loop line at the terminus; the turnouts had been laid with the main line.

The latter part of 1973 saw the demolition of the old Meggitt factory adjacent to Parramatta Park. The factory was served, until the closure in 1943 of tramway services, by a branch siding off the Parramatta Park to Redbank tramway. Considerable quantities of goods were shuttled between the wharf and Meggitt's on 4-wheeled trucks towed by steam motor between passenger runs, with mixed trams also being run from time to time.

Although the factory did not fail due to the loss of its novel transport facilities, at last it appears to have succumbed to the need for the business area of the city to spread.



Erisbane centre aisle car 180 heads the line-up of the SPER fleet on Members' Day, December 1973.

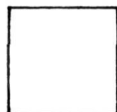
--Wayne Armitage



The small portal frame factory building under demolition at Mascot.

--Wayne Armitage

from WOLLONGONG



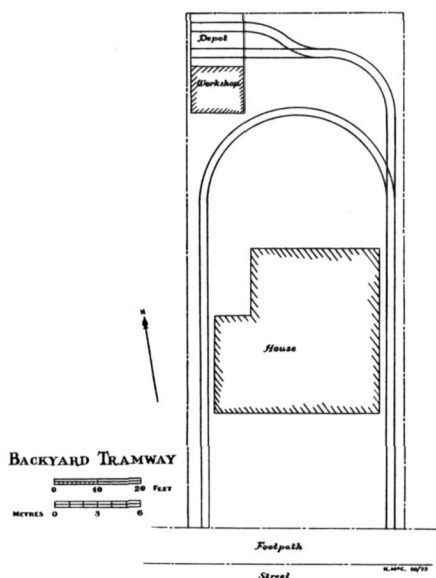
ILLAWARRA LIGHT RAILWAY MUSEUM SOCIETY

This month's report is not based so much on a Society activity but on the individual efforts of an ILRMS member. The Illawarra area of NSW has seen little in the way of electric traction on surface railways, the main exceptions being the ER&S plant lines at Port Kembla where overhead wire-trolley pole collection railways operated on the 2 ft gauge between 1908 and 1951 and on 4'8½" gauge between 1927 and 1956 (see TW Oct 1954, p3 and Oct 1966, p10). In 1912 several proposals were investigated but not proceeded with:- In March 1912 the Public Works Committee completed a survey for a steam tramway network linking Port Kembla with Thirroul via Wollongong, a distance of 13 miles, which would have been possibly electrified at a later date, and the possibility of a 2 ft gauge electrically operated gravel tramway at Kiama was also investigated. The Government of the day built the direct Coniston to Port Kembla railway instead of the tramway, while the Kiama railway opened soon after the survey, but using conventional 2 ft gauge steam locos as motive power.

The enthusiast, however, can now ride on a 2 ft gauge electric "tramway" in the City of Wollongong drawing power from conventional overhead through a trolleypole! The trackwork, now nearing completion, consists of a "U" shaped main line with a branch to a two road depot which amount to a route "mileage" of 215 feet and 45 feet resp. in the close confines of a 120 ft x 50 ft suburban building lot. The depot yard accounts for another 60 ft of track, half of which is contained under the depot roof.

The motive power on the line currently consists of a four wheel flat trolley of approximately 5' x 3' with a small seat accommodating two adults, and a mast on which the trolley base is mounted. Traction is provided by an underfloor motor, once a Lucas generator but now having re-wound field coils and this transmits power to one axle by double reduction gearing providing an 18:1 ratio which enables the tramcar to reach 7 mph on straights. The electrical gear is quite complex. The controller has five notches, four resistance notches for acceleration and one full speed position, there being no series-parallel control as the vehicle has only one motor. A line breaker relay trips out should an overload occur due to rapid acceleration or fourth notch being reached while the trolley is stalled. The 400 lb car is provided with hand operated wheel brakes but a dynamic brake is also available which works on four notch positions on the controller.

The trolley pole potential is a nominal 30 volts DC, provided by a battery of accumulators located in a shed beside the depot and recharged from the domestic mains;



negative polarity is attached to the overhead wire with positive to the tracks.

The early experiments were conducted in Sydney. The trolley was first tried on November 13th 1966 with shocked comments such as "What will the neighbours think?" and eventually the system found a temporary home in a factory grounds at Kirrawee where track laying commenced on January 29th 1968 and eventually some 300 feet were laid, accommodation being shared with the Hudswell Clarke-Robert Hudson loco ex Corrimal which was purchased from the AI&S on August 5th 1967 (See TW - Oct 1972 - p14).

Matrimony caught up with the partners in the Kirrawee venture so the "last tram" operated on that site at 4 pm on November 27th 1971, the electric section has now found a permanent home in the Illawarra region while the steam loco is now housed at the Southern Highlands steam group property at Colo Vale. Track laying commenced in Wollongong in January 1973 and the erection of overhead started on July 1st 1973. At the time of writing (Oct '73) a further 70 feet of mainline trackage has to be constructed to complete the ultimate system while over half the route is now served by electric wires.

The line is located near the ocean so salt air has been a problem. To prevent radio and TV interference, overhead arcing is reduced to a minimum by the use of a carbon insert trolley shoe while a four-wheel scrubber flusher car is frequently hauled along the track to remove grass clippings and oxide film to ensure good earth return. The terminals are located on the street property alignments and



The 2'0" gauge tramcar on the private line near Wollongong.

--Ken McCarthy

like all tramway terminals, evidence of running beyond the end can clearly be seen!

Operation in Wollongong has not been limited to this home system. During April 1973 the electric trolley has worked on the northern end of the re-opened Corrimall 2 ft gauge colliery railway traversing the half mile scenic section of that route for an entire afternoon on a single battery charge.

Although planned as a leisure time hobby operation this electric system is being used as an experimental line for future ILRMS electric operations. That Society's Gemco electric loco and spares will soon be delivered to the depot of this backyard system where overhauls and trials will be eventually conducted before the restored industrial machine enters public operation on the museum's public site. Future activities will not stop there! A long term project for this "Wollongong Tramway" is the construction of a birney car, scaled down somewhat to suit the two foot gauge similar to tramcars operated until recently at Eastbourne in England. On the day the birney rolls out of the backyard depot -- "What will the neighbours think" then?

* * * * *

Footnote: On the morning of December 11th 1973, the ILRMS received its first electric traction vehicle, the long awaited Gemco loco. Discovered in a machinery yard at Mittagong, NSW, over 12 months ago, this machine, as well as two spare wheel, axle, gear, motor sets were purchased by the ILRMS for \$100. Disused for many years, the unit ap-

peared derelict, with the battery box missing and overgrown by weeds.

The arrival of these items in Wollongong was awaited for some months; the delivery being actually performed, on the above mentioned "backyard" tramway quite unexpectedly at 6.30 am! Having been landed on a piece of temporary track at the street kerb, forces had to be mustered to transport the heavy loco onto private property and into the depot area. Initial inspection revealed that the unit was in much better condition than first thought. In order to spare physical exertion at that early hour of the morning the powered 2 ft gauge flat car was coupled onto the Gemco loco, jumper leads rigged and with a turn of each units' controllers, the coupled set came to life and within minutes were driven into the "backyard" depot, of course with much arcing and sparking due to the Gemco unit's long period of inactivity.

Since its arrival in December, the electrical and mechanical components of the Gemco loco have been checked, a temporary trolley pole fitted, and several hours of trials have been clocked in "backyard" working.

Technical details of the Gemco unit are:-

Built by Gemco of Rydalmere, NSW in 1947 for the Water, Sewerage and Drainage Board. Fitted with two electric motors which work on a nominal 40 volt potential to provide a maximum 4 BHP each at 700 rpm drawing 86 amps. The gauge is 24", length over headstocks = 7'5", overall width = 3'3", wheelbase = 2'6", wheel diameter (over treads) = 1'5", with height from rail to top of frame = 1'9". Transmission is through reversible worm wheel and pinion and control is through a single tramway type controller, although the early notches cause only one motor to be energised and the higher notches bring the second motor to life, possibly to conserve battery power when only light loads need to be moved. The newer number carried is fleet No. 49 but signs exist of No.26 being displayed earlier.

* * * * *

Rides on the tramway described in this article are by appointment only, such visits can be arranged through the ILRMS address, providing at least 3 weeks notice is given.

* * * * *

TROLLEY WIRE - NEW RATES

From this issue of TROLLEY WIRE it has been necessary to adjust the selling price and subscription rates.

The new rates will be:-

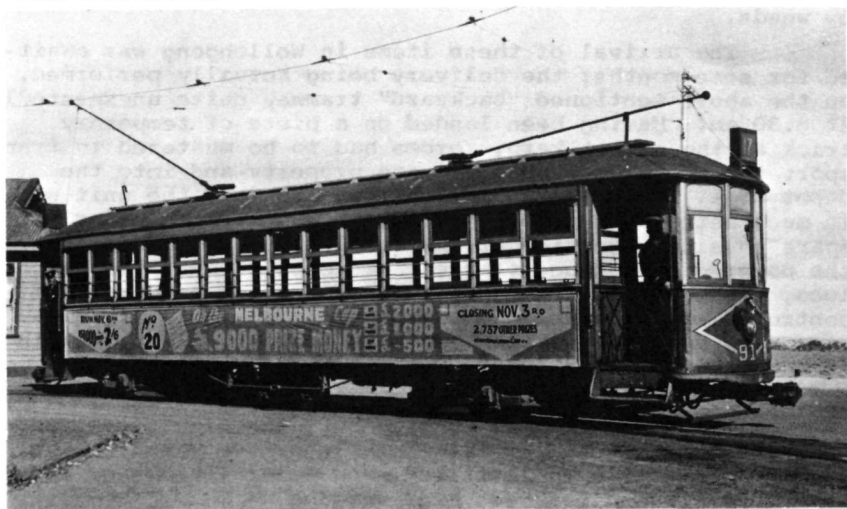
65¢ per copy - recommended retail selling price in Australia.

\$3.50 per annum to financial members of participating museums.

\$3.70 per annum to non/member subscribers in Australia and Papua/ New Guinea.

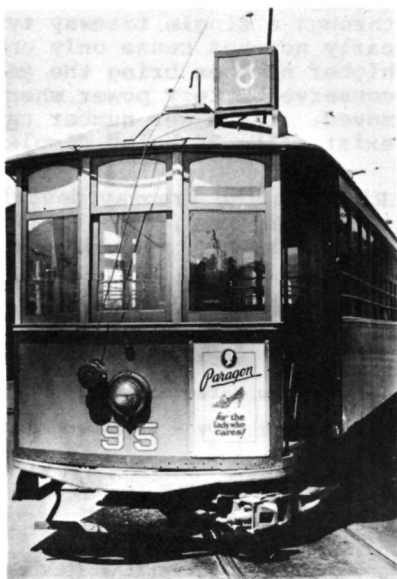
\$A3.90 per annum to other countries.

Yearly subscriptions include packing and postage.

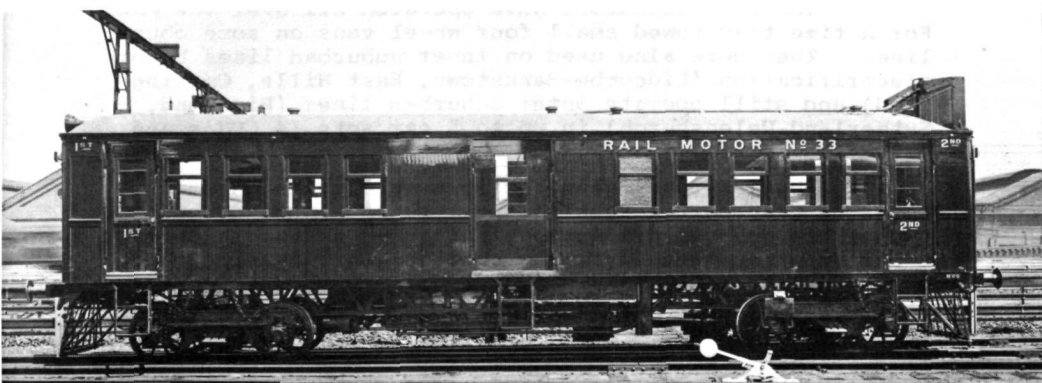
from **PERTH**

Western Australian Government Tramways car 91 (above) is one of twenty D class cars built during 1921-22. The class carried the numbers 84 to 103 and was unique in being the only two-motor trams in Australia fitted for multiple-unit control. Coupling was effected by Van Dorn pattern Westinghouse couplers, but these were replaced by standard link and pin type when the M-U equipment was removed from all cars during the early 1950's. Two-car sets were run during peak hours while 3 and 4 car trains were operated on picnic specials. 70 hp motors were fitted to the Brill 39E maximum traction trucks. With a length of 48'4½", these cars could seat 64 with a full capacity of 92. Car 91 was one of three D class cars extensively damaged in the carbarn fire of March 1958. At right is car 95. Note the Van Dorn coupler and trolley retriever. Also of interest is the destination (not route) number box - each separate destination had its own number, although the name appeared in small letters below. Car 95 was withdrawn from traffic during April 1958.

Photos: Reg Francis collection



50 YEARS OF "CPH" RAILMOTORS



Early in January 1924 the first "42 Foot Railmotor" of the New South Wales Government Railways went into service at Culcairn. Numbered 3, it had run trials on 17th December 1923 and was handed over with No.4 on 23rd of the same month. By 1930, 37 units were in service (Nos. 3 to 37 and (2nd) 1 and 2).

As introduced the motors were propelled by a petrol engine through a mechanical transmission. The cars rode on a 'maximum-traction' power bogie, driven on one axle with the unmotored axle leading. The trailing bogie was of equal wheel type; both bogies were of inside frame form.

Shorter than most bogie tramcars of the same period, the railmotors, later to receive the code 'CPH' had a seating capacity of 21 First class passengers and 24 Second class passengers in separate saloons each end of the vehicle, while the centre guard's compartment could officially accommodate 7 persons on fold up seats.

Over the past 50 years the CPH Railmotors have undergone considerable modification; discussion of which is for the most part outside the scope of this article. It is however, pertinent to note that the original trucks have given way to equal wheel outside framed types of a more conventional form, the original petrol engines and transmission have been replaced, re-engining has resulted in the remaining cars being fitted with diesel engines and torque converters. As originally built, the motors could not be run coupled, except that each car would require a separate driver. However, later modifications have enabled remote control to be fitted and multiple unit operation is now undertaken, including from driving cabins fitted to matching 42'0" trailer cars. Other modifications have seen the replacement of the small 'automobile' type roof mounted headlights with large locomotive type lamps, believed to have been salvaged from steam tram motors. The radiators were

removed from under the cars and placed upright, flanking the headlight at one end of the motor above fascia level.

The CPH Railmotors have operated all over the state. For a time they towed small four wheel vans on some country lines. They were also used on inner suburban lines before electrification (Lidcombe-Bankstown, East Hills, Carlingford) and still operate outer suburban lines (Richmond, Sutherland-Helensburgh) in up to 5 car sets (4 CPH's and 1 CTH trailer).

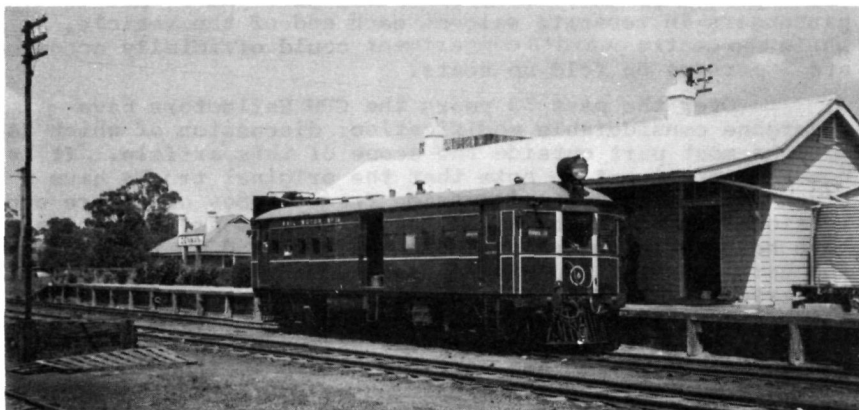
The CPH-type railmotor is very popular on small tours by transport enthusiasts -- one reason no doubt being the centre mounted driving cabin flanked on each side by a passenger seat, a favourite position for watching the driver or the road ahead. Reorganisation of rail services may, however, soon see the displacement and possible total withdrawal of the CPH fleet. A number of cars have already been scrapped, mainly due to accident damage. Several have been replaced by motorised trail cars which carry the number of the wrecked motor.

The Victorian Railways and the Tasmanian Government Railways both operated railcars built to the CPH design but with apparently limited success; these cars have been scrapped.

The NSWGR first entered the railmotor sphere in September 1919 when Railmotor No.1, a typical 'rail-bus' of the day, but built on a truck chassis, entered service at Lismore.

The next excursion into the railmotor field saw the introduction into service at Tamworth in October 1922 of Railmotor No.2, a converted end platform suburban car.

After the delivery of Railmotor (later CPH) No.7 the numbers 1 and 2 were re-allocated to the new cars.



ABOVE: CPH railmotor 16 as it appeared in April 1971 on the Merriwa branch line at Denman. PREVIOUS PAGE: Official photo of Railmotor (CPH) No.33 in an early form.

We regret to inform readers of the death of W.D. (Bill) Allnutt, a longtime traction fan, of Subiaco in Perth. Bill left Sydney's eastern suburbs for the West in his youth and spent most of his working life with the Western Australian Government Tramways and Ferries, firstly on trams as a conductor, then as driver, and eventually retiring as Foreman of the Car barn during the closing stages of Perth's trolleybuses.

He made a working model tram to 9mm/ft scale as early as 1937, and later made a matching trolleybus, and continued modelling until quite recently.

Bill was a strong supporter of the WAETM, willingly placing his considerable accumulated electrical and mechanical knowledge at its disposal. He also exemplified the traditional hospitality of the West, quite a few Eastern fans will long remember this ever helpful quiet friendly man.

We extend our sincere sympathy to his wife Amy, and to his family.

--A.W.P.

BOOK REVIEW.....

TRAMWAYS OF EASTERN GERMANY
by M.R. Taplin LRTL

(56 pages (210 x 147 mm) card covers)

Intended more in the nature of a guide to the tramways in the German Democratic Republic, it is felt that its benefit to the Australian enthusiast will be somewhat limited. The book does, however, make an excellent companion to the monthly magazine "Modern Tramway" containing as it does some 27 route maps of the tramways covered in the tables.

Details of the various tramcar fleets are set out in tabulated form; while general notes cover such things travel notes, tramway closures, preserved tramcars, and what seems rather strange to the average Australian enthusiast, the warning that photo taking of trams may be forbidden within range of not only military establishments, but railways, bridges and industrial plants!

TRAMWAYS OF EASTERN GERMANY may be obtained from:

Light Railway Transport League Publications
130 Coombe Lane, Croydon CR0 5RF England.

Price - £0.75 posted, payment to be made by International M.O.

--W.M.D.

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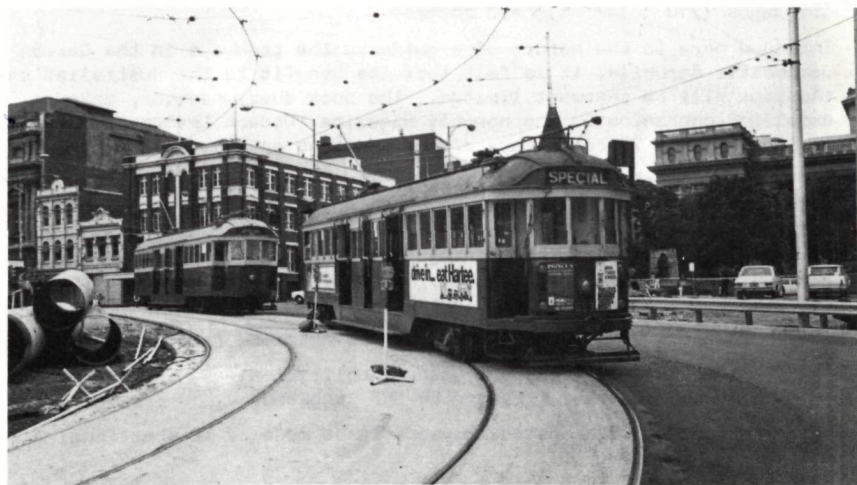
Editorial
N. L. Chinn
W. M. Denham
V. C. Solomons

* 65¢ - Recommended maximum selling price in Australia.



TMSV car, ex MMTB X class Birney 217 in Dandenong Road at the Chapel Street crossover on 13th January 1974.

--Robert Green



W2 class car 219 follows W2 653 into the deviation in La Trobe Street on the TMSV - Golden Sunset Tour, 23rd December 1973. The deviation takes the tramlines around the site of excavation for Melbourne's underground railway.

--Robert Green

THE OPINIONS EXPRESSED IN THIS MAGAZINE ARE THOSE OF THE AUTHORS
AND NOT NECESSARILY THOSE OF THE PARTICIPATING SOCIETIES.