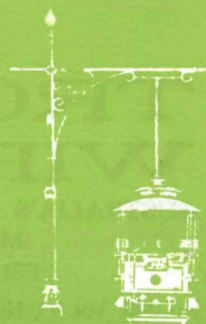


TROLLEY WIRE



No. 248

FEBRUARY 1992



40TH ANNIVERSARY OF TROLLEY WIRE

TROLLEY WIRE

AUSTRALIA'S TRAMWAY MUSEUM
MAGAZINE

FEBRUARY 1992

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Melbourne X class Birney 217 in Queensbridge Street near Kingsway during the special operations for the Public Transport Corporation of Victoria's Open Day on 20 October 1991. Eight Birney cars were imported from the USA during 1924/5; two for Melbourne, two for Geelong and four for Port Adelaide. All except one are preserved in operating condition. Melbourne 218 was presented to a children's home in 1957. It deteriorated and was dismantled in 1969 for spare parts. IAN MacCOWAN

FRONT COVER:

Sydney ballast motor 93u and O class car IIII stand at the Pitt Street crossing during the S.P.E.R. open day on 30 November 1991. 99u provided the motive power for 93u while IIII was in multiple with O class breakdown car 141s.

R.I. MERCHANT

BACK COVER:

Top: Visitors admire horse tram (ex-cable trailer) 256 at the Kew Depot open day in Melbourne on 8 December 1991.

R.J. MARSH

Bottom: Sydney Ballast motor 93u stands outside the Hunter Valley Training Company's workshop at Maitland after being officially handed back to the Sydney Tramway Museum on 26 November 1991.

R.I. MERCHANT

40 YEARS OF TROLLEY WIRE

AND THERE ARE STILL STORIES TO TELL

by K.A. McCarthy

February 1992 marks the 40th anniversary of the publication of the first issue of *Trolley Wire*. Copies of early issues have been reproduced in these pages at the time of earlier anniversaries, while the peculiar fact that the first issue was being printed when the news of the death of King George VI was announced, has also been recalled in the past.

To mark this anniversary, the events in tramway development in Australia are briefly recalled for the period since 1952. At that stage twelve authorities operated 17 separate street tramway undertakings.

By 1972, only two tramway undertakings remained. . . From this low point the tramway movement has grown and flourished, the two remaining tramway undertakings have undergone a rebuilding and modernisation process and we are possibly on the brink of witnessing the metamorphosis of abandoned tramways in the form of new light rail undertakings, especially in Sydney.

By early 1952, the last route of the once large Newcastle tramway network had closed just twenty months before the appearance of the first issue of *Trolley Wire*. During that first year of publication, three of the remaining 3 feet 6 inch gauge tramways were closed, Kalgoorlie on 16 March, Fremantle on 8 November and Launceston on 13 December.

Kalgoorlie

The Kalgoorlie Electric Tramway Coy, the last private undertaking in Australia, opened the initial routes in May 1902. By the close of 1904, the system had reached its maximum extent with 11 branches extending from a long elongated belt line which linked Kalgoorlie with Boulder City.

W.H Stanley, the manager from 1903, retired when the Eastern Goldfields Transport Board took over the undertaking on 1 April 1947. He was permitted to occupy his residence until his death in 1950.

By April 1947, only four Kalgoorlie tram routes remained and after 1949 only the heavily patronised lines linking the Kalgoorlie business centre with Boulder City and Boulder Block continued.

These two routes deteriorated largely to a peak period operation only and were finally replaced by buses in March 1952.

Fremantle

The well maintained Fremantle tramways opened during October 1905 and were owned and operated by the Municipal Council for the entire working existence of 47 years.

The network extended to six suburban terminals. By 1952 only the trunk routes to East Fremantle, Marmion Street and South Fremantle remained. The Marmion Street line closed in May 1952 while the East and South working continued until 8 November 1952 when car 32 performed the final run.

The Council expected to continue tram operation for many years beyond 1952. With the rationalisation of electricity generation in the south-western quarter of Western Australia, however, the Council lost its generation and supply rights, the resulting loss of control over tramway power costs caused the Fremantle council to convert to bus operation.

Launceston

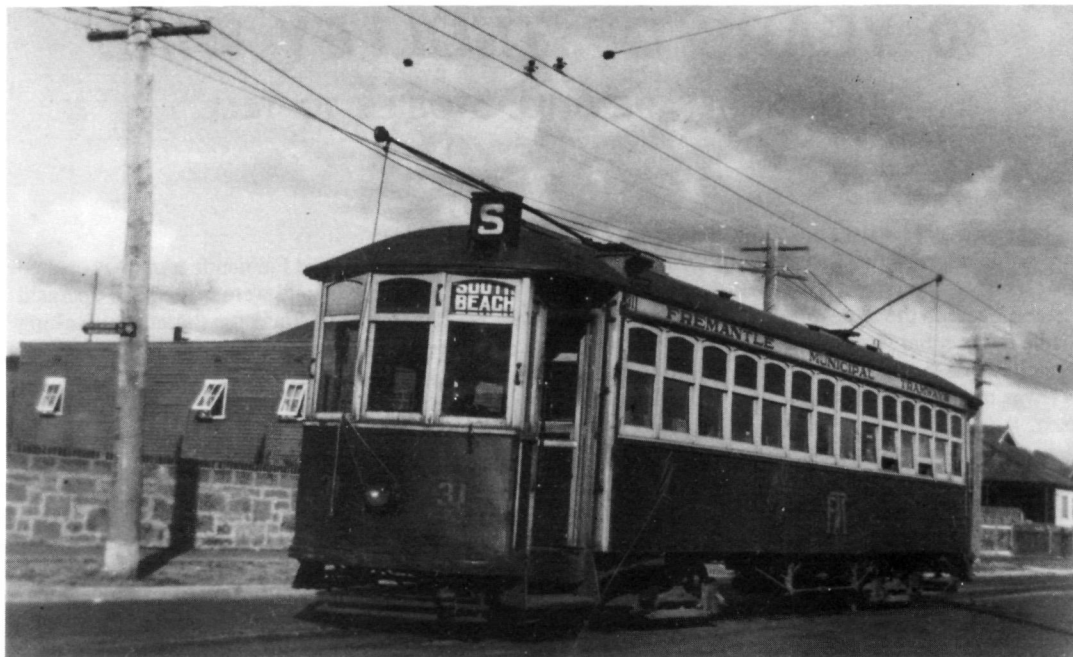
The first part of the Launceston Municipal Tramways was commissioned in August 1911, and eventually extended to six routes. By 1952, tram services had been reduced to lines serving Mowbray Heights and Newstead with the Wellington Road section remaining in use for depot trips.

During 1945, the Chief engineer of the Municipal Tramways Trust in Adelaide, Sir William Goodman, prepared a report on the future of the tramways. When released during the following year it recommended the conversion of most tram routes to trolley bus operation. From 1947, the tramway services were gradually replaced by motor buses. The slow delivery of the new trolley buses prevented the introduction of this new transport mode until 21 December 1951.

The Mowbray Heights tram was replaced by trolley bus on 15 September 1952 and the final trips were made to Newstead on 13 December 1952. This latter route was replaced by motor buses until the trolley bus wires could be erected.

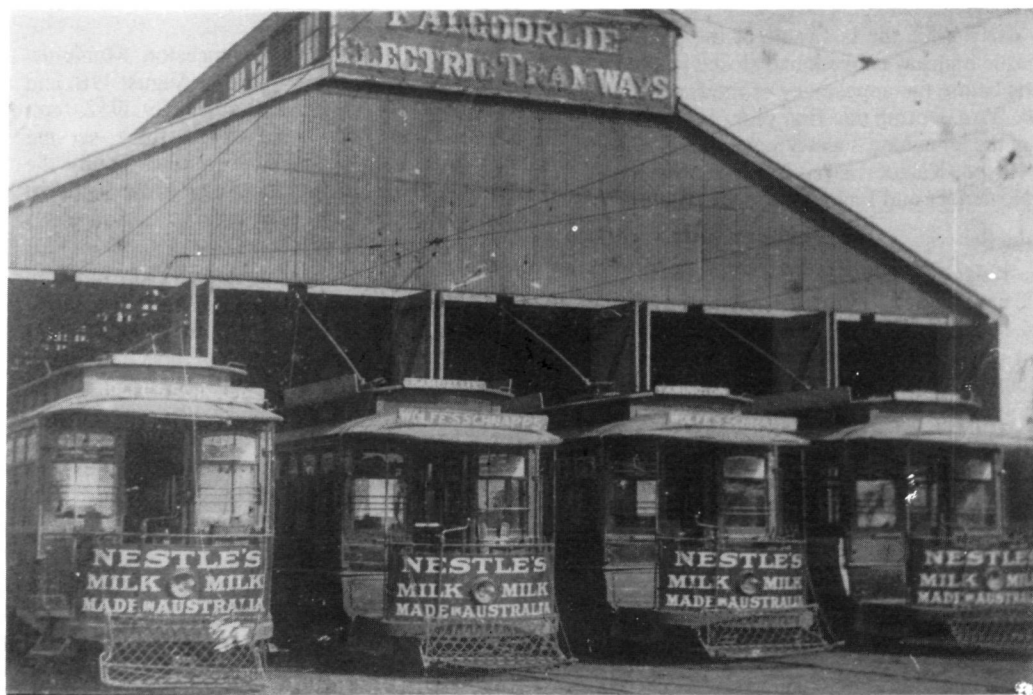
Car 27 made the final regular run followed by No. 1 carrying civic dignitaries.

With the exception of the large Melbourne tramway system and the single retained high speed



Fremantle Municipal Tramways car 31 at South Beach in May 1949. This was one of two cars constructed by Bolton's Ltd during 1925.

Late W. JACK



Smothered in advertisements, four Kalgoorlie single truck cars stand outside the depot during the first decade of this century.

K. MAGOR Collection

tramway in Adelaide, the other twelve undertakings closed between 1955 and 1972.

Victor Harbor

From 1894, horse trams provided a tourist service during the summer months on the 5 feet 3 inch gauge railway goods line between Victor Harbor and Granite Island. Half the route traversed a long trestle timber bridge or causeway. By 1952, the service was operated for the South Australian Railways under contract and employed two double deck horse cars, numbers 5 and 6 built for the SAR in 1888 by Duncan and Fraser of Adelaide. Approximately every second winter the horse cars were hauled to Adelaide by railmotor for major maintenance.

The deterioration of the causeway resulted in the closure of the tram service as there were no plans to relay the track when the structure was rebuilt. The full service ceased at the end of the 1954-55 summer season. Car 5 did operate again on the short length of remaining track on Granite Island during the 1955 Christmas season, but the end of the holiday period in January 1956 marked the end of the operation.

For the following 31 years, a road tractor hauling rubber tyred trailers provided a tourist service

between Victor Harbor and Granite Island but this lacked heritage value and the tourists and local residents still complained about the loss of the horse car operation.

The idea of restoring the tram service never died. In 1983, a proposal by Victor Harbor Council to restore and reopen the tramway as a sesqui-centenary-centenary project to mark 150 years of European settlement in South Australia was approved. The track and two new double deck cars were completed by April 1986 and the service, which now operates seven days per week during the entire year, reopened on 14 June 1986.

By 1988, two additional trams had been added to the fleet. The horse tramway and the Victor Harbor-Goolwa-Mount Barker Junction railway, operated by enthusiasts with steam trains, have certainly assisted in keeping Victor Harbor one of the major tourist destinations in South Australia.

The next closures occurred in Victoria. The three State Electricity Commission (SECV) tramways at Geelong, Ballarat and Bendigo closed between 1956 and 1972, while the two isolated Melbourne feeder tramways operated from St Kilda and Sandringham railway stations by the Victorian Railways (VR) were converted to bus operation between 1956 and 1959.



Prior to the first closure in 1955-56, the Victor Harbor to Granite Island horse tram service was worked by 1888 vintage cars. Double deck tram No.5 appears at the Granite Island terminus in its final form with Masonite side panels about 1953.

Commercial card, K. McCarthy Collection

SECV Provincial Tramways

The Geelong electric tramways were constructed and operated by the Melbourne Electric Supply Coy Ltd and the first trams operated on 14 March 1912. The Electric Supply Company of Victoria Ltd replaced the Bendigo steam trams with electric vehicles from 15 April 1903 and the Ballarat horse cars with electric trams on 18 August 1905.

The State Electricity Commission of Victoria was established in 1918 to centralise the generation and distribution of electricity in that state. Alternative operating bodies could not be found for the three tramway systems so the SECV was forced to take over the tramways after a period of dual interest and involvement. The SECV took over sole rights of the Geelong system in 1927, followed by the Bendigo and Ballarat undertakings during 1940s.

The Geelong plant and rolling stock was received in sound condition but a rehabilitation programme needed to be undertaken at Ballarat and Bendigo. The SECV predicted that the life of the three tramways would expire in the early 1940s.

Single route extensions were made to the three systems between 1937 and 1942, and after World War II older bogie cars surplus to the needs of

the Melbourne tramways were overhauled and used on the three provincial undertakings to retire elderly single truck vehicles. In addition, some rolling stock exchanges also occurred to better suit the traffic needs of each provincial city.

As experienced by all public transport systems in Australia, patronage declined after World War II. This was accelerated with the end of petrol rationing in 1950 and the increase in family car ownership.

Slow population increases occurred in Bendigo and Ballarat, but a population explosion was experienced in Geelong, caused by the rapid expansion of major industrial undertakings. In that city, many new suburbs were established far beyond the existing tramway termini.

Geelong

Two reports resulted in the closure of the busy Geelong tramway system in early 1956. A report compiled by Mr H.H. Bell Jnr of the Melbourne tramways was released in early 1949. This recommended that the obsolete trams be replaced by buses and that the Victorian Railways inaugurate a suburban train service.

An inquiry conducted by the Transport Regulation Board in September and October 1953



Geelong cars 7 and 26 at the Aphrasia Street Junction of the Newtown and Chilwell routes in January 1951. Car 7 was the last of the original batch built by Duncan and Fraser of Adelaide for the opening in March 1912. No.26 was one of seven combination cars purchased from Melbourne during 1928 and was withdrawn in the early 1950s to provide parts for the remaining Geelong cars of the ex-M&MTB pattern.

K. A. McCARTHY



After setting down passengers, Victorian Railways dropcentre car 51 is about to turn from Royal Avenue into Bluff Road on the Sandringham to Black Rock tramway, 4 September 1956.

KEN McCARTHY

revealed that a mixed reception existed in Geelong to continued tramway operation. Some municipalities served by the trams were in favour of bus conversion, while other councils beyond the tramway territory requested extensions to the network.

In mid-1955, the necessary Bill was presented in parliament and the nine terminals served by the Geelong Tramways closed in four stages between 8 January 1956 and 23 March 1956, when the long Belmont to Railway Station service ceased. The official last car was No. 4 which opened the tramway in 1912.

VR Tramways — St Kilda and Sandringham

The St Kilda Station to Brighton Beach 5 feet 3 inch gauge electric tramway opened for traffic progressively between 5 May 1906 and 22 December 1906. The undertaking operated as a feeder to the St Kilda railway to Melbourne. New tramcars continued to be constructed as needed until 1942.

A second feeder line, constructed to the standard 4 feet 8½ inch gauge, opened between Sandringham Station and Black Rock on the southeastern outskirts of Melbourne on 10 March 1919. Between 1926 and 1931, a long but poorly

patronised extension to Beaumaris operated beyond Black Rock.

Faced with major reconstruction and declining patronage at the end of World War II, the Victorian Railways Commissioners stated that both tramways would soon be replaced by buses. This proposal was first aired in 1946, but it took over ten years before local objections were overcome and abandonment succeeded.

The Sandringham to Black Rock line closed on 4 November 1956. The St Kilda to Brighton Beach line, however, was replaced by buses in three stages. The Middle Brighton to the terminus section closed on 31 December 1956, the portion between Elwood Depot and Middle Brighton followed in July 1957, and the final part from Elwood to St Kilda Station lingered on until 28 February 1959.

Perth

The 3 feet 6 inch gauge Perth tramways opened in 1899 using electric cars. The main system was developed by the Perth Electric Tramways Ltd, who worked two extensions constructed by development companies. The undertaking was purchased by the government in 1913 from which time it functioned as a department within the Western Australian Government Railways until just prior to closure.



Perth E class car 64 on the Victoria Park service in late 1942. This car was the first of a batch of ten built by the WAGR during 1917.

J. GREEN

By 1952 five tram routes still operated, the system having gradually contracted under a programme of trolley and motor bus replacements.

On 29 November 1953, the Leederville and Mount Lawley (North Perth) routes closed. The remaining three lines continued for a further 4½ years using the best of the remaining rolling stock.

The final closures took place during the early months of 1958. The Charles Street route converted to diesel bus operation on 1 February 1958 and the last two heavily patronised routes, of a system which once served 15 termini, closed on 19 April 1958. Car 88 was the last to Subiaco and No. 66 to Inglewood.

Diesel buses replaced the Subiaco trams but trolley buses were extended to Inglewood.

Adelaide

The capital of South Australia was the last large Australian centre of population to receive electric tramcars. Its extensive horse-hauled system, which dated from 1878, was gradually converted from March 1909.

A programme of new car construction continued until 1929 when the large 'interurban' style trams

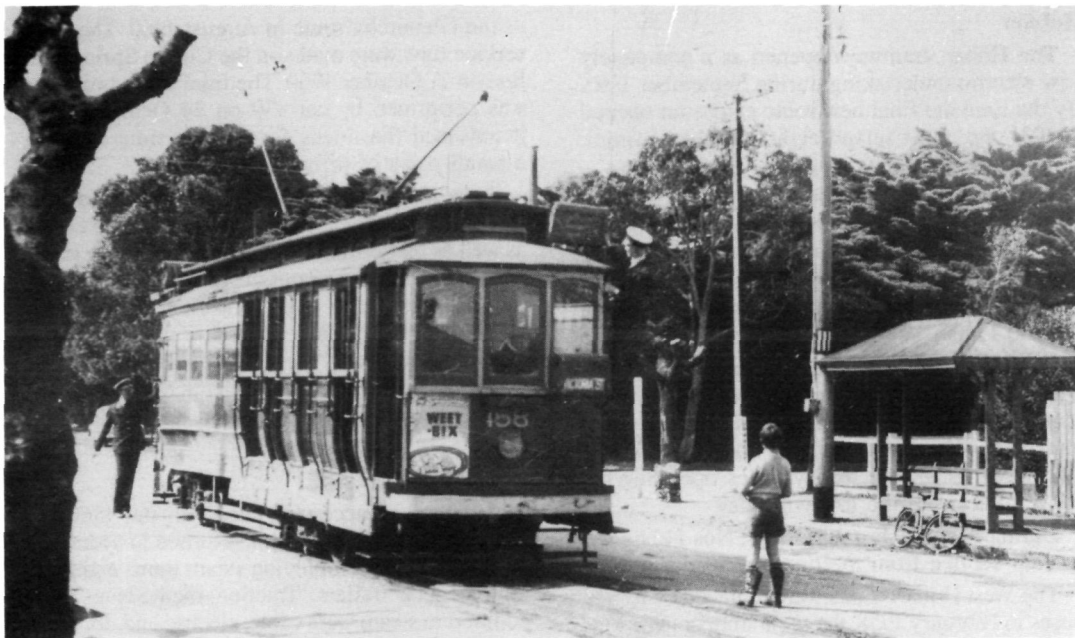
were delivered for the conversion of the South Terrace to Glenelg railway.

At the end of World War II, Adelaide was in the unenviable position where it had not received a 'second wave' of new tramcars to replace the well maintained but ageing original fleet.

As a result of an experimental trolley bus line operated from 1932 to 1934, the first permanent route opened in 1937. By the following year, the trolley buses had reached Port Adelaide, covering the former isolated Port Adelaide tramway system which had closed in 1935.

Although some minor alterations had occurred on the main Adelaide tramways resulting in some route truncations, the system continued to expand until 1944. The network then reached its maximum extent serving 23 suburban terminals.

Sir William Goodman was the Chief Engineer and General Manager of the Municipal Tramways Trust from 1908 until 1950, during the early part of 1952 a report was released which investigated the then current state of the undertaking, with recommendations for the future. Although strong criticism was raised regarding the condition and management of the system, a statement cleared Sir



A small boy watches as the route number is changed on Adelaide D type car 158 at St Peters in September 1956 as its crew prepare to return to Victoria Square.

BEN PARLE

William Goodman of any direct responsibility for this situation.

Although not directly recommending the abandonment of the Adelaide tramways, the report did criticise the age of the tramway fleet and the costly maintenance charges which resulted.

In 1952, a start was made on the gradual closure of the tramways when three eastern routes were replaced by trolley buses.

During 1953, a large tramcar, No. 381, the first of a planned fleet of 40 units, entered service. Although work had commenced on No. 382, the decision to gradually close the system resulted in the cancellation of the remaining 39 new cars.

From 1953, the tram routes generally closed in groups. From that time, all conversions were to diesel bus operation and not to trolley buses.

The last tram on the street system was No. 269 which traversed the long run to Cheltenham on 22 November 1958.

The high-speed Glenelg route was retained, working from the City tram depot. Its future, however, was uncertain.

In 1971, a programme of major rebuilding and overhaul of the fleet of 26 H type cars commenced.

No. 364, the first to be treated, re-entered traffic in July 1971, followed by car 363 (renumbered from 361) in December. Both carried a colour scheme similar to that introduced in the 1950s with grey replacing the silver livery.

The third car to be treated, No. 373, returned to traffic in September 1972 repainted in the old tuscan red and cream scheme. Subsequent cars overhauled in this project have emerged in the old red and cream livery.

In the late 1970s, plans were prepared to extend the Glenelg tramway from the Victoria Square city terminal northwards in tunnels under King William Street to the north parklands. From this point, the high-speed route would serve the north-eastern suburbs along the Torrens River valley.

Trial borings for the underground section were carried out on 1979 but a change in the State Government resulted in this project being replaced by an O'Bahn guided busway.

The opening of the new depot at Glengowrie on the Glenelg line on 19 October 1986 enabled the City depot to be closed. At the same time, pantographs replaced trolley poles on the H tramcars.

Hobart

The Hobart tramways opened as a completely new electric undertaking during September 1893. By the time the final new route extension opened in 1931, the trams served eight suburban termini.

Trolley buses made their debut in 1935 with a short operation to Huon Road. The Cascade and Proctors Road tram routes were converted to trolley buses in 1942 and 1946. By the start of 1952, trams still served the trunk routes to Sandy Bay, Glenorchy and West Hobart as well as the branch lines to Lenah Valley and Springfield.

The decision to replace the Sandy Bay trams with trolley buses saw gradual cut backs of the tram service using motor buses as temporary transport. The final closure occurred on 8 December 1952 with trolley buses operating the entire route from the following day.

During 1952, the last new trams, Nos 140 to 142, entered service from the tramway workshops.

The West Hobart trams were replaced by trolley buses in February 1958, the remaining conversions received motor buses. After the West Hobart closure, the remaining tram services were based on the long Glenorchy route. The Lenah Valley branch line closed in August 1957, the outer end

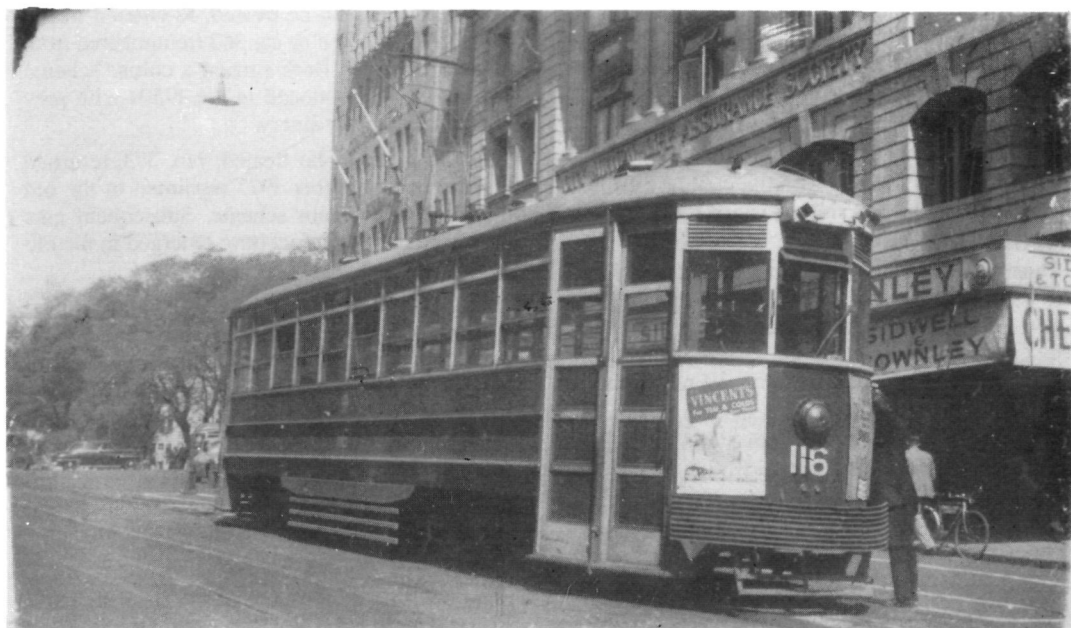
of the Glenorchy route in August 1960. The final service runs were made on the City to Springfield line on 21 October 1960. The final ceremonial trip was performed by car 130 on 24 October when it traversed the tracks for the last time carrying a small party of official guests.

From 1929, the standard Hobart car was a long saloon bogie vehicle. The first three carried centre as well as platform doors. From 1931, all new trams were constructed without the centre doors and the original three were later converted to this form. From 1893 until 1947, Hobart was served by a gradually shrinking fleet of double deck trams. After several capsize in 1946, the remaining cars of that design were converted to single deck saloons.

Sydney

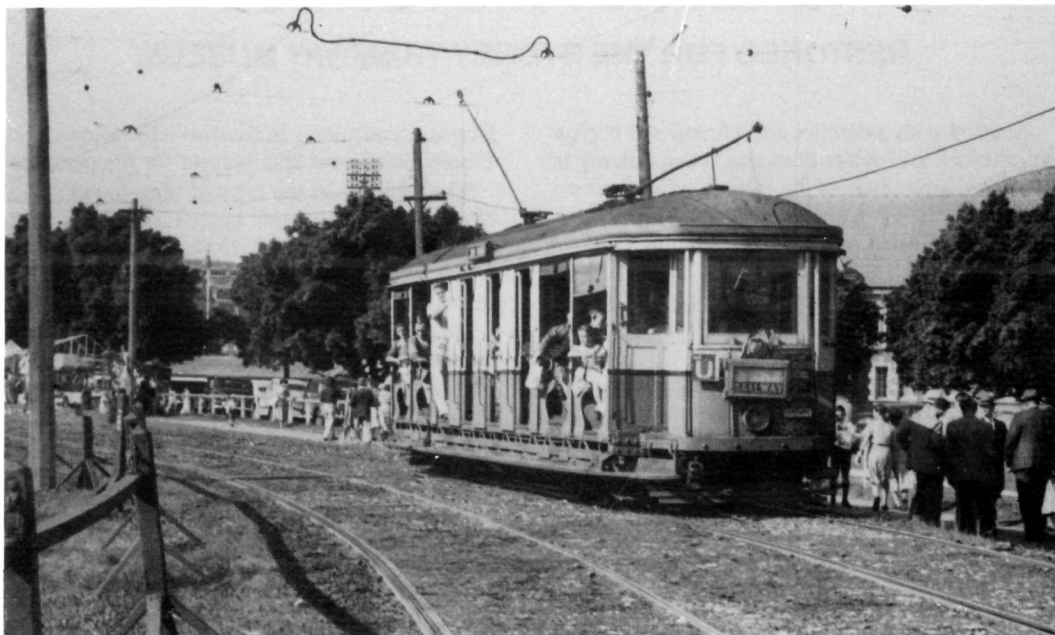
After an unsuccessful period in the 1860s of horse tram operation, trams returned to Sydney in September 1879, employing steam trams and large double deck trailers. Traction methods used in addition to steam were cable, electric and, for short periods, horse.

By what now appears to have been a well orchestrated media campaign, tram passengers were conditioned to believe that the tramway



Hobart standard bogie car 116 at the city terminus in Elizabeth Street. This car was built in 1940, one of 42 built in the tramway workshops (with some progressive improvements) from 1928 until 1952.

K. MAGOR Collection



Ultimo Depot O class car 969 working the Showgrounds to Railway Square route in Sydney on 17 April 1954.

BEN PARLE

system was unsuitable and should be replaced by buses. Gradual pruning of tram routes commenced during the 1930s but from 1933 to 1936 a total of 250 new saloon cars entered service. The value of the tramway system was best shown by the number of passengers carried during World War II. This peaked at 404,630,000 for the year 1944-45. The postwar politicians promised a fleet of new cars with an initial order for 250 vehicles. Between 1950 and 1953, one hundred new R1 class trams were delivered when the contract for the remaining 150 cars was cancelled.

In 1953, the Date Government considered a proposal to retain a compact tramway network operated by approximately 800 cars. Route closures had recommenced in 1948 but these were limited to very long services or those requiring special work such as deviations.

Any form of tramway retention was eventually rejected and after a pause of one year, tramway closures resumed in late 1954. By 1957, regular

diesel bus deliveries allowed conversions to be made in geographical districts. The southern lines using Pitt and Castlereagh Streets closed in September 1957, the isolated North Sydney system followed in June 1958, and the western lines using George Street were converted during November 1958.

By this time the eastern and southeastern routes departing from Queens Square or traversing Elizabeth Street remained. The Queens Square service to Watsons Bay closed in July 1960 and the Elizabeth Street tram routes gradually closed until only the main line to La Perouse and the branch to Maroubra Beach, operating from Hunter Street in the city and from Railway Square, remained.

The final closure took place on Saturday afternoon, 25 February 1961, when R1 class car 1995 entered the Randwick Workshops gate at 4.26pm.

To be continued . . .

VERY LATE NEWS

The Sydney Tramway Museum has been advised their application for use of the Royal National Park Branch Railway has been successful . . .

BALLAST MOTOR 93u

RESTORED FOR THE SYDNEY TRAMWAY MUSEUM

Starting with a derelict underframe and bogies, thirty black-and-white photographs and plenty of initiative, apprentices of the Hunter Valley Training Company have restored 79-year-old Sydney tramway ballast motor 93u to gleaming original condition.

Car 93u was officially handed back to the Sydney Tramway Museum by the HVTC chairman, Hon. Milton Morris AO, in a brief ceremony at the group apprenticeship scheme's skills training centre near Maitland, NSW on 26 November 1991.

Museum directors Greg Sutherland and Peter Hallan accepted the ballast motor on behalf of the Museum. They were accompanied by former director and *Trolley Wire* editor Bob Merchant. Representatives of the State and Federal

Departments of Industrial Relations and Employment were also present for the ceremony.

The project was the baby of Museum chairman Howard Clark who was unable to be present for the handback ceremony. However, Howard made a flying visit to Maitland the previous day to inspect the finished work.

Boilermaking and fitting and machining apprentices at the HVTC off-the-job skills centre have rebuilt and largely remade the tram over the past 18 months. The job was masterminded by the HVTC's boilermaking apprentice supervisor, Jim Lawrence in co-operation with technical manager Arthur Soennichsen.

Ballast motor 93u is one of 13 type U4 cars built by the Meadowbank Manufacturing Co. in 1912-13.



93u advertises a well-known brand of soap powder, complete with fence and line of washing.

OFFICIAL PHOTO, RIM Collection



The 100,000th production model Holden car was carried through the streets of Sydney on 93u in 1953.

VC. SOLOMONS Collection



The film Desiree was advertised using 93u as a mobile advertisement in July 1955. It is seen here on the terminal sidings beside Fort Macquarie Depot.

TED DAVIES



Ballast motor 93u assisted with the removal of the tram tracks on the Sydney Harbour Bridge and its approaches. Here 93u makes the last trip from the Wynyard tramway tunnels with a load of sleepers in July 1958. The track was cut immediately it cleared the tunnel mouth.

NORM CHINN

They were built with multiple-unit controls for coupled operation and had the trolley pole mounted on a bracket extending from one driver's cabin. Two Sydney No. 6 trucks, each equipped with two 50 horsepower motors, were standard for this type. These cars measured 41 feet 6 inches over bumpers and 7 feet 6 inches over side sills. They had a capacity of 10 tons for a tare weight of 18.5 tons. They could operate with a trailer on lines with grades up to 1 in 17 and could work as coupled motor units or singly on all routes except the steeply graded Neutral Bay line and Darling Street incline.

With the exception of sister car 99u and U2 type car 42u, which were used as overhead line cars (both now in the Sydney Tramway Museum collection), all ballast motors remained open-

fronted with only a small apron 1 foot 9 inches wide being provided, although the right-hand-side cab opening was enclosed to waist level in 1919.

93u was one of seven U type cars decorated for the War Effort in 1915 and 1916, and is known to have been decorated for Allies Day in 1916. 93u ran coupled with 90u from 1919 until 22 December 1921 fitted with a special bolster across the centre of each car for carrying welded rail 60 feet in length. 93u went to Leichhardt Depot to be fitted with floodlighting in September 1937 for advertising and it carried promotions for soap powder, complete with fence and lines of washing. 93u was again used in June 1953 to advertise Holden motor cars. It was fitted with loud speakers but was silenced after one day!

During 1953, 93u and three sister cars were shown attached to Tempe Depot and housed at Wolli Creek permanent way yard. They were used to transport ballast and rail, especially at night on large rerailing and deviation work when complete track occupancy could be obtained.

Car 93u was one of three cars transferred to North Sydney to aid in the dismantling of the Harbour Bridge tram tracks after closure in June 1958 and was the last tram to use the tramway tunnels to Wynyard Station; the track was cut after it had cleared the tunnel mouth with a load of sleepers in July of that year. It was returned to Randwick Workshops with North Sydney ballast motor 98u in August 1958. These two trams were cut down to flat cars in 1960 and 1961 respectively and pushed or towed by R1 class 1979 (also in the STM collection) carrying fabricated steelwork around the restricted confines of the workshop complex. 93u was officially withdrawn from this service in July 1967. It had obviously not seen service for some time and had been shunted to the extreme end of the remaining length of tramline between the workshop buildings. It was purchased

by the Museum for \$100 and transported to Loftus (National Park site) on 12 July 1967.

In May 1989, the rusted hulk of flatcar 93u was transported to Maitland for restoration. It was found that only 30% of the original vehicle delivered to the training company was reusable, so 93u's restoration became a major reconstruction job. The cab roofs were manufactured in Sydney and transported to Maitland at the appropriate time for incorporating into the rebuilding programme.

It is intended that 93u will be a working exhibit and with this in mind, the very heavy full-length drop sides which were fitted to Sydney ballast motors were rebuilt as three-section drop sides, the only change from the original specification. The fitting of the trolley pole, motors and other missing equipment, and the wiring of the car will be carried out at Loftus as the Museum's restoration programme permits.

The apprentices who carried out the restoration work as part of their training can be proud that their work will be on display at the Sydney Tramway Museum as a working vehicle to be appreciated by future generations.



The rusted remains of flatcar 93u outside the HVTC at Maitland.

BOB MERCHANT



Apprentices and staff of the Hunter Valley Training Company line up in front of 93u with HVTC Chairman Milton Morris and STM Director Greg Sutherland to face the NTN television camera.

BOB MERCHANT

COTMA CONFERENCE — PERTH 1992

29 MAY — 3 JUNE

The technical programme of the Conference is now being finalised — there are sure to be Papers and Workshops to interest all participants.

Registration and a Welcome evening will be held on Friday 29 May. Conference sessions commence on Sunday 31 May and conclude with the Conference General Meeting on Tuesday 2 June.

Conference tours, to be held on Saturday 30 May, Tuesday 2 and Wednesday 3 June, will include an inspection of progress in the construction of Perth's Northern Suburbs electric railway; a fast run to Armadale in one of the new EMUs; tours of the Westrail Electric Depot at Claisebrook and the Control Room at East Perth; a diesel railcar trip to cover some of Perth's metropolitan goods lines, finishing in Fremantle; and a visit to the Australian Railway Historical Society's Rail Transport Museum at Bassendean, which also houses an extensive display of photographs of Western Australian tramways.

And of course there will be plenty of time to see the developments at Whiteman Park — home of the Perth Electric Tramway Society, the W.A. Light Railway Preservation Association and the Bus Museum of W.A.

Take a ride on the first Western Australian tram to be fully restored to operational condition — the 1921 Fremantle bogie saloon no. 29 — as well as on the Melbourne trams.

**Conference brochures and registration forms are available
from your Museum's Secretary.**

The closing date for registration is 30 April 1992.

**Late enquiries should be directed to David Brown, Conference Booking Officer,
PO Box 257, Mount Lawley, W.A. 6050
(phone 09 444 1825).**

HERE AND THERE

NEWS ITEMS OF INTEREST FROM ALL OVER

Melbourne Tramway Works

During the last months of 1991, work continued steadily on completing the new down track in St Georges Road. About 70 metres north of Arthurton Road, a temporary connection was made between the new down track and the old down track. On weekdays, work continued on laying the new track roughly on top of the location of the old up track. In places it was laid on top of the old roadway and track, but where it was found this foundation was unsuitable, or elevation too high, the old road and track was removed. The curve at Hutton Street was also eased. At Thornbury, the new track was connected via a temporary ramp onto the last 100 metres of the old up track, which in turn connects with the temporary crossover used by the Northcote shuttle service. Trams from the city use this crossover in the facing direction to gain access to the old down track before turning towards West Preston or Northcote. This new down track was brought into use on Monday, 16 December, the overhead wiring being transferred to the new masts during the previous two days.

By the end of December, construction of the new junction for Thornbury was nearing

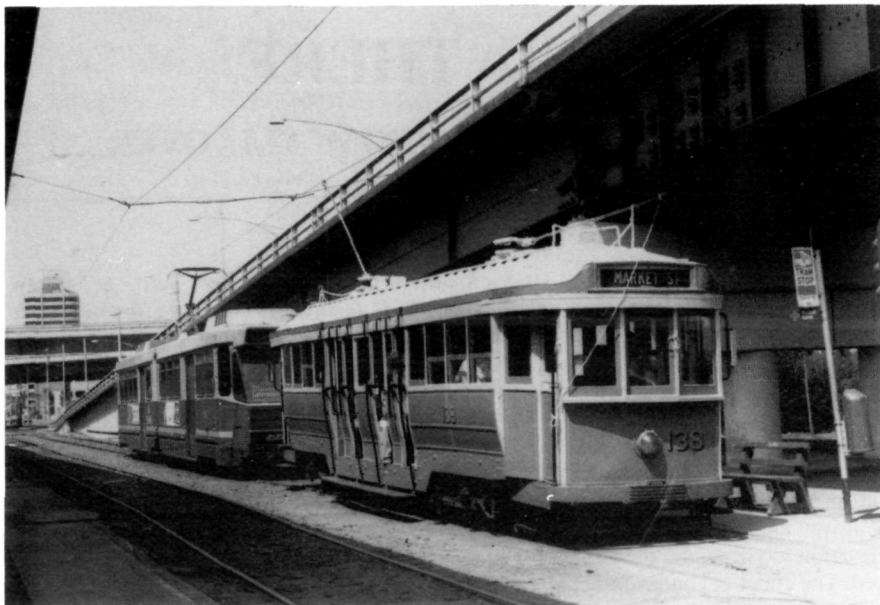
completion in the per-way yard at South Melbourne. It features a three-way double track junction, which will allow cars travelling between West Preston and Preston Depot to proceed direct to the depot without having to reverse in St Georges Road. This new portion of the junction is also bisected by a single track connection into the old Thornbury depot, now used for car storage. The western four roads are still available for such use, but overhead wiring has been removed from over the eastern half of this former depot. Access to Preston Workshops will also have to be provided, but in another junction.

Overhead

Mention was made in the November 1991 issue of *Trolley Wire* of the use of steel span wires instead of the nylon that has been in general use for over ten years. It has been realised that, although nylon is satisfactory for straight track and easy to work with, there are serious disadvantages to its use on curves and junctions. It stretches, allowing the overhead to become misaligned. Dewired poles then readily damage it. Work is now proceeding on removing nylon spans from curves and junctions



A driver's view of the temporary connection from the new down track to the old down track in St Georges Road. This arrangement was in use from 28 October to 13 December 1991.



P class 138, on loan to the PTC from the Bendigo Trust, and B2 class 2012 in the Kingsway approaching City Road on 20 October 1991. 138 was built in 1918, the last of its class.

IAN MacCOWAN



Full size and half size Birneys on display during the Open Day at South Melbourne Depot on 20 October 1991.

and replacing them with steel and distinctive grey insulators. An interesting innovation has been in the splicing necessary where span wires are attached to poles and insulators. The short end is folded over the long portion and a pretwisted section of wire is wrapped over the two to hold the loop firm. It is very neat in appearance and quick to install.

On 31 October, boom barriers were put into service on the two original level crossings on the Port Melbourne light rail route, both locations having a bad accident record, there have been a few initial problems, mainly unreliability in strong winds.

Policy

On 3 December, the High Court of Australia finally determined that the scratch ticket system and driver-only trams did, in fact, discriminate against disabled passengers. While the matter of tickets is no longer an issue with trams and buses issuing virtually the full range of previously available tickets, the matter of driver-only trams still is of concern. At the time of writing, there had been no repercussions from the Court's decision.

A plan has been exhibited for a new terminus outside Melbourne University following closure

of the Swanston Street services city terminus in Victoria Street. The proposed new terminus is located one kilometre further north. It involves separating the present up and down tracks in the vicinity of the University crossover and installing a terminating track between the two. Additionally, a short single track extension is proposed further north in Swanston Street beyond the curves into Elgin Street, intended for trams terminating but having a longer layover time. However, equally detailed plans of the Domain Road/St Kilda Road interchange were available in 1976, nearly ten years before it was built, so the preparation of plans does not automatically mean a start of work is imminent.

Melbourne Trams

The Z class trams in storage at Thornbury and Hawthorn have disappeared, presumably to Glenhuntly depot for route 79 and Malvern for route 69.

A Santa Tram was launched on 3 December. It consisted of car 725 freshly painted in green but with the yellow replaced with red which continued over the roof as well. Christmas bells and tinsel adorned both the inside and the outside of the tram. The service operated during shopping hours along Bourke Street, terminating at the Exhibition Buildings. Santa rode most of the time, handing out sweets to the young faithful on the



Driver Lucy Tuhaka is about to take car 727 from South Melbourne Depot. This car was painted by students at the PTC Open Day on 20 October 1991. BARRY NEILSEN

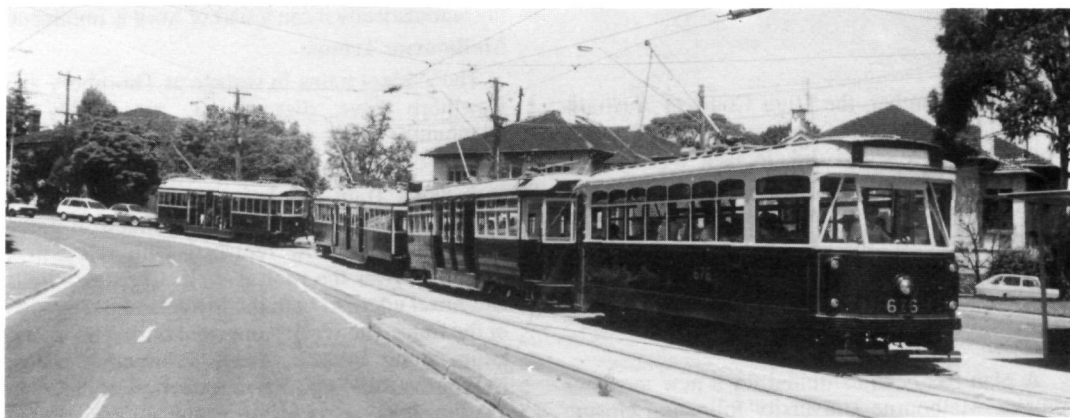
tram and whilst passing through Bourke Street Mall.

Melbourne's Historic Fleet

The last three months of 1991 saw a feast of activity for the tramway enthusiast in Melbourne.

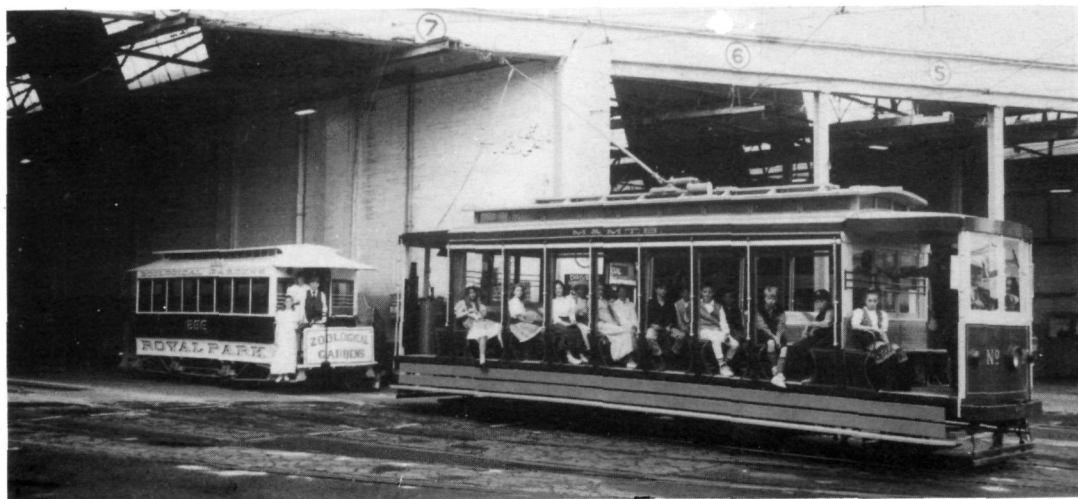
A state-wide Public Transport Corporation 'Open Day' was held on Sunday, 20 October, with depots, workshops and stations being open to the

public. Some preserved steam train services were operated as well. Tramway activity centred on a display in Finders Street, City, next to the railway station and the thoroughfare was closed to traffic and trams. 'Pop art' tram 727 was repainted by college students to a previously chosen transport theme design. Other trams and buses featured in the display there included SW6 class 938, Z1 class 8, A1 class 231 and 246, W1 class 431 and B2 class 2014, all in special liveries. Malvern Depot



Part of the MTA's 'Great Brown Fleet' near Hawthorn Depot on 24 November 1991. X2 class 676, L class 104, W class 380 and W1 class 431 formed part of a cavalcade of 18 vintage trams to commemorate 75 years of the Hawthorn Tramways Trust and the handing over of Wattle Park to the Melbourne Water Authority.

RAY MARSH



Open crossbench car V214 hauls trailer 256 for the benefit of Kew Primary School students as part of the Kew Depot 75th anniversary celebrations.

RAY MARSH



Students from Kew Primary School display artwork relating to the Kew Depot 75th anniversary celebrations in November 1991.

RAY MARSH

displayed W2 class 600, W5 class 685 with blinds and scrubber 8W, which was towed there by an Ex-sydney scrubber a few days earlier.

Other depots ran free shuttle services on local lines using Y1 class 613 (Camberwell), Y1 class 611 (Brunswick), L class 104 (Glen Huntley). South Melbourne ran a shuttle service between the Flinders Street display and the depot via Spencer, Bourke and William Streets. Trams used were V class 214, X2 class 676, Bendigo maximum traction car 138, and S class 164, T class 180 and X class Birney 217 from the Tramway Museum Society of Victoria. W2 class cars 510 and 646 were running the route 16 service along St Kilda Road and A1 class 237 gave rides inside Preston Workshops. The ½ scale model Birney built by SPER member Richard Youl was running at South Melbourne depot on full scale track and overhead supplied by the Met.

On 10 November, a convoy of trams consisting of V class 214, X2 class 676, SW6 class 892, Y1 class 611 and A1 class 237 re-enacted the start of electric services from Victoria Bridge (just west of Kew Depot) via Glenferrie Road to St Kilda. The mayors of the four municipalities which adjoin the bridge were also present in the re-enactment.

This service had ended in 1929 with the replacement of the cable and horse trams by electric services. The return journey was made via Chapel Street.

The next major event was on Sunday 24 November, celebrating the 75th anniversary of electric trams to the city, the Hawthorn Tramways Trust, and the tramways-owned (until recently) Wattle Park. A large cavalcade of vintage trams left Hawthorn Depot early in the afternoon and proceeded to the Batman Avenue terminus of route 70. The street was closed to motor traffic and, after suitable speeches had been made, the trams set off for Wattle Park with a police escort ensuring the trams received priority at intersections. Short speeches, inviting the tram cavalcade to enter, were made at every municipal boundary with more festivities at Wattle Park. On the trip east, the trams ran in the following order: 138, 214, 164, 180, 217, 676, 104, 380, 431, 510, 613, 611, 885 and 757, the latter two representing the more modern traditional trams.

The final event was the Kew Depot open day, being the culmination of that depot's 75th anniversary celebrations. A number of vintage trams were on display in the depot yard, while

others gave rides on the various routes radiating from the depot. A horse tram was also running which did a ceremonial trip to Kew Junction in the afternoon. Model Birney trams to 2 feet gauge and 7¼ inch gauge gave rides in the depot car park.

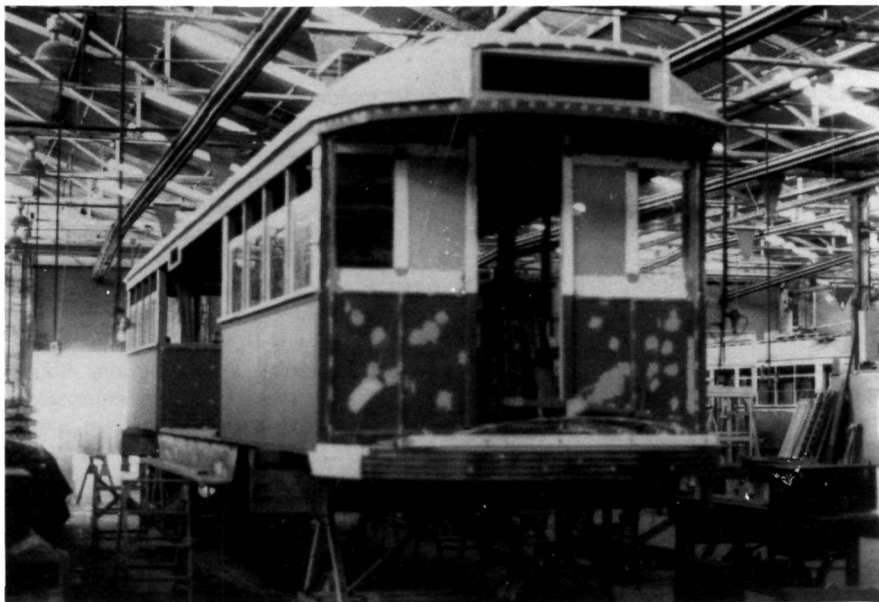
All these events received remarkable public interest, indicating the popularity of the tramway system with a good proportion of the population in general, and were only possible due to tram crews working voluntarily.

Car 138's time in Melbourne has been far from incident free. Although it performed well at the PTC Open Day, the next time it was moved it was found to have a defective motor. It struggled to Hawthorn Depot on the remaining good motor, but when being towed from there to Preston Workshops for repair the bumper bar was ripped off. As it was to star in the 75th anniversary parade on Sunday 24 November, repairs were quickly carried out and completed by 22 November. However, the Friday before the Kew Depot open day, a pull-rod broke in the brake rigging while doing a training run and the tram collided with three motor cars. Since then, all of the older two-motor vintage trams have been banned from running. It is hoped engineering checks will be made so that renewal of defective parts can be made

where necessary and these unique vehicles can be run again on special occasions.

As mentioned in previous issues, some staff at South Melbourne Depot were unhappy about working on vintage trams. Threats of standing down staff who refused to work them resulted in a stopwork meeting being called to clear the air. This meeting eventually voted overwhelmingly to continue to work these trams on the Sunday route 16 service, provided running time and frequencies were made adequate and the trams were brought up to normal operating standards. More importantly, if a crew member was unable to exchange away a vintage shift they were unwilling to work, it was agreed they would work as directed for that shift, thus eliminating the possibility of vintage services being cancelled because a crew member did not like to work on them. It was also agreed that the vintage trams would not work other shifts unless the crew worked the shift as an overtime shift to do so.

The single truck California combination car, formerly Bendigo No. 3, M&MTB No. 114 and HTT No. 8, which has been languishing at the back of Malvern Depot for many years, has been sent to Preston Workshops for restoration as Melbourne M class No. 114. Also in the workshops for overhaul



W5 class 774 is stripped down for an O1 overhaul in Preston Workshops. The Met is restoring this car for preservation as an original W5 class for the vintage fleet.

IAN MacCOWAN



B1 class 2002 and B2 class cars 2074 and 2087 in Preston Workshops during the PTC Open Day on 20 October 1991. At this time 2087 was being prepared for service. 2088 was on the property but had not yet been numbered.

IAN MacCOWAN

is X1 class 467 from the Tramway Museum Society of Victoria, while Y class 469 has joined the vintage tram fleet looking resplendent after a heavy overhaul.

Postcards Available

A set of four postcards was produced to help celebrate the 75th anniversary of Kew Depot. The cards show W class 892 and visiting V class 214 outside the depot, W class 840 in Victoria Parade in May 1973, A class 231 in its Mont Albert line 75th anniversary special livery, and A class cars 249 and 253 in Victoria Parade in May 1990. The cards are well produced and are a worthy addition to any collection of tramway postcards. The four cards can be obtained for \$1.50 (including postage within Australia) from Postcards, Kew Depot Amenities Club, 61 Barkers Road, Kew, Victoria 3101.

Sabotage

A1 class tram 231, which was painted in a 'vintage' chocolate and cream livery in August, was heavily vandalised with paint whilst parked in the lane beside Kew Depot. Adjacent trams were vandalised much less severely. Management planned to repaint it in standard colours, but threats that if this was done it would not run again resulted in the special livery being restored.

New Trams

Delivery of the new B2 class trams is continuing, with 2085 undergoing test running in mid-December. At that time, depot allocations of this class was as follows: Brunswick 17, Preston 26, North Fitzroy 10 and South Melbourne 29, although some of these were actually at the workshops at that time. Once again the two prototypes are out of use. 2001 is in storage at Camberwell Depot while 2002 is at the workshops.

A class trams 236 and 282 have received faces similar to that applied to SW6 class 938 'Sam the Tram' which promoted the children's story of the same name. Most popular is 282 which is named 'Monique', a name shared with a popular Tramways District Inspector. Car 236 carries the name 'Turbo'.

The Z class trams have been a convenient workplace for conductors with medical certificates stating they are unfit to be roving conductors. With the larger number of B class trams operating from Preston and Brunswick Depots, it is normal to operate most of the Saturday and all of the Sunday services with the B cars instead of the Z class cars. This means the 'Z only' conductors were getting little, if any, of the more lucrative weekend work.

You will be pleased to learn that some of these conductors have enjoyed miraculous returns to good health and can once again rove conduct when required, thanks to an interesting rehabilitation programme...

Melbourne Double Deck Trains

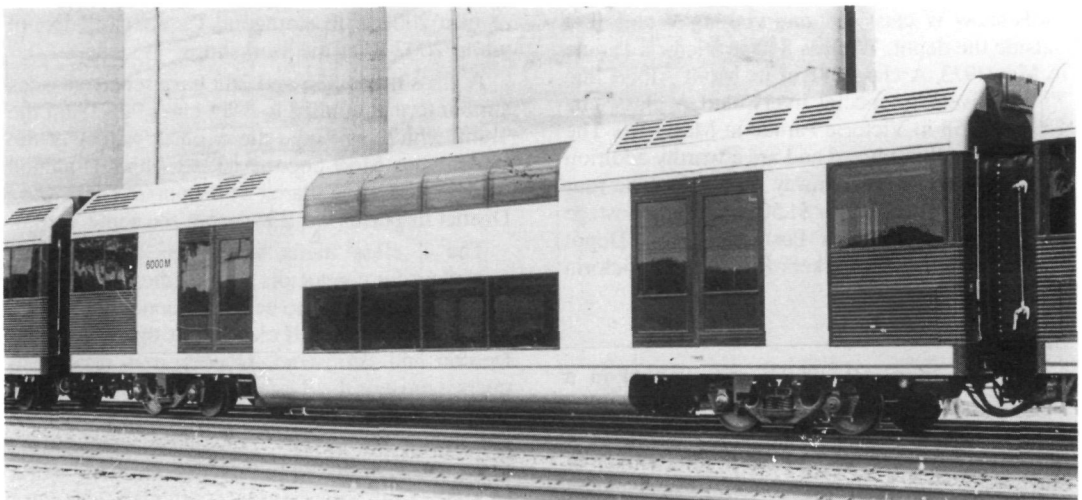
A. Goninan & Co. was contracted to manufacture a double deck development and demonstration suburban train for the Public Transport Corporation of Victoria. The four car train was delivered during the second week of December 1991 and will enter service during 1992.

The PTC intends to trial the operational and maintenance aspects of the new train on the Melbourne suburban network to ensure that the facilities satisfy the needs of the customers. The demonstration train will also be evaluated for its reliability, performance, crew accommodation, maintenance and its ability to work with the existing fleet of single deck cars. Unlike the Tangara cars operated by CityRail in Sydney, these cars are not fitted with full skirting as the cars are narrower than the Tangaras and room is required for the broad gauge bogies to swing. A skirt is



Driving car 5000T displays its Tangara-origin design during a stop at The Rock in southern New South Wales on 10 December 1991.

GRAHAM BALL



Intermediate car 6000M. Differences between the Sydney and Melbourne cars include solid panels to the lower third of the doors and metal panels between the upper and lower deck windows.

GRAHAM BALL



The four-car double deck demonstration train for the Victorian PTC on its delivery run from Newcastle to Melbourne. The cars are 5002T, 6002M, 6000M and 5000T.

GRAHAM BALL



The new look of Perth's public transport — at Platform No.6 in the barely recognisable City station, electric power car AEA212 and trailer AEB312 are about to depart for Fremantle on 18 December 1991. The old station building is at the extreme right.

PAUL EDWARDS

fitted across the front of the driving cars but was removed during the delivery run from Newcastle to Melbourne. Seating is 3-2 on the top deck and 2-2 with a wide aisle for standing room on the lower deck.

Perth Rail Electrification

The first two-car electric multiple unit sets entered revenue service on Saturday, 28 September 1991 on the Fremantle line for Perth Royal Show week. On 7 October, they were transferred to the Armadale line where they were progressively joined by more sets in the ensuing weeks as the modifications to overcome the vibration problem (TW August 91) were completed.

Ten of the 21 two-car sets were in service by late November. Limited electric services commenced on the Fremantle and Midland lines on 15 December, and new timetables were introduced to coincide with the change. By 20 December, 14 EMU sets had entered service.

Construction work on the new 29km Northern Suburbs Railway is progressing rapidly, with intense activity taking place at various locations along the route. Laying of the concrete sleepers has started on a 5km stretch between Warwick and Ocean Reef Roads, where preliminary earthworks have already been completed. Work on building four of the eight stations — Stirling, Warwick, Whitfords and Joonalup — was expected to begin soon after Christmas.

The first trains are expected to commence running between Perth and Joonalup by the end of 1992, with the 3km extension to Burns Beach Road due to be completed by the end of 1993.

National Park Line

The 1.7km Royal National Park branch railway south of Sydney, over which all services ceased on 12 June 1991, has been of interest as a possible operating tram line to the Sydney Tramway Museum for many, many years.



A view from high above the Sydney Tramway Museum's workshop building, looking south. The Loftus Junction signal box is the structure seen level with the top of the flagpole, and the Royal National Park branch diverges from the main Illawarra railway immediately to the left of the signal box. The four-lane Princes Highway is on the left of the picture.

BOB MERCHANT

The line is now surplus to the State Rail Authority's current operational requirements, and in order to ensure that this asset is suitably utilised, the Authority invited Expressions of Interest in the future use of the Loftus Junction to Royal National Park Terminus Railway Line in the Government Tenders section of *The Sydney Morning Herald* on 18 December 1991. These expressions of interest, from all parties who had proposals to use the rail corridor, closed at 10am on 8 January 1992.

The tender stated that the line may be utilised for commercial, historical or community purposes consistent with the obligations placed on the Authority by the Transport Administration Act 1988.

Repair and maintenance of the line and associated infrastructure may be the responsibility of the successful registrant together with the liability for payment of rates, taxes public liability insurance and other outgoings.

Registrants wishing to use the line for the purpose of operating private rail services must comply with the Authority's Accreditation Criteria for non-operating lines and execute the Authority's appropriate historical or commercial licence to operate on disused lines.

Preference would be given in any final decision on registrants to incorporated bodies rather than individuals.

The Sydney Tramway Museum has submitted an expression of interest to the State Rail Authority of New South Wales for use of this branch line.

C.O.T.M.A.

Council of Tramway Museums of Australasia



From the Executive Officer

COTMA Conference, Perth 1992

Your museum will have recently received information from the PETS in the form of a really classy glossy brochure with details of the 1992 COTMA Conference. Please ensure that all your active members have access to the information therein. An important task needing immediate attention is the compilation of details on the topics for presentation to the general assembly of delegates, or as workshops, or as displays or posters. The oral presentations for general and workshop consumption can be classed as Papers. You may wish to request Workshops which are of a complete discussion format. The displays are a new innovation. They may be in the form of a single poster or a small collection of displayable material. Would all museums please put their thinking caps on and contribute to this important aspect of the Conference. If you have any queries please do not hesitate to discuss them with Lindsay Richardson in Perth.

COTMA and the Met

One of the most important tasks for COTMA in 1991 was the re-establishment of contacts within

the Met in Melbourne, following large-scale changes in administration there. We are overjoyed to be able to inform you that this has been achieved to a degree beyond our highest hopes. COTMA, its museums, and the Met are now working together with tremendous harmony for the mutual benefit of all. We are assisting the Met with the development of its historical tram fleet, the TMSV is combining its archival material with the Met display in Tramways Hall, there has been an exchange of trams between the museums and the Met, we are assisting the Met in various special functions and celebrations, and we are especially involved in co-ordination for the Australia Day Cavalcade of Transport in January 1992. I would like to thank the following officers of the Met and of the PTC for their great assistance to us. To Russell Nathan (General Manager Tram and bus division) especially and to the ever helpful Les Jean, also Biruta Bourke, Ray Wilson, Brian Moore, Norm Grady, Owen Hicks, Garry Poynton, we thank you all, and also acknowledge the continued help of Norm Cross and Neville Woolnough. We must also acknowledge the

indefatigable assistance of Andy Hall in helping us to establish and continue this liaison.

Electrical Rules Committee

This Committee, as requested by the Wellington Conference, is now well under way under the Chairmanship of Craig Tooke towards the development of a Voluntary code of Electrical Practice. All Victorian museums are represented on the Committee through Harold McCarthy (BT), Richard Gilbert (BTPS), Noel Gipps (MPTA) and Geoff Dean (TMSV). We have the very great assistance of Ian Cooke (PTC Electrical Test Section) as an adviser, and of Noel Blackmore (PETS) by correspondence. The completed Code will soon be shared with the Victorian museums for checking and then presented to all COTMA museums for your prognostication and appreciation.

Operations Committee

As you may have guessed from all of the above, COTMA, and especially its Executive Officer, have been extremely busy. To me, retirement now feels like a figment of the imagination. In order to serve you all better, your Executive has approved the formation of an Operations Committee, consisting of the Executive Officer as Chairman, Carolyn Dean (Treasurer), Keith Kings (Spare Parts Officer), Andy Hall (Met Liaison), and Craig Tooke (Electrical Officer). Bill, Carolyn and Keith were already working together anyway, but the addition of Andy (whose appearances in Met Head Office are relentless) and Craig (an Electrical Officer with the Met) will provide an excellent balance of ability and opportunity. The team come from four different museums and will meet regularly. One great advantage of the Committee is that it will be able to cover the work of other members when they are away on holidays, etc. This is why, until now, you have not seen the Executive Officer interstate this year, because as soon as he left his desk, COTMA just stopped. Please note this is an operations group. It is to get things done. It is not a policy group. That remains the province of the elected Executive.

Cavalcade of Transport

COTMA, the TMSV and the Bendigo Trust continue to work together with the Met and the Premiers Department towards the Cavalcade of Transport in Melbourne on Sunday, 26 January 1992. Commencing at 9.30am, this will be the largest procession of its type ever seen in

Melbourne. There will be nine trams leading the procession, then buses, run-and-jump motor cycles, an 1885 Shearer steam vehicle, military vehicles, aircraft, a special contingent from Ford, horse-drawn vehicles, and about 800 veteran, vintage and classic motor vehicles. All motor vehicles will be on display in the Alexandra Gardens after the procession down Swanston Street, while five of the trams, including the TMSV's 467 and Bendigo 19, will provide a shuttle service from Victoria Street to Domain Road. Don't miss this great occasion. Thanks to Geoff Dean (TMSV) and Dennis Bell (Bendigo Trust) for their great assistance. We must add our thanks to Lou De Gregorio and the ATMOEA for their help too.

Videos Available

Bendigo Trust has produced a video celebrating the centenary of trams in that city. This video has realised enormous success and the BT are finding it hard to keep up supplies. The older residents of Bendigo are flocking to the tram depot to buy copies, especially because of the memories provided by the scenes filmed by Bob Prentice in the heyday of operations. Cost is \$28.50 including mailing within Australia. Apply to Dennis Bell, Bendigo Tramways, 1 Tramways Avenue, Bendigo, Victoria 3550.

The Ballarat Tramway Preservation Society has produced a video documenting the 1990 COTMA Conference in Wellington. This tape shows the conference venue, has segments of a number of workshops and social gatherings, and shows the locations we visited during the conference. It also follows the extended tour of the South Island after the conference concluded. There is a good coverage of the Foxton Trolleybus Museum, the steam train trip from Palmerston North along the Manawatu Gorge, Wellington trolleybuses, Ferrymead showing electric and steam trams, plus lots of train travel on the new Zealand Railways. The rough seas across Cook Strait and the resultant rough ferry trip are well documented.

The tape is narrated and is full of information and scenery, tramways, railways and many people you know. There is a good segment of the Wurlitzer theatre organ being played at the Southward Motor Museum.

Running time is approximately one hour and the price is \$15 plus \$3 postage within Australia; overseas postage will be added to the account. Available in VHS (PAL format) only. Please send orders to the Ballarat Tramway Preservation Society Ltd, PO Box 632, Ballarat, Victoria 3353.

WHITEMAN PARK...

Perth Electric Tramway Society



Fremantle

Restoration work on this car is once more gaining momentum, with its completion now just around the corner.

The second resistor bank was hung below the saloon on 2 October after having been completely stripped down, cleaned and rebuilt by Noel Blackmore. Work has been progressing well on the third resistor bank and controllers.

With most of the heavy equipment now attached to 29, the opportunity was taken on 6 October to level the body and tighten the stress-bars below the saloon. Further adjustments were made on 27 October and the line of the body is now very straight.

The newly chrome-plated fittings are being installed in the saloon and the end-platforms by Eddie Vagg, and the result is excellent.

On 8 December, the body was lifted and the Brill 77E truck at the No. 1 end was rolled out for final adjustments and electrical work to be completed. The other truck was to receive the same attention soon after.

The amber glass panes for the saloon upper-quadrant windows (salvaged from the bodies of sister cars 31 and 33 near Albany) are being cleaned ready for installation. The removal of the layers of grime accumulated over the 40 years since these cars last ran is proving to be no easy job!



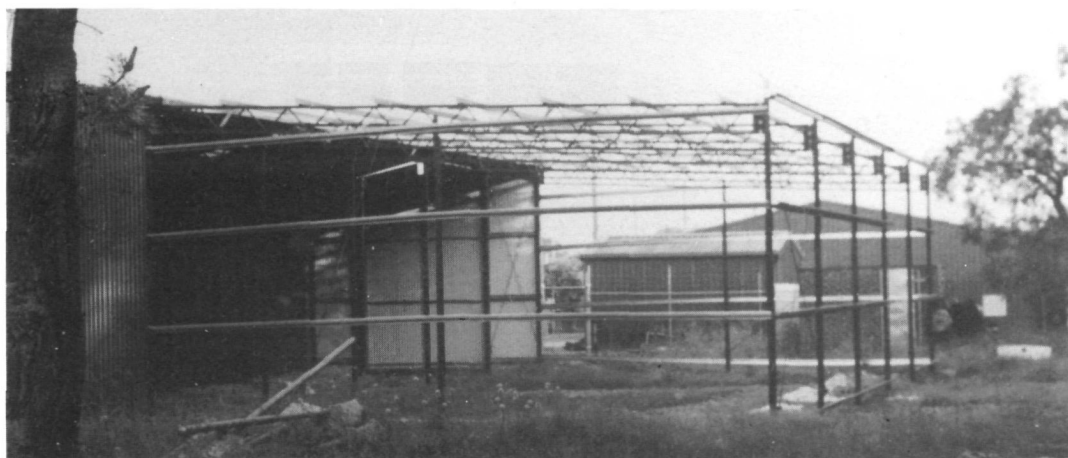
Passengers alight as poles are changed ready for W2 class 393 and 368 to start their return trip from the Village to the Park entrance. Such short workings are sometimes used for special functions.

TERRY VERNEY



Paul Edwards (left) and Duncan McVicar hard at work on 8 December 1991 reassembling the Melbourne No. 9C truck which has been overhauled for W4 class 674, seen behind them. The work was done at the rear of No. 4 road in the carbarn.

MICHAEL STUKELY



In early November 1991, the framework for the new Engineering Shop was erected. On the left is the Pit Road Shed which is on the south side of the Oketon Geddes Carbarn. Through the framework may also be seen the Perway Shed and behind it, the Car Storage Shed alongside the carbarn fan.

TERRY VERNEY

Once installed, this glass will give the car a very distinctive appearance.

New Buildings and Facilities

the fence on the south side of the Oketon Geddes Carbarn was relocated during October to allow for the construction of the new Engineering Shop (an extension of the Pit Road Shed) and Traction Sub-shed (between the Engineering Shop and the Perway shed).

During the week of 4 November, the steel framework for both new sheds was erected. Installation of their 'Colorbond' steel cladding and roofs (matching the existing buildings) was completed during November. On 7-8 December, the floor of the Sub-shed was levelled and the ducting positions were pegged; trenching was then started. Levelling of the Engineering Shop floor was progressing in December and quotes for concreting the floors of the two sheds were obtained. By late December, detailed planning of the layout of the Engineering Shop — including

work areas for both the Mechanical Engineering and electrical Sections — was being carried out.

Plans for the maintenance pit have been developed, and final checks on materials, loadings and stresses are being made.

Earlier in 1991, PETS was successful in its application for a \$1500 grant from the Western Australian Lotteries Commission for museum display equipment, thanks to the efforts of David Brown. This has allowed us to obtain a number of display boards and stands which will form the basis of future displays of tramway photographs and other memorabilia.

Track and Overhead

Lindsay Richardson's team have again been busy bringing the overall standard of the track up to a high level. In October, a section of Horse Swamp Culvert curve was lifted, packed and regauged. Attention was also given to a section just south of the Village road crossing, where sleepers at three joints which had dropped were lifted and repacked;



Track upgrading in progress on the upper section of the hill between Triangle Junction and the Village, in February 1990. Following this project, work done on specific sections has resulted in a very good overall track standard being maintained.

LINDSAY RICHARDSON

three sleepers were replaced and a 12 metre panel of track was also packed. On the Village street, the first joint north of the road crossing was also repacked after the pavers were removed to one metre each side. Work on this paved section will be continued during the February closedown.

On 27 October, further strengthening work was done on Bennett Brook Curve, where 12 sleepers were double-spiked and the outer rail at both ends of the curve was lifted and packed to improve camber. Some work was also done in November to rectify a 'hole' at the western end of Bullpen Curve. On 7-8 December, the frog-plates and ramps of the railway points at Triangle North and Triangle East were renewed. The ride is now noticeably better at all of these locations.

Ray Blackmore's overhead team repositioned the overhead on Bennett Brook Curve in November, and have straightened the steel poles on the south side of the carbarn fan as well as removing one rusted pole from the fan area.

Other News

The combined effects of the economic recession and a wet winter in Perth led to a 20% decrease in weekend revenue between 1 July and 30 September, in contrast to other recent periods when a substantial rise had occurred. However, the overall

result for the year was still highly satisfactory, as reported previously (TW November 1991).

The overhaul of the second Melbourne No. 9C truck is progressing well, with major efforts being put in by Duncan McVicar, Noel Blackmore and Ric Francis. The motor overhaul is proceeding; a bent portion of the frame has been straightened, broken springs have been replaced, and the reassembly of the truck was nearing completion late December.

Noel Blackmore has now finished the door-engine rebuild and overhaul on SW2 class 426, which is serviceable again.

The members' leisure garden alongside the carbarn fan continues to develop as a very attractive and relaxing feature, under the guidance of John Shaw. A most successful Christmas barbecue, organised by Social Officer Martin Grant, was held there on 14 December.

Another Western Australian tram body is to be added to PETS' collection. Perth B class 15 is expected to arrive at the Museum early in January, and will bring the total number of Western Australian tram bodies in the possession of the Museum to 15, coincidentally.

Correction

TW November 1991, Page 36 column 2: The total figure for revenue for the year should have been \$34968, not \$43968 as shown.



Special hires are on the increase. Recently, one particularly busy Wednesday saw four cars loading school groups at the Park Entrance — W2 class 329 and 368 at left; W2 class 393 and W4 class 674 at right.

TERRY VERNEY

ST. KILDA . . .

Australian Electric Transport Museum

**Car 14**

On Thursday, 14 November 1991, the body of former A type tram No. 14 arrived at St Kilda. On the previous Tuesday, members spent the day demolishing the buildings surrounding it at its resting place of some forty years on the shell grit of Middle Beach, about 50 kilometres north of St Kilda. The body is in good condition, the surrounding buildings and roof having afforded considerable protection from the elements. The

body was placed on the 21E truck from car 42, and moved behind car 42 in the bodyshop.

The acquisition of 14 provides the opportunity to one day operate a coupled set of consecutively numbered 'Bib and Bub' cars — 14 and 15, the body of 15 having been obtained a few years ago. 'Bib and Bub' was the name given to the 31 sets of A type cars permanently coupled in 1940 as part of a wartime measure to conserve manpower.



The body of A type 14 at Middle Beach after demolition of the surrounding buildings.

PETER KEYNES

The coupled sets continued to operate until November 1950. 'Bib and Bub' were well-known bushland comic characters created by popular Australian author May Gibbs.

Interestingly, cars 14 and 15 never ran coupled together. 14 was coupled with 16 while car 15 remained as a single unit.

Opening of Bodyshop

Sunday, 15 December 1991 saw the official opening of our restoration bodyshop by the Hon. State Minister for Arts and Cultural Heritage, Ms Anne Levy. The Mayor of Salisbury, Mrs Pat St Clair-Dixon was also in attendance.

In August 1990, the Minister advised our Museum that we had been successful in our application for a grant of \$9000 for the installation of flooring and fitting out of the building through the Arts Facilities Capital Grants Committee. the Museum had previously spent \$18,000 of its own funds on erection of the shed.

During his introductory speech in front of the display gallery, AETM President Colin Seymour

pointed out that while it may not seem very exciting for a Minister to be opening a 'large shed', the completion of the bodyshop really enhances the museum's ability to restore Adelaide's old tramcars, enabling the public to relive Adelaide's past transport history.

After speeches from the Mayor and the Minister, all present were invited on an unusual trek through the main workshop to see the Minister cut the ribbon to officially open the bodyshop. The scissors used by Anne were originally used by the Mayoress of Port Adelaide to officially open the Port Adelaide tramway system in 1917! The official party were then shown through the bodyshop and the workshop, while members of the public, wanting a tram ride, rode to the beach. Upon the return of car 381, a special convoy of cars A 1, C 186, D 192 and F1 type 264 headed for the beach, with the official party on board No. 1. On the return journey, the Minister drove car 264 while the Mayor took the controls of car 192. It seems the Minister has fond memories of trams, having lived as a child next to the Hyde Park terminus.



Ian Seymour (left), John Pennack and Peter Letherby watch the body of car 14 being unloaded onto the 21E truck (ex car 42) at St Kilda.

PAUL SHILLABEER

The day was billed as a restoration day, and visitors were given conducted tours of the bodyshop and workshop areas which are not normally open to the public.

At the end of the day, our members joined with members of the AETA for a barbecue. Those present took a last run on E1 type 111 before its refurbishment.

Workshop Facilities

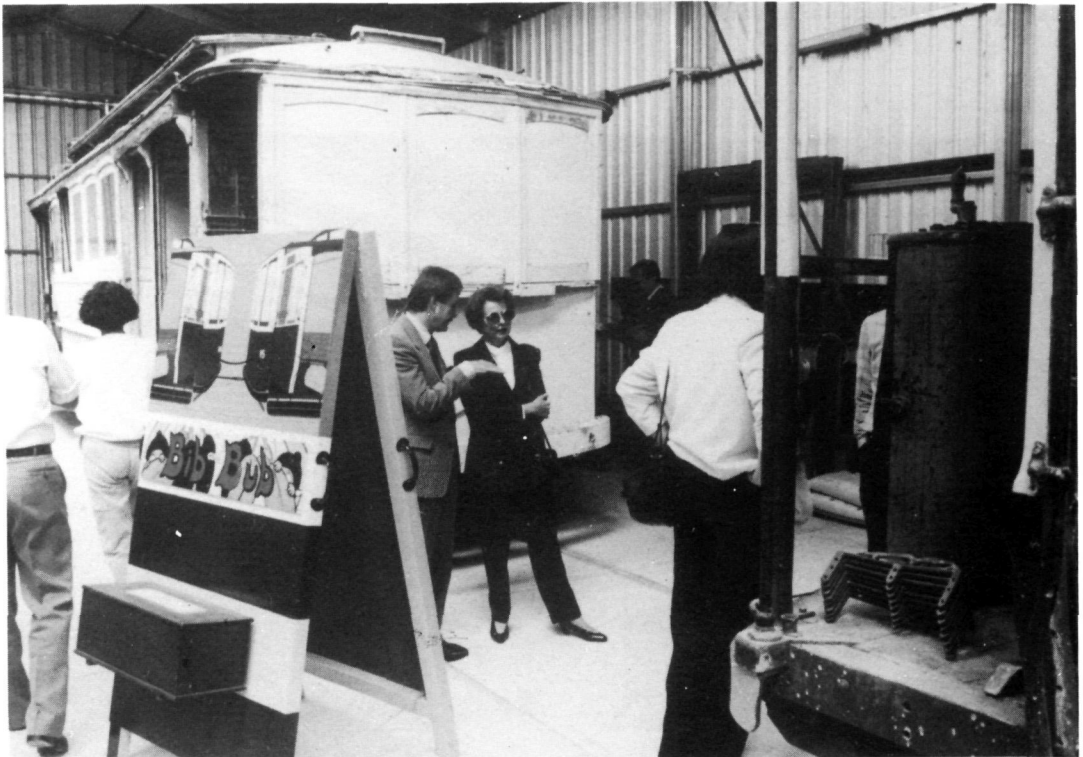
In the months leading up to the official opening, benches were built, painted and brought into use. The woodworking machinery and most of the tools were shifted out of the maintenance workshop, enabling all woodwork and most painting activities to be transferred to the bodyshop. The power and lighting services installed were being extended to the outlying stores sheds as well.

Concurrently, the welding shed has been fitted out. This shed is situated in between and adjacent

to the workshop and bodyshop buildings. The air supply system has now been installed. Two of the three compressors formerly used to supply air in the City Depot workshop are now in operation. The system will drive the heavy duty ex-MTT welder and the stationary air supply. The permanent 600 Volt d.c. power supply will be drawn from the overhead inside road 2. Most of the 'spark'-producing work will now be carried out in the welding shed instead of the workshop.

Painting of Depot Buildings

After a further four days work by the students of Marlestone TAFE School of Painting, the old depot is now sporting a glistening new coat of grey with green trim. There was a small amount of extra material available, so the substation and the horsebox were also repainted, and car 355 was given a covering coat of grey as well. This will assist in keeping out the weather during its term



AETM President Colin Seymour describes a facet of toastrack 42's restoration to the Hon. Minister for Arts and Cultural Heritage at the official opening of the bodyshop on 15 December 1991. The special 'Bib and Bub' donation box and display can be seen at left. Newly acquired car 14 is behind the Minister.

PAUL SHILLABEER

of outside storage, a move made necessary by the arrival of the body of car 14.

Track

John Pennack's lakeside track renewal programme is nearing completion, with only a few rail joints and some packing and levelling work to be done. The significant improvement in the ride on the renewed sections has been most pleasing, increasing passenger comfort and decreasing the amount of body twisting on the older bogie cars and the pitching of the four-wheelers. Track timbers have also been replaced on the eastern section of the loop.

A track spraying unit has been constructed on a spare M&MTB No. 1A motorless truck by Ian Seymour. Ian removed the brake rigging and constructed a steel frame to sit on top of the truck. The tank from an agricultural spraying unit obtained from the Department of Agriculture was then fitted to the truck. The unit has been fitted with a spray boom across the front which is wide enough to spray the track bed. The unit has been painted grey (the colour of the small Adelaide service fleet) and will be known as 'S4'. The spraying unit has been designed to be towed or

propelled by the works car, W2 class 354.

Other News

Car 111 has replaced car 14 in the bodyshop. Car 14 now waits in the main depot, along with car 15, for restoration in the future. The first stage of 111's refurbishment has seen the floor removed in some sections where the side of the tram is bowed, to enable the wooden underflooring to be inspected.

The area in front of the 'Bouncing Billy' kiosk has been brick-paved by Jim Burke, and together with the garden seats Jim has repainted, now provides a pleasant outside eating area for patrons.

John Radcliffe has replaced some timbers and repainted the inspector's cabin.

Christopher Steele was the force behind a special restoration donation box and explanatory display board for our 'Bib and Bub' cars. The donation box was ready for the opening of the bodyshop and was positioned near car 14. It is now located near the entrance to the display gallery.

A series of refresher courses has been conducted for motormen and conductors by Ron White to ensure that our safe working practices continue.



The spacious facilities of the new bodyshop can be seen in this view looking towards car 42.

PAUL SHILLABEER

BALLARAT . . .

Ballarat Tramway Preservation Society



Progress on the new museum display area will be accelerated with the receipt of a \$2500 grant from the Victorian Ministry of The Arts. \$1000 was spent in having the floor of the old depot area asphalt-sealed on 10 December. This has made the interior of the shed look more complete and has dramatically cut down the dust problem, a prerequisite to carpeting the museum area. The remaining grant money is to be spent on video equipment for the display.

Car No. 27 returned to service on 16 November after repairs to the No. 2 motor armature, but no sooner was it back running than No. 33 went down with a bearing failure. It has been decided to replace the offending items completely, so 33 will be out until the work can be fitted in. Work on car 671 and the horse tram continue at a steady pace.

Farewell 1991

The last day of 1991 started out normally enough after a night of noisy but harmless thunderstorms. Peter Hill was running the service with No. 18. While Dave Macartney was absent from the shed, having some tramway matters to attend to downtown. By 3.30pm, thick black clouds had filled the sky, and thunder and lightning were about. As the rain started to pelt down, Peter decided to run in. He collected his signs, but on arrival at Depot Junction discovered that the track had disappeared under a sea of swiftly flowing brown water. A lightening strike knocked the substation out, so there was a wet trudge up to the shed to reset the breaker. By now the track was under water in four different places, and the rain was getting heavier. Depot Junction points are difficult at the best of times; in ankle-deep water they are near impossible. Peter abandoned 18 to the elements, waded to his car and went for help.

Meanwhile, Dave had returned home, but could not depart for the depot because of the weather. Someone had discarded a Christmas tree in the drain that runs down the side of Dave's place, and this had become wedged in the tunnel under the footpath, diverting the contents of the drain across Dave's lawn and out through the front fence. Needless to say, the power had also failed. Peter

arrived out front after fording a few more instant rivers on the way, to be confronted by a sea of swirling water between the crown of the road and Dave's verandah. He went striding quickly through this but miscalculated the location of the bridge over the deep bluestone channel, and disappeared up to his chest in the torrent. Fishing himself out of this, he presented such a pathetic sight that Dave agreed to abandon his house and contents to the mercy of the elements and proceed to the depot to attempt to get the tram in. Getting back to the car was the first problem. Dave rolled his trousers up, removed his shoes and revealed his feet to the public gaze for the first time in several decades. Peter was so wet by now he didn't bother.

The numerous instant rivers were negotiated once more, and soon the Gardens came into view. There was a solid sheet of water over the road from near St Aidan's Drive right up around the curve, a river running across at the north end of the loop, another at the Floral Clock, and a huge quantity of water at Depot Junction. 18 stood forlornly in the midst of all this. The points were located and they came over easily once the lid had been removed from the pointbox and the spring forced over. On arrival at the depot it was realised that Dave's shoes were still in Peter's car, and now Peter couldn't find his doorway, so Dave had to walk barefoot across from 5 Road, a very painful experience on that sharp gravel. 18 ran in at 5.40pm, having arrived at Depot Junction at 4.15pm. As one local enthusiast says on occasions like this, It's great to see people enjoying their hobby.

The following day was cleanup day, not only at the tramway, but all over town. A number of businesses around the railway station area were all but wiped out by the torrent that swept through there. At the tramway, Dave cleaned the track as best he could when the rain stopped on the 31st, while Frank Puls and Len Millar went out the following day and finished the job. No. 18 needed a major clean out, having had mud tramped into it from one end to the other. It had the final word on 2 January when it blew a lighting circuit out in spectacular fashion, in a fit of pique for being left out in 76mm of rain. Now all we have to do is pump the water out of the pits.

FERNY GROVE . . .



Brisbane Tramway Museum Society

Display Building

The 'new' display building is still being stored on site while fresh paperwork is prepared for submission to the relevant departments of the Brisbane City Council. The revised paperwork is required due to alterations to BCC town planning ordinances which are presently being gazetted by the State Government.

Telephones

A new ten-pair cable has been installed from the new PABX MDF in the workshops to the house to allow for connection to the new display building and future expansion. Concurrent with this task, the new MDF was installed adjacent to the PABX and wiring in the workshops was re-arranged and tidied up.

Telecom Australia has installed a lightening activity detector on the museum's telephone line and since installation in early December, the unit has recorded twelve strikes in the vicinity of the museum. On the first night following its installation, it recorded two strikes and an observant member noticed that a large gum tree

in Tramway Street opposite the museum had suffered a fatal direct strike.

Trackwork

The triangle obtained from Exhibition several years ago has been laid out in position to allow further design work to be undertaken before installation. Most of this work was performed in the late afternoon when the temperature had dropped below its usual 30°C, which is typical of Brisbane weather at this time of year.

Site Cleanup

The site cleanup has now moved into the store building with most work performed during the middle of the day when the sun has considerable bite. The grounds are looking well following the recent summer rains. However, in some areas the grass seems to grow faster than it can be mown. Difficult areas, such as around rail stacks, have been hit with Roundup to keep them tidy.

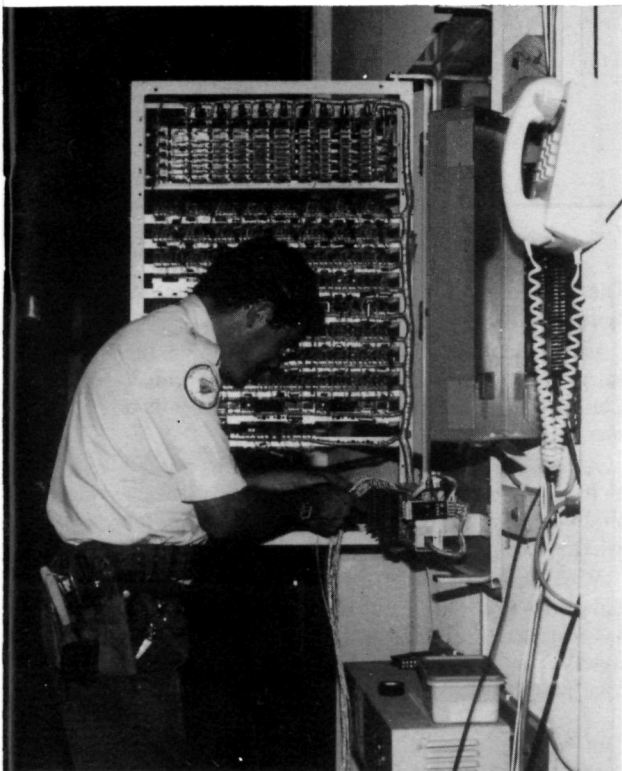
Security

John Lambert received a 3am phone call from Wormalds Security advising a vehicle had been driven out of the museum through the locked gates



ABC Television's '7.30 Report' crew make use of the museum's tower wagon. On the tower are Peter Cooke, cameraman, and soundman Peter Moor. Watching from below are journalist Peter Greer and museum members Colin Stokes, Alex Tafe and Mick Topp.

JOHN LAMBERT



John Lambert is 'cutting over' the PABX to the new MDF in the workshops. John's shoulder patches are from Whiteman Park. MICK TOPP

in Tramway Street. Investigations and consultation with our local police indicated that a stolen car had been driven down the right-of-way behind the museum, through the site, and out to the street via the locked gates. Repairs to the gates will cost several hundred dollars and action has been taken to prevent vehicular access via the right-of-way.

The 7.30 Report

An ABC '7.30 Report' television crew visited the museum for 2½ days in December to film a story about the museum and its' members. They also interviewed BCC employees who worked on the trams and are still with the Transport Department. The story was to go to air in December but other items (Federal leadership crisis, President Bush's visit, Compass airline collapse, etc.) have put our story on the backburner. The cameraman turned out to be an enthusiast and has been given a membership application. [Editor's note: It eventually went to air on Wednesday, 22 January 1992.]

Workshops

Work continues on the floor in the dropcentre of car 341 where most of the Malthoid has been removed prior to replacing with new stock. Plans are in hand for the removal of the trucks from 341 so that they can be overhauled concurrent with the final stages of the body restoration.

Acquisitions

items obtained during 1991 which have not been mentioned in these pages previously include an electric pointsetter obtained complete from the Breakfast Creek Bridge, a boosted bond-to-rail electrolysis unit from Old Cleveland Road at the Belmont terminus, and the last piece of trolleywire to be removed in Brisbane.

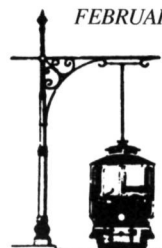
The Museum is presently negotiating with the South East Queensland Electricity Board to obtain some old 11kV OCB equipment as spares for our substation.



Bevan Burnes removing old Malthoid from the floor of dropcentre car 341. TROY THOMAS

LOFTUS . . .

South Pacific Electric Railway



General Works

The appearance of Tramway Avenue has been further improved with the completion of the brick kerbing on the western side for the entire length. This, together with brick kerbing on the eastern side from the gate to the first span pole, has enabled the fencing at the entrance gate to be rearranged to give a more pleasing appearance.

Inside the workshop, our electricians have made further progress on the wiring and installation of lighting.

Work on the Bedford tower wagon continues. The old paint has been removed from the tower and much very expert panelbeating of the cab and mudguards continues.

The electrical and mechanical overhaul of the bogies for R1 class 1971 has been completed. Some minor preparation work on the cabins and end entrance vestibules still remains to be carried out.

The finishing coats of paint on the exterior are being applied as this news goes to press.

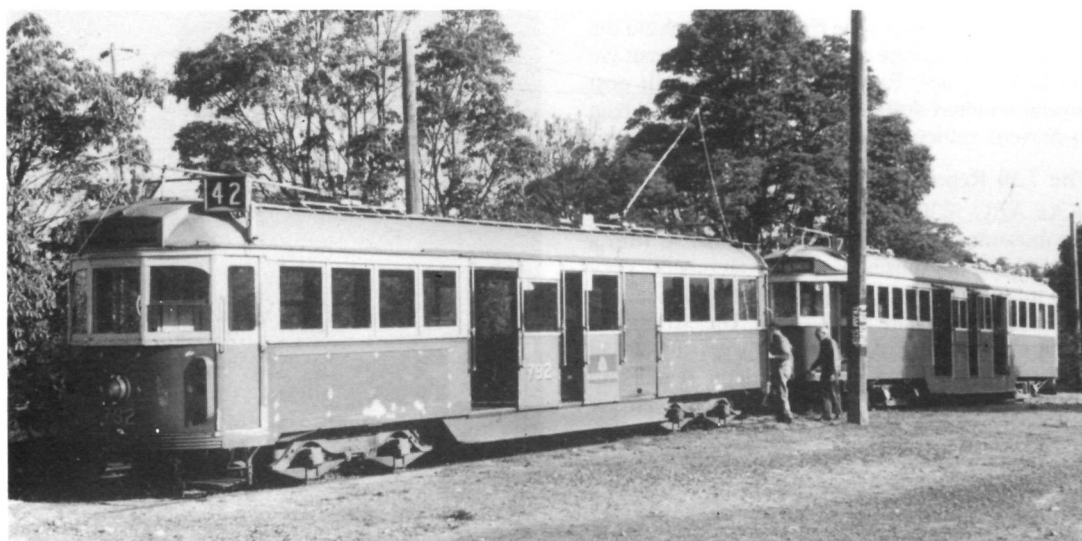
Inside the main depot and display building, the extension of Road 4 has been levelled and welded. Completion of this road will allow another two cars to be stored under cover.

A considerable amount of concrete was poured on the scissors crossover on 2 November, and again on 25 January, bringing this project a step closer towards completion.

Work on the traffic office above the substation, came to a halt nearly twelve months ago. Work has restarted on this project under Bob Cowing's supervision. All ceiling joists, rafters and fascias have now been erected and the eaves lined.

Car News

Norm Chinn has completed a repaint of O class 1111 in the standard cream and green livery. This



W5 class 792 on its surprise visit to the northern terminus on 26 October 1991

HOWARD CLARK

car carried an experimental version of this colour scheme for many years.

On 23 October 1991, Bill Parkinson commenced work on replacing the various parts, such as trolley poles and route number boxes, removed from W5 class 792 prior to its departure from Preston Workshops. On 26 October, after overhauling and testing the air compressor, the temptation became too great and the car was propelled to the northern terminus by W2 class 393 for photos. Work on repairing the car's motors will be carried out as time permits, to return it to full running order and in the intervening period it will receive a cosmetic repaint and a general cleanup inside.

Considerable progress has been made by Jeff Spaulding and Howard Clark, assisted by Andrew Stevens and Jim Jowett, on the restoration of O class 957. Rusted underframe parts are being replaced and further replacement of damaged timber is being carried out. Additional mullions have been made and fitted, and new flooring is also being installed.

Accreditation Team Visit

The State Rail Authority's Accreditation and Operations Unit recently visited the museum to view our facilities and procedures. This was arranged as a result of a general tightening up of

safety procedures in force at various rail museums in New South Wales following the unfortunate incident involving an interurban and a train hauled by locomotive 3801 last year.

Our strict attitude towards safety in all of our activities made a favourable impression on our visitors from State Rail and comment was made to this effect.

Donation from Telecom

Recently, as a social outing with his family, the Corporate Affairs Manager (ACT/NSW) of Telecom Australia, Allan Rawson visited the museum. Allan noticed the museum had acquired several former Telecom red wooden payphone cabinets which unfortunately did not include any payphone instruments.

Once back at work, Allan made some enquiries to ascertain if any pre-CT3 instruments were being, or had been, recovered. Due to Telecom's Rural and Remote Areas Programme, the old A/B type payphones have been replaced in outback New South Wales and Allan's enquiries led him to two unrestored A/B instruments previously recovered and now surplus to requirements.

On behalf of Telecom, Allan called into Loftus and presented these instruments to the Museum. Thank you, Allan, for your interest and helping to make complete our 'red phone boxes'.



Norm Chinn accepts the donation of two sets of A/B payphone equipment from Telecom's Corporate Affairs Manager Allan Rawson. One of the Museum's two red phone boxes can be seen in the background.

Courtesy TELECOM AUSTRALIA



Pouring concrete for the scissors crossover on 2 November 1991.

BOB MERCHANT



The roof of the traffic office under construction in December 1991.

BOB MERCHANT

BYLANDS . . .



Tramway Museum Society of Victoria

Premier to Visit Bylands

Our local MLA, Max McDonald, has been organising for a visit to the museum by the Premier of Victoria, Mrs Joan Kirner, after deputations on behalf of our Society by Andrew Hall. The Premier is coming to view the Museum and to provide further support for the construction of the electric tram line between Bylands and Kilmore. The Premier's visit is expected, at the time of writing these notes, to be in December, 1991 but the final date has yet to be fixed. Whilst at the museum the Premier will officially open the new cable tram shed. Our Society is extremely fortunate in having the Premier visit our museum and giving it her personal support.

Museum Works

Work has concentrated on the completion of the W3 car and preparing the X1 for its trip to Melbourne.

We participated in the Puffing Billy Olde Time Festival on 13 October with a stand and display at emerald, and also displayed the tower truck and the horse car with the PTC's Mark IV bus at Wallan Railway Station on the PTC Open Day on 20 October.

New Signs

Two large signs, indicating the presence of the museum, have been erected approximately 300 metres each side of Union Lane on the Northern Highway. These signs are larger and easier to see and display a tram logo. They were installed in early October and a fingerboard sign was placed at the Union lane turn-off later in the month.

Australia Day Cavalcade and Pageant

Our museum will be represented in this event with X1 class 467 going to Melbourne to run in the Transport Cavalcade on 26 January. The cable tram and the horse tram will also be sent to Melbourne for the Cavalcade.

Buildings for Bylands

The Society has been tentatively offered buildings for removal to the Bylands site. The buildings are the British 'Bristol' metal Meccano-type bolt-together-construction style. These buildings, when re-erected, will replace the cramped ex-railway C van and provide vastly superior kiosk and display facilities. The project is anticipated to be undertaken in the December-January holiday period.



S class 164 and B2 class 2026 in Flinders Street near Market Street on 20 October 1991. 164 was presented to the AETA in 1953 and transferred to the TMSV ten years later. It is on loan to the PTC.

IAN MACCOWAN

HADDON . . .

Melbourne Tramcar Preservation Association



They say it never rains but it pours and this has been the case over the last few months at Haddon. We are beginning to wonder if summer and the fine weather will ever appear at all. Most activity therefore has been spent indoors well away from the elements.

W2 Class 407

The worst part of any painting is the preparation work that has to be carried out prior to the actual application of paint. Work on the tram has now reached this stage and many hours have been spent plugging holes, applying body filler and sanding it down.

All of the window sashes have been removed for sanding down and filling, sanding down and repainting.

Arthur Ireland has rebuilt one of the motorman's external doors. The second door is almost complete and awaits the fabrication of a new metal panel to replace the rusted out one.

W4 Class 670

During November, John Withers had completed the manufacture and fitting of the external metal tread plates. He has also gone around the windows removing excess paint and masking tape with a razor blade.

The only work now required to complete the restoration is the fitting of side destination blinds, the application of numbers and monograms and the lining out of the external saloon panels.

Weed Poisoning

During late October and early November, the yearly weed poisoning took place and all areas the slasher cannot get into were done. Around the rail piles at the front fence, around buildings and along the right-of-way has been poisoned. We don't want to give the weeds a sporting chance.

Work in the Substation

Craig Tooke has been busy identifying and labelling all cables and apparatus. He has also manufactured and installed a counter unit that counts the number of operations on each of the circuit breakers.

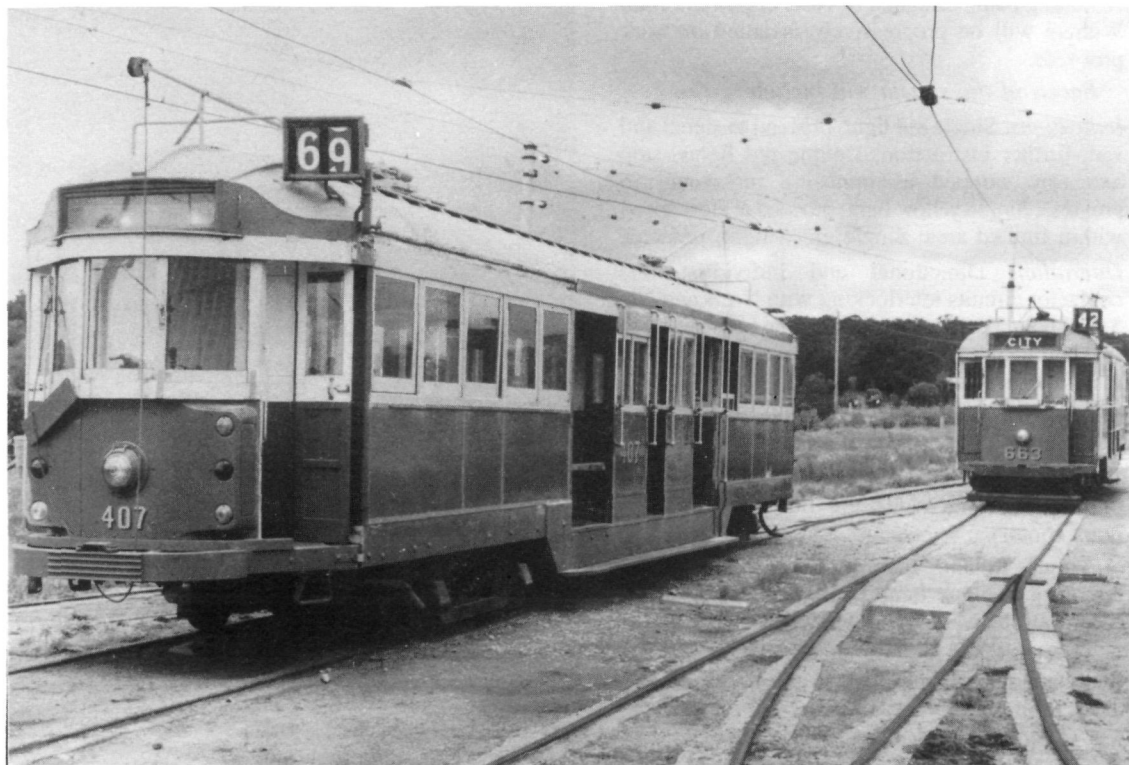
Final Substation Electrical Tests

After some twelve months of energisation and operation, Electrical Superintendent Noel Gipps carried out the last relevant test before declaring the substation available for normal service. On Friday, 21 June the final overload setting and adjustments were made to check the calibration on the main line rectifier circuit breaker.



Tony Smith bolting the rail for the south-western curve onto the steel sleepers.

ARTHUR IRELAND



W2 class 407 undergoing restoration and W3 class 663 outside the car barn.

ARTHUR IRELAND

The system was energised, with W2 class 357, W3 class 663 and W4 class 670 prepared for service and placed around the system. The test team, consisting of Noel Gipps, Arthur Ireland, Tony Smith and John Withers, then proceeded to load the substation by starting the three cars simultaneously. After four attempts and no breaker opened, a visual inspection revealed a peak current of some 380 Amps. The breaker should have tripped at 260 Amps.

The plant was shut down and a number of adjustments were made to the overload relay. Tests were resumed and the breaker cleared at the new overload setting without fail at 260 Amps. The car barn breaker continues to be set at 200 Amps.

It is interesting to note that, despite short term peak overloads of some 300% above their normal rating, neither of the a.c. circuit breakers operated. The 'Tait' breakers live on to provide yet many more years of reliable service. Bravo, General Electric!

It is very curious indeed that the rectifier breaker (previously calibrated a 260 Amps) was so far out of adjustment.

Overhead Line Work

Final alignment adjustments of frogs and catenary were made to the overhead system completed in stage 1. It is of interest to note that despite winds of some 120 km/h in our area recently, our overhead is still horizontal, congratulations to all involved.

Lightning Arrester

A lightning arrester, recently overhauled by Craig Tooke, has been installed by John Withers and Tony Smith at the tram washing plant at the top end terminus to protect the overhead from lightning strikes.

Signalling and Safe Working

As operation between terminals would mean cars travelling without visual contact, a system of

signalling being designed by Noel Gipps and John Withers will be progressively installed as work proceeds.

Facets of the system will include:

Indications: Single red light, proceed to signal and wait further instruction; Double red lights, stop and stay stopped as opposing movement in progress; Single yellow light, proceed at slow speed within limited area; Single green light, proceed.

Operation: Directional and individual line contactor circuits interlocking with No. 4 and No. 5 road point positions to differentiate between main line and local car movements; One car movement at a time between terminals.

Switching: Standard Telecom relays with ballast resistors on the 600 Volt detection.

Voltages: 600 Volt detection, 24 Volt d.c. signal lighting and relay switching 110 Volt a.c. (lower point motor).

Arthur Ireland has overhauled all of the appropriate signal lamp equipment which is ex-SEC Latrobe Valley and M&MTB equipment.

The first signal mast for the installation has been manufactured and installed in the depot area by Tony Smith and Noel Gipps.

Tram Move-Around

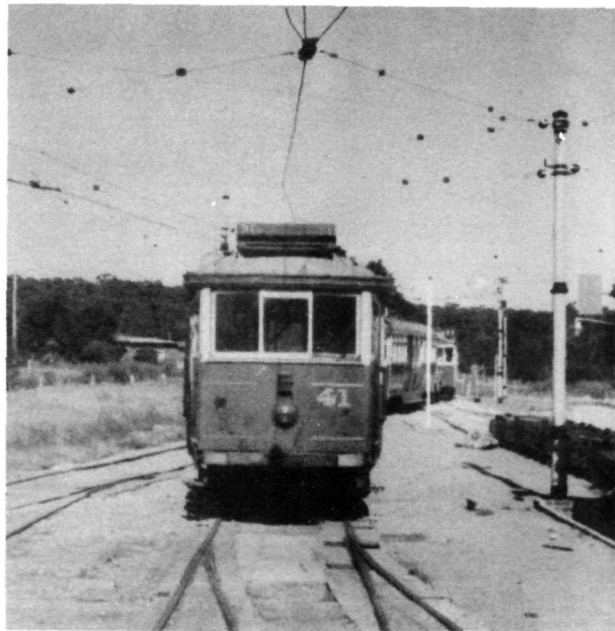
In early November, the trams were put in different places in the car barn, a change from the places they seem to have been glued to in the past. However, it must be remembered that the space between 3 and 4 road is very close and if a wide bodied car like the L or W4 is placed at the top of 4 road, it must be put in as close to the bumper of the car at the bottom of 4 road as possible. This would then allow plenty of clearance for the car on 3 road to get in and out without hitting any part of the car on 4 road.

South-West Curve

The south-western curve was completed in late October/early November. The rails had been bent to the required radius, placed on the sleepers and bolted together to form two long lengths of rail. The bolting of the rail to the steel sleepers was undertaken, and at the end of November it was complete to the end of the track which runs east a few yards past the curve.

Retaining Wall

At the end of the track at present, the ballast ends just before the dip in the hillside. We cannot lay track over the dip at present, so a bank will be built up. This will have a wall made up of old rail as vertical posts and concrete will be fitted into the webs of the rail posts to form a wall. This



Victorian Railways 41, on the move for the first time in a decade, during the recent tram shunting.

ARTHUR IRELAND

will hold the filling that has been put in to remove the dip. This filling will have pipes put through it to stop water from banking up on the high side. Ballast will then be spread over the filling and rolled, ready for track laying.

Bogie Road

Now that all of the trackwork as far as the retaining wall site has been laid this year, it was time to find a place for the spare bogies which lie on No. 2 road.

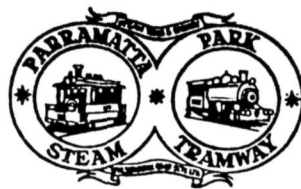
The area north-east of the car barn parallel to the north side fence was the site chosen, as the area is on level ground and we can get trucks in and out. The area could also be used to unload trams if necessary.

The pointwork for it, if it was made with any fewer parts, would not exist at all. There will be no V-crossing in the main line and the only point blade can be removed when it is out of use, so there is no chance of a tram ending up on the bogie road.

It is intended to use a derail ramp to get the bogies in and out, hence the lack of physical connection to the main line. The only clue that the site is there is the closure rail that is welded between the rails of the main line. This closure rail is welded to the steel sleepers.

PARRAMATTA PARK . . .

Steam Tram and Railway Preservation Society



The body was fitted to steam tram motor 103A at the Rail Transport Museum, Thirlmere and a final steaming took place on 31 October. The completed motor was delivered to our depot in Parramatta Park on Friday 1 November 1991.

A trial steaming was undertaken along our line but the motor did not enter public service until our December operating day, which was held on 1 December so as to avoid the Christmas holiday. Headlights have yet to be fitted and, as the motor

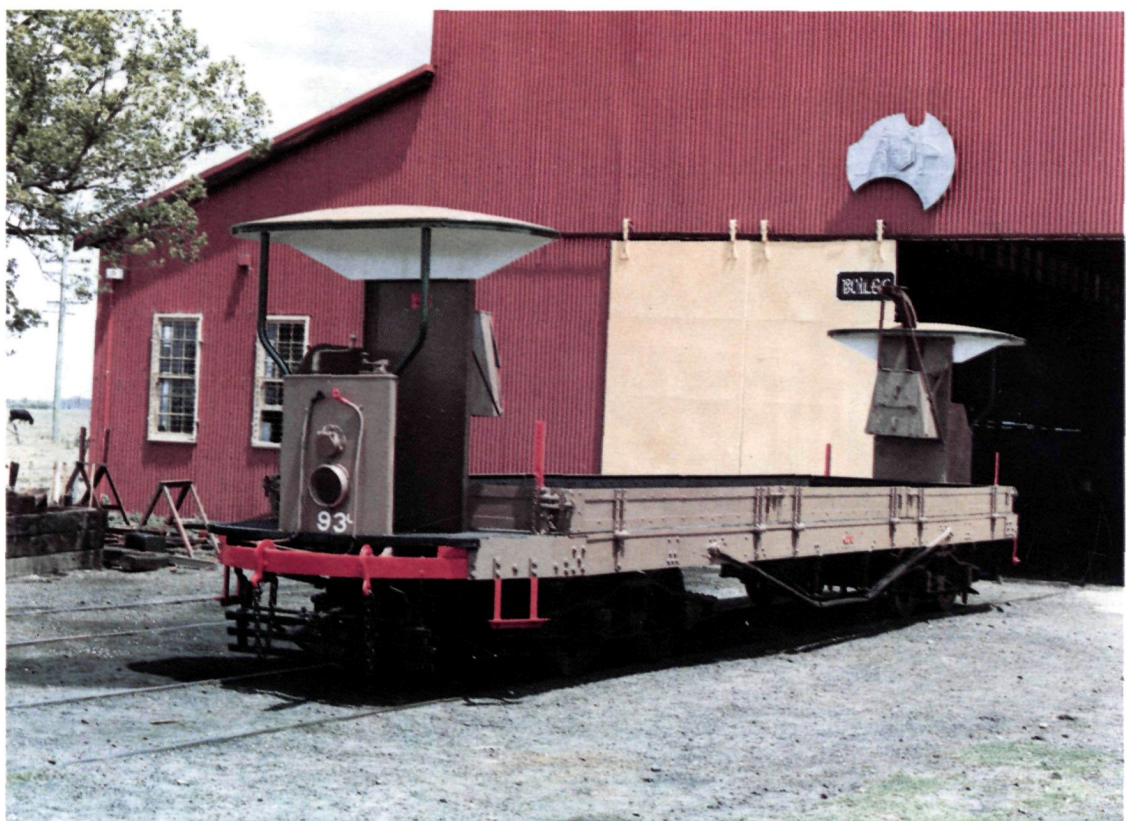
has been restored to the final form of these fine little engines, electric headlights are being repaired for use on 103A.

Trackwork is also being undertaken, with No. 2 road being relaid for steam tram use and new points installed for the approach to 5 and 6 roads. We were offered and have collected a quantity of 71 pounds per yard pointwork from the Zig Zag Railway at Lithgow. This was surplus to their requirements as they are now installing heavier rail.



Motor 103A leaves the depot yard on 1 December 1991 on one of its first passenger journeys after returning from major overhaul.

BOB MERCHANT



a sper magazine