TROLLEY WIRE

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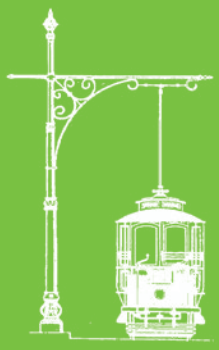

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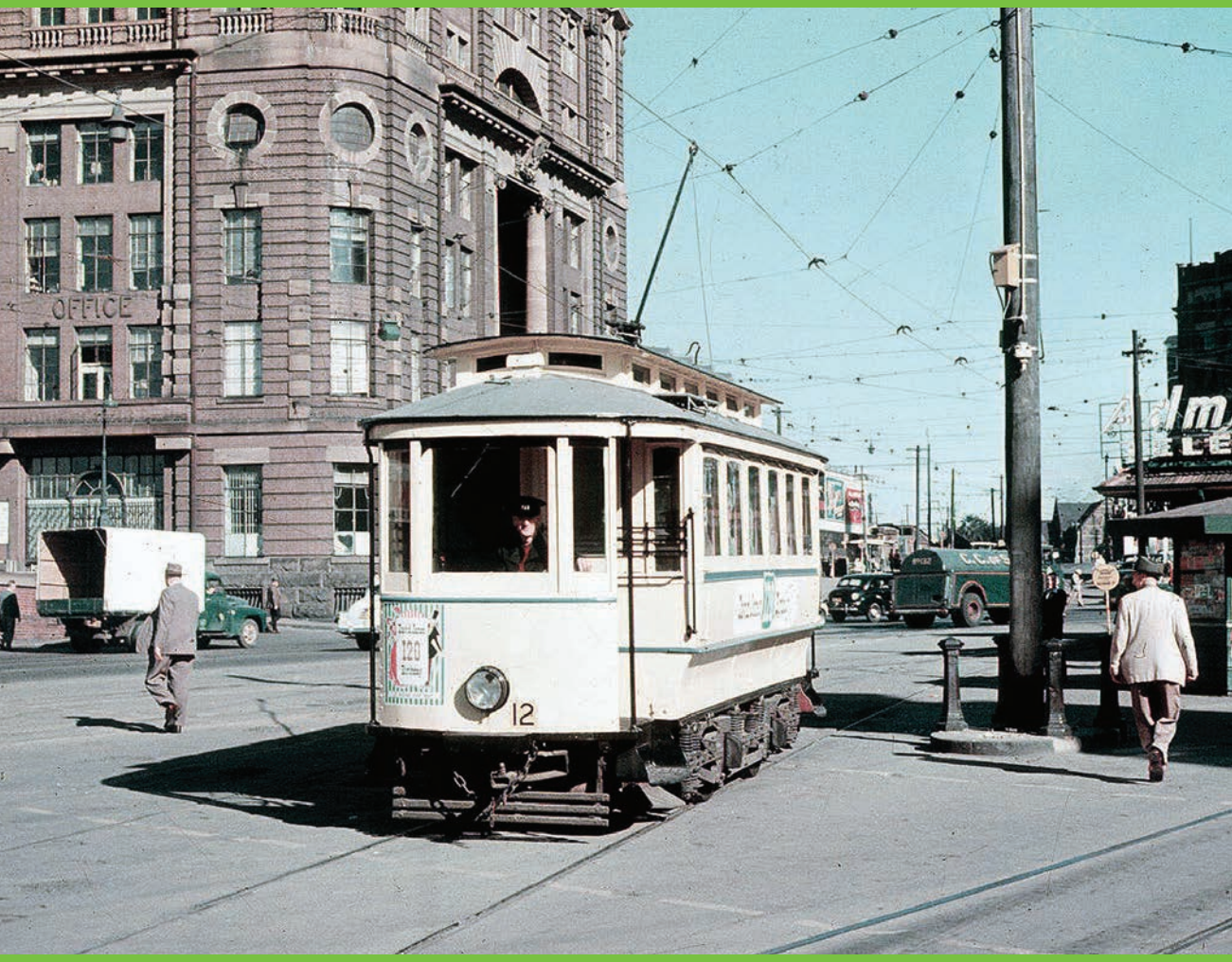

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TROLLEY WIRE

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Tram Rides Free

The following short account, published in The Age, *Melbourne, on Friday 12 July 1935, was written by their Special Representative as part of a column headed Sydney Topics.*

It was located by Andrew Cook from Bendigo. Andrew notes that 'the writer may have had their tongue placed firmly in their cheek!', or 'maybe this was their final article, before moving to a new job?'

There is, after all, a soft spot in the hearts of the people who control transport in this State, despite the fact that they arrest motor vehicles that come over the border of New South Wales to see what contraband they have got from that trading state, Victoria.

There are sections in our tram service that are free to anybody that likes to ride in them. One of them is a long section that runs from Circular Quay round the historic Bennelong Point to Fort Macquarie (the site today of Sydney Opera House - ed.) and the gates of the Botanic Garden. The other is the Gladesville Bridge, where the footways are so narrow that people are in danger of being swept off by the trams when they pass. The Tramway department, hearing about this, decided in the interests of the hospitals and undertakers, it is better that the trams should stop for the people who are footing it, and carry them across the bridge. The ride is popular. Something for nothing, even if it is only a ride in a tram, is worth looking after. But now that the transport authorities have made a commencement, they might be induced to consider carrying people over other expensive sections – the harbour bridge, for instance, which costs threepence to cross. But there is a big difference between the harbour bridge and the Gladesville Bridge. Everybody wants to go across the Harbour Bridge, to visit the place on the other side. Whilst those that cross the Gladesville Bridge are faced with the lunatic asylum, which may have attractions for some people.

We are grateful to Brian Weedon for supplying the article, Notes on the Melbourne Cable Tramway System by W.R. Pollock, which appeared in the November 2015 issue of this magazine and for researching the author's history.

Front Cover:

Sydney breakdown car 56s, renumbered as C 12, was hired by David Jones department store to advertise their 120th anniversary in May 1958. The tram ran between Circular Quay and Railway Square, and is seen here in Railway Square heading towards George Street. Robert Merchant

THE LIFE AND TIMES of the LOFTUS FIRE CASUALTIES OF 23 OCTOBER 2015

Ross Willson and Howard Clark

This article gives the history of the trams that were the casualties of the fire at Loftus, both up to the time they were withdrawn by their original owners and in their subsequent ownership. The authors acknowledge with thanks information provided by Chris O'Sullivan and Wayne Dempsey.

By way of background, the old shed at Royal National Park which housed the trams and buses stored there, was the original depot building occupied by Sydney Tramway Museum from March 1957 until March 1988, when operations ceased from that site and commenced on 19 March at our current Loftus site. (The last operable trams were transferred from the old depot in May 1989.) The building reverted to use by the NSW National Parks and Wildlife Service and by a tenant. It was subsequently offered to STM for 'passive storage' purposes and rails were laid in old roads 1 to 3, while road 4 was allocated for bus storage from July 2007.

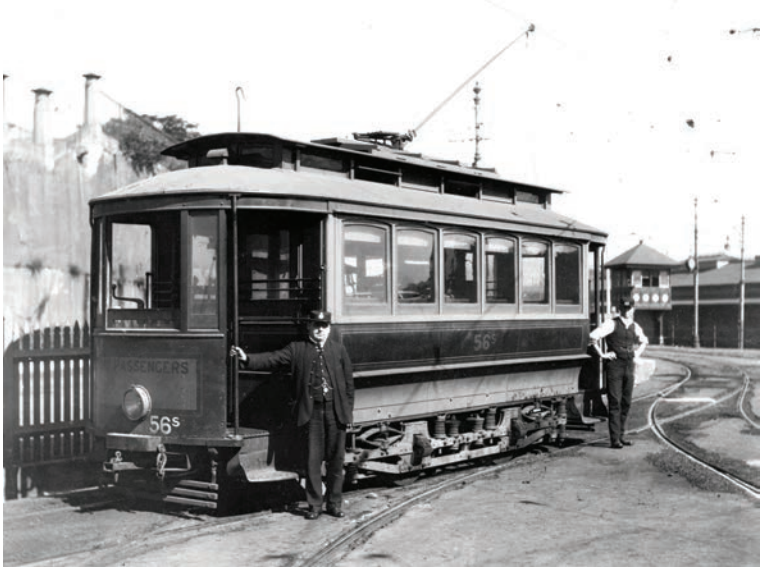
Until about 2011 the vehicles at the site were relatively safe and, apart from a couple of minor break-ins through the small rear entry door, any damage that occurred to the trams stored there appeared to be caused by rain entering through the building's deteriorated roof. However, after developers purchased the old Rozelle tram depot and placed 24-hour security there, where six severely vandalised tram bodies remained trapped, word spread mainly on social media about the RNP building and the 'derelict trams and buses' stored there, as a site to explore. Doors were forced open, iron sheeting was cut and/or removed from the walls allowing virtual free access. A spate of graffiti vandalism at first occurred, followed by the 'Rozelle style' progressive smashing of glass and other damage. Despite efforts to secure the entry points, and with no readily available alternative storage available and it being virtually impossible to secure the site short of erecting a new building, this 'reserve collection' was vulnerable. However short of the devastating fire that occurred, such vandalism was deemed reversible upon restoration.

No. 12 (56s)

The most notable loss involved a C class car with a body 23 feet long having 6 windows and seating for 22 passengers. It was constructed by Hudson Brothers of Clyde under a contract let to Charles G Hudson

Track being laid in the old shed on 17 February 2007 in preparation for it to become a tram storage facility.
Robert Merchant

C12 and its nine-window companion cross C 15 on the Rose Bay line c1900. The drivers are exchanging the single line staff. STM Archives



Breakdown car 56s at Fort Macquarie Depot. Although the six-window C cars were fitted with a Peckham Metropolitan truck, the inner set of coil springs were not fitted until after they were remotored for heavier breakdown work.
V.C. Solomons collection

under the lowest of five tenders opened on 15 March 1897. The tram was built for the new electric line from Ocean Street, Edgecliff to Rose Bay wharf that opened on 4 October 1898. It was originally numbered in a separate series (from 1 upwards) applicable to the Rose Bay section and became No. 12 when these cars were renumbered to bring the cars at Rose Bay and North Sydney into a unified series. Its date of entry into service is recorded as 29 August 1898. Its cost was quoted in NSWT records as £608. Our nine window C car 29 built by the same supplier entered service just two months later on 31 October 1898. Both cars saw service on the new electric line from Ocean Street.

The *New South Wales Railway Budget* of 20 October 1898 enthused:

The motor cars, which have been highly finished, seat 20 passengers, while the platforms at each end carry eight more, the total capacity being 36, or only one less than a cable tram accommodates. The cars are brilliantly lighted by two electric lamps of 8 candle power under the canopies, three lamps of 16 candle-power, and a lamp in the front head light of 32 candle-power, making objects on the line at night easily discernible at a considerable distance. Fully equipped with motors the cars weigh about 7 tons and the easy way they take the curves and negotiate the steep gradients has been favourably commented upon by the numerous patrons, in fact the opening of this line has apparently whetted the appetite of the public for electric traction, and caused enquiries as to when the George Street line will be ready.

C breakdown car 56s at Fort Macquarie Depot. The inner set of coil springs have been fitted to the Peckham Metropolitan truck. Noel Reed

C 12 was fitted with a Peckham truck with a wheelbase of 6 feet 6 inches and two GE 67A motors of 48 horsepower each. The weight of each was 2,442 pounds. The car had direct control K10 type controllers of General Electric manufacture weighing 210 pounds each at either end. It was fitted with a Westinghouse A1 National type compressor weighing 539 pounds with a capacity of 11 cubic feet per minute.

With the rapid expansion of electric trams in Sydney and the delivery of larger capacity cars these little four-wheel saloons fast became obsolete for regular passenger use. So it was with C car 12, and it was one of the first of a number of C cars converted for use as a breakdown car, with a capacity of 3 tons, on 19 December 1907. [1] According to the New South Wales Tramcar Handbook, these breakdown trams were remotored with two 50 horsepower motors.

Having been renumbered as 56s in the service stock series, the car was allocated to Fort Macquarie Depot, where it then served for 48 years. Following the closure of Fort Macquarie Depot on 24 October 1955, 56s was sent to Rozelle as a spare breakdown car, although it is uncertain whether it was ever used in this capacity. There it joined 141s, which had been converted from O 1030 on 19 September 1955.

During 1957 the car was used on various enthusiast tours conducted by the NSW Tramway Historical Association, under the leadership of enthusiast Norm Boxall. Its number was altered back to 12. On one of these outings, on 23 June 1957, it had the distinction of being the last tram to run on three lines which closed that weekend – to Clovelly, Daceyville and Rosebery.

In connection with its 120th anniversary, in 1958 David Jones hired the tram, which was painted cream with blue stripes. According to an item published in the September 1958 issue of *Electric Traction*, it operated alternatively in George and Elizabeth Streets, with occasional trips to Kings Cross. Subsequently, the car received a repaint (by the enthusiast group) into a chocolate livery and at least one tour was conducted with the car before Rozelle Depot closed with the George Street and western suburbs lines on 23 November 1958.

The car's only recorded further use was on a tour run by the NSW Tramway Historical Association on 31 May 1959. From Dowling Street Depot the tram visited Botany, West Kensington, Coogee, La Perouse and Maroubra. It was then stored at Randwick Workshops until sold, without motors and other key

[1] This date, which was obtained from drawing No. E/31166 sheet 2, differs from that customarily quoted in other publications. However, it is clear from the specific reference in Appendix XXVIII to the NSWRT's Annual Report for 1907-08 that "… 1 four-wheel electric motor car … converted to service car[s]", that the 1907 date is correct. The same appendix to the report for 1909-10 states that "one four-wheel motor car was converted to a breakdown car". That for 1910-11 specifically notes that "three four-wheeled motor cars were converted to break-down cars". These references were to Nos. 57s (No. 11) (14/9/1909) and 58s-60s (Nos. 7, 13 and 29 respectively) (15/9/1910, 16/9/1910 and 17/9/1910).

Marrickville Park is in the background as 56s, renumbered back to 12, turns from Enmore Road into Addison Road, Enmore in 1957. STM Archives

C 56s was renumbered C 12 and used to advertise David Jones' 120th birthday in 1958. It ran between Railway Square and Fort Macquarie Depot.
V.C. Solomons collection

C 12 on a NSW Tramway Historical Association tour at Botany on 31 May 1959.
STM Archives

C 56s was repainted into a chocolate livery using the David Jones livery as a base. It was repainted at Rozelle Depot on 13 September 1958. The painters are, from left: Robert Merchant, John Fawl, Leon Manny, Warwick Upton and Norm Boxall. John Fawl, STM Archives

C 12 with K 1295 in Norm Boxall's back yard at Henson Street, Marrickville in 1997. Howard Clark

operating gear, to Norm Boxall on 29 June 1959. It thereafter remained at his Marrickville residence in less than ideal conditions, although in the early 1960s it appeared in October each year on a float sponsored by Brambles in the spring Waratah parade.

In poor body condition, but with a sound roof, 12 came into the Sydney Tramway Museum's hands, and was delivered to Loftus on 26 July 1997. This resulted from an agreement brokered much earlier with Norm Boxall by David Wilson and John Burgess. The car resided in the top shed at Loftus until it was transferred in July 2007 to the old site at Royal National Park. It had been selected for restoration and leasing to Christchurch Tramway as an additional small car, and numerous parts, including side and drivers windows and saloon doors, were made for it and are stored at Loftus. When C 37 became available in 2010 it was decided to substitute it for 12 as it is an identical car to our restored 29, and was in better condition. No. 12 was of the smaller six widow variety, and would have provided STM with three different styles of C car. Ironically, it was planned to have it moved during early 2016 to an outside location for body restoration. It is uncertain when longitudinal seats were fitted to the car, although it is likely these were fitted using remnant R car drop centre seat backs and bases, after it became privately owned.

No. 710

A member of the N class, this tram's body was made by the Meadowbank Manufacturing Company. It entered service on 5 December 1905.

Contemporary accounts of the prototype of this design (No. 295 constructed at Randwick Workshops) can be found in the *Sydney Morning Herald* of 8 June 1901 and the *New South Wales Railway Budget* of 20 June 1901.

As a non-coupling 70-seat car it was fitted with two trucks of the maximum traction type supplied by the J. G. Brill Company of Philadelphia. The weight of each was 1.95 tons. The car had GE90 motors of 60 horsepower direct control with a K6 type controller of General Electric manufacture at either end weighing 259 pounds each. It was fitted with a General Electric CP 27 type compressor weighing 539 pounds with a capacity of 15 cubic feet per minute. Its tare was quoted as 14.76 tons while its cost was £1,053.

N 710 at the Showground, still with wartime brown-out paintwork.
David Keenan collection

At the time of withdrawal it was attached to Tempe. Written off the books on 25 January 1950, the tram was sold with a full complement of seats to a Mrs Merrivale on 23 August 1950. Along with sister car 715, it was located at a property near Moss Vale. It was used for some time as greyhound kennels, for which purpose its cross bench seats made it ideal as evidenced by the scratch marks noted on the seat nosing and seat tops. It was purchased in 2005 by STM, along with a quantity of spare doors and solid cedar seat backs, and delivered direct to the old site in late 2007. The seat backs were restored and installed in J car 675 during its restoration, along with some of the doors rebuilt for the same purpose. It had a purpose built corrugated iron roof when purchased and the body was in sound restorable condition.

No. 1295

This K class tram was also a Meadowbank product and entered service on 20 June 1913.

By 5 May 1917 it had been fitted with track brakes prior to its transfer to the North Sydney system for use, along with sister car 1296, on the steeply graded line from Military Road to the ferry wharf at Neutral Bay which had opened on 25 June 1900. Its role was diminished both by falling traffic and the introduction in 1952 of new R1 car 2029 which was supplemented by K class 1296 until the line to the wharf closed on 26 May 1956.
No. 1295 was fitted with two 50 horsepower GE203 motors (2,659 lbs) K35G controllers (282 lbs), a Brill

N 710 on a property at Moss Vale in 2005. Howard Clark

K 1295 at Neutral Bay Junction on 20 September 1952.
Noel Reed

K 1295 at Neutral Bay Wharf terminus.
William Denham collection, STM Archives

K 1295 ready to depart Neutral Bay Wharf with a standing evening peak load c1952. Note the rotted bow rail. Noel Reed

K 1295 appeared as a float in the Waratah Parade in October 1966. R. Merchant collection

K 1295 in Norm Boxall's backyard at Henson Street, Marrickville in 1959.
STM Archives

K 1295 in the top shed at Loftus.
Howard Clark

K 1295 being unloaded into the old site shed on 28 July 2007.
Dale Budd

21E1 type truck with a 7 feet 6 inches wheelbase weighing 2.95 tons and a GE CP 27 compressor (585 lbs). With a seating capacity of 50, it cost £1,067.

In consequence of its poor mechanical condition, it was transferred back to the main system on 27 August 1954. The Australian Electric Traction Association planned to hire the car for a tour to mark the 75th anniversary of regular tramway operation in Sydney on 19 September 1954. However the car was ruled out due to its poor condition, and instead O 1254 of similar vintage substituted. No. 1295 was sent from Dowling Street to Randwick on 22 September 1954. On 11 June 1955 No. 1295 was sold to Norm Boxall; it remained at Marrickville until it came into STM ownership along with C 12 in July 1997. The car when obtained was in very poor condition and would have required a complete rebuild for use with 1296 at Loftus.

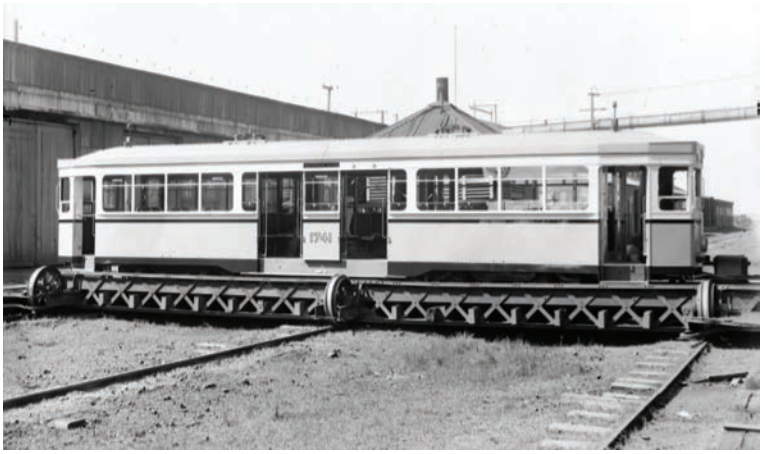
The R class trio

These three cars will be familiar to readers of this journal. All had the same equipment configuration: GE247A 40 horsepower motors (1,815 lbs) DK Q2 K5a (338 lbs) master controllers, No. 12 type trucks (2.499 tons) and GE CP 27 compressors (585 lbs) and Westinghouse quick service special valves. These cars had gears supplied by the Cincinnati Tool Steel & Gear Co. Each cost £2,926.

No. 1741 was despatched from Randwick workshops to Rushcutters Bay Depot on 19 October 1933. It would have been one of the three new R cars, first introduced in ordinary service to Double Bay, on 20 October 1933.[2] By 1940 it was at North Sydney, having previously been at Newtown; it went back to Newtown on 23 May 1950 and to Dowling Street on 29 September 1957. It was forwarded to Randwick on 18 May 1960 and sold to a Mr Mayland of Ashford on 22 June 1960. Along with 1749 from the same property, it was acquired by the City Tram Association for intended transfer to Rozelle. Due to a lockout at Rozelle these two cars, along with 1917 were stored in a transport yard at Penrith, until transfer to the City Council garbage depot at Wentworth Park for storage. Here they remained, until first 1749 was removed for restoration at Loftus for use as guest accommodation in the Southern Highlands in exchange for post war R1 2001 in 2001. Cars 1741 and 1917 were transferred from Wentworth Park and stored outside the Railway Square waiting shed at Loftus from 20 September 2003 until October 2007 when they were transferred to the old site.

No. 1819 was sent from Randwick as a new tram on 17 May 1934. It operated from Fort Macquarie and returned there on 5 June 1953 having been at Rozelle. It went back to Rozelle on 23 October 1955 and was sent to Dowling Street on 26 November 1955, returning to Rozelle on 28 August 1956. It went back to storage at Dowling Street on 23 November 1958. It was sold to

[2] Of the other two new cars, one (No. 1739) had been available for a special service from Erskine Street to Vaucluse (Signal Station) on 11 October. A second car (No. 1740) was sent out from Randwick on 12 October. Its commissioning enabled the operation on 13 15 October of 8, 11 and 7 trips to Vaucluse. From 16 October one of the Vaucluse cars was transferred for operation elsewhere. Four journeys operated to Vaucluse on 16-19 October. The second tram ran from Circular Quay to North Bondi via Bellevue Hill (5 trips) on 16 October, from St James Road and Fort Macquarie to Gladesville (4 trips) on 17 October, from Circular Quay to Coogee (5 trips) on 18 October and to Maroubra Bay (5 trips) on 19 October.



Brand new R 1741 on the traverser at Clyde Engineering Company before its delivery to Randwick Workshops.
Clyde Engineering, Powerhouse Museum collection

a Mr Benson on 28 August 1959, apparently for use by a Boy Scouts Troop at Braidwood. Along with R 1806 it was purchased in 1986 by the Tradesmen's Union Club in Canberra and subsequently restored for use in the Bistro at the club. It was donated to STM in 2006 and moved to storage at Hume ACT, until delivered to outside storage in Sydney on 7 June 2006 before delivery to Loftus for immediate transfer to the old site in July 2007.

No. 1917 was delivered from Clyde Engineering to Randwick on 7 April 1935 and left there on 11 April for service from Waverley. On 22 February 1948 it entered service from that depot having been fitted with dewirement indicator lights. The test of this device under service conditions proved unsuccessful and the use of the lights was discontinued on 18 October 1948. They were removed from the car on 7 June 1949. This tram received self-lapping brake valves on 8 November 1956. Its working life was spent at Waverley until by 9 December 1953 it was at Rozelle; it remained there until that depot's closure on 23 November 1958 when it was sent for storage at Dowling Street. It was briefly in service from 18 May to 16 July 1960 and was sent to Randwick on 8 August 1960. The car was sold to Darling Shire Council on 24 March 1961. The car was subsequently acquired by the City Tram Association and shared the same subsequent history as 1741.

Melbourne No. 432 – class SW2, originally W1

The *raison d'être* of this car, a development of the W class introduced in 1923, constructed by the Melbourne and Metropolitan Tramways Board at its Preston workshops, was clearly stated in *The Argus* of 13 May 1926 as follows:

> The car differs from the ordinary type of bogie cars now in use in that the central smoking compartment is built in a manner similar to

R 1819 in George Street at the Barlow Street junction on 22 November 1958.
Robert Merchant

The interior of R 1819 when in use as a dining area in the Canberra Tradesmen's Union Club's bistro, 11 October 2008. Dale Budd

R 1819 with R 1740 at Loftus in July 2007. Dale Budd

Arrival of R 1917 at Loftus in 2003. Howard Clark

The fascia of R 1917 showing the position of the experimental dewirement indicator light beside the destination box, 6 October 2007.

Robert Merchant

> the dummy of a cable tram. Two seats, facing outwards, run the whole length of the smoking compartment, passageway being provided between them in which the conductor may move to collect fares. The sides of the car are protected with wooden stanchions. The new car will seat 14 persons in the smoking compartment, as against 16 in the ordinary type of cars. The standing space in the centre of the new car, however, is much greater than that in the ordinary bogie cars. The new car is really intended as an observation car, those on the side seats having an uninterrupted view from the car. For wet weather waterproof blinds will be provided to pull down along each side of the smoking compartment, leaving the centre doorways open.
>
> It is proposed to build an improved type of the car in which the dummy seats will be so constructed that they may be reversed to face inwards in wet weather. The blinds on the outside of the compartment will then make the smoking compartment more weather-proof than the smoking compartments on the existing bogie cars.

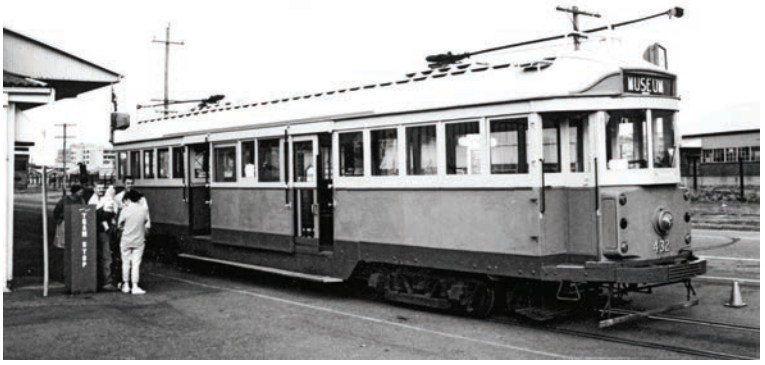
On 13 May 1926 members of the Board went to Swanston and Victoria Streets to inspect the new tram and take a short ride. That morning *The Age* stated that the new car would be "placed in running" that day. The item referred to regrets that the conversion "would mean the elimination of the delights of riding on the dummy" and that the Board "… has displayed more sympathy with the sentiment than is usually shown to persons anxious for tramway improvement". The report confirmed what *The Argus* had noted saying that "… the side seats are fixed, but it is intended to manufacture another type, in which the seats may be turned inwards in the case of bad weather".

Nos. 419, 426 and 429 were constructed during 1926 and Nos. 420-425, 427-428 and 430-438 in 1927 with 470-479 following in 1928. Contrary to what was stated in The Age, MMTB workshops record cards indicate that the first W1 to be placed in service was No. 426 on 6 August 1926.

In retrospect, it is obvious that the seating arrangement was incompatible with operating trams in conjunction with heavy motor traffic. A similar layout had been discarded by the New South Wales Tramways between 1906 and 1912 with the implementation of the program of altering the 44 seat bogie combination cars of the F type to a 55 passenger design (L type) with cross bench rather than longitudinal seating. Only ten years after their introduction, conversion of the W1 cars to the W2 design began in 1936.

The opportunity was taken to use the W1 class conversions to test the use of air-operated sliding doors prior to the introduction of the SW5 and SW6 classes in 1939. No. 432 entered service as a W1 on 18 June 1927 and was converted to an SW2 during October 1938. The first SW2 (No. 436) had entered traffic on 14 February 1938. As a W1 it had four 40 horsepower GE288 motors, No. 1 type trucks with 26½ inch wheels, K35JJ controllers and a CP27 compressor. It weighed 17.26 tons and had seating for 50 passengers. As an SW2 it seated 52 with a tare of 17 tons.

Melbourne SW2 432 in Albert Road Siding, Albert Park in October 1975. Richard Jones



SW2 432 on the Lee Wharf rail siding at Newcastle. The Newcastle Tramway Museum ran a tourist service here from June 1993. STM Archives

The car was acquired by what became the Newcastle Tramway Museum on its withdrawal in 1987 and spent time at Rutherford operating with a motor generator set. It was subsequently transferred for use, along with W2 245, on disused railway tracks at a wharf near Newcastle railway station.

Upon the liquidation of that museum in early 1995 the tramway assets were purchased by STM and the car was transferred to the Hunter Valley Training Company at East Greta, near Maitland. Here it was partially stripped of external panels as part of a proposed apprentice training program which failed to materialise due to lack of funding. It was then transferred to Loftus and stored outside on the traverser and used for a time as a shunter. Subsequently it had a bogie exchange with restored W2 car 249 because of wheel condition, and it was removed to the old site in 2007.

Questions have been asked as to why STM acquired the above cars in the first place and why they were left in such vulnerable surroundings. All these cars were inherited by STM, except for N 710, which was purchased outright as a reserve car, and remained the least vandalised tram at the old site. Regrettably, while some consultations and engineering advice had been received concerning a replacement secure building, no funds were available for such works.

The risk of fire was always accepted. However with no ready alternatives available there was little option than to trust and hope that damage would stop short of fire, either caused by intruders or a natural bush fire. Vandalism could be reversible by restoration, as has been demonstrated before, but short of a 'Phoenix arising' from some small remnants of C 12 that were not in the fire, nothing can be done to resurrect anything else destroyed. Ironically, the trams there, as well as the buses, were deemed to be our 'reserve' collection, to be used in the event of a calamity with a vehicle in our main collection. Regrettably, this is no longer an option we have available.

SW2 432 is about to be loaded for transport to the old site shed for storage, 28 July 2007.
Dale Budd

SW2 435 is unloaded into the old site shed on 28 July 2007.
Dale Budd

SW2 432 heavily vandalised in the old shed, 23 August 2014.
Howard Clark

From *The Evening News*, Thursday 21 September 1893, page 3:

MILITARY ROAD TRAMWAY
THE OPENING CEREMONY

The newly-completed electric tramway from St. Leonards Reserve to the junction of the Military and Spit-roads, Mossman (*sic*), a distance of nearly two miles, was opened to public traffic yesterday. This is the first section of the line which it is proposed to construct to the Spit at Middle Harbour and thence to Manly by a branch line connected with the fortifications at Middle Head.

The track is a good one, and care has been taken to use good material strong enough to carry a light railway and serve not only the necessities of the fortifications but the growing traffic in the district. Between 8 and 9 a.m. the following gentlemen left Manly by coach for the tram terminus: Aldermen C. H. Hayes (acting-Mayor), Farmer, Fletcher, Thomas, and Moss; also Messrs. Cr. Austin, T. C. Haylock (council clerk), H. T. Robey (secretary of Manly and Pittwater Railway League), John Woods, E. Eidge, S. Smith, and A. Hilder. The route taken was along Lauderdale Avenue, a roadway that was completed some six months ago at a cost of about £2000. The scenery along the road was charming, and the coach journey was a delightful one. The tramway was opened for traffic at the Ridge-street terminus at 6.45 a.m., when the first car left for Spit-road. On it were Mr. James Roberts, manager for tramways; Mr. G. F. Clements, of the railway electrical engineering branch; and Mr. C. Peters, traffic inspector. The night officer in charge of the North Shore Ferry Company's Wharf at Circular Quay was the first passenger. The journey was accomplished without a hitch, one passenger being picked up on the way. Upon the car returning to the station at 8.21 one of the cable cars was coupled to it, and after Mr. J. F. Cullen, M.L.A., and Mr. Matthew Nimmo, locomotive officer in charge of the North Sydney cable trams, boarded the car, a fresh start was made, and at Spit-road it was found that the Mayor of Mosman (Mr. E. Harnett, Jun.), and Aldermen Bladen, Moran, G. T. Taylor, C. Cowles, and Cannon, Mr. Hutchinson (engineer for existing lines), Mr. B. Harnett, sen., ex- Alderman Beaney, and Messrs. T. Glover, Leonard Dodds, G. Dalton, and Alderman M'Knight (Mayor of North Sydney) were awaiting its arrival. The coach arrived from Manly soon after, and Alderman Hayes, of Manly, in the absence of the Mayor, and on behalf of his fellow aldermen and the residents of Manly, congratulated the Mosman Council upon being brought into touch with the central portion of their own district, and he hoped that they might enjoy with them the beautiful surroundings of their borough. They of Manly were interested with those of Mosman in the work which had been so far accomplished. The journey from Manly had been accomplished in 29 minutes, and he hoped that the influx of excursion traffic that the public would be enabled to get from the stopping place to the beauties beyond Middle Harbour. It was their desire that it might be of such volume as to warrant the Railway Commissioners in extending the line across the Spit to Manly. Mayor Harnett, in reply said that he had much pleasure in welcoming them to the new borough of Mosman, and as they now had the nucleus of a lasting connection between Mosman and Manly, two of Sydney's most picturesque and beautiful marine suburbs, they, as a council to Mosman, hoped that there might be a connecting link over Middle Harbour some day by bridge and tramway, so that the beauties of Middle Harbour might become more appreciated. They hoped that the tramway would be a financial success, and that the cheapness of the fares on this line would attract a large population to the district. Cheers were then given for the Manly Council, the Mosman Council, Mr. Lyne, and the Railway Commissioners, after which the company proceeded to North Sydney. Several passengers were picked up en route, amongst them being Sir Joseph Abbott. Upon arriving at Ridge-street a change was made to the cable tram, and the party left for Sydney. Shortly after the tram had left at 8.24 for Mosman a horse attached to a vehicle on Ranger's-road took fright at the tram, and galloped furiously down the hill. Miss Harnett (sister of the Mayor of Mosman) had been out driving, and had left the animal for a moment. The lady attempted to check the horse, but her efforts unfortunately were unsuccessful, and nearly resulted in her being run over.

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ARE TRAMS DOOMED?

By Victor F. Letcher

WILL 'buses supplant electric traction in the cities of the future? Can they cope with the demands of mass transportation? These questions have given experts, the world over, much food for thought and diligent research. Mr. Letcher, who was a prizewinner in the Melbourne "Herald's" recent essay competition on city traffic problems, and who, at the instance of the Victorian Railways Department, visited America last year to study, among other things, the 'bus problem, at firsthand, here gives, clear cut, and backed by the testimony of unquestioned authorities, his conclusions on a hotly debated subject.
He insists that co-ordinated city transportation is the only solution.

A good deal of discussion has taken place from time to time concerning the relative value of the tramway and the motor 'bus for city street transportation, and the question has been raised whether we are wise in proceeding with the extension of our electric tramway system, and should not use 'buses instead.

It has been claimed that the electric tramway is out of date, and that in large cities in other countries, notably in New York and London, the tramways are being superseded by motor 'buses.

In a talk through [radio station] 3 L.O. recently, I stated that in the United States the backbone of city street transportation is the electric tramway, and that, while in most cities 'buses are being operated, it is considered to be unlikely that the tramway will ever be superseded by 'buses for moving masses of people who require to be transported through the streets of large cities during the morning and evening peak periods of the day.

Unbiased Observation

My desire is not to decry the 'bus nor to praise the tram, but, as far as possible, to present an impartial statement of the relations of the two forms of transportation, as a result of my observations and enquiries over a period of nearly nine months, last year, in the United States.

In New York City the conditions are dissimilar to those in other cities of the United States, and constitute a vastly different problem from that of catering for the traffic needs of the city of Melbourne.

As is well known, the central business district of New York City is located on Manhattan Island, which is bounded by the Hudson, East and Harlem Rivers. In the limited area available, which is approximately 12 miles long and two miles wide, and carries a population of over 2,000,000 of people, are buildings which for height and capacity are unequalled anywhere else in the world.

How New York Is Transported

The city traffic is catered for by the Underground Electric Railways (constructed in some places at two levels underground) by elevated electric railways, by surface tramways and by motor 'buses. The Long Island Railroad is also a large transportation system serving an. area populated by over 3,000,000 people, and handling about 100,000,000 passengers annually.

The motor buses, which are of the double deck type, operate along the celebrated Fifth Avenue and Riverside Drive. This route is most favourable for the operation of buses, providing what might be termed boulevard running conditions rather than ordinary city operation.

Traffic Badly Handled

In New York City the street traffic appeared to me to be very badly handled. I learned by experience that, if I wanted to travel quickly from one part of the city to another the tram cars, taxicabs or any other form of surface transportation: were hopeless. Traffic jambs were' frequent. The streets were congested with a slowly moving mass of automobiles, motor trucks, a few horse drawn vehicles and conveyances of all kinds. Through this maze of traffic which, of course, overflowed on to the tram tracks, the tram cars could not help but make slow progress.

For quick movement, therefore, the New Yorker is compelled to use either the underground electric railways or the elevated electric railways. The underground is a wonderful system of local and express trains running the full length of Manhattan Island and radiating across the Harlem River into the Bronx and Westchester County and the East River into Brooklyn and Queens.

The elevated electric railways also provide rapid transit. These trains run on steel viaducts. The unsightliness of these huge steel structures in the streets, and the noise and rattle of the trains, can well be imagined. I understand that some of these elevated railways are soon to be removed and the traffic carried underground. I do not anticipate that we will ever require rapid transit of this nature; but at all costs we should preserve our city against such a nuisance. Let us go underground rather than overhead.

More Tubes Wanted

Experts are agreed that the only way traffic congestion in New York City can be relieved is by building more underground rapid transit electric railway lines, and by improving the present methods of handling the street traffic.

At the present time in Greater New York there are 619 miles of rapid transit underground and elevated electric railway lines. On these lines in 1925 were carried 1,681,000,000 passengers compared with 830,000,000 in 1915, an increase of over 100 per cent. During the same period the number of passengers carried on the surface tramway lines increased from 918,000,000 to 1,035,000,000 passengers or by 11 per cent.

In the same period, however, the public records for Greater New York show a remarkable increase in the number of motor vehicles using the streets. Taxicabs, which in 1915 numbered 3,381, aggregated 24,398, while in the same period automobiles increased from 49,344 to 363,404, and commercial cars and omnibuses from 19,607 to 94,449.

Trams Carry 38 per cent

Despite this tremendous increase in the number of automotive vehicles, however, the number of passengers on the tram car lines increased by over 11 per cent., and there were carried on the tram lines 38 per cent., or four of every 10 passengers carried on the rapid transit electric railway and tramway lines.

I am quoting largely the figures collated by Mr. Gerhard M. Dahl, Chairman of the Board of Directors of the Brooklyn-Manhattan Transit Corporation.

Mr. Dahl says that universal experience has shown that it requires five ’buses to handle the same amount of traffic, under similar conditions, as can be handled by three tram cars – mind you, five ’buses to three tram cars!

On this basis, if the 3,388 tram cars which operated in the five boroughs of Greater New York, and each of which carried 336,000 passengers for the year were replaced with ’buses, no less than 5,812 buses would be necessary to cope with the traffic. Approximately 2013 of these ’buses would be required for use in the City of New York, and bearing in mind the already congested traffic conditions there, Mr. Dahl pertinently asks: where would one put these 2,013 additional ’buses?

Anyone who rides in an automobile or 'drives an automobile in street congestion as it exists on the streets of New York today knows that the 1,174 tram cars now operating in that City on permanently located tracks, cannot and do not congest traffic conditions as much as would 2,013 ’buses meandering in and through the maze of traffic to take on or discharge passengers at the curb. In fact it is apparent to anyone that a ’bus even going in a straight general direction must be given a wider berth clearance than a tram car on its fixed directional tracks.

On the other hand, due perhaps mainly to the low rate of fare which the Tramways of New York City under their franchise are compelled to charge, namely, 2½d. compared with the ’bus fare of 5d., the New York Tramways are in the hands of Receivers, and the equipment used and the service given are not what one would expect to find in the great city of New York.

The time will, there-fore, soon come when a more liberal franchise will have to be granted or else the existing trams will have to be scrapped, either to make way for a modern tramway system or for motor ’buses supplementing additional underground lines.

Even if New York did scrap its tramway system and use ’buses on some of the lines on which trams are now run, it would be foolish for us to follow the example. We have no geographic limitations which would contribute to an artificial traffic congestion, such as is found on Manhattan Island and other cities; for instance, to come nearer home; the City of Sydney, which also has geographic restrictions.

The Position in London

So far as the City of London is concerned, the situation is that 55 per cent. of the available traffic is carried by 3,000 tram cars, and 45 per cent. by 6,000 ’buses, the ’buses operating in many cases competitively with the London County Council Tramway.

When the Chairman of the London Traffic Committee visited New York recently, he stated:-

“If the tramways of the London County Council were to cease operations, where would one put the ’buses that would be needed to carry the 50,000 persons per hour that these tramways transport in

This is Melbourne's Problem. Co-ordination, Mr. Letcher maintains, is the solution.

the rush hours. Already our streets are crowded to saturation point. No, the motor 'bus cannot do the work of the tramways and rail lines. It has its proper place in our system of transport, but the place is not in competition with the rail lines nor in congested streets. The expense of widening streets and other changes that would be necessary were all our traffic to be handled by motor buses, would be beyond all reason – absolutely prohibitive."

The City of Manchester also has considered the comparative utility of the motor 'bus and tram car. In its report it states :-

> "The motor 'bus cannot be considered either as a practical or financial substitute for the tram car for the passenger transportation of the City and its districts, nor for the Central area only."

In Berlin, it was found as a result of an investigation by Dr. Giese, Professor of Transportation at the Berlin Technical School, that the substitution of 'buses for the electric cars in Berlin would require the doubling of the existing fares charged for the tramway services

Trams Carry 44,000,000 a day in U.S.A.

In the United States, at the present time, there are approximately 44,000 miles of electric tramway lines. On these lines are operated about 100,000 tram cars. Last year these cars carried 44,000,000 passengers per day, or a total of approximately 16,000,000,000 passengers for the year. These are big figures.

In no city of any importance in the United States have 'buses superseded the electric tramways; but do not infer from my remarks that the motor 'bus is not being extensively used for city and suburban transportation. As a matter of fact 'buses are being very extensively utilised, and more and still more use is likely to be made of them. Speaking generally, the use of the motor 'bus is not, however, in competition with the electric tramway.

Co-ordination the Solution

The principle has been laid down that reliable public transportation can only be provided by means of co-ordinated services. The co-ordination of electric tramways and motor 'buses is being brought about on an unprecedented scale.

The electric tramway authorities of the United States have been compelled to supply the demand of the people for motor 'bus services.

In the early stages most American cities had their experience of privately owned 'bus lines operating in competition with the existing transportation utility: but this experience ended disastrously for this method of motor 'bus operation and at the same time, assisted nearly to bankrupt many of the electric tramways which had already been hard hit by the private automobile.

Now, as 1 have stated, it has been recognised that the established providers of transportation who have had long experience in catering for the needs of the public are the proper authorities to provide and co-ordinate the new form of transportation with the already established services.

Regulatory measures have been passed giving the electric tramways the right to co-ordinate 'bus lines with their tramway services, and the result has been that in many cities there are now in operation hundreds of comfortable well equipped 'buses providing excellent service throughout the day, and assisting the electric tramways to cater for peak hour street traffic.

In September, 1926, there were 339 electric tramway systems operating more than 6,500 motor 'buses.

I will give one or two instances of co-ordinated transportation. The most striking example is that of the City of Philadelphia, which has a population of approximately 2½ millions. Here the Mitten Management operates the underground electric railways, the surface electric tramways, the motor bus services, the taxi cabs, and, for some months during the Sesqui Centennial Exposition, an aeroplane service between Philadelphia and Washington and Richmond, Virginia.

Cleveland, Too

Another instance is that of Cleveland, Ohio. In this city of more than 1,000,000 inhabitants which can be compared with the City of Melbourne, in size, the Cleveland Railway Company is operating co-ordinated tramway and bus lines. It has 425 miles of tramway lines, some affording real rapid transit through the means of the "Skipstop" system of operation, and 56 miles of bus routes.

It was evident from my observations and enquiries in American cities, and from contact with many leaders of the industry, that the electric tramways are far from being a back number, and, on the other hand, there was demonstrated very clearly –

(1) that in large cities such as New York, Chicago, Philadelphia and Boston, a great mass of the people are handled by the rapid transit electric railways (either underground or overhead or both) which lines merge into surface lines outside the city limits.
(2) That the electric tramway is the most important factor in surface street transportation in all large cities.
(3) That the motor bus is of increasing importance in city street transportation, its greatest usefulness being secured by co-ordination with and supplementary to existing services.
(4) That motor bus lines are more likely to be successful when operated on boulevards or as special services warranting a higher fare than the electric tramway fare.

Melbourne Fortunate

The people of Melbourne are exceedingly fortunate in having had provided for their needs a modern suburban electric railway and. tramway system of transportation giving a service which is superior to that provided in any American city, taking the population of Melbourne into consideration.

It would, however, be very unwise to interfere with the functions of our great city and suburban transportation systems by permitting the unregulated use of motor 'buses. Bearing the experience of the cities of the. United States in mind, and looking into the future, it is apparent that the operation of modern motor 'bus services will require to be co-ordinated with existing transportation facilities. 'Buses may supplant some of our tramway lines, and be installed as feeders in areas now unserved by either tramways or electric railways. They may also be utilised in the future to provide boulevard service on streets where it may be undesirable to operate tramways, but we cannot hope to solve the problem of handling our mass transportation by the use of motor 'buses alone.

The time may come with the growth of a Greater Melbourne when serious traffic congestion may force us to place our tram-ways underground in the heart of the city, or to provide underground electric railway services; or both; but bearing in mind the tremendous cost of the installation of under-ground electric railways or tramways, before the taking in hand of such a great work would be justified, we would have to relieve the congestion by all other possible means, for example, by the bridging of the Yarra at frequent locations, thus allowing traffic to flow in its natural channels.

HERE AND THERE
AUSTRALIAN AND OVERSEAS NEWS

Sydney light rail

A surge in passengers on Sydney's inner-west light rail line over the past year has prompted the operator to add up to 90 extra services a week to meet demand during peak periods.

The number of passengers using the trams rose almost 60 per cent to 6.1 million last financial year due in large part to the opening of the 5.6-kilometre extension to Dulwich Hill in early 2014. The line runs from Central Station to the inner west via Pyrmont, Glebe and Lilyfield. The patronage statistics would not be a surprise to commuters who are increasingly finding the trams to be very crowded.

Most of the extra peak-hour services were to begin from 25 January, with more following by the middle of the year. In total, tram trips will rise from 197 to 215 on weekdays. The increase is expected to result in a service running every eight minutes during peak travel periods on weekdays, instead of every 10 minutes at present.

Transport Minister Andrew Constance said the increase in tram services would allow an extra 3700 people to travel on the light rail line each day during the peak periods. "Demand for light rail is expected to rise so we're putting on extra services to make sure we're ahead of the curve," he said.
The afternoon peak travel period will also be extended by an hour to 7:00pm on weekdays.

The surge in demand supports the case for Sydney's $2.1 billion light rail line from Circular Quay to Randwick and Kensington in the city's east, as well as the Parramatta light rail project.

Construction of the new line to the south-eastern suburbs began late last year, and the first trams are due to run on it in 2019.

ALTRAC, the consortium of four companies building the new line, also operates the inner-west light rail. It will run the extra services using its existing fleet of trams.

With construction of the city and south-eastern line gathering pace this year, the University of NSW has raised concerns that stops for trams near its campus in Kensington will not be large enough to cope with the expected growth in commuters when it opens. The university has forecast students and staff will use up to 76 per cent of the capacity – or 5300 passengers per hour – on the two branches of the light rail line to Kensington and Randwick by 2021.

About 26,000 people already catch public transport to the university on weekdays, and four of the six busiest bus stops in Sydney are between Central and the UNSW.

Adelaide

Glengowrie Depot maintenance staff marked the tenth anniversary of the delivery of the first of Adelaide's new trams on 23 November 2015. Flexity tram 101 was delivered from Outer Harbor and unloaded in Victoria Square in the early hours of 22 November 2005, with tram 102 following a few hours later. After testing, tram 101 entered passenger service on 9 January 2006.

Silver H tram 352 (formerly 367) made a rare journey out of Glengowrie Depot on 9 December 2015 for a charter for the SA Railway Modelling Association.

From *Evening News*, Thursday 12 April 1900, page 3

About a quarter-past 5 on Tuesday evening a block took place in the 'down' — i.e., that from the Quay towards the railway — line in George-street. A string of cars extending from Circular Quay to Goulburn-street was standing still for about half an hour. The 'up' line was working all right, and as the cars reached the terminal loop, opposite the Watson's Bay ferry wharf, and turned on to the down line, they increased the procession. The block was caused by a car running into the one in front of it, near Goulburn-street. The impact caused the rear of the front car and the front of the one following to be some what badly damaged, and the shock caused the hand-brake of the latter to become jammed, with the result that the car could not be moved until the chain was cut and the blocks released. This occupied some time, and the traffic was considerably disarranged for about an hour. The injured cars were taken for repairs to the Randwick sheds, and a departmental inquiry will be held in connection with the matter.

Glengowrie Depot staff who were involved with the delivery of Flexity tram 101 on 22 November 2005 with the tram for the commemoration of its tenth anniversary on 23 November 2015.
S.A. Department of Planning, Transport and Infrastructure

Car 101 at Glengowrie Depot on 23 November 2015 on the tenth anniversary of its delivery.
S.A. Department of Planning, Transport and Infrastructure

No. 101 happened to be at the Entertainment Centre, Hindmarsh terminus on 9 December 2015 when H 352 waited for its charter run to commence. Damian Hill

H 352 crosses Brighton Road, Glenelg on its way to Moseley Square on a charter run on 9 December. Damian Hill

A rare sight for an H tram to be out in the evening. H 352 was captured in Victoria Square passing the City of Adelaide Christmas tree on its return journey to Glengowrie Depot after dropping off its charter passengers at the Entertainment Centre, Hindmarsh.
Arnold Krueger

Gold Coast Light Rail

As trams on the Gold Coast clock up 1.5 million kilometres, passenger numbers are booming, with an extra 640,000 fares registered from July to September 2015 compared with the same period in 2014.

Figures released in the December TransLink Tracker report show that from July to September 2015 there were 1.88 million trips compared to 1.24 million in the same period for 2014.

GoldLinQ CEO Phil Mumford said the increase in passenger numbers was great news. “It is fantastic to see Gold Coasters continuing to embrace the G as shown by the latest passenger data and the record number of passengers using the system during the GC600,” he said. “We will continue to provide a high-quality, reliable service and expect this trend to continue as the average number of passengers riding the trams each month has increased in the second year of services.”

Meanwhile, the Queensland Government has signalled its intention to proceed with Stage 2 of the Gold Coast Light Rail by taking delivery of tender documentation from three short-listed bidders. These are Leighton Contractors Pty Ltd, John Holland Queensland Pty Ltd, and GamesLinQ (a Downer EDI Works and BMD Constructions joint venture). The final cost of Stage 2 is not available at present, but the likely amount should be known once GoldLinQ has completed the competitive tender process.

Transport Minister Stirling Hinchliffe said the team examining the bids worked through the Christmas break so the contract could be awarded in late March or early April. Construction is expected to begin soon after. The Minister confirmed the project was still on track for completion in late 2017 or early 2018, in time for the Commonwealth Games in April 2018.

The planned 7.3 kilometre alignment of the extension uses existing road and rail corridors, thereby reducing community and environmental impacts, and shortening the time required for its construction. The new track will run along the inter-regional transport corridor, adjacent to the Smith Street Motorway and the Gold Coast railway, from the Gold Coast University Hospital to Helensvale railway station.

Bombardier will supply four more trams for the northern extension of the line. The $25 million order represents an option on the original contract signed in 2011 for 14 trams.

"Light rail has become the spine of public transport on the Coast," Mr Hinchliffe said. "Good quality public transport doesn't just change the journey, it changes the whole city and that's what the G has done for the Gold Coast. We're very confident Stage 2 will continue that pattern of growth."

To the north of Brisbane the Sunshine Coast is also looking at building its own light rail system. In October 2015, the team that prepared a feasibility study for the project received an award from the Planning Institute of Australia.

WHITEMAN PARK

PERTH ELECTRIC TRAMWAY SOCIETY (INC)

PO Box 257, Mount Lawley, Western Australia 6929 www.pets.org.au

Michael Stukely

Thirtieth anniversary, and Perth tram 66 runs again

On 30 November 1985, following the official opening ceremony for the first stage of the new PETS tramway which was held at the Carbarn, we commenced electric tram services for the public at Whiteman Park. Return trips were run between the Carbarn and the then terminus at the original 'Mussel Pool' tram stop (the low-level platform between the two road crossings at Bennett Brook, where the logging whim is now displayed). The thirtieth anniversary of this very significant event in the Society's history was celebrated at the Park on 28 November 2015.

Perth E 66 passes through the Village Mall on 4 December.
Michaek Stukely

Perth E 66 and Fremantle Municipal Tramways No. 29 rest briefly at the Village tram stop in Whiteman Park after arriving from the Carbarn to enter service on Friday 4 December.
Shane Parsons

Perth E 66, driven by Shane Parsons on its first day of public passenger service since 1958, passes the Park Administration building in the Village on 4 December with a load of happy school children.
Michael Stukely

WAGT (Perth) E 66 is driven into position on the Carbarn fan by Motorman, Lindsay Richardson ready for its first passenger run, which will carry members and guests to the Village Cafe for the anniversary dinner on 28 November. Melbourne W2 441 has run in after completing the day's service. Michael Stukely

About 50 members, partners and special guests gathered late in the afternoon at the Carbarn where there was an opportunity to inspect various projects in progress. After the service tram (Melbourne W2 441) had run in, members were delighted when the restored WAGT (Perth) E class tram 66 (built by the WA Government Railways at the Midland Junction Railway Workshops in 1917) was positioned on the fan for boarding. After final testing of No. 66 in October, the completed recommissioning papers and Change Advice had been submitted to the Rail Safety Regulator, and the required endorsement for its regular operation in passenger service had been received. This enabled 66 to make its first passenger-carrying run for the anniversary celebration.

Motorman, Lindsay Richardson, prepares to drive Perth E 66 to the anniversary dinner.
Michael Stukely

The group rode 66, driven by PETS member No.1, Lindsay Richardson, to the Village Junction Station terminus and back to the Village tram stop, where they alighted and moved across to the Village Cafe. Here they enjoyed a three-course dinner in the al-fresco area as the sun set, with 66 standing nearby at the tram stop and looking resplendent with its lights on. A welcome was given by President, Allan Kelly. A tramway-related quiz was held during the evening; the questions had been prepared by David Brown and Robert Pearce. Robert was MC and Allan Kelly acted as scrutineer. A special cake depicting E 66, made by a niece of Michael Mason-Coe, was cut jointly by Lindsay Richardson (representing the Society's outstanding past achievements) and our youngest member Jordon Blain (representing the Society's very promising future).

To conclude this memorable occasion, everyone then boarded E 66 for the return night ride to the Carbarn.

Our anniversary was also recognised by Whiteman Park management. At the Park's annual volunteer morning tea on 4 December, we were presented by the Park Manager, Steve Lowe, with a special framed Certificate of Appreciation highlighting our 30 years of tram operations in the Park.

E 66 stands at the Village tram stop in the evening during the anniversary dinner on 28 November. Michael Stukely

Lindsay Richardson and Jordon Blain cut the anniversary cake at the dinner, as Secretary, Robert Pearce (far left) and President, Allan Kelly look on.
Michael Stukely

December 4 also saw the first appearance of E 66 in public passenger service in 57 years, when it ran all day for a group booking for about 300 school students. The last passenger service running by 66 was as the official 'last tram' for the closure of the last remaining route (18 Inglewood) of the Perth tramway system on 19 July 1958. Fremantle 29 was also used all day on 4 December, for other passengers. This was the first occasion on which two restored Western Australian trams have been in service together in the Park.

Traffic operations and service cars

Trams ran on seven days per week as usual in the October school holidays, following the Queen's Birthday (WA) long weekend of 26-28 September, with good levels of patronage.

W2 329 and 441 were again the main service cars in the spring months, and FMT 29 ran occasionally. Perth E 66 saw some regular use in December. One running day was lost in November due to high fire danger.

Fremantle 29, driven by Michael Mason-Coe, passes the flowering paperbarks as it approaches the Village from Village Junction Station terminus on 4 December.
Michael Stukely

The standard gauge mechanical sleeper-exchanger given to PETS in October by Whiteman Park management.
Michael Stukely

Bryan Liversidge (left) and Lakmal Wijesuriya cleaning a wheel-set from Ballarat 31 prior to sending it out for re-profiling of the wheels.
Michael Mason-Coe

General

Metal roofing was installed in November by a patio-building firm on the brick-walled former Western Power transformer compound, with excellent results. This work was funded from the Oketon Geddes Trust. The storage container previously located south of the Lindsay Richardson Carbarn was moved into the fenced area on the south side of the brick compound. The Building Licence for the planned new carbarn is still awaited from the City of Swan.

Work has commenced on the refurbishment of Ballarat 31, after its body was lifted from the Brill 21E truck several years ago. In October, the two motors were removed from the truck for overhaul; the truck frame was lifted and the wheel-sets rolled out and cleaned in preparation for their re-profiling by an engineering firm.

The replacement of old timber sleepers on the main line with steels has continued, with a team of 6 replacing about 14 sleepers on 26 September, and on 31 October an outstanding effort by 8 members resulted in 20 sleepers being replaced. This completed the current round of sleeper replacement on the straight section eastwards from Horse Swamp Curve to Stockmans Triangle, and also included sleepers immediately north of the Triangle on the passing loop and parallel main line. Sleepers due for replacement on the next section have been marked, from the Triangle up the grade towards the cattle grid. A follow-up weed spraying treatment was done on the main line on 11 November.

A used standard gauge mechanical sleeper-exchanger has been given to PETS by Whiteman Park management after it was donated to the Park. The machine was transferred to our site and placed on Road 6. It is now to be tidied up and tested, and assessed for use.

The cherry picker, mounted on the tray of the Mercedes-Benz truck, was almost fully operational in December. The new plasma cutter has been trialled satisfactorily with the used larger-capacity compressor, purchased recently. A new drop-saw has been purchased, with good results, along with a large industrial fan which is used in the workshop area of the Noel Blackmore Tram Service Centre.

LOFTUS
SOUTH PACIFIC ELECTRIC RAILWAY CO-OP SOCIETY
PO Box 103, Sutherland, NSW 1499 www.sydneytramwaymuseum.com.au

SPER News

Centenary and relaunch of Ballarat 37

The launch of restored Ballarat 37 (built in 1916) is planned to be celebrated with an all-Victorian Day probably in June or July, subject to continued progress on its restoration as reported below. We are looking at celebrating the day with solely Victorian trams (Birney 11, Y1 611 and Z2 111).

Traffic news

The traffic staff were very busy during the recent festive season with some days attracting significant numbers of families to the Museum. The weather played a part, with some cooler days being extremely busy while the hotter days had reduced attendances. Our thanks are extended to those members of the traffic staff who were able to make themselves available during the school holidays.

The Museum has been very pleased to receive a number of emails recently from visitors who were keen to let us know how much they appreciated their visit. They expressed their thanks to the traffic staff who had made their visit more enjoyable through their knowledge of the Museum's and Sydney's tramway heritage.

Track and associated work

During December more surplus concrete was received and placed in the re-laid track working uphill from Army Crossing. The formwork was progressively relocated as required. Concreting has now reached some 45 metres uphill from the crossing.

Some rock has been added to raise the height of the existing retaining wall along the side of the Council drain at Army Crossing and concrete has been placed around the new twin 300mm pipes that we placed under the road bed while the track was out. As the holiday period commenced the supply surplus concrete ceased with the general gearing down of the building industry at this time of year.

Towards the top of Army Hill two Melbourne cast point blade units and a Sydney crossing frog have been assembled. These components have been welded

The heavy work of replacing the trolley base and pole on ballast motor 42s is made easier with the use of our forklift on 2 December. Martin Pinches

Concreting the new trackwork on Army Hill continues. This view was taken on 2 December 2015. Martin Pinches

together to form a right hand set of points for the double track terminus and work is continuing. Three of the cover plates were missing from these blade units and new ones were made, our milling machine being used to cut the slots in these plates so they can be lifted for inspection as required.

Overhead

New side arm brackets for the replacement poles on the Royal National Park (1 pole) and Sutherland (3 poles) lines have been prepared and are ready for installation. The redundant poles will be removed for firewood.

Preparations are ongoing for the installation of pull offs on the sharp curve near No. 2 substation.

Security matters

A member has made a generous gift towards the $40,000 cost of new powder coated pike fencing and gates to be erected along the Pitt Street frontage of our site, matching the new fencing along the railway boundary and increasing security. With several other members also making contributions we will soon see progress with the new fencing and gates. The cost is significant due to the need for two sets of folding entrance gates and a pedestrian gate. That still leaves the chain wire fencing along the Highway boundary and the area around the new South Shed to be secured with upgraded fencing. Chain wire fences only keep honest people out and are only a minor inconvenience to vandals, arsonists and thieves. After the fire at the old site it is essential that we upgrade our fencing and site security to protect our exhibits.

Rock wall construction in progress near Army Crossing on 25 November. The associated new drainage works can be seen. Martin Pinches

Tramcar news

Melbourne Grip car 322 is nearing completion with only a few coats of paint to be applied. At present the floors are being painted after which railings and piping will be done. At the time of writing the restoration crew are hoping to have the car complete for our annual Vintage Tramway Festival on 28 February, when it may get a run from the South Shed to Railway Square (only by gravity). It has taken five years to get the project to this stage and many thanks are due to all those who have helped along the way.
Ballarat single truck 12 has been cleared of stored junk and is being readied for its centenary later this year.

Ballarat bogie car 37 has had both traction motors refitted to the bogies. One bogie is complete but the other still requires some work. An SOS was sent to Ballarat for two new brake shoes and these should be available shortly. The trolley bases and hooks are back in position and the roof has been repainted.

Sydney C car 37 has had many of the parts refitted that had been removed for painting, including the controllers.

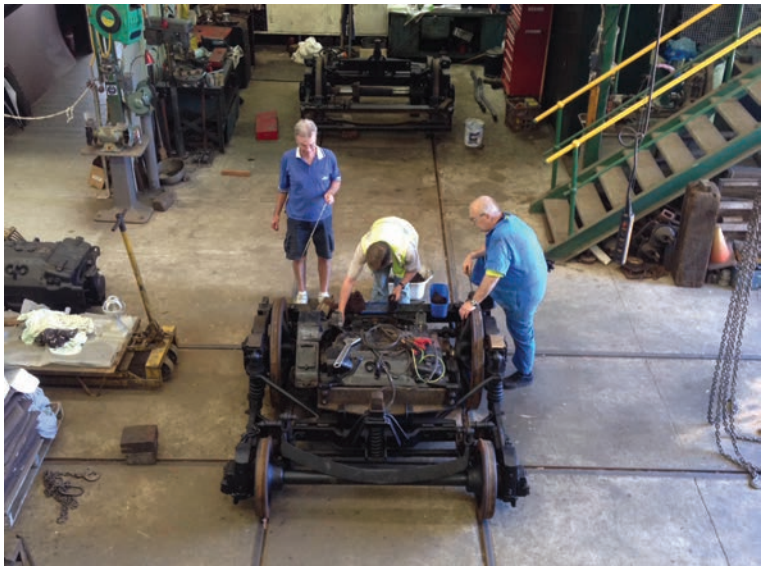
Some damage was sustained by **Melbourne Z2 car 111** last year when it had a brush with a wheelbarrow. The damaged fairing has been removed, the supporting framing straightened and 3-metre long equipment hatch cover removed. This required the drilling out of many pop rivets to the fairing and to the long piano hinge supporting the hatch. The corner of the hatch is having new steel welded in and a new fairing is to be sourced from a local sheet metal works.

Work is in progress to repair some damage to **Melbourne W2 249** where an overhanging branch, broken by a storm, caused substantial damage to the roof when it struck one of the route number boxes. This necessitated the removal of the box for roof repairs to be carried out.

Work on refitting drop windows to **Sydney P 1729** continues when Geoff Spaulding is available. Progress has slowed on the construction in Ferrymead of three new trucks for this car and **Sydney PR1 1573**, due to the need for works on W2 244 to return it to City service in Christchurch before Christmas. The sudden sad death of Dave Carr (well known to COTMA conference attendees) in October is also a major setback as he was overseeing this project for us.

The new higher safety railings on the tower of **overhead line car 99u**, required by the Regulator, have been completed. They have been disassembled for final painting to complete this job.

As reported in the notes from Bendigo elsewhere in this issue, the body restoration of **R1 1995**, undertaken on behalf of Mirvac Projects Pty Ltd was completed on 10 December 2015. The car, now mounted on Melbourne No.15 trucks, will be installed in the former Rozelle tram depot as a café in the redevelopment of the building as a market place early in 2016. It was transported to Sydney on 11 December by Australian Train Movers and is in secure storage until the final move to Rozelle. The Sydney Tramway Museum will supply a quantity of rail for the final relocation.



An overhauled bogie for Ballarat 37 being reassembled in the workshop on 30 December.
Ian Hanson

The St James Rail enthusiast group visited the museum on 12 December. Vic Solomons

BENDIGO

BENDIGO TRAMWAYS

1 Tramways Avenue, Bendigo, Victoria 3550 www.bendigotramways.com

Bendigo Tramways

Another 'Gold' in the Victorian Tourism Awards

Bendigo Tramways exists for the purpose of restoring, preserving and operating heritage trams for the enjoyment of all. We are very proud of our accomplishments and are pleased to report that, for the second year running, we have taken out Gold in the 2015 Victorian Tourism Awards by being named Victoria's Cultural Tourism Attraction of the Year. We are thrilled with this result which is a real compliment to all the hard working staff, both paid and volunteer, who have put so much effort and many hours into keeping our trams rolling.

Left to right: Steve, Catherine, Anita and Peter with the Victorian Tourism Award 2015. Bendigo Tramways

Summer operations

Despite high temperatures during the summer school holidays, passenger numbers for the period to mid-January were up nine per cent on last year. After a quieter December, it is nice to see many of the trams returning to the depot full of holidaying families.

A new tram timetable was in place from 12 October to 26 December 2015 to provide more frequent services in the middle of the day. The improved service appears to have been well received by passengers and cater better to the needs of local users and visitors who use the trams to hop on and off at other attractions. The timetable changed again for the January school holidays, with two more trips each day to cater for holiday makers. Other changes to the timetable are being considered for the quieter months of the year.

Our Anniversary Day was moved from Sunday 6 December to Saturday 5 December 2015 to combine with the Vibrant Central Bendigo street festival and

Car No. 7's centenary cake. Bendigo Tramways

A large crowd turned out to celebrate 125 years of trams in Bendigo and the centenary of car No. 7. Bendigo Tramways

Tram No. 17 on our 125th Anniversary Day. Simon Perrin

The 2015 Toyworld Santa Tram, decorated by Bendigo's local Yarn Bombers. Bendigo Tramways

Central Deborah Gold Mine's Christmas celebration. Free trams operated every 20 minutes between 10:00am and 9:00pm to mark the Vintage Talking Tram Tour's 43rd anniversary, the 125th anniversary of trams in Bendigo and the centenary of tram No. 7. The three events held on 5 December promoted each other, with No. 7 being well patronised right through to 9:00pm and carrying around 1400 people on the day.

The Toyworld Santa Tram, Birney No. 15, was a huge success again this year: 4 trips per day over 14 days, loadings of 28-35 passengers every trip, with a total of 1778 people enjoying the experience. We express our appreciation to all the staff who made the Toyworld Santa Tram a great success.

Workshop news

Completion of **Melbourne W8 No. 1010** is approaching with the final coats of paint being applied over the Christmas break. Following internal fit-out and the installation of new electrical and pneumatic systems in January, the tram is expected to be ready for testing and commissioning in February.

In other developments, **Sydney R1 1995**, which was cosmetically restored in Bendigo for the property developer Mirvac and Sydney City Council returned to its home city recently. This car was the last to operate on the streets of Sydney when the tramway system closed in 1961. It will be placed inside a new shopping and community precinct that is being developed at the heritage-listed former tram depot at Rozelle and adjacent Harold Park. Our workshop team put in some long hours to get the tram completed by its deadline. The staff did a tremendous job and the tram looks fantastic.

Our workshop has also been working busily on **Sydney R1 2050**, which has had its new servery

The workshop crew take a minute to consider the work that has been accomplished on car 1995. Simon Perrin

R1 1995 leaves Bendigo Depot for the last time, and the first stage of its way back to Sydney.
Simon Perrin

The Road 2 section insulator, after being moved to its new location above the door.
Bendigo Tramways

windows installed. When closed these windows will appear as traditional R1-type window frames. When opened, however, the windows will provide four serveries for the delivery of food. The next step will involve a commercial kitchen fit-out, with the project expected to be completed in March 2016.

In the latest round of safety improvements to our tramway infrastructure, the section insulators from roads 1 through 3 have been moved to the front of the tram shed where they have been set into a recess above the doors. Previously these insulators were positioned about a metre inside the tram shed, above the outer edge of the service pits. The change will result in better isolation of overhead wiring within the building.

HADDON

MELBOURNE TRAMCAR PRESERVATION ASSOCIATION

324 Sago Hill Road, Haddon, Victoria 3351 www.mtpa.com.au

Anthony Smith

Restoration of W5 792

Good progress continues to be made on the restoration of this tram. The entire drop-centre floor has been removed as well as all the underfloor equipment and old wiring. This will enable the drop-centre chassis panels to be replaced.

New sheet metal cut to size for the replacement of the drop-centre underframe panels was obtained in early December and primed in readiness. The drop-centre chassis on the north side was supported to prevent any movement after which the old panel was removed. This involved the cutting and removal of 120 rivets and numerous stitch welds in the process, a slow and time consuming job. One section of framing had to be cut out and replaced with new steel due to corrosion but the overall condition of the remaining frame structure is good. The chassis framework was then cleaned and a coat of primer paint applied, and work is now under way fitting the new panel. Once the north side is completed the same process will be undertaken on the south side chassis.

Repairs have also commenced at the No. 1 end on the roof canopy frame. The vent roof side frame timbers

View of the drop-centre section with the flooring removed but with equipment still in place. Anthony Smith

Frank Schroeders removing the old panel from the drop-centre chassis. Anthony Smith

in the cabs at both ends have had been repaired, and a section of rotted timber was cut out from the canopy frame and a replacement section machined for splicing. We are fortunate that this is the only section requiring attention before we can commence fitting the new sill rails and destination fascia. Whilst the replacement destination fascia timbers were in stock we have had to have new sill plates manufactured by our local joinery firm, using the old sections as patterns. They are now on site and are being primed and undercoated in readiness for fitting. We have also commenced removing the old paint and varnish from the cabin ceilings and bulkheads at both ends, another laborious and time consuming job that will result in a finished surface that is ready for varnishing.

Daniel Edwards with one of the new sill plates after priming. Anthony Smith

Anthony Smith cleaning out the old rivet holes in the chassis framework. Daniel Edwards

Arthur Ireland checks the new splice section of canopy framing for correct fit. Anthony Smith

The new panels in the process of being fitted to the north side chassis. Anthony Smith

FERNY GROVE

BRISBANE TRAMWAY MUSEUM SOCIETY

PO Box 94, Ferny Hills, Queensland 4055 www.brisbanetramwaymuseum.org

Peter Hyde

In the previous issue of *Trolley Wire* we reported the arrival of the former Stafford Road tram stop waiting shelter. Since then, the shelter's roof tiles have been placed in position by a professional roofing contractor. Only one of the work gang had ever seen a tram before! The seat is undergoing some refurbishment and the project will be completed once it is installed and the uprights painted.

Even before its completion, the shelter has been put to use to provide shade for the signing table for a wedding held in Combination tram No. 47 on New Years Eve. A high tea was held in the specially cleaned and decorated workshop after the ceremony.

Combination tram 47 and the newly tiled tramway shelter provide a setting for the wedding photographer on New Year's Eve. Peter Hyde

The wedding was held in car 47 and the tramway shelter provided shade for the signing table. Peter Hyde

The tree outside the Museum fence showing the branch blown off by the lightning strike and the track made by the current when it passed down the trunk. Peter Hyde

Another event, held at the Museum on Sunday 22 November, was the Concours of the Historic Motorcycle Club of Queensland. Approximately 600 people attended throughout the day to view the 70 beautifully restored vintage and veteran motorcycles, and to ride the trams. The Museum conducted a highly successful sausage sizzle, while the Ferny Grove State School ran a cake stall.

On Sunday 8 November during a morning charter operation, lightning struck a tree outside the Museum's side fence. While the tree suffered the most, Phoenix car 554 was travelling up the hill about 50 metres away and took some of the strike. Fortunately the damage to the tram was small being confined to the melting of a short length of wire inside the linebreaker box.

On the restoration front, FM 400 has had its brake cylinder overhauled and reinstalled while Dreadnought 136 has had brass fittings installed in the saloon. These fittings were cast from original parts from sister car 133 which were kindly loaned to us by the Wellington Tramway Museum.

The refined elegance of the high tea table setting for the wedding held at the Museum on New Year's Eve provides an interesting contrast with the simpler Christmas break-up lunch for members. Peter Hyde

The roof tiling team pose beside the completed job. Peter Hyde

Above and right: Scenes at the Historic Motor Cycle Club of Queensland's Conours held at the museum on 22 November.
Above: Dave Royston
Right: Peter Hyde

Replica horse car 41 made an appearance during the day. Some of the 70 vintage and veteran motorcycles on display can be seen in the background.
Peter Hyde

Neil Cameron installing in 136 the brass fittings made from samples supplied by the Wellington Tramway Museum.
Peter Hyde

BALLARAT

BALLARAT TRAMWAY MUSEUM

PO Box 632, Ballarat, Victoria 3353 www.btm.org.au

Dave Macartney and Warren Doubleday

Function Tram No. 939

The complete refurbishment of our Function Tram is nearing completion.

During October the worst of the upholstery, together with the tables, were sent away for specialist attention. The tables were narrowed slightly as it was found that people of generous proportions had great difficulty getting comfortable. On 6 November the ornate exterior lining was completed by Brian Wood, so little remains to be done to the outside of the car other than applying its name. New air-conditioning units have been installed as some of the existing units were faulty, and on 14 December the carpets were cleaned by a contractor. With the installation of the coffee machine, only the paperwork remains to be finalised, and this is well advanced.

Tramway operations

Springfest was held on 29 November last year – later than usual – in a bid to find better weather than in previous years when the festival was celebrated at the beginning of the month. The later timing worked well, with 504 passengers riding the tram. For the annual tram pull we used Nos. 13 and 14, two matching green cars. In the days before the event the opportunity was taken to fully repaint the floors of service cars Nos. 661 and 671.

On 27 November a tram was hired by the Brace Options Social Club, a group of disabled young adults, many of whom were familiar faces as former students from the Ballarat Specialist School, located opposite the depot. A ride on 661 was followed by the consumption of copious pizzas. Needless to say the depot staff did not go without! Other charters have been done for various groups, including two weddings and two birthdays.

Tram 939 was presented to members during the Museum's AGM. Peter Winspur

Two of the nine teams who took part in the 2015 Tram Pull on 27 November exert all their strength to pull the tram as fast as possible over a measured distance. Peter Waugh

For the second year, the Museum operated a Santa Tram on Saturdays 5 and 12 December. The first day was made more difficult by preparations for the Ironman run the following day, with almost all of the car parking spaces being taken over by barriers and other event items. Patronage on the second day was greatly reduced because of the very hot 40 degree weather, where either everybody stayed home or went to the air-conditioned shopping centres!

The tram operated once again on Christmas Day, carrying almost 100 passengers despite the very hot weather.

As this report was being prepared, a new method of traffic operations was being trialled throughout January. Two motormen were rostered each day, with cars running out a couple of hours earlier and finishing a couple of hours later, with a crew change during the afternoon. It was felt that there may be an untapped market here, and passenger figures were promising.

Depot activities

Nos. 26 and 27 had new standee leather straps installed during October, part of an ongoing plan to keep up with the breakages of these items, often abused by the public. Subsequently, No. 27 was decorated for the festive season. The front panel of display tram No. 39 was repainted in December, as it had faded badly over the years.

At the depot the gantry crane was finally assembled after a couple of years in storage, thereby enabling heavy items to be moved around once more.

The Museum has entered into a contract with Wormalds for the installation of an early fire detection system in the depot. Planning for the resleepering of the depot fan during April is in hand. Investigations have been made for the installation of a broadband cable service but these have come to naught. Although an iiNet cable passes to the rear of the depot, the cost of providing a line to the depot was found to be prohibitive due to the

The Santa Tram crew standing alongside tram 27, decorated for Christmas on Saturday 12 December. The 40 degree heat resulted in a very deserted Wendouree Parade. Peter Waugh

At the Museum's AGM on Sunday 8 November, the President Greg Rogers (left) presents 25 year service badges to Len Millar and Paul Mong. Peter Waugh

original installers making no provision for customer connections in our vicinity.

Surplus to requirements in Melbourne, SW6 No. 953 arrived at Bungaree from Preston Workshops in 2014 to provide a source of spare parts. During November our weekday workers removed equipment from under the car as well as many other useful parts. On 22 December the body headed off to a new home at Yarram in Gippsland.

Since the reconstruction of Wendouree Parade and the removal of some bushes, it is possible to photograph trams with the lake in the background from the depot. No. 40 passes through depot junction on 12 September. Peter Waugh

ST KILDA

AUSTRALIAN ELECTRIC TRANSPORT MUSEUM (SA) INC
PO Box 213, Salisbury, South Australia 5108 www.trammuseumadelaide.com.au

From Colin Seymour

Opening of new playground

On Sunday 22 November 2015 the refurbished St. Kilda Playground was opened with an event day hosted by the City of Salisbury. The Museum provided free services during the day as part of our commitment to supporting the Council, who in turn support us in numerous ways. Council event publicity had encouraged playground visitors to park their car at the Museum and take the free tram to the playground.

Operations commenced at 10.00am. Car 42 ran a couple of trips, one in a convoy of two trams. However, it soon became apparent that to handle the large volume of passengers convoys of three trams were required. From 11.00am until 5.00pm cars 294, 264 and 1971 ran a shuttle leaving the Museum every 20 minutes. Even after 5.00pm two single car trips were operated.

We ran 25 return services, with over 3100 passenger journeys over a space of 8 hours.

As part of the day's activities, at approximately 2:30pm, a runner from the Salisbury Athletics Club raced against W2 294, the lead car in the convoy, to the Playground. The runner won!

The crowd at the playground stop. The roof of the new toilet block can just be seen above car 264's roof. Damian Hill

Passengers disembarking drop-centre 264 before it takes another load down to the playground on 22 November 2015. R1 1971 is behind car 264. Toastrack 42 can just be seen to the left. Damian Hill

It was one of the busiest days for us in years. Even though the trams were free, a gold coin donation box in the bookshop together with brisk book and kiosk sales proved very beneficial for the Museum.

New shed pit

Work is well under way on the construction of the pit on Road 6 in the new tram shed. This is a major milestone, nearly bringing to completion the new shed project after several years. The new pit is deeper and longer than the previous pit (now part of outside Road 2) which will greatly assist with the maintenance of our trams. Construction is being carried out by our well known contractor, North East Demolitions (NED), with assistance from Museum members.

The construction of the new shed and workshop facilities to modern standards significantly enhances the protection and maintenance of our trams. However, construction of the pit and the surrounding flooring has caused a significant drain on our reserves, so if you can donate towards the project, your support will be greatly appreciated.

Launch of refurbished H tram 365

Privately owned refurbished H type tram 365 was launched in a low key ceremony at the Museum on 13 December 2015. The tram is owned by Museum Rollingstock Manager, William Adams.

William invited friends, Museum colleagues and family to attend the launch. At 3.00pm William's fiancé, Yahaira Molina, who is also a member, gave a short speech, outlining William's achievement in refurbishing the tram with assistance from family and Museum members – especially John Pennack — and the importance of the project to the family. A bottle of champagne was then smashed across the coupler assembly to officially launch the tram. Car 365 and guests then followed H tram 360 (our circa 1929 version) to the playground. The tram later ran trips for the public.

H 365 was one of ten fully operational 1980s style refurbished H trams disposed of by TransAdelaide in 2005-06 to make way for the new Flexity trams. (Five non-refurbished – non-operational H trams plus the restaurant tram were also disposed of). Eight of these trams went to museums. H 361 was donated to the Holdfast Bay council for eventual display alongside the Buffalo replica ship.

The length of the new pit can be appreciated in this view of the pit floor formwork being prepared in late November 2015. Rob Lench

Member, Michael Pretty's Volvo B10M bus 1445 lines up with William Adams' tram 365 and Museum cars 264, 360 and 294. Arnold Krueger

H 365 was sold to private buyers for a planned venture in the Adelaide Hills. In the "short term" it was to be housed at St Kilda for storage on behalf of the private owners and arrived on 20 December 2005. The venture failed to materialise, so the AETM purchased the tram and offered it to other museums or individuals for use as an operational tram (the AETM already owning sister tram 364).

The tram was bought by William Adams, then aged 22, in 2012, but housed and refurbished at St. Kilda to its '1980s style' as refurbished for the STA (State Transport Authority) in 1993.

H 365 makes an interesting comparison with our other regular operational H tram, No. 360. Car 360 has varnished wooden doors, incandescent globes and brown leather-like seating. Car 365 has Tuscan red fibre glass doors, fluorescent lighting and red vinyl seating. There are of course many other differences.

Track and overhead

The first of the former Victorian broad gauge sleepers have been installed in the track in the tree reserve, with further sleepers to be replaced between Poles 7 and 9 and near Pole 14. Pole 18 was installed for us by NED on 10 December 2015, allowing a small crew to install the bracket arm and to reconnect the overhead to it prior to operations on 13 December.

Tram movements

A number of tram movements have taken place lately around the site. On 29 October 2015 B type toast rack tram 42 was moved on to powered track to enable it to run in service over the summer months. The restaurant tram was moved out of the workshop/running shed and into the northern display shed, with silver H type tram 362 making the opposite journey. Ballarat tram 21 (ex-Adelaide 10) was also moved to take up a position in the northern display shed.

Work on construction of the new pit on Road 6 has necessitated some trams spending a short period outside. Works car W2 354 and H 362 are stored on Road 2 behind the public fence (the old workshop area). Other trams have spent brief periods outdoors as required.

New Glenelg line DVD

A new DVD on the Glenelg line was released on the day of the launch of H 365. Copies can be purchased locally from the Museum bookshop, or through the Museum web site (www.trammuseumadelaide.com).

Sydney R1 1995, with its body restoration by Bendigo Tramways for Mirvac Projects Pty Ltd, nears the gasworks siding on 10 December 2015 from which it will be loaded onto Australian Train Movers truck for transport to Sydney. Peter Neve

William Adams' beautifully refurbished Adelaide H 365 undergoes a trial run during the week preceding its launch on 13 December 2015 at the Adelaide tramway museum, St Kilda, South Australia. Arnold Krueger