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TRAMS FROM SYDNEY TO THE RESCUE

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The erection of the YMCA sandstone façade was well under way at the Sydney Tramway Museum when this view was taken on 4 May 2002. The façade is almost hidden by the scaffolding and safety screening.
Bob Merchant

Front Cover:
Combino tram 3501 is seen on a service test run for M>Tram in Swanston Street in July 2002.
Victor Solomons

Back Page Top:
Combino tram 3501 on a test run at the corner of La Trobe and Elizabeth Streets, Melbourne on 15 July 2002. The Combino cars are under test for 24 hours a day. Ray Marsh

Back Page Bottom:
Yarra Trams' Citadis car 3021 in service on Route 109 in Victoria Parade on 7 July 2002. Ray Marsh

TRAMS FROM SYDNEY TO THE RESCUE

The St Kilda to Brighton Beach Electric Street Railway after the 1907 Fire

By Lloyd Rogers

The Victorian Railways (VR) operated two electric tramways in bayside Melbourne. The older line was between St Kilda and Brighton Beach; the other ran from Sandringham to Black Rock (1919-56) and on to Beaumaris (1926-31). Both tramways were formally called 'electric street railways', and according to the enabling Acts of Parliament were deemed to be railways within the meaning of the Railways Acts and not subject to the provisions of the Tramways Acts.

The St Kilda tramway was built to the gauge used on the state railway system – 5 feet 3 inches, later 1600mm. The first section of the line was opened from St Kilda railway station on 7 May 1906, and terminated at Park Street, Middle Brighton. An extension to Brighton Beach was opened on 22 December 1906. The headquarters for the line was at a combined power house and car shed located on a portion of Elsternwick Park at the corner of St Kilda Street and Head Street, Elwood. Owing to changing social circumstances in later years, patronage fell with the result that the tramway was closed in sections, the last being from St Kilda to Elwood, which closed on 28 February 1959.

When services commenced, the manager of the tramway was Francis E. Bradford, an American electrical engineer who had experience in the electric railway industry in the USA during the 1890s. In 1900, he was employed by Noyes Brothers of Melbourne, and was engaged subsequently as an electrical engineer in connection with the construction of tramways in Dunedin, New Zealand and Fremantle, WA.

In 1905, Thomas Bent, Premier of Victoria and Minister of Railways appointed Bradford to the Board of Land and Works, the body authorised at that time to undertake railway construction in the state. In that capacity, Bradford advised on the electrical equipment required for the St Kilda to Brighton tramway, and had principal responsibility for the design and construction of the project. When construction of the tramway was completed, the Victorian Railways Commissioners appointed Bradford interim manager of the tramway to inaugurate services on the new line.[1]

As a result of a fire at the Elwood powerhouse early on Thursday, 7 March 1907 in which the car shed and all 17 trams were destroyed, the service between St Kilda and Brighton was suspended. The trams concerned were all four-wheeled vehicles of Brill design. They comprised seven combination and two saloon motor cars; one saloon and seven open-sided trailer cars.

Bradford arranged for an emergency service of six 'Chelmsford' steam buses to commence operation the day after the fire. The buses had been in storage following cessation in 1906 of the Victorian Railways bus service between Prahran station and Malvern Town Hall. The service operated every 20 minutes, and ran only between St Kilda station and Park Street, Middle Brighton.

Urgent enquiries were made about possible acquisition of suitable replacement tram bodies to enable an early resumption of tram services.

Tramway companies in Ballarat, Bendigo and Perth were approached, and the North Melbourne Electric Tramways and Lighting Company, operator of the Essendon lines, offered its assistance.[2] Offers of trams were made by the Melbourne Tramway and Omnibus Company, operator of the cable tram system; the Dunedin Tramway Company; and the Adelaide car builder, Duncan & Fraser.[3] E. Chambers of Sydney offered to build 12 trams in six weeks.[4] Speed of delivery and the question of whether the tram bodies could be readily adapted to fit the broad gauge trucks were the main difficulties associated with these proposals.

It was considered that Sydney trams were wider in the body than those of the other operators. Accordingly, Bradford and T.H. Woodroffe, the Victorian Railways Chief Mechanical Engineer, travelled to Sydney by overnight train, arriving on Sunday morning, 10 March.[5] They were met by O.W. Brain, Electrical Engineer, New South Wales Government Tramways, and were taken to Fort Macquarie tram depot where H.J. Windon, Works Manager of the Randwick Tramway Workshops, joined them. The Victorians decided initially to take five four-wheel saloon trams but then Bradford noticed some four-wheel California combination cars. They finally decided on three combination and two saloon cars.

As there were no combination cars operating as single units at Fort Macquarie depot, three Sydney D class trams of this design, Nos 98, 101 and 110, and two C class saloon cars, Nos 38 and 39, were obtained from North Sydney depot. After preparation at Randwick Workshops the five cars were transported to Eveleigh Railway Workshops for despatch by rail for Melbourne on Monday, 11 March 1907. On the afternoon of that day, the VR ordered the despatch of two additional saloon cars. These were C class cars Nos 23 and 25, which were sent to Melbourne the next day.

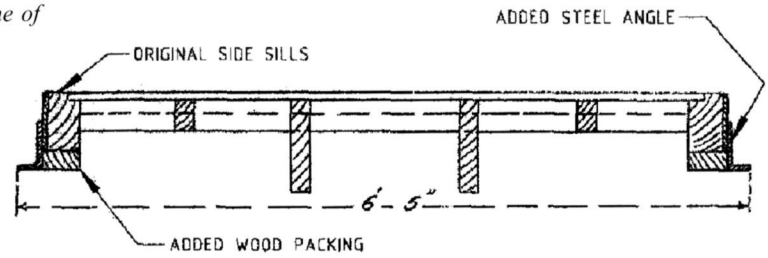
In preparing the cars for transit, the bodies were separated from the trucks, and the traction motors, gear wheels and axle collars were removed from the trucks. During this work, the opportunity was taken to examine armature pinions and gear wheels to ensure they retained a satisfactory working life. The purchase of the seven car bodies and the hire of seven sets of electrical equipment cost £1,157 16s 3d.[6]

In evidence before a Board of Inquiry which later investigated the management of the St Kilda and Brighton Electric Street Railway, Bradford recalled that the Sydney authorities were very kind and considerate to Woodroffe and himself, and said that "... they were very glad to get rid of the cars; they stated they wanted to build new ones".[7]

Whilst Bradford was busy organising the temporary bus service, and visiting Sydney, his assistant, Gordon Massey, arranged for the fire-damaged trucks to be transported to Newport Workshops for repair. In some cases the armatures had to be removed from the motors to enable the trucks to be wheeled from the ruined depot. The trucks were then hauled by horses along the tramline to either St Kilda or Brighton Beach stations from where they were transported to the workshops. The first seven trucks were taken to St Kilda station and loaded into open QR class bogie rail wagons. As there was no track connection at that time between the

Former Sydney combination car VR No. 15 at Elwood Depot, about 1912.
Victorian Railways – part of H2263.

Cross Section of Underframe of VR Trams Nos 15-17.



CROSS-SECTION OF UNDERFRAME - VR TRAMS Nos15-17

SHOWING MATERIAL ADDED FOR CONVERSION TO 5'-3" GAUGE

tramway and the steam railway at St Kilda, the trucks had to be dragged over the roads between Grey Street and the goods siding – a distance of about 100 yards. How the speed of the trucks was controlled on descending grades, such as in Grey Street (1 in 22 in part), remains a mystery![8]

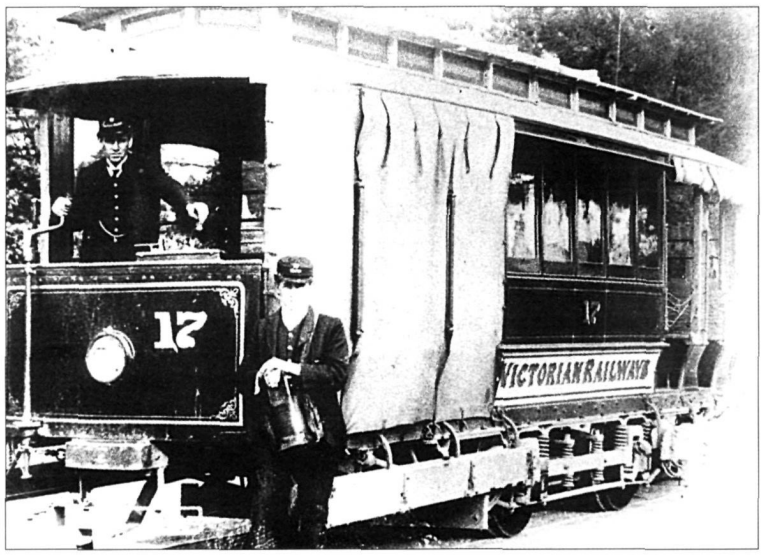
The first seven trucks were required for the bodies then in transit from Sydney. The remaining ten trucks were taken to Brighton Beach station because it was more convenient for a steam crane to load them there. The seven trucks taken to St Kilda station arrived at Newport on the morning of Tuesday, 12 March and the other ten arrived by Thursday, 14 March. Repairs such as straightening side and end frames; dealing with any bent axles and loose tyres; remetalling axle bearings; and testing and retempering the various springs were carried out as required.

The Sydney bodies and the hired electrical equipment comprising General Electric (GE) type 1000 traction motors, gear wheels, axle collars and controllers arrived at Newport Workshops on the morning of Thursday, 14 March. In fitting the replacement motors and gears to the axles it was found necessary to bore out the motor suspension brasses and the two-piece gear wheels to suit the four-inch diameter local axles; the Sydney axle diameter being only three inches. There must have been some very intense work being performed well into the night on Thursday and Friday.[9]

The car bodies were narrow and typical of their time. The combination cars had been built in Sydney in 1899, Nos 98 and 101 by Ritchie Brothers, and No 110 by Clyde Engineering.[10] Being designed for the standard gauge, the side sills (soles) were positioned to mount on a truck for that gauge. As run in Sydney, the wheels were located inboard of the side sills with their tops extending up through openings in the floor which were covered by wheel covers. As the VR wheels were further apart, the bodies had to be raised so that the tops of the wheels were below the floor. This alteration required timber packing to be added to the underside of the sills, and for part of the wooden sills to be cut away to give clearance for the wheels. A major additional component in the form of a steel angle approximately 5 inches high x 2 inches for the length of the truck was bolted to the outside of the original sill. The angle had two functions: widening the base of the body from 6 feet to 6 feet 5 inches, and strengthening the sills to overcome structural weaknesses elsewhere.[11]

The four saloon cars had been built in Sydney in 1899 by Hudson Brothers.[12] During the conversion, the cars were raised by approximately 9 inches from rail level so that the tops of the wheels were below the floor. The means of achieving this is not known although the steel angle described above was applied to the existing structure.[13] Assuming that the Sydney end platform steps were in the original position, the height from rail level on the VR cars would be about 18 inches. It is not known if the Victorian Railways modified the steps after the initial rushed work. If this occurred, however, it could explain why three saloons were out of service at Elwood in October 1907 and three being 'Off Register' by 1910. The low carrying capacity (26 seats) and the high steps on these trams could have been the reason for their early demise.[14]

Gauge conversion of four-wheel trams was a rarity in Australia, and was limited possibly to two occasions both of which involved the lines operated by the VR.



Tram No. 17, about 1910. Note the strengthening of the side sill.
Courtesy TMSV

The first of these related to conversion in 1907 of the trams obtained from Sydney; the second occurred in 1918-19 when trams used formerly on the broad gauge St Kilda to Brighton Beach line were converted for use on the standard gauge Sandringham to Black Rock line.

The seven converted trams were sent to Elwood Depot on Friday and Saturday, 15 and 16 March, being hauled on their wheels on the railway between Newport and St Kilda. After arriving at the St Kilda goods siding the tramcars were removed from the rails onto the goods yard roadway then hauled by horses to Fitzroy Street and to the tram track in Grey Street which led to the depot. As the tram service resumed the next day, the cars went into running in their Sydney livery and fleet numbers; a situation which lasted about five months.[15] The combination cars were re-numbered 15-17, and the saloon cars, 18-21. However, the re-numbering of individual cars is not known.

Because the tracks in the burnt out car shed were unavailable for use because of the lack of overhead wiring, trams were stabled in the street.[16] The only building available for the shed staff was the engine-room of the powerhouse which contained a substantial amount of machinery in addition to the switchboard. A tarpaulin protected spare equipment. After the fire, working conditions at Elwood during the winter were very poor as there was no office or shed accommodation for about four months.

Motorman J.P. Gillies, who had earlier been a motorman at Dunedin, New Zealand, gave the motormen a short course in the operation of the Sydney cars. The controllers were of GE type K10, which were similar to the GE type B18 controllers that had existed on the destroyed fleet. The main difference was that the K10 controller was not provided with electric (rheostatic) braking notches. Bradford approved of Gillies instructing the men in the use of an emergency brake, by reversing the motors and having the circuit breaker open. This form of braking was very severe on the motors and was therefore to be reserved strictly for emergencies. Use of this form of braking probably contributed to the motor troubles experienced soon after the resumption of tram services.[17] The only other brake was hand operated, and this form of braking was that used in normal service.

The arrangements for the circuit breakers were also different. Trams in the original fleet had two circuit breakers, one at each end under the canopies. On the Sydney cars only one breaker was provided, apparently at one end only. A simple canopy switch was provided at the other end of the vehicle.[18]

When the electric lighting in the Sydney trams was inoperative, kerosene hurricane lamps were hung inside the cars as the VR never seemed to have sufficient spare light globes. In addition, the Sydney trams used light globes of a bayonet cap design, whereas the VR used globes of the Edison screw cap type.[19]

After the Sydney cars had been running for about a week troubles began to occur, mainly with the

The body of VR tram No. 15 en route to the Powelltown school, 1923-1930. The leading bullocks have crossed a narrow gauge timber tramway.
Lloyd Rogers Collection

armatures or field coils burning out. It became a struggle to maintain sufficient cars in service, and at one stage most of the trams were running on only one motor.[20] Replacement coils and two spare armatures were hurriedly obtained from Sydney. In order to minimise service disruptions, some GE80 motors which had been in trams destroyed in the fire were examined and tested, and repaired where necessary at Newport Workshops. These salvaged motors were installed under the Sydney bodies and run with some success.[21]

In the meantime Newport was busy building new tram bodies. Ironically the first new cars completed after the fire were three open trailer cars. Whilst vehicles of this type were not what was needed at the time, they had nevertheless been under construction at the time of the fire.

In the struggle to keep the service running, the continual failure of the Sydney motors was not the only problem to be faced by Bradford and his staff. Public criticism about the unreliable service plus the chronic overcrowding caused by the restricted carrying capacity of the Sydney trams added to the line's difficulties. As new tram bodies were completed by Newport Workshops, they were rushed to Elwood where electrical equipment obtained from Sydney would be installed. This procedure was repeated as each new body was received during July 1907. From that time, the saloon cars were only used as trailers. As new electrical equipment including motors, controllers and switchgear, was received from overseas, it would be installed sometimes temporarily in order to return the new trams to service as quickly as possible.[22]

After all the new bodies were refitted with new equipment, the following rolling stock was available for use on 16 October 1907:

Former VR tram No. 15 arriving at the Powelltown Primary School where it was used as a class room and yard shelter. It was burnt in the 1983 Ash Wednesday bushfires.
Lloyd Rogers Collection

- new motor cars Nos 1-7;
- new trailer cars Nos 8-14; and
- Sydney combination motor car No. 15 and saloon trailer car No. 18.

In addition, there were the bodies of former Sydney trams Nos. 16, 17, 19-21. A spare truck was motorised, overhauled and placed under Sydney combination body No. 16 to become a spare motor car.[23] Sydney saloon car No. 18 remained in service as a trailer until trailer operation was discontinued in 1913. The other three saloon trailers were sold in 1912. No. 18, together with combination motor car No. 16, was scrapped in 1918.[24]

No photographs are known to exist of the saloon cars in VR service. Sydney combination motor cars were fitted with driver's end weather screens about 1916. These comprised three sashes, the centre one being much narrower than the others. Whilst Nos. 15 and 17 continued to operate on short workings such as from St Kilda station to Dickens Street, these cars were replaced in time by newer trams. Official scrapping dates have not been recorded but these would have been around 1922-23.[25]

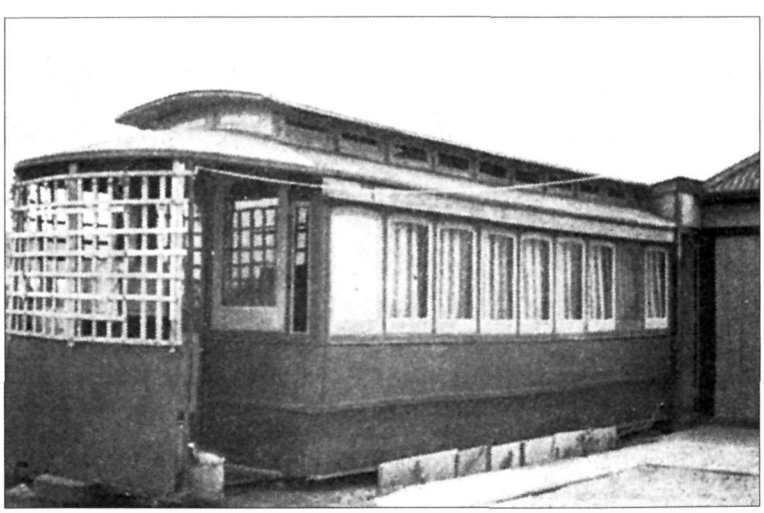
Following the depot fire in March 1907, and the disorganisation that resulted, Bradford's tenure as manager was extended because of the rebuilding work that was necessary. However, in October 1907 the VR Commissioners decided to dispense with Bradford's services and to rely instead on permanent railway staff for management and operation of the tramway.[26]

A Board of Inquiry was set up by the Victorian Government on 4 February 1908 after Bradford took his case to Premier Bent claiming that his reputation as an electrical engineer had been injured by his dismissal by the VR. The Inquiry Board, consisting of three eminent engineers, met on 17 February 1908 and heard substantial evidence including a number of written submissions up to 9 May from 25 witnesses.

The Board's report, dated 24 July 1908, included 25 pages of findings. The Board commended Bradford and Newport Workshops for their energy and ability in obtaining replacement rolling stock from Sydney; repairing the fire damaged trucks; converting and assembling the Sydney equipment; and restoring the tram service within 10 days of the fire.

However, it also found that the technical and clerical organisation and management methods established by Bradford as manager were inefficient and unsatisfactory. Notwithstanding this, Bradford's qualifications as an electrical construction engineer were "... in no degree impugned".[27]

Bradford's initial staff at Elwood Depot consisted of men chosen from a list supplied to him by the Victorian Railways after the Government had decided that the VR would run the tramway. Some of the men chosen were unemployed former locomotive drivers who had been prominent during the enginemen's strike in 1903 and whose employment was not continued following the resumption of work. The staff selected did not possess sufficient technical knowledge or experience in electric traction. This included the assistant manager at the Elwood power house and



No photographs have been located of the former Sydney C class cars in VR service. This view shows the body of No. 18, substantially intact, in use as a weekend shack at Dromana.
Leon Marshall-Wood

depot, Gordon Massey, who although being a qualified draftsman seconded from the Board of Land and Works, had no previous training in either steam engineering or electric tramway working.

Although the tramway was formally part of the VR system, railway officials regarded it generally as a separate entity certainly up to the time when Bradford's management role was taken over by the Commissioners' officers in October 1907. After that time, the dismissal of Bradford as tramway manager removed any possibility of a harmonious working relationship existing between him and Victorian Railways management.

In conclusion, the comment could be made that the speed of the response from Sydney in providing replacement trams, and the effort by Newport Workshops to convert the cars and repair the fire-damaged trucks, would be very unlikely to be bettered today. The time taken over the past two years to resolve braking issues on W series trams, and to modify the cars concerned, compares poorly with ten days taken to obtain and convert seven operational trams in 1907.

Whilst some of the electric motors were in good working condition when they were taken out of service in Sydney, it is apparent that they did not give reliable service at Elwood.

The Elwood men who operated the Sydney trams were previously accustomed to run comparatively new equipment. To ensure that the Sydney equipment was properly introduced, Bradford should have obtained a Sydney Tramways' electrical fitter to superintend and assist in assembling this equipment as well as instruct the local staff in its use.[28]

Surplus electrical equipment was later returned to Sydney in batches. Of the first twelve armatures returned, one only was found to be fit for service. The other eleven were damaged in various ways. Randwick Workshops records for this class of motor indicate that the average life of an armature was 69,925 miles. Only 3 of the 16 armatures loaned to the VR were over the above figure; the average life of the 16 armatures loaned was 44,000 miles, one as low as 892 miles. The last event in this saga was the rendering of an account by the NSWGT for £102 6s 6d for the cost of repairs to the electrical equipment.[29]

[1] A Board of Inquiry, appointed by the Department of the Chief Secretary of the Government of Victoria in 1908, regarding the management and maintenance by Francis Edwin Bradford of the St Kilda to Brighton Electric Street Railway. Evidence, pp. 231-32.
[2] Argus, 9 & 11 March 1907.
[3] VPRS 422, VR Secretary's Correspondence Register, vol 88, 1907, p. 91.
[4] ibid, vol. 86, 1907, p. 461.
[5] Argus, 11 March 1907.
[6] Vic Govt Gazette 10 July 1907.
[7] Board of Inquiry, 1908, evidence, p. 343.
[8] ibid, p. 210.
[9] ibid, p. 205
[10] McCarthy, K. & Chinn, N. 1975, NSW Tramcar Handbook, 1861-1961, part 1, pp. 14-15.
[11] NSWGT, Drawing No. 612, 5/9/1898, VR, Drawing No. 2129, 18/3/1911.
[12] McCarthy & Chinn, op. cit. pp. 11-13.
[13] NSWGT, Drawing No. 492, 17/11/1896, VR, Drawing No. 2130, 18/3/1911.
[14] VR Annual Report, 30/6/1910, Rolling Stock Inventory.
[15] Board of Inquiry, evidence, pp. 202-10.
[16] ibid, pp. 243 & 342.
[17] ibid, pp. 336-7.
[18] ibid, p. 341.
[19] ibid, p. 147.
[20] ibid, p. 147
[21] ibid, p. 168.
[22] ibid, p. 111.
[23] ibid, p. 29.
[24] VR, Chief Mechanical Engineer's Rolling Stock Register.
[25] VR, Annual Reports, 1921-22-23-24, Rolling Stock Inventories.
[26] Board of Inquiry, Report, p. vi.
[27] ibid, findings, No. 6, p. xxiv and No. 1, p. xxii.
[28] ibid, findings, No. 2, p. xxiii, No. 5, p. xxiv, N°11, p. xxv.
[29] Board of Inquiry, evidence, pp. 45-47 and p. xxxviii.

THE QUEST FOR WRECKS – THE MALABAR FACTOR

By Howard R. Clark

Malabar was an intermediate destination on Sydney's La Perouse line situated on a windswept coastline, which in the 1950s still contained large areas of coastal scrubland. It needed the wisdom of a fellow teenage tramway historian to explain that the locality was named after the wreck of a ship which foundered off the coastline in the depression era. The unusual white target symbol on the destination blind was derived from the previous terminal named 'Rifle Range' to which shooters travelled by steam tram some 50 years before. Apart from the development of the Coast Hospital and the ideally isolated penitentiary at nearby Long Bay, the trams at that time served little else than the market gardens in and around La Perouse. Unlike today, governments 100 years ago invested in public transport infrastructure well ahead of urban sprawl.

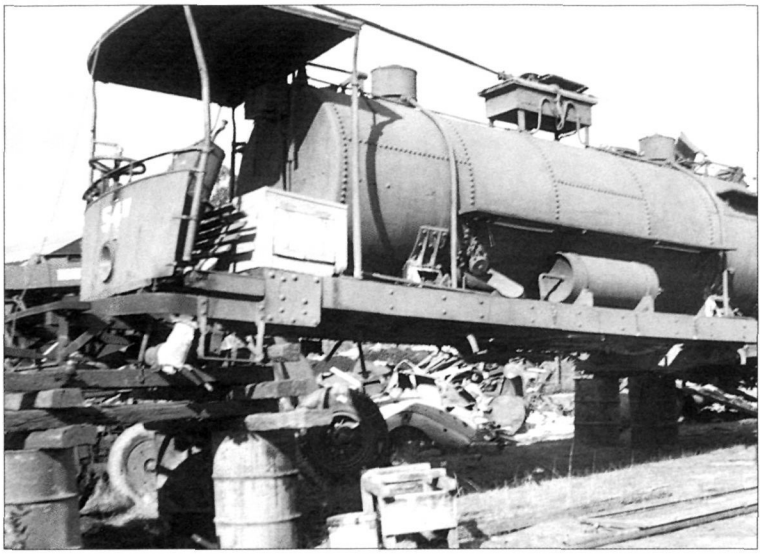
The story of the wreck of the Malabar conjured up images of other shipwrecks on the Australian coastline. Soon one's mind was diverted to a similar coastline complete with a lighthouse somewhere on the northern coast where as a very small child recollections of wrecks of a different kind came flooding back! These were the remains of what my father described as 'wrecks of old Newcastle trams' devoid of wheels, seats and the familiar sounds of living trams we were still accustomed to in Sydney, weathering by the sea at some coastal campsite. It is to these 'wrecks' that one can trace a lifelong fascination for the second life of a neutered tram body in the bush (and the uses to which they were put). To my eternal frustration, I have never learned of the location of these derelict L/P cars near that lighthouse and what became of them. The quest over the years has, however, yielded many other tramcar treasures from the past, some of which have happily now been brought back to life once more!

An early discovery in the nearby suburb of Ashfield was the top deck of a double-decker bus lying in a backyard. Adventure at weekends on the pushbike soon located the roof of a direct control O car used as a shelter for bicycles at Leichhardt bus workshops. A 'tip-off' saw us ride to Waterloo to discover the bodies of N class cars sitting alongside South Sydney Hospital without any apparent purpose. Tempe tip yielded the remains of an L/P. Why these vehicles were there and why they were no longer being used for their original intended purpose escaped our interest at that time, except that we knew they had somehow escaped the fate of burning which accounted for most tramcars. There was no inclination or time to dwell on these issues as our adventures also covered a range of locales and other non-related and nevertheless interesting activities. In this sense I was fortunate to have such tolerant friends who shared such experiences and accepted these somewhat eccentric pursuits along with the more 'normal' teenage experiences.

From 1958, after-school visits to Randwick tram workshops became a regular weekly feature. Soon one learnt that whilst most discarded trams were burnt (at that time an almost daily occurrence), some were

The bodies of E class cars 525 and 526 and K class 1285 at Sampsons Saw Mill in the Kangaroo Valley in 1951. Tree stumps are being used to support the bodies.

Photographer Unknown



Sprinkler car 54W photographed in August 1957 in a scrap yard at Dunheved in western Sydney.
Bruce Macdonald,
M McAulay collection

described by the staff as 'sold', and were stripped and despatched to places unknown by truck in the wee small hours under cover of darkness. It was with some excitement that it was discovered that some of these ended up within Sydney suburbs, usually in a school yard or church somewhere, or in a car saleyard like 1742 which to this day resides within a few kilometres of Sydney's Olympic Park.

Unfortunately, the others suffered from the effects of the elements and vandals and were often discarded once unprotected canvas roofs leaked and their gimmick value was lost. Many of those despatched to country areas suffered a similar fate, however the drier inland climes and the common sense of farmers saw many survive under protective corrugated iron roofs, etc., as hay stores, outhouses for itinerant workers and the like. Impressionable teenage enthusiasts soon became bored with the commonplace corridor car body despatched to some country locale and the fertile mind seized upon the urban myth, rumour or even the 'fairy at the bottom of the garden' story.

Each story seemed to grow in importance and likelihood with the telling. A first urban myth related to six complete O cars saved from burning and stored by a farmer in a barn somewhere. Ten or more years later the same story returned, only this time, several years after the Brisbane system closed, it was six complete dropcentre cars in the shed! They seemed like good stories at the time. A particularly appealing story over the years was of the alleged rescue of a single G car from the Randwick flames in 1928 when all were to be burnt. According to this story a 'fairy godfather' with happy memories of the tourist tram service using single G cars had spirited one away to an unknown destination for safekeeping and thus carried out the very first act of tramcar preservation anywhere in the world! Sadly, there has never been any evidence to support this fairy godfather theory, although happily such a dream has given rise to the next best thing – see later!

The rumours were always there – in particular these related to J car bodies at Kangaroo Valley (later found to be N, E and K cars) or used as tennis sheds at Tempe. Or the water sprinkler car kept by a 'scrap dealer somewhere near St Marys' or a 'steam tram motor used on a mushroom farm' at an unspecified location near Hawkesbury River. Bruce Macdonald photographed the remains of 54W in a scrap yard at Dunheved, near St Marys in August 1957 so whilst the former was true, the latter has never emerged. The J car in the shed, however, did become a happy reality (see *Trolley Wire*, May 1997). The perfectly cocooned body of car 675 awaits approximately $100,000 in funding to see the Sydney Tramway Museum secure a truck for it and restore it to operational conditional given that it last operated in 1934.

The Kangaroo Valley cars from the immediate post World War II era could benefit from greater research. It appears that a local transport operator / Caltex agent found a market for surplus N, K and E bodies in the southern highlands region around the late 1940s and 1950s. In that period he purchased, transported and disposed of in the order of fifty cars to local property owners at the time. Evidently he was left with several

The remains of K class car 1285 in the Kangaroo Valley in December 1996.
Howard Clark

and thus his interest was lost and the market appeared to dry up.

Years later I learned of the remnants but could not locate them even though I had been given a map. These remained all but forgotten when a chance discussion with a banker client formerly in the oil industry yielded the story of the old man at Kangaroo Valley who some fifteen to twenty years before was one of the last dealers in 44-gallon drums of fuel. Again a map was drawn, this time showing a bridge and a creek. A road bypass had since been made, but lurking beyond the remnants of the old road were the remains of K 1286, complete with tree growing through it, and E cars 525 and 526. Nearby were the metal half round straps from the bow rails of an N car and the underframe remnants of another E car. A keen bushwalker provided the coordinates of another underframe near a creek in the same vicinity whilst the burnt out underframe of another N car in the nearby national park was also located. (In March 1962 a Sydney Tramway Museum (STM) work party visited the Kangaroo Valley and retrieved a number of parts from the E and K class cars there. In July 1965 the Museum removed some parts from the bodies of two N cars 623 and 634 at Beecroft before demolishing them. Today, these cars might have been viewed differently. – Ed.)

A visit to Christchurch in 1968 brought home another reality. The system in that city had closed in 1954. Whereas in Sydney we had been fortunate in securing operational trams of various types for preservation, in Christchurch they had to start with the neutered remnants of bodies used as baches on beach properties or farms, then locate the mechanical and electrical equipment to bring them back to life. ('Bach' is a New Zealand term for a holiday shack.) What a wonderful job has been done with the likes of No. 1, 152 and 178 by the Tramway Historical Society at Ferrymead.

By the late 1980s a second P car for the Museum was actively sought after. Only four were then known to exist, 1497 at Loftus, 1729 at the Canberra Tradesmen's Union Club, 1700 at the Seashore Trolley Museum in Maine, USA and 1501 at Lightning Ridge, which was said to be unavailable. A museum member discovered the body of PR1 1517 at Bega, and its owner, Dr Hudson, offered to donate it for preservation. Although somewhat termite infested, its roof and underframe were largely intact and so the decision was taken to accept this generous offer with the objective of converting 1517 back to a P car at some future stage. Dr Hudson told us that he had previously bulldozed the remains of two P cars under a paddock on his property as they had fallen to pieces. He retained many of the side windows of these cars and donated them with 1517. Another P car in the area had recently been disposed of by being buried in a tip. Fortunately 1501 was acquired in 1999 and the task of restoring a second P car is now much closer to reality. Sydney R cars 1800, 1869 and 1908, and Melbourne W2 car 372, remain at Lightning Ridge, at the 'Tramotel' as does PR1 car 1562 elsewhere in the town. R car 1773 was destroyed at Lightning Ridge in a fire.

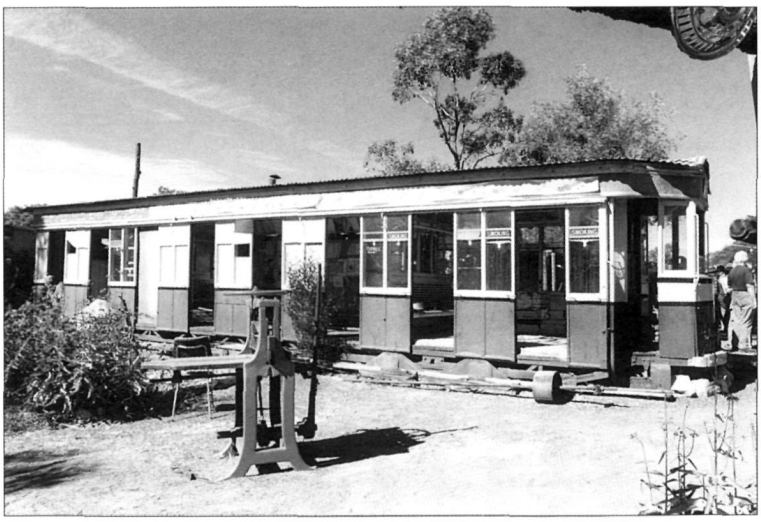
The early recoveries of wrecks by the STM, which it must now be admitted may have been for a different purpose, have already added great value to the Museum's collection. R1 class 1971 was acquired in 1979 from a Blue Mountains property and after its restoration in 1992 has been the mainstay of our National Park operating fleet. O/P 1089 was recovered from its use as a fruit stall at Glenorie and its body has since been restored awaiting fitout and installation of equipment. Similarly O class 957 was acquired with bogies and has been partially restored, as has PR1 car 1573 from the Glenfield School.

There are the ones that got away, such as water car 113W, which languished at Randwick Workshops until 1959 and was scrapped due to lack of museum space and poor condition. Today it would have been seized upon and the mere problem of a corroded tank would have been the least of our restoration worries. We now have a partially built replica which has just been delivered to Loftus from the Hunter Valley Training Company at Maitland where it has awaited a further training program to progress its development since work lapsed in 1990.

Other collectors have also contributed to the acquisition of wrecks for future restoration. The trams collected by the former Newcastle Tramway Museum remain largely unrestored at this time. These include C car 33, one of two experimentally converted to double-deck, now under cover at Loftus after passing through several hands from the 1950s until acquired in 1995. L/P 257, N 718, O class 824, W2 classes 245 and 471 and W3 class 668 are stored at Cessnock. SW2 class 432 is now at Loftus awaiting conversion to a mobility-impaired access vehicle. W2 class 244 was restored and delivered to Christchurch in 1996, the body of FM 550 was restored and exchanged with Perth Electric Tramway Society for Kalgoorlie 22, and R 1892 restored for use as a restaurant in Newcastle. C 12 and K 1295 were collected by the late Norm Boxall and arrived at Loftus in 1997 in near-derelict condition and still await restoration.

L/P cars 298 and 341 destined for Newcastle in 1995 ended up at Maitland and await restoration whilst Graham Beller's D 107 (112s) is at Loftus and R1 1951 is at Bendigo awaiting restoration. Happily W2 car 249 acquired from Garnet Pearce and R1 car 2001 acquired from the Michael family at Balmoral village in 2001 have both been restored to operating condition, as was R 1808 collected by Chris O'Sullivan and Waverley Council supporters from a tobacco farm in the 1980s. R cars 1798 and 1980 were similarly collected and are stored at Cessnock awaiting restoration. In 2001 our workshop team visited several properties at Camden and in the southern highlands and removed brake and other components from derelict bodies including 1781 and 1998 to assist with these restorations.

A visit to Colo Vale in early 2001 revealed cars 1792 and 1949 being used for workers' accommodation, together with the ruins of 1775 in the bush. The family owning them was very receptive to providing assistance to our restoration projects, and generously provided lunch on the occasion of our visit. Both cars have useful handbrake components which we can obtain when the need arises.



P class 1501 is seen at Lightning Ridge in northern NSW on 21 May 1999. The dry climate has prevented much rot and deterioration. Howard Clark

A proposed waterfront tramway at Port Kembla saw the acquisition of W2 cars 370, 560 and 577 in 1984 only to see the proposed venture stall and the cars handed over to the Sydney Tramway Museum in 2000 after more than 15 years outside storage and several moves. Car 560 yielded parts for Christchurch restaurant tram 411, itself recovered from a Maroubra Junction hotel by the Museum in 1995. Cars 370 and 577 were in June 2002 removed from Port Kembla to Robertson pending opportunities for their future use.

In 1990 a list of potentially available tram bodies was prepared by the supporters of the CityTram Association for possible use on the proposed Walsh Bay tourist tramway. Of these, five corridor car bodies, 1753, 1923, 1943, 1993 and 1995 were collected under the guidance of Wayne Dempsey on behalf of the Sydney City Council. They remain stored and inaccessible (although now technically owned by the STM) at Rozelle, whilst 1741, 1749 and 1917 were at Penrith then Wentworth Park. Car 1749 was refurbished in 2001 and moved to Balmoral village in exchange for car 2001. Numerous other bodies were identified in this list and several have been already accounted for earlier in this commentary, whilst several others including N 641 at Helensburgh, and O cars 1065 and 1132 at Windsor were beyond restoration and only parts or the underframes were salvaged. R car 1755 was inspected near Come-By-Chance in 1996; it had every pane of glass intact and was largely covered by a roof, but an infestation of hornets discouraged close investigation of its condition. In similar vein, R1 car 1975 remains well protected under a roof behind a house in the Bowral area. Not so fortunate is R1 car 2083, the last tram overhauled at Randwick (in 1959). On a farm in the southern highlands, it has suffered the ravages of weather and only in recent times have its owners covered it with a protective roof. Sister car 1998 languishes nearby, on a windswept hill on the same farm. A mere shell after open storage all these years, as mentioned earlier it was one of the cars which yielded valuable parts towards the restoration of car 2001.

A few years ago it was suggested that one or more of the O cars used as bombing targets near Jervis Bay might have survived. Wishful thinking! A visit to the area by Dale Budd with the co-operation of the Defence Department found that the trams had been no match for the RAAF. Close examination of a pile of scrap metal revealed nothing longer than a few centimetres, and it took a keen eye to identify anything that might once have been part of a tram.

N car 709 at Woy Woy regretfully is beyond full restoration, although it is expected to yield valuable components to assist particularly in the restoration of J car 675.

Victorian Railways 35 and Melbourne X1 class 461 were also obtained from use on properties and are currently stored at Bylands by the Tramway Museum Society of Victoria on behalf of the STM. The disposal of the Melbourne W2 (first series) pop art cars in the mid 1980s created a deal of publicity and attracted the attention of an elderly real estate agent in Brisbane who contacted the Museum concerning two Brisbane cars at a tennis club in the southern outskirts of Brisbane. Peter Hyde from the Brisbane Tramway

Sydney N class car 709 at Woy Woy in July 2001.
Howard Clark

At Camden, R class 1781 is slowly disentigrating and disappearing into the undergrowth, 13 March 2001. Howard Clark

Museum Society was aware of them and as they had no specific interest a flight to Brisbane soon occurred. Our elderly gentleman, driving a delightful old Jaguar painted British Racing Green, whisked me away from the airport to our destination. He was sure the trams were worth 'a lot of money once restored.' Although a second dropcentre car was of interest, this one, whilst well protected with an iron roof and used as a clubroom, was missing its end aprons. The FM car was disused, rusty and full of discarded building materials and cobwebs. A replacement clubroom and the hint of a commission placed the cars out of interest and they since appear to have been lost.

No museum collection of Australian trams would be complete without an example of a double deck car from Hobart. Member Tom Tramby spent his 1994 Christmas holidays in Tasmania. Whilst there he found what he first thought was a van, which was revealed to be the body of Hobart No. 7, lurking amongst the outbuildings of a guest house 'Red Briar Cottage' in Richmond. The owners had expressed some interest in seeing it preserved in due course, so a school holiday trip with my children, Stuart and Sonia was hastily arranged. It became apparent that on second thoughts the lady of the house had sentimental attachments to it, as its garden shed appearance complete with vines growing through it and the chickens using it as a roosting house, was indeed an attractive part of the garden. It was missing its end aprons and had been rescued from a nearby farm by its owner for a 'case of beer and a bottle of scotch' with the assistance of his compatriots in the local bush fire brigade. It had been offered as a bush fire barbecue burn-off exercise. It had been lying on its side for many years, which explained the dry rot in the timbers on one side. The trip was not wasted, however, as the existence of another car nearby, No. 20, was revealed. It 'probably would not be of interest' as it had been 'built into a house for more than 40 years' and was believed to have 'one side cut out it'. A visit a short time later revealed this not to be the case. Instead one bulkhead doorway had been widened and the metal side panels behind where the stairways used to be were missing on one end. It was enthusiastically acquired on the spot. A great bonus was that the owner, Barry Baxter, was an accomplished welder and tradesman. He was not only willing to store it; he was prepared to help in its restoration.

With support and assistance from our friends at the Tasmanian Transport Museum Society in Hobart, the loan of a staircase and bow collector along with copies of microfiche plans for the upper deck equipment were secured. The owner of No. 7 lent an upper deck seat for the same purpose. Barry was commissioned to manufacture the upper deck seats, the staircases, a replica bow collector, all upper deck support steelwork and railings, and numerous other small items. A follow-up visit six months later in mid 1995 to the farm where Barry used the barn whilst he built the staircases, revealed the remnants from No. 7 amongst scrap farm machinery. These were purchased, and Barry used his oxy equipment to collect the useable components to complete our work on the end panels of No. 20. Two seat bases were also acquired. The other two had rotted away in the barn due to rat nests in the cavity, as they were stored below the other bases on the floor. These were not collected at the time. It should be remembered that the acquisition of No. 20 occurred

Christchurch 'Yank' 12 is seen at Akaroa, New Zealand on 31 January 2002. It has since been moved to Ferrymead for evaluation of the restoration work required. Howard Clark

several years before the proposals for a tourist tramway in Hobart were promoted. Prior to No. 20 being transferred to Bendigo in August 2001, No. 7 had by then been purchased from its owners on behalf of the Hobart City Council. The components purchased by the STM to assist with restoration of No. 20 were removed from Barry's property without consultation for use with No. 7.

Chris O'Sullivan also provided a photo of a Hobart double deck car at an unknown location somewhere near Hobart which his mother had taken many years before. The only clue was a complex of factory buildings in the far background. With assistance from Barry, this turned out to be the paper mill. With some driving about, Stuart and I located the spot where the photo was taken only to find a 1970s style house there. Inquiries from locals revealed that the Tasmanian bushfires in the 1960s destroyed properties in the area including the tram. We subsequently learned that the only known example of an original Siemens car was also lost in those same fires. A couple of Hobart bogie cars were also located on properties at this time in somewhat poor condition.

In covering the quest for wrecks it is also important to mention the activities of the Canberra Tradesmen's Union Club whose Secretary-Manager, Rod Driver was responsible for gathering together a vast variety of tram bodies from around Australia. Most of these are exhibited in the club and used as meal areas or for other purposes. These include examples of Sydney C, P and R classes (2), a Melbourne cable trailer, an L and W2, a Brisbane FM and an Adelaide D and H (the latter used as an Internet 'cafe'). In addition they have stored the bodies of a Launceston car, a Hobart bogie car, M&MTB Q class 139 and two Victorian Railways bogie cars.

Tramway museums in Australia and throughout the world have embarked upon collection programs to secure examples of extinct tramcar types from properties. Most notably the Perth Electric Tramway Society and Australian Electric Transport Museum have been active in Australia whilst Christchurch's collection comes entirely from rescued bodies. Similarly, in the USA museums have collected 'chicken coops' and 'roadside diners' for subsequent restoration. The acquisition of an example of a British double deck car, Coventry No. 71, was briefly contemplated in correspondence. However, at 12,000 miles distance with only one newspaper photo to rely upon it was soon realised that such a major recovery and restoration task could not be contemplated by the STM.

Certainly the collection of so many wrecks by museums seems to many as overkill – taking on potential restoration projects well into the next generation's lifetimes. However, 'the last tram round-up' at this time is both important and credible as with every passing day the opportunity to collect such examples diminishes as weather and other factors intervene, bearing in mind that means the bodies have spent already almost fifty years in this state. This brings me to the happy story of the godfather and the 'G car in the shed'.

A former sporting colleague and bird watcher friend in England has great empathy for the tramway historian and enthusiast. In his view our hobby, as with his, is "not an obsession, it is merely an all-consuming

N class 710 at Moss Vale was widely advertised for sale in the press and on the Internet as a candidate for restoration.
Howard Clark

enthusiasm". His advice many years ago was to never give up believing that one day the impossible will be achieved even if a miracle takes a little longer, and in terms of the G car in the shed or the rare bird in the bush, it just might one day appear!

And so it came to pass. In 1995 when the STM was preparing 244 for restoration to run in Christchurch we were reminded that Christchurch in 1905 had received ten cars from the USA for operation on its new tramway which were almost identical in design to the Sydney G cars. These were known as 'Yanks' and were later modified and enclosed. One such car, No. 20, was at Ferrymead. Inquiries revealed that at least three others remained as baches on farms or seaside properties. Of these Nos 11 and 12 were deemed to be restorable if and when they became available. Our friends at Ferrymead ultimately decided to keep an interest in No. 11 for primarily historical reasons and gave their support for No. 12 to be acquired by the STM. In 2002 the owners indicated their readiness to dispose of No. 12 as they were expanding the facilities at their bach. The car had been largely protected over the years by a metal roof. With assistance from Steve Lea, David Hinman and Dave Carr in particular, No. 12 was removed in May 2002 from its Akaroa resting place of the last fifty years and moved to Ferrymead where it is being evaluated for restoration work required.

The acquisition of this car, to be restored as open-fronted Christchurch No. 12 of 1905, puts the Sydney Tramway Museum in the happy position, subject in due course to New Zealand export consents, of having an example of every production tramcar type to operate on the Sydney system. With this story to be covered in future years as restoration occurs, the quest for wrecks should happily now be over. Or is it?

Just when one thinks there is nothing more to be acquired or located the owner of N class cars 710 and 715 has advertised 710 for sale as an 'ideal restoration project'. The car has been inspected and would be suitable for restoration as an example of an open-fronted N car. However this may be an opportunity lost as at the time of writing the asking price is way beyond the Museum's available resources for a car requiring such major restoration. The quest continues!

Now, all we have to find is Brisbane Hedley Doyle car 301, the body of which it is said was not scrapped but sold and located somewhere in the Redcliffe area.

The interior view of N 710 shows it certainly worthy of restoration.
Howard Clark

HERE AND THERE

NEWS ITEMS OF INTEREST FROM ALL OVER

It's all over for city flyover

The Flinders Street flyover at King Street is to be demolished, removing an unattractive feature from the western end of Melbourne's central business district, and opening up the north bank of the Yarra for development. The roadway and tram lines would revert to ground level, creating a Flinders Street frontage for new recreation or commercial activities.

Victorian Premier Steve Bracks said he expected the removal of the flyover would add 30 seconds to a typical trip along Flinders Street. The cost of removing the flyover, which was built in 1961(sic), is estimated to be $10-15 million. - Meaghan Shaw

(The first section of the flyover, the southern part of the structure, was in fact opened on 22 November 1959. Temporary tracks laid on top of the road surface allowed trams [only] to use it, enabling removal of the original tracks in Flinders Street and the building of the second half of the overpass, which incorporated permanent track laid in the roadway. This second section of the flyover was completed about June 1960. – Ed.)

High Street to High Street

On 21 June 2002, thirteen of the stored W series trams awaiting brake modifications were driven in convoy to temporary storage in the former depot at Thornbury. The convoy left Malvern Depot about 7:30pm and ran via Glenferrie Road, High Street, St Kilda Road, Park Street, Kingsway into William Street, La Trobe Street, Nicholson Street, Gertrude Street, Smith Street, Queens Parade, High Street, then over the hump to Thornbury.

Some of the trams had not run for two years. They will be progressively modified and returned to service.

H class No. 351 and its clone at Glenelg

Adelaide H car 351, which opened the Glenelg tramway on 14 December 1929, was among the five cars recently completely rebuilt, including chopper control, for TransAdelaide. (The others are 367, 370, 374 and 380.)

Car 351's historical significance has been enhanced by a new set of destination blinds fitted to it, crafted in the old lettering style by Max Fenner of the Australian Electric Transport Museum. In line with those used on other Glenelg cars, newer names are also included – only Special, City & Glenelg, Express, City, Glenelg

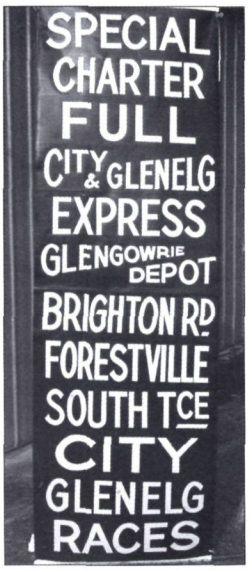
Car 884 and three others on their transfer run to Thornbury Depot on 21 June 2002. They are seen in High Street, Northcote.
Ray Marsh

Cars 896 and 928 head the rows of trams in Malvern Depot prior to their transfer to Thornbury on 21 June 2002.
Ray Marsh

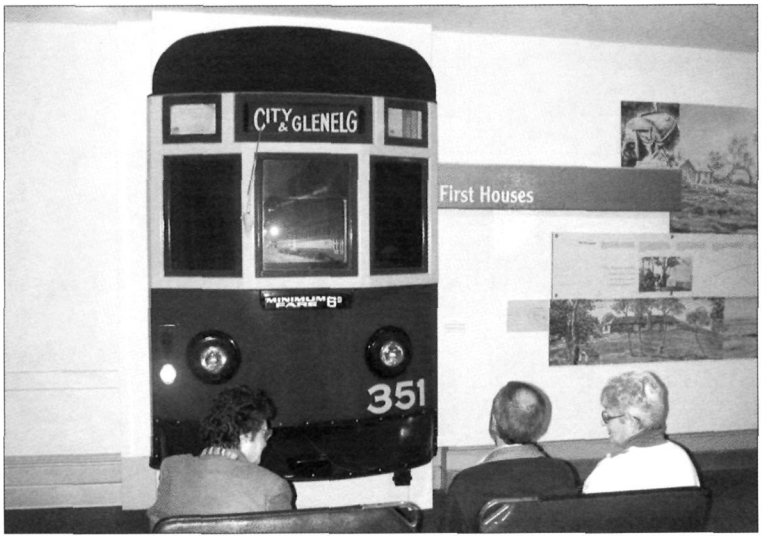
and Races were represented on the 40-name blinds originally fitted to the H cars.

No. 351 also stars in the recently opened 'Bay Discovery Centre', located in the Glenelg Town Hall, adjacent to the tram terminus. With the amalgamation of the Glenelg and Brighton Corporations to form the City of Holdfast Bay, and the relocation of most administrative functions to the former Brighton Council Chambers, space became available to tell the story of Glenelg, birthplace of South Australia, in an exhibition funded by a $2 million grant from the Centenary of Federation fund. Staffed by volunteers, admission is free. The H type fibreglass cabin front, which had been provided to the AETM by TransAdelaide, was prepared for the exhibition. A video screen in the motorman's window gives a short history of Adelaide's trams and the Glenelg line.

The pattern destination blinds made by Max Fenner for 351.
John Radcliffe



Passengers board 351, which is coupled to 374, at the Victoria Square terminus, 17 July 2001.
John Radcliffe



Visitors enjoy a history of Adelaide's trams from the front of '351' while seated on H type seats at the 'Bay Discovery Centre', in the Glenelg Town Hall.
John Radcliffe

A rather unobservant visitor thought that John Radcliffe's kitchen had aquired a bay window. John Radcliffe

Fort Worth's Tandy line closes

The famous Tandy Subway at Fort Worth, Texas has closed.

Marvin and Obie Leonard built the mile-long line in 1962 between a 23-acre, 3000-space car park on the Trinity River and their department store. It opened in February 1963 as the M & O Subway, although only 1400 feet of the double track line is actually underground. The terminus of the free service was in the store basement and not only served the store but also the surrounding downtown area.

The building was sold to the Tandy Corporation in 1967. The store was demolished and a mall and multi-use office centre constructed in its place. Tandy continued the operation of the tramway and the policy of not charging riders. Owner RadioShack sold the Tandy Center in early 2002.

The line's original rolling stock was seven PCC cars from DC Transit in Washington DC. They were rebuilt as double-enders with additional streamlining and decorations but were still recognisable as PCC cars. During 1976/77 the cars underwent a major rebuild to a very boxy style. A number of PCC cars from Boston were obtained in 1970 but all except one were used as a source of spare parts. One of the seven DC Transit cars was sold out of service and ended up as a bodyshell in Arkansas before being obtained by the National Capital Trolley Museum at Wheaton, Maryland where it awaits restoration.

China's first homemade light rail vehicles completed

China's first two homemade light-rail vehicles rolled off line on 25 November 2001 in Xiangtan in central China's Hunan Province. With a maximum speed of 70-80km/h, the new trams are considered to be very comfortable and will each be capable of carrying more than 300 passengers.

The trams, which incorporate a number of technological advances, can be used either as street-level light rail vehicles or as elevated expressway or subway vehicles. The two trams will be transported to Changchun, capital of northeastern Jilin Province, where construction of China's first light rail line is under way. The 15km line will commence operation during the next northern summer if trials are successful. It is expected that the line will transport nearly 10,000 passengers per hour at an average speed of around 25km/h.

A small photo of the new vehicle on the People's Daily website shows a vehicle closely resembling Sydney's Variotrams.

Large Chinese cities opt for light rail

China will speed up construction of light rail transit systems in its large cities during the country's tenth Five-Year Plan (2001-05). Reliable sources said a total of 450 kilometres of urban rail lines involving an estimated investment of 140 billion yuan (US$16.8 billion) will be built over the next five years. At present, only Beijing, Shanghai, Guangzhou, Tianjin and Hong Kong operate subways or light rail systems. The total length of these systems is 193.4km.

People's Daily Online –
http://english.peopledaily.com.cn/

SW6 class 968 has replaced W2 class 457 at the Traffic School in Albion Street, Essendon. Car 968 is complete. Jeff Bounds

Restoration of Melbourne cable trailer 256 at Malvern is nearing completion. This view was taken on 6 August 2002. Ray Marsh

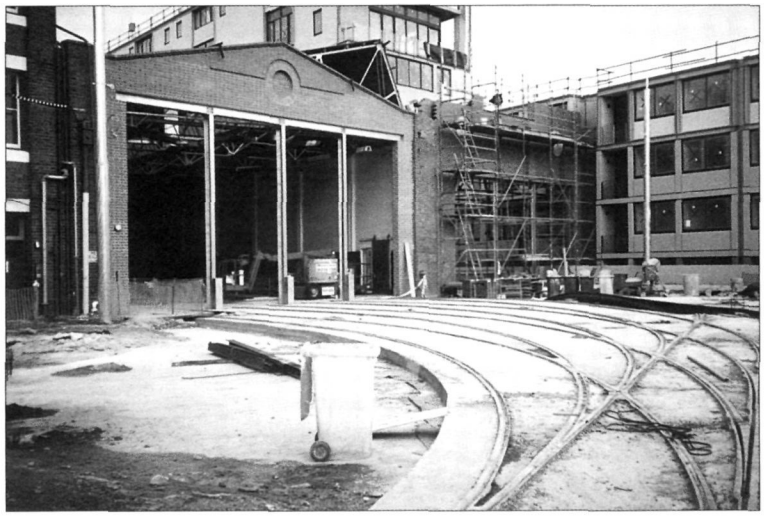
One of four new Citadis cars for Yarra Trams being delivered to Preston Workshops on 25 June 2002 after the sea voyage from France. Ray Marsh

Combino cars 3501 and 3502 stand outside Preston Workshops on 28 May 2002. Note the German destination, nach Mexikoplatz, on 3501.
Ray Marsh

Combino 3502 stands at the new super stop on Princes Bridge during service testing on 29 May 2002. Ray Marsh

Combino 3501 in its new M>Tram livery is at a ceremony at the Dudley Street siding where it was named in honour of Sir Robert Risson, Chairman of the Melbourne and Metropolitan Tramways Board from 1949 to 1970. Ray Marsh

Combino cars 3502 and 3501 on a test run wait to turn from Elizabeth Street into Victoria Street, en route to Malvern Depot via Swanston Street on 28 May 2002. Ray Marsh



Hawthorn Depot redevelopment seen on 22 July 2002. The new depot fan was concreted on 18 July. Steven Altham

WHITEMAN PARK

Perth Electric Tramway Society
PO Box 257, Mount Lawley, Western Australia 6929

From Michael Stukely

Annual General Meeting

The twenty-first Annual General Meeting of the Perth Electric Tramway Society was held in the theatrette at the Westrail Centre, East Perth, on 6 July. The following Officers and Councillors were elected: President, Michael Stukely; Vice-President, David Brown; Secretary, Robert Pearce; Membership Secretary, John Stone; Councillors, Trevor Dennhardt and Tony Kelly. Martin Grant has since been co-opted to the position of Treasurer.

During the 12 months to 31 March 2002, our trams travelled a total of 9,639km on 233 running days, with

individual totals as follows:

Fremantle 29	551
Melbourne W2 329	2,516
Melbourne W2 393	3,888
Melbourne SW2 426	2,684
Melbourne W2 36	0
Melbourne W4 674	0
Ballarat 31	0

Web site

PETS now has a brand new web site, developed to a very high standard by David Brown. It contains many very interesting images and a wealth of information. Please visit at http://www.railpage.org.au/pets

General news

The weather, as usual, has played a key role in determining patronage levels on the trams. Fares were collected on Mothers' Day this year (rather than the trams being hired as previously), and poor weather led to lower revenue. Similarly on the June long weekend, numbers of visitors were only moderate, with cool weather being experienced.

The tram stop formerly called Bennett Brook has been renamed Mussel Pool East, to more clearly identify its location.

Rapid progress has continued in our track upgrading program, using steel sleepers to replace rotted timbers, where necessary. Steel sleeper installation on the Triangle's north-to-east curve was completed in March-April. This was followed on 8-9 April with a two-day marathon effort by a small team – Lindsay Richardson, Trevor Dennhardt and Peter Rankin – with assistance from Jim Paton on day 2 – when 26 steels (modified to fasten to checkrail) were installed on the west-to-north curve.

The remaining timber sleepers on the curve were screw-spiked on the outside rail. The timber platform face was removed as it obstructed the steel sleepers. The initial resleepering of the Triangle was then completed with the installation of another seven steels on the same curve on 10 April. Attention then shifted to the Stockmans Village section, with steel sleepers being installed as necessary through the loop, and then past Red Dam and on to the north. Work had been done in February on the embankment just south of Red Dam.

Lifting and packing has continued between Mussel Pool East and Stockmans Triangle, resulting in a significantly better ride through the section. Other minor track repairs have been done as required. Other members who have assisted with track work are: Cliff Norgate, Tony Grose, Terry Verney, Martin Grant, John Shaw, Michael Stukely, Brent Luscombe, John Davies and Laurie Ahearn; Scott Parker has assisted with welding of rail bonds.

Some unusual tram movements, assisted and otherwise, were seen on 28 April when most trams in the Oketon Geddes Carbarn were re-positioned. WAGT E class No. 66 (under restoration) was lowered

Work in progress on 13 November 2001 with re-setting the checkrail on the Stockmans West to North curve.
Lindsay Richardson

On 18 December, Trevor Dennhardt inspects the reset checkrail, which has been extended right through to the western points (foreground).
Lindsay Richardson

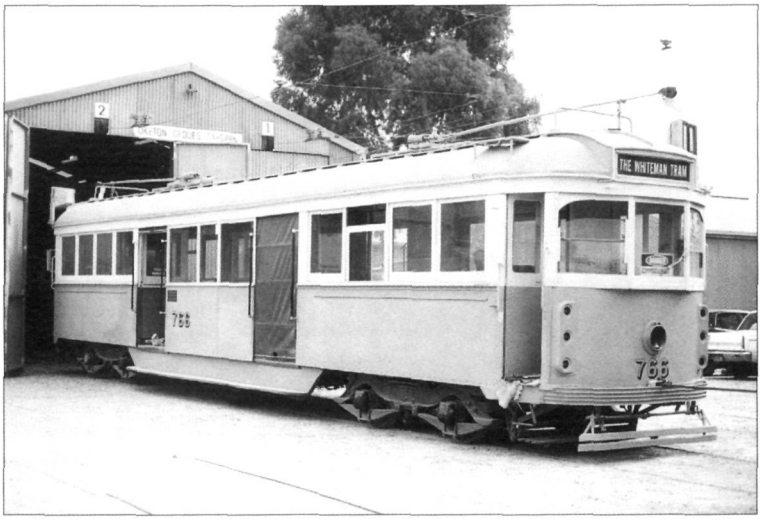
onto demotored Melbourne No. 1 trucks and was moved out of the barn for the first time in several years. The body now rests very straight on the trucks following its straightening and reinforcement. It is now located immediately behind Fremantle 29 on No. 3 road, with ex-Melbourne W5 class No. 766 behind it. At one stage of the day, the Carbarn was empty apart from the bodies of Kalgoorlie No. 25, now in its Centenary year, and Fremantle No. 28, the 'Dormitory Car'.

Lindsay Richardson, Special Projects and Museum Site Supervisor, reports that in April, Park Management confirmed that some financial assistance would be made available for the completion of the Society's maintenance pit in the engineering shed. Priority works were to be identified and quotes provided by early June. Noel Blackmore, with assistance from Tony Kelly, took detailed measurements and then prepared design and construction drawings for the centre pillars and corner pillars. Quotes were then obtained for these and for their special masonry anchors, as well as for ten light boxes to be mounted in the pit walls.

Lindsay has also sought quotes for a monitored smoke detection system to protect the main buildings in the complex, as this is a requirement of our lease with the Park.

The Society plans to add to its covered tram storage capacity by extending the Lindsay Richardson Carbarn southwards. For this project to proceed, the Western Power supply line that ran diagonally across the site

On 8 April Peter Rankin prepares to dig out sleeper trenches for the installation of steel sleepers on the West to North curve. Rotted timber sleepers have been extracted (at left), whilst steels are laid out ready to install (at centre).
Lindsay Richardson



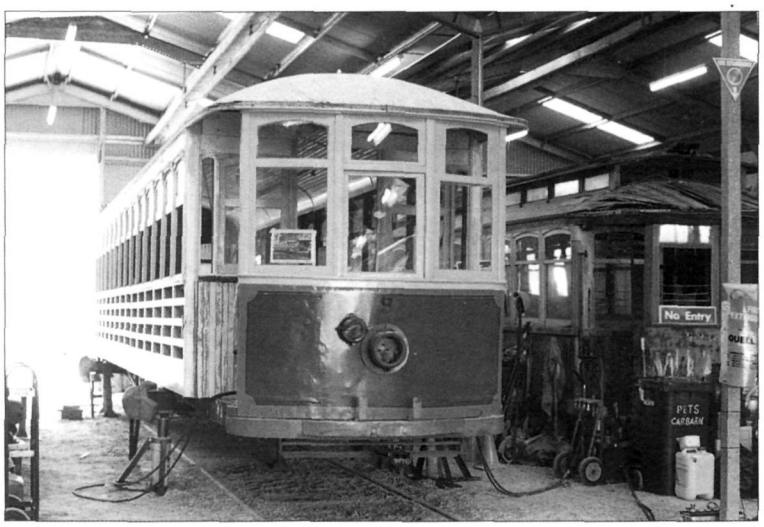
W5 class No. 766 on the carbarn fan during the Great Tram Shuffle on 28 April. More than ten years after its arrival from Melbourne (at considerable expense), this tram has not yet run under its own power, as serviceable motors were not supplied and are not available.
Tony Kelly

from the terminal pole at the sub-shed had to be relocated parallel to the service road entry to the Museum. Lindsay arranged for contractors to remove a number of trees from the new alignment in March, which enabled Noel Blackmore to obtain a costing for the realignment from Western Power. After 12 stored concrete poles were shifted from the path of the new line, Western Power personnel arrived on 6 June and carried out the new installation.

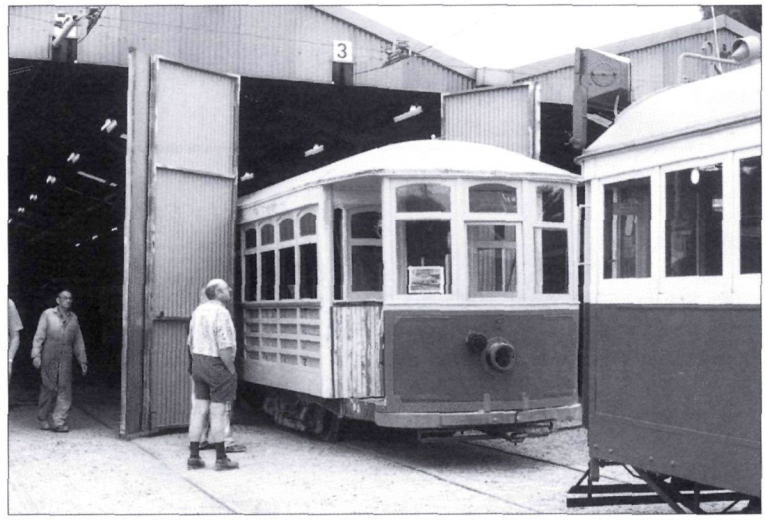
Further work was done in March on the works road alongside the tramline to the north of Red Dam, when contractors excavated and widened the existing formation, and paved part of it. This road is badly needed, as access to this part of the system by our works vehicles is extremely difficult for a large part of the year, due to the very soft sand in the area.

Several more timber span poles have been treated for termite activity, a never-ending battle at Whiteman Park. Three more replacement concrete masts (Westrail type) were erected alongside rotting timber poles between the Carbarn and Mussel Pool. The cross-arm and switchgear have been mounted on pole E2 (east of the Triangle on the Entrance line) in preparation for the installation of a section insulator. Ray Blackmore and Scott Parker have worked with Noel on these projects.

Work on W4 class No. 674 has progressed well, with the brake-hanger assembly being completed and tested in March-April. However, Noel Blackmore reports that following the motor electrical test, the first short operational test of the truck had to be stopped due to foreign material being detected in the gear case. The



WAGT (Perth) E class car No. 66 is about to be lifted off its stands (using the hydraulic lifting gear) so that dollies can be rolled underneath for the car to be moved, on 28 April. The body of the 100-year-old Brill bogie saloon, Kalgoorlie 25, can be seen at right.
Tony Kelly



Perth No. 66 emerges from the carbarn, towed by W2 class No. 393, on 28 April. Vic Sweetlove is at left, as Martin Grant checks the clearances (Matt Blight is obscured). Tony Kelly

case was then removed for cleaning and inspection, with Eddie Vagg, Kurt Gahler and Noel completing repairs in late in May. The truck was at last re-installed under the car on 12 June.

Due to the continuing difficulties in our obtaining spare parts for our fleet of heritage ex-Melbourne trams, we have reached the stage of having to manufacture new ones and custom machine to suit. New gears are being manufactured for traction motors, whilst for traction motor suspension bearings, new patterns will have to be made, castings taken and the bearings individually machined. All of this proves to be very expensive and time-consuming.

Gareth Watts has carried out a number of repairs to the bodies of our operational trams. The saloon seats in Fremantle No. 29 were found to be suffering 'timber fatigue', which required the reinforcement with marine ply of the base of the squab. It appears that today's passengers are somewhat heavier and wider than those of the early 1920s.

New storm-water soakwells are being installed around the carbarn and workshop buildings to reduce flooding in wet weather.

John Stone and his helpers continue to promote the Society to the public through displays, the latest being at the annual model railway exhibition of the Australian Model Railway Association, held at Claremont Showgrounds over the June long weekend. The display again attracted a good deal of interest and sales were brisk.

Perth E class No. 66 in its new spot in the carbarn, with ex-Melbourne W2 class trams Nos. 393 (left) and 368 (right). The very straight line of the body of No. 66 can be clearly seen. Tony Kelly

VALLEY HEIGHTS

Steam Tram and Railway Preservation Society
PO Box 3179, Parramatta NSW 2124

From Peter Stock

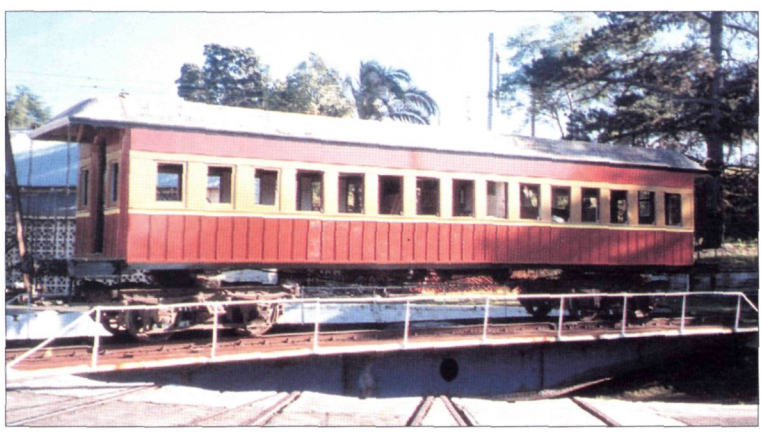
CBI 1073

On Saturday, 20 April 2002 the Society passed another milestone. The Hon. Kerry Bartlett MP, Member for Macquarie, unveiled a commemorative plaque to mark the partial restoration of CBI 1073, the 'end-platform' car.

Valley Heights Locomotive Depot Heritage Museum chairman, Ted Mullett, was the master of ceremonies. Our Society chairman, Peter Stock spoke about the restoration the members of both groups and invited guests. Mr Bartlett was then invited to unveil the plaque attached to one of the end platforms of CBI 1073 which acknowledges the Federal Government's contribution to the project through the provision of a Centenary of Federation heritage grant.

The grant has enabled the Society to complete its restoration of the car body, windows and platforms which, so far, has involved around 274 man days of work.

The Hon. Kerry Barlett MP, Member for Macquarie, addresses the invited guests and the members of the two societies from the platform of CBI 1073. Chairman Peter Stock (at rear) invited Mr Bartlett to unveil a plaque to mark the partial restoration of the car under the Federal Government's Centenary of Federation Community Grants Scheme. Robyn Stock



CBI 1073 on the turntable at Valley Heights prior to the ceremony on 20 April 2002. Peter Stock

These two views show steam motor 103A on 19 May 2002. The roof is in place but the clerestory still to be fitted. New aprons have been manufactured and can be glimpsed on the left of the photo at right. Note the plough type lifeguard fitted under the motor. Peter Stock

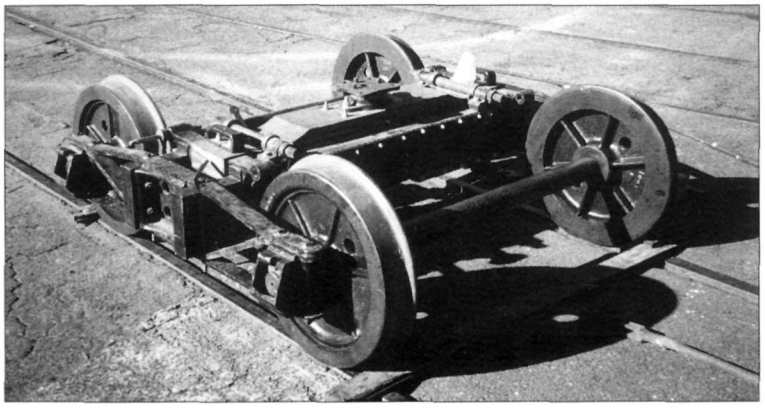
The society would like to record its sincere thanks for the support of the Hon. Kerry Bartlett MP and the Centenary of Federation Heritage Grants Committee.

Motor 103A

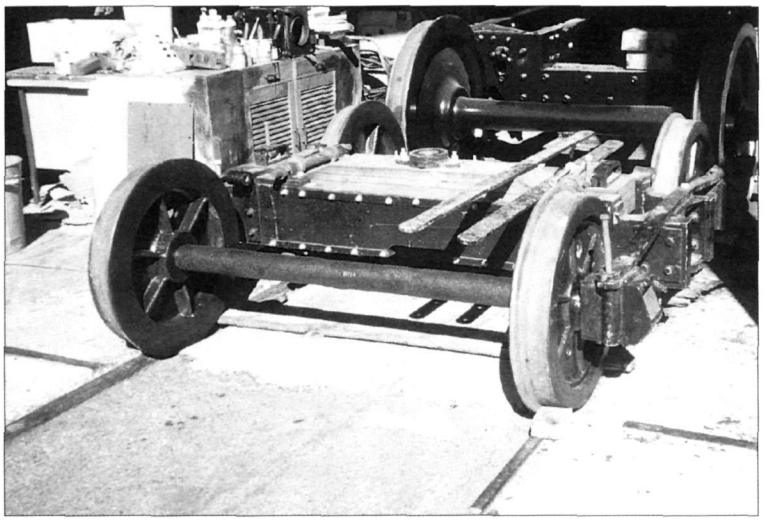
The assembly of the new cab continues apace with major components now in place. The roof clerestory will then be fitted following waterproofing of the surface of the main roof. The end aprons have been fabricated and are ready for fitting.

Trailer car 73B

Work on this vehicle has progressed to the stage where the ceiling has received its first coat of white enamel. Doors and handrails have been removed to enable other painting tasks to proceed. Glass will be fitted to the car's doors at this time.



One of the bogies for steam trailer 93B on 19 May 2002. Brake gear for the bogie will be fitted shortly. Peter Stock



The second bogie for steam trailer 93B on 19 May 2002. The brake gear for the bogie will be fitted shortly. The wheelset behind the bogie belongs to a NSW Rail Transport Museum restoration project. Peter Stock

The bogies, rescued after the 1993 fire, are being reassembled. Key components including the car's coil springs have been manufactured, and new brake shoes have been cast. The vacuum brake pans and associated components will be fitted shortly.

Other news

In conjunction with the Valley Heights Locomotive Depot Heritage Museum, the Society has commenced regular operation. Late in December 2001, the Joint Operating Committee decided to open the depot to the public on the first and third Sundays of the month. The Valley Heights Steam tramway assists in these open days. On the third Sunday (the old Parramatta Park traditional operating day) the Stephenson locomotive is usually in steam. The Society offers cab rides on these days.

Visitors are welcome on open days between 10:00am and 4:00pm.The depot is located in Tuscalum Road, Valley Heights, an easy walk from the railway station.

HOBART

Hobart City Council
GPO Box 503E, Hobart, Tasmania 7001

The Mercury, Hobart

The proposed tourist tramway in Sullivans Cove made another major advance in June 2002.

The Hobart City Council approved an allocation of $2 million from the $2.7 million fund it has established to mark the bicentenary of European settlement in Hobart in February 2004. As well, the Council approved the lodgement of a development application for the tramway.

Alderman Darlene Haigh, head of the Council committee that supports the tramway project, welcomed the support of aldermen. "We are very happy," she said. "We are well and truly on the way. Nothing will stop us now."

It was Alderman Haigh's idea more than ten years ago to re-establish a tramway in Hobart. During that time, she has headed the Council committee supporting the proposal, and has been active in searching for trams and suitable spare parts. The total cost of the tramway project is estimated at $3.47 million.

Alderman Haigh said: "We hope the State Government will come on board. We are working towards that through the partnership agreement between the Council and the State Government. We would like to get $1 million from the Government of the day after the State election. This is such a big project for the whole of Tasmania, certainly southern Tasmania ... We would be hopeful they will come to the party with money."

Alderman Haigh said that the route originally proposed for the tramway from North Hobart to the waterfront could be constructed as an extension in the future.

The Lord Mayor of Hobart, Alderman Rob Valentine, said he would like to see the tramway run up Elizabeth Street to link North Hobart, the central business district and Sullivans Cove. Also, he said he would like to see it extended to the Royal Tasmanian Botanical Gardens, which attracted 320,000 visitors a year. Whilst funding for both routes would need to be considered, Alderman Valentine believed they would improve the tramway's revenue and viability potential. Recently, he supported the tramway when voting on two Council resolutions despite saying previously that the proposal should not be allocated bicentennial funds.

Alderman Valentine said on 25 June that the tramway was a good project and he did not want to put a 'negative spin' on it. Although Elizabeth Street was the route preferred originally by the Council, a route around Sullivans Cove was supported subsequently because of its lower construction cost.

Two more historic Tasmanian trams have begun the journey to restoration. On 12 June, they were taken to the Tasmanian Museum and Art Gallery's Moonah workshop for restoration. Of the 100 trams that operated in Hobart between 1893 and 1960, five are now in the possession of the Hobart City Council. Two of the oldest, including one double-decker, have been restored, and bogie cars No. 118 (1941) and No. 133 (1949) will shortly undergo restoration.

The body of Hobart bogie car 133 at Marshall's Farm, 6 August 2001. This car has been rescued and is to be restored by the Hobart City Council. Howard Clark

Tony Colman of the TMAG's heritage furniture restoration unit said the restoration of No. 133 would take up to a year. He will investigate the possibility of altering the design of the tram to incorporate wheelchair access. The tram had been on a farm near Bridgewater since the 1960s. Whilst the farmhouse was destroyed in the 1967 bushfires, the tram survived and became the family home for a short time.

ST KILDA

Australian Electric Transport Museum
GPO Box 2012, Adelaide, South Australia 5001

From Colin Seymour

Northern Depot administration rooms

Sufficient work has now been completed and the new Members' Lounge and office have been opened for use. The Friday work crew held a 'Last Supper' in the old Members' Lounge Area early on 3 May, and then got into the considerable task of pulling the old facilities apart and transferring everything over to the new area. This work progressed rapidly, and with the bulk of the furniture moved and installed, lunch was taken in the new setting. The afternoon saw the fixtures removed and transferred. It was a busy day for the group, including literally carrying over the kitchen sink.

More work was done on these new facilities over the course of the following week in readiness for this year's Annual General Meeting. However, whilst they are operational, the new facilities are by no means complete.

Christopher Steele has been busy relocating the Museum's own archival records from his house to the new archives vault, whilst Treasurer, Barry Fox is almost lost in the spacious new office.

The old Members' Lounge was one of the first buildings to be erected at St Kilda in the early 1960s and was originally the workshop, becoming the Members' Lounge following completion of the current workshop in 1968.

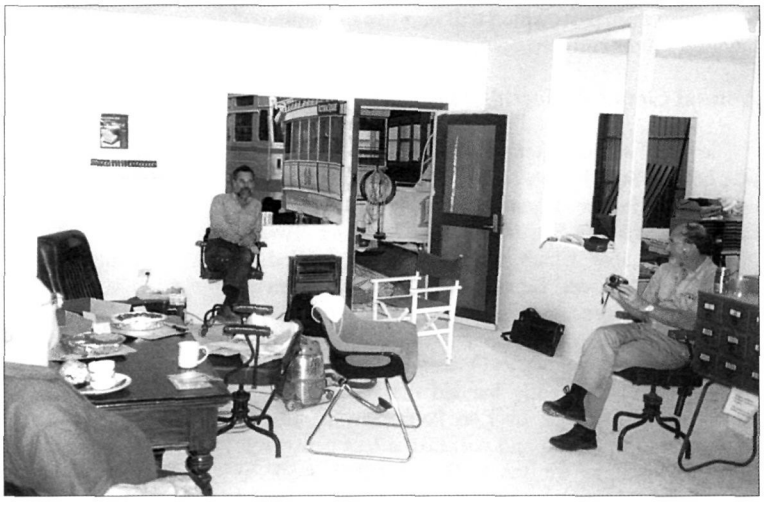
Rolling stock

The last pony wheel set for car 118 has been turned on the wheel lathe. Work continues on pony wheel axle box rebuilding. Welding of the pony wheel truck hornways is finished and machining of the cast iron wearing strips has begun.

Toastrack No. 42 is in the workshop for re-varnishing of panels to extend the life of the gold leaf line work.

Car 360 has had the eastern end trolley base replaced due to tension problems during the servicing of the car. Worn components in the step rigging were replaced using rebuilt parts from 362. In time, all of 362's parts will be rebuilt. Work will then commence

Peter Vawser (left), Ron White, Peter Letheby and John Pennack have a farewell cuppa in the old AETM Members' Lounge on 3 May 2002. Ian Seymour



Peter Letheby (left), John Pennack and David Williams have lunch in the new AETM Members' Lounge in the Northern Depot administration area on 3 May 2002. Members are able to view trams stored in the Northern Depot. The room to the right is the museum office. Since this view was taken, light fittings were completed and glass placed in the windows. Ian Seymour

The 2002 AETM Annual General Meeting was held in the recently completed Members' Lounge in the new Northern Depot. The museum office is to the right. John Radcliffe

Since 1990, the AETM has used an interim archives repository in the projection room attached to the Museum's entrance building. John Radcliffe

on the less worn parts which will improve the timing of the tram's door and step operation.

Annual General Meeting

The 45th Annual General Meeting of the AETM was held at St Kilda on 11 May 2002. It was the first event held in the recently opened new Members' Lounge in the new Northern Depot Building. Twenty plastic stackable chairs were recently acquired to enable the Members' Lounge to be suitably converted to a meeting room.

Bev Smith stood down as Operations Manager at the AGM. Bev also recently handed the running of the Bouncing Billy Kiosk over to Peter Vawser. Bev is relocating to Wallaroo and will take a less active role in the Museum. We thank Bev for her work as Operations Manager, and also for being a major contributor to our charter operations.

Bev started the museum catering account as a fund raising venture to assist with our hosting of the 1986 COTMA conference. A temporary facility was set up on a trestle table in the southern tram depot. The Bouncing Billy Kiosk was opened in 1989 when the bookshop was relocated into the then new display gallery building.

There were two changes to the committee. Ron White has taken over from Bev Smith as Operations Manager, whilst Peter Vawser has joined the committee as Vice President. The new committee is as follows:

President	Colin Seymour
Vice President	Peter Vawser
Secretary	David Williams
Treasurer	Barry Fox
General Manager	Ian Seymour
Operations Manager	Ron White
Site and Safety Manager	John Pennack
Trustee	Christopher Steele
Trustee	Ian Seymour
Trustee	Chris Andrews

The meeting was followed by an evening barbecue and tram rides.

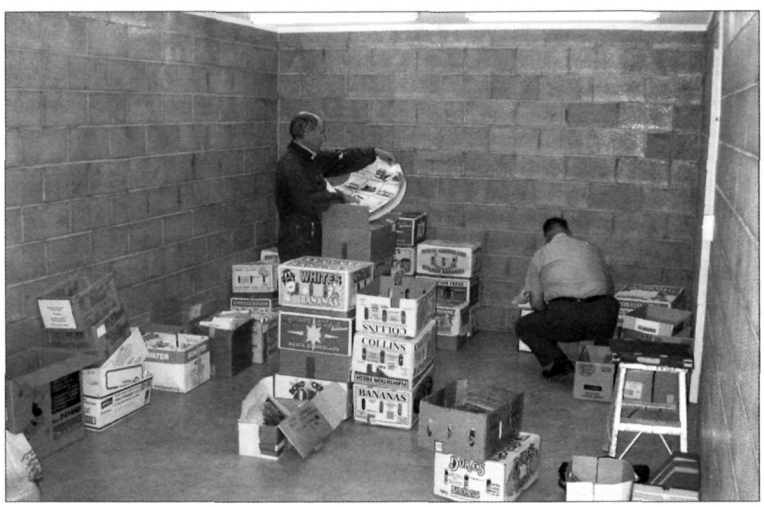
Bookshop

Peter Vawser has developed a series of souvenir photographs. They are very nearly the same size as standard postcards, but are single sided and consist of a picture top centre with a description below and the museum name on either side. The first five available are current photos of 21, 111, 264, 294 and 360. These have been priced at $2.00.

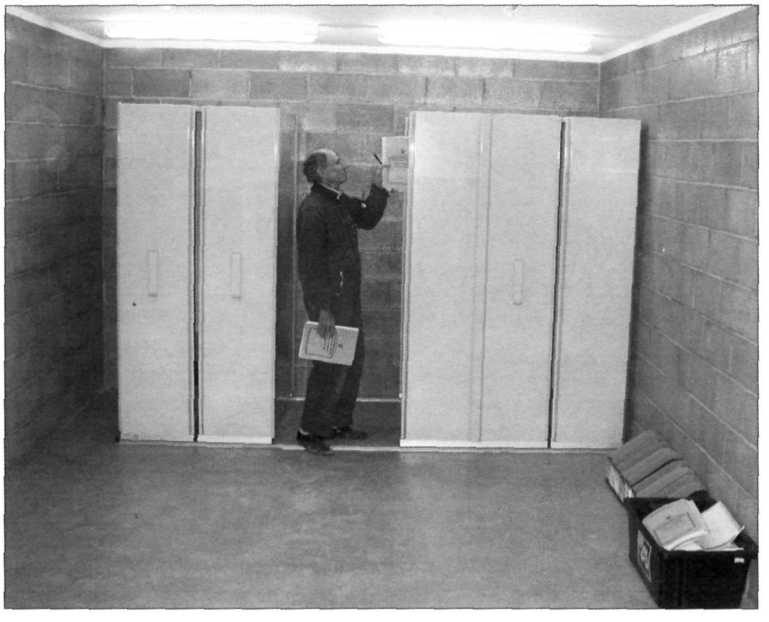
The second hand book display is proving to be a success. Most of the shelves on one wall of the bookshop are being used for this venture, and this provides room for a moderate selection of books. Our visitors seem interested in them and there has been a reasonable level of stock turnover.

Other news

The Museum has commenced advertising a Children's Party Tram service. Ballarat 21 is currently being used as the Party Tram. The first Party Tram hire took place on 22 June 2002. The hirers provide their own party decorations and the Museum provides relevant kiosk facilities.



With the completion of the archives vault in the new Northern Depot, work has begun rounding up archival material previously held off site.
John Radcliffe



Chris Steele commences loading the compactus, which is the first storage unit installed in the new AETM archives. John Radcliffe

BALLARAT

Ballarat Tramway Museum
PO Box 632, Ballarat, Victoria 3353 http://www.btm.org.au

From Dave Macartney

A charter with a difference took place on 9 May.

A group of people from Cardigan Lodge Motel hired 671 for their morning tea break during a tour of Ballarat. The motel did the catering, so there was a minimum of effort required from the tramway. The group consisted of elderly people from the Sydney region, and during the depot inspection that followed the tram ride it turned out that one of the ladies had known the general manager of the Meadowbank Manufacturing Company many years ago.

Another slightly offbeat visit occurred on 14 April when a group of members of the Central Highlands Historical Association paid a visit to the Museum's house at Bungaree. The details of the house, built by the Railway Department in 1926, were discussed, and some of the railway history in the area looked into. Richard Gilbert handled both of these charters.

In the workshop, No. 27 has had the wheels and truck frame re-united. The axle bearings have been re-metalled, as have the armature and motor suspension bearings. The truck has been out of square for some years, causing uneven flange wear, but this is being rectified. Once the armatures have been returned from insulation renewal the truck should go back together rapidly.

Most of No. 28's interior painting is complete, with the exterior work to be done as soon as winter eases back a little. The interior panel work is in Mission Brown, rather than the Indian red used on No. 26. Rubbing back various areas inside the car revealed only the brown of the M&MTB underneath the SEC green, so presumably the interior of No. 28 was not redone when the car arrived in Ballarat in 1931. The exterior was still in red when it was decorated for the Coronation of King George VI in 1937, with repainting into green following soon after. All the windows have been installed, seats and sanders

Frank Puls and Austin Brehaut with No. 26 on the day of the Queen Mother's funeral. They wore black ties for the day.

refitted, and a test run conducted in Wendouree Parade. This resulted in scraping noises from underneath. A close inspection over the pit revealed that one of the brake rods had been turned through 90 degrees during reassembly. In theory this should not matter, but wear patterns were such that it was rubbing on the spokes. Turning it back to its original position solved the problem.

Scrubber No. 8 continues to be upgraded as time permits. A windscreen wiper has been fitted to one end, with the other to follow when another wiper motor is obtained. Some welding has been carried out to strengthen parts of the underframe showing signs of wastage. The lighting system is being tackled – a daunting task as it appears to have been fitted in a totally random manner.

BENDIGO

The Bendigo Trust
1 Tramways Avenue, Bendigo, Victoria 3550

From Len Millar

Thirtieth anniversary of the closure of the SEC system

Sunday, 16 April 1972 saw the end of SEC tram services in Bendigo. We observed the day by sprucing up SEC-liveried trams Nos. 5 and 26, and parking them at Charing Cross prior to speeches, nibbles and black ribbons. These two cars formed part of the four tram side-by-side convoy up Pall Mall to the Depot on that fateful day 30 years ago. Birney No. 28 was the last tram off the streets bearing dignitaries and SEC people. In December that year, it was one of our first Talking Trams.

Easter

Easter, our busiest time of the year, passed successfully into history.

We ran a basic 20-minute service, requiring four drivers each day, and there were few problems. We put ticket sellers on trams leaving the depot, and were surprised that they collected a significant number of fares. Our usual ticket selling precincts are the Central Deborah Gold Mine and the tram depot, but some passengers slipped through the net. It has led us to reconsider putting conductors back on the trams. A plan for doing so is being prepared, and will be adopted if it is shown that engaging conductors is financially attractive for us.

The Tram Cavalcade in Pall Mall this year was greatly assisted by the placement of steel barriers between the trams parked in Pall Mall and those using the adjacent service track. In previous years our drivers had to stay alert for people walking between the parked

There were festivities at Charing Cross to mark the thirtieth anniversary of the closure of the SEC trams in Bendigo. Bogie trams 5 and 26, which both featured in the final four-tram convoy down Pall Mall on the closing day, were given a thorough going over by volunteers during the preceding weekend. Tram replacement bus 17, donated by Walkers Bus lines to us, is just visible to the right of car 26. Councillor Daryl McClure, a Bendigo Trust board member, addressed the crowd. Dennis O'Hoy

trams. Another change made this year was to remove the foot-gong pedals from the parked trams to prevent the cacophony of misleading noise. The many people milling about Pall Mall in the vicinity of the parked trams could not tell if the gongs were coming from a display tram or from a service tram.

Perhaps the highlight of the Easter events was the Torchlight Procession on the Monday night. Apart from many Country Fire Authority tankers and floats, we had four trams participating in the procession. We removed the twin longitudinal tip-over seats from W1 class car 31 to create a stage for a jazz combo that was ably assisted by our new driver Wes Hunter. Our newly overhauled and painted 1954 Bedford tower wagon, No. 35, single-truck car No. 7, maximum traction car No. 122 and No. 31 all joined in the fun.

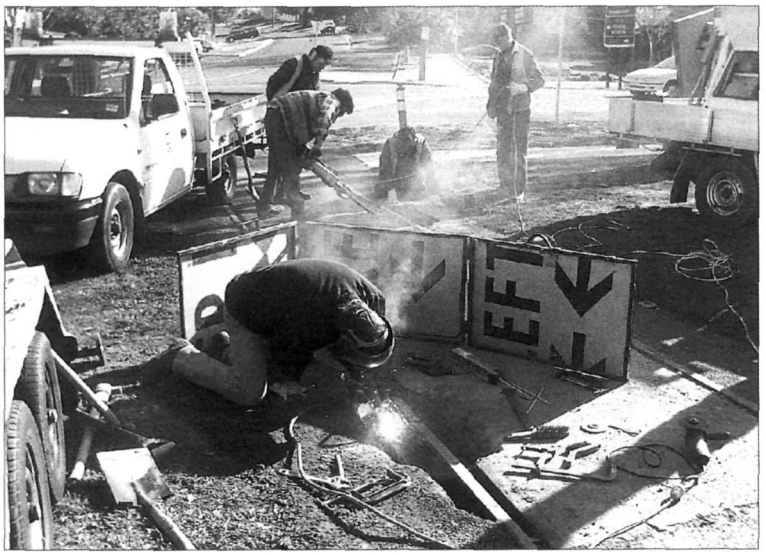
Your correspondent freely admits that driving a tram through cheering crowds 15 and 20 deep from the city centre to Lake Weeroona was an unforgettable experience. Another such experience was the sight of Bendigo Trust CEO, James Thompson, dressed as the Easter Bunny on No. 35.

We express our appreciation to Michael McGowan who again ably supervised the tram action!

Tramways Avenue track renewal

For some time, we have been tolerating a major rail joint failure in Tramways Avenue to the extent that a 5km/h speed limit was applied. Finally, to coincide with reconstruction of the road and kerbing, we decided to relay the track.

Contractors repair a broken rail joint at Cathedral Curve in High Street. Kym Smith



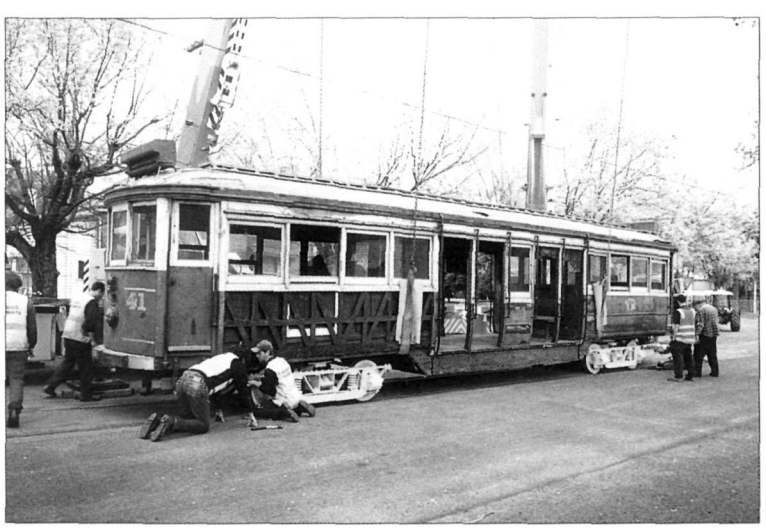
Bendigo Tramways workers are seen repairing one of three broken rail joints in Violet Street near the mine terminus.
Kym Smith

The original 1903 grooved rail was removed and 'as-new' 80-pound rail, manufactured in 1884, was installed. This rail came from a significant quantity purchased by the City of Bendigo some years ago when many Victorian branch lines were being dismantled. The work was undertaken after the April school holidays when a 30-minute service was in operation. It took a fortnight to complete and included provision of improved track drainage and the laying of mass concrete between the rails.

Whilst the work was going on, tram access to the depot was not possible, and some interesting arrangements were put in place. All the trams stored at the gasworks depot were retrieved and swapped for five serviceable trams including single-truck car No. 20 and Birney No. 28, and scrubber 9W. Our gasworks depot sprang into life as a running shed, but not without some pain.

Access off Caledonia Street is not by way of a conventional set of points with a movable point blade. Rather, our workshop staff had to place metre-long pieces of steel in the flangeway to derail an incoming tram at dead slow speed under the watchful eyes of helpers.

Fortunately, the days of a very long wandering lead have now passed. Recently we assisted Alstom Australia, an active contractor in the Melbourne scene which has our Hino scissors lift tower wagon on long-term lease, to install poles, span wires and trolley wire in from the street and over the depot fan. One day we



Victorian Railways tram No. 41, used on the former St Kilda-Brighton Beach line, arrived from the MTPA at Haddon on 5 October 2001 for restoration. A detailed inspection of the tram indicates the 'railway trams' were of substantial and quality construction.
Dennis O'Hoy

will install troughing in the shed, but for now, what we have is just fine.

Whilst Tramways Avenue was unavailable, the Talking Tram Tour continued north past the triangle instead of turning left to enter the depot. Although we continued to invite our passengers to make their own way to the depot after the tour to inspect our trams, it was quiet there for the two weeks. Our drivers were given a more relaxed timing for the tour, and all went well. By the end of the project, there was a noticeable amount of rust on the city depot's fan rails. This soon disappeared following resumption of normal operating arrangements.

For the record, maximum traction car M&MTB No. 122 driven by Trevor Lamb was the last car over the 1903 Tramways Avenue rails. 9W took the honours over the replacement rails, with 50 or so passes to eliminate a mix of mill scale and concrete. Simon Jenkins almost needed to resort to a pen and piece of paper to keep track of his running total of 150 metre-long sweeps to and fro along the new track. He was grateful that the relatively new and taut trolley wire permitted 'spearing' the skid shoe trolley pole during the two days. Swinging the pole 50 times would have driven him to distraction!

Brill 21E truck for Hobart

By early July, two new locally made steel side-frames had arrived in our workshop, and were soon having bracing, springs and bearing plates bolted to them. The truck is being assembled for Hobart City Council for HMT car No.22. New axles have also been made and are ready for pressing on the gears and wheels which are all new. The motors are being re-assembled after all components have been overhauled. We understand that it is the first Brill 21E 7ft 6in wheelbase truck to be constructed for over 50 years.

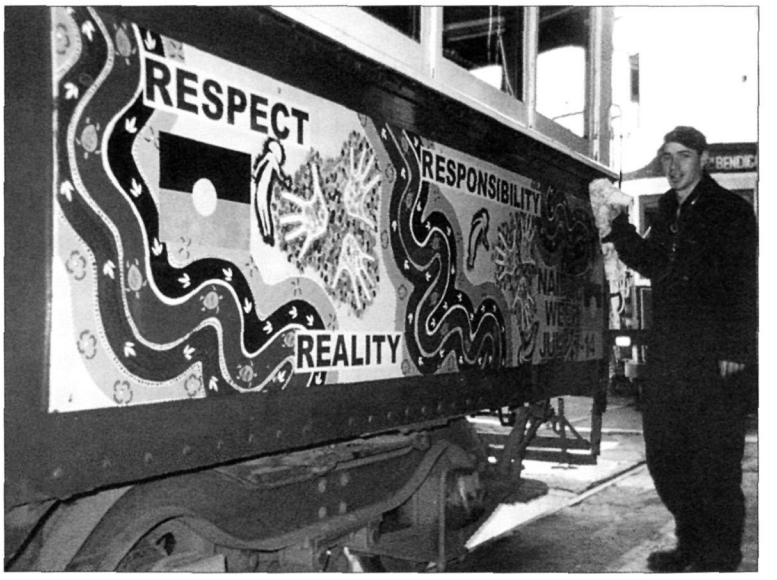
W1 No. 31

Following problems with the 'Rivers' tram earlier in the year, the car has spent a lengthy period in the workshops. It now has new bearings and reconditioned motors, and the tram seemingly glides along the track. The brakes are highly effective, and it is quiet and free-rolling.

Although the Rivers Company chose not to renew its sponsorship of the tram, we are pleased to report that the Bendigo United Friendly Society chemist quickly stepped in to seize the opportunity for some good corporate exposure.

Birney No. 15

With assistance from our Driver Examiner Michael McGowan, Birney No. 15 will again have its 'dead man's handle' equipment. Anthony Jennings has had the benefit of Birney (MTT Adelaide) No. 302 parked ahead of it on Road 3, so he hops from one tram to the other with measurements and pieces of pipe being replicated. It could be safely said that it has been a head-scratching exercise. Now all we have to do is re-educate our drivers to the pleasures of driving a Birney in traffic.



A NAIDOC Week panel on car 808 being polished by Ashleigh John. Len Millar

Dennis Rodda trial fits a repaired door motor compartment cover to X1 class No. 466. Len Millar

Scott Gard is doing the hardest job – sanding back the ceiling varnish in No. 466. Len Millar

NAIDOC Week

July 8 to 14 was National Aboriginal and Islander Day Observance Week, and we were delighted to have sponsorship for four special signs which were carried on SW5 class No. 808. The signs were painted by students of Eaglehawk Secondary College, and one each by the inmates of Loddon Prison and Malmsbury Juvenile Centre. The signs were in traditional Aboriginal art style and looked great.

City of Greater Bendigo Cultural Officer Nadia Reid, who arranged the deal, told our local newspaper that the tram was one of the great outcomes of NAIDOC. "It's a way to promote the week without being in everyone's face. They are four fantastic pieces! The Bendigo area theme for the week was 'Bridging the Gap'. Next year we may get the funds to paint an entire tram."

X1 No. 466

Progress on this contract is picking up pace. The back-breaking task of scraping the old varnish off the ceiling has been undertaken by Scott Gard. Denis Rodda and Luke Jenkins have constructed four new timber sand-box/seats assemblies, and have also completed internal ply and hardwood panels. These have been trial fitted, and then French polished by Les Woodfield prior to being placed in storage ready for later installation. This will occur after the seats and wiring have been completed.

The body now sits on two-metre high stands so that under-floor works can proceed. A new M&MTB 2B truck frame has been manufactured locally, delivered and photographed. Local contractors are now wondering what their next project will be!

By Volvo to Loftus

In July, 21 Bendigo tram enthusiasts ventured sedately to Sydney to help our friends at Loftus celebrate the centenary of F class car No. 393.

We were late arriving on the Saturday evening, but our generous hosts delivered us to a good local club bistro for food, then gave us several night-time tram trips and an extended tour of their great complex. It was good to renew acquaintances with Bendigo Birney No. 30.

We joined the Sunday festivities, and set off home the next morning. Although the bus speedometer read 95km/h to your correspondent who helped with the driving, the above-freeway speed indicator read 84km/h. It was a long trip home.

Thank you to David Critchley and all the Sydney Tramway Museum members who contributed to a great weekend.

LOFTUS

South Pacific Electric Railway Co-op Society
PO Box 103, Sutherland, NSW 1499 http://www.railpage.org.au/tram/loftus

YMCA facade

The contractor for the reinforced concrete building structure scaled down his activities to relatively minor work after the last concrete pour for the stairs took place on 11 May to allow the stonemasons to commence work. On 9 May, the appearance of the site changed dramatically with the arrival of a self-erecting construction crane for use by the stonemasons. It consisted of a telescopic steel tower stabilised by massive removable concrete blocks around the base and a horizontal jib, which can turn 360 degrees around the tower.

The first stonework arrived on site soon afterwards. By the end of June its erection had progressed to the stage where a good impression could be gained of the final appearance of the facade. Builders will soon return to the site to erect steelwork for the top floor of the structure. Little did our early members constructing the old National Park corrugated iron shed all those years ago think in their wildest dreams that we would ever have a four storey sandstone building beside our tramway.

Sutherland (No.3) substation

As previously reported, this building was in the way of our proposed Sutherland extension. The front wall was approximately on the centre line of the proposed track alignment and had to be cut back about two

A view inside the new construction with the sandstone of the façade at left. This is the archives level looking south. Originally a three-story structure housing a hall with 20ft ceilings on its first floor, the reconstructed façade will provide a frontage for four floors, hence the odd position of the windows in this scene. Bob Merchant

This building at our northern terminus stands in the way of our extension into Sutherland and is being converted into our third substation. In this view looking south taken on 24 May, a new external wall is being constructed through the existing building and the original outer wall at left will be demolished to provide clearance for the tram line to pass. Bob Merchant

This view from Rawson Avenue shows the reconstruction on 7 July. The tower is reminiscent of Sydney tramway substations. The present northern terminus of the museum tram line is behind the tree to the left of the building. Bob Merchant

metres. Sutherland Council allocated $75,000 towards the necessary modifications to the building as part of a commitment to support the Sutherland extension. Earlier quotes were updated and a contractor engaged to carry out the work.

On 17 May equipment stored in the building was moved clear of the work area. Two oil switches and a transformer were moved temporarily into the fenced transformer yard. Temporary fencing was erected by the builder following which the floor was excavated and a new reinforced concrete strip footing poured. This was followed by the erection of the new brick wall two metres inside the original wall, which has since been demolished. The roof tiles were then removed from the roof for reuse and at the time of writing work is in progress on the reconstruction of the roof framing to suit the new size and shape of the building. The new roof will incorporate a small tower reminiscent of the architectural style of Sydney tramway substations.

No.3 substation will be both an operational substation providing extra power for the Sutherland extension and the Army Depot hill, and a substation museum. It will provide a home for the now historic equipment from the Gray Street, Kogarah trolleybus substation including the rotary converter and the polished slate panels on which are mounted the various switches, relays and meters. This equipment has been stored in a less than satisfactory manner since it had to be removed from the substation at our old site. Its relocation to a permanent home will provide much needed extra storage at Loftus and will assist in the on going clean-up and reorganisation of the museum.

In the longer term it is planned to make the ex-Kogarah equipment available for occasional use whilst a silicon diode rectifier will provide power on most occasions.

New toilet block

The brickwork for this building has been completed and cleaned on the outside. Three cast iron window frames have been fitted which complement those in the workshop. The inside walls have been bagged ready for painting and a favourable quote has been received for the completion of the roof from the builder working on the No.3 substation.

Workshop extension

An application made to the Department of Land and Water Conservation for financial assistance towards the completion of the toilet block and the workshop extension resulted in a grant of $10,000 and a loan repayable with interest over ten years amounting to a total of $40,000. If all goes to plan we should have an unprecedented four separate building projects in progress simultaneously.

Replica waiting shed

The replica Federation-style waiting shed erected around the rear roller shutter in the display hall has been painted and some of the original French tiles from the Railway Square waiting shed have been cleaned and placed on the roof. These were made by Guillard Freres (Brothers) of Marseilles.

As a point of interest, Marseilles, or French Pattern, interlocking roofing tiles were apparently first imported in quantity by W.H. Roche & Co. of Melbourne from the 1880s. The Wunderlich brothers in Sydney took over W.H. Roche in 1893 and by 1894 became the sole agent for the importation of Marseilles tiles into Australia. In 1897 the company claimed yearly sales exceeding two and a half million tiles. The company claimed that by World War 1, when importation of tiles ceased, it had imported a total of 75 million tiles in 110 full cargoes, enough to roof 40,000 homes of average size, making Wunderlich the largest, if not the sole, importer of these tiles into Australia.

Berlin cars

Car 3008 has been repainted in its original cream colours and has received its original fleet number, 5133, as well as the earlier style monograms. To complete the job aluminium mouldings have been installed to create the two stripes below the windowsills. Brian Hague has made a pattern to cast the specially shaped mouldings on the end aprons. Trailer car 3717 has been repainted in orange and cream but has received its former computer number, 2 69 017-8, a very strange number for a tram.

First use of overhead crane

On 4 May Bob McKeever carried out a light machining of the commutator of the third P car motor armature. An overhead crane was used to remove the commutator. This was the first occasion that one of the overhead cranes was used other than for testing and training purposes.

Christchurch 'Yank' 12

As reported in a feature article in this issue, the body of Christchurch 'Yank' car No.12 has been acquired and transported to Ferrymead for assessment prior to restoration. This car is almost identical to a Sydney G class car.

This car will fill the last gap in our collection of Sydney tramcars (with the exception of the H and M types which were not produced in fleet numbers), and at the same time gives us an example of a Stephenson-built car and a New Zealand tramcar. Gifts towards its restoration and transport to Sydney are now being sought.

EDITOR'S NOTE:

The Sydney G class cars were delivered in 1899. The American Car Company of St Louis constructed cars 124-131 and the J.G. Brill Company of Philadelphia built cars 132-139. In 1902 the American Car Company came under Brill control. The John Stephenson Company, which was taken over by J.G. Brill in January 1905, constructed Christchurch cars 11-20 at their Elizabeth, New Jersey plant in the same year. This may explain the close similarity with Sydney's Brill-built cars.

Similar cars were also built for the Metropolitan Street Railway Company of New York.

In 1903 the Christchurch Tramway Board engaged F. Hulbert Chamberlain as engineer. Chamberlain, an American, had just completed an engagement with the Sydney tramways. It can be surmised that Chamberlain's knowledge of the Sydney G cars, and of

Vale Ben Parle

Members and friends of the Museum were deeply saddened by the passing on 2 July of Bennet Parle.

Ben lost a long fight to recover from the effects of an accident on 17 August last year, when he was struck by a car near his home.

Ben was one of the founders of the Museum, holding membership number 3. He was a stalwart worker and supporter over more than 50 years. For a very long period until his accident, he filled the important role of Membership Secretary.

Ben's memorial service on 5 July was attended by some 50 of his friends from the Museum, and their partners, by whom he will be sorely missed. A number of traffic staff wore their uniforms to the service as a special tribute to Ben. Our deepest sympathies are extended to Megan and to all of Ben's family.

the similar cars in New York, led him to specify the same design for Christchurch. The original tender specifications and drawings prepared by the Christchurch Tramway Board included this type of car, and others including a four wheel car similar to the Sydney D type, represented at Ferrymead by Christchurch No. 1.

Retreat from Maitland – and Port Kembla

On 3 June, three of the six cars located at the Hunter Valley Training Company at Maitland were loaded onto trucks. Melbourne SW2 class 432, ex-ballast motor 42U and replica sprinkler car 113W were unloaded at Loftus the next day. Newcastle L/Ps 298 and 341 and Melbourne W2 class 245 remain and will shortly be transferred to storage at Cessnock.

As donations have been received towards the restoration of car 42u, our Tuesday night crew has begun stripping it down to the bare underframe. The side members have suffered from many years of open storage: it spend most of its railway life in the open at Prince Alfred Sidings at Central, from the effects of the lead acid batteries carried in railway service and from at least one heavy impact that bent the frame. It is planned to buy new channel iron frame members for the perimeter frame and to hot rivet the existing cross members and cross bracing to them. The cross members will be renewed if required.

W2 cars Nos. 370 and 577 were moved from Port Kembla to storage at Robertson on 17 June. They have since been covered with tarpaulins to protect them from the worst of the weather.

BYLANDS

Tramway Museum Society of Victoria
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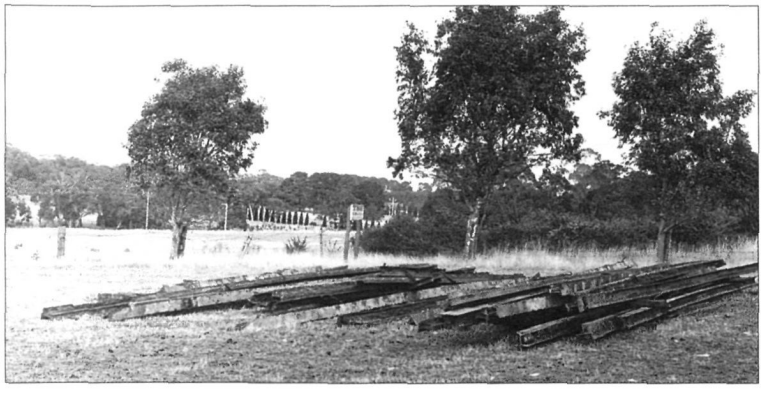
From *Running Journal*

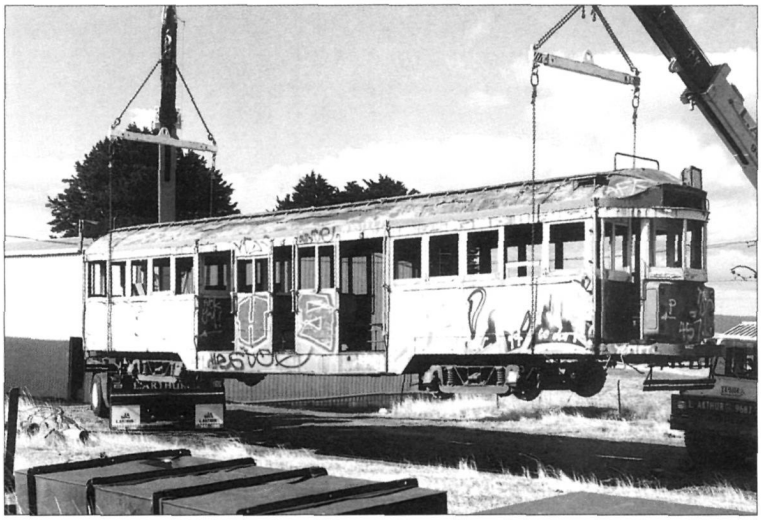
Rail obtained

Late last year, the City of Greater Geelong Council approved a $2.5 million plan to redevelop Ryrie Street, Geelong as part of an overall plan to refurbish the central business district of this city. The successful tenderer for the project is Streetscapes Pty Ltd, a large Melbourne based company specialising in this type of work. The plan as designed allowed for a 3-metre centre median strip with two traffic lanes each side. In order to achieve this, the current angle parking is to be replaced by parallel parking. Centre of the road street lighting would also be provided.

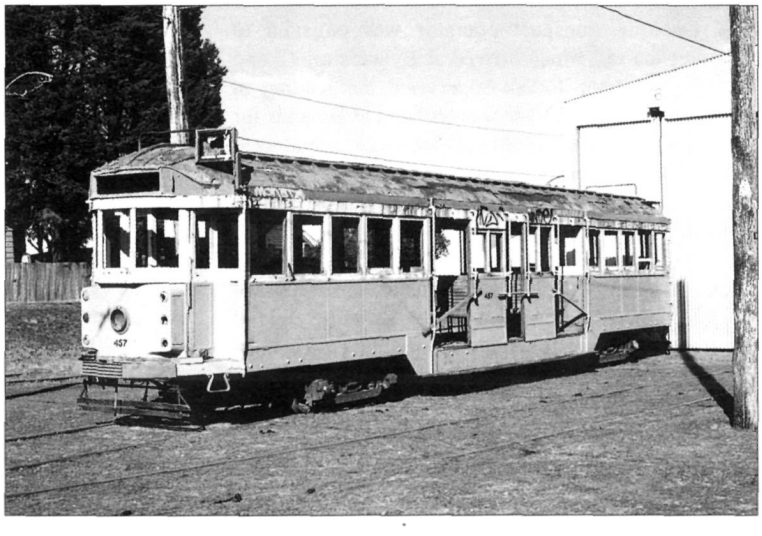
Work commenced early in May at the eastern end of Ryrie Street between Yarra and Bellarine Streets. It soon became apparent that excavating a hole in the middle of the road is not as easy as it might appear. The contractor soon found some difficulty when he uncovered the tram rails still in position. Ryrie Street had a double track electric tramway with centre poles and bracket arms along its complete length. When electric trams were first introduced into Geelong in 1912, the original tram lines were laid in a westerly direction in Ryrie Street from the Moorabool Street intersection. The track was laid in 941b grooved



Recent road works in Geelong saw a quantity of tramway grooved rail recovered from beneath the road surface in Ryrie Street. The Society snapped up the opportunity to acquire several truckloads for use at Bylands. Graham Jordan



The Society recently took delivery of W2 457 which had been a fixture at the Essendon Traffic School since its withdrawal in 1980. The tram is seen here being unloaded at the rear of road 2 at Bylands on 4 April 2002. Several weeks later, it was moved to road 6 for repainting. Graham Jordan

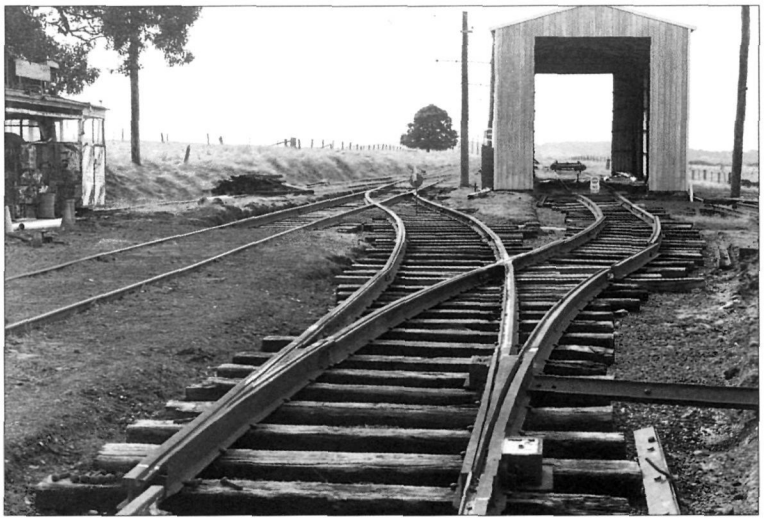


To present a more appealing sight for visitors, car 457 was repainted in a camouflage green to hide graffiti. Numbers were applied to identify the tram.
Graham Jordan

tramway rail with several crossovers. In 1922, extensions to the system resulted in track being laid across Moorabool Street in an easterly direction past the Geelong Hospital. This section was laid in 80lb ordinary railway rail without a checkrail due to the difficulty obtaining grooved rail after the First World War.

Within a couple of days, the contractor had removed the double track section between Yarra and Bellarine Streets, and levelled the former trackbed. Society Secretary Graham Jordan, who by chance was attending to business in Geelong the day after the work commenced, approached the City of Greater Geelong Council with a request to obtain the rail for the museum but not before some had already gone to the scrap merchant. The Council advised that the plan for Ryrie Street included the removal of almost all the remaining tram line beneath the road surface for the entire length of the street. It supplied the name of the contractor undertaking the works, and suggested that we contact the company. Another two visits to Geelong by the Secretary a week later saw an agreement reached with the contractor whereby the Society could have the entire rail being released on the condition that it would be removed promptly from site at our expense.

During the first week of June, the section of double grooved track between Gheringhap Street and Fenwick Street was excavated. This section also included a crossover which was situated outside the Post Office. Realising the importance of the rail to us, the contractor took extra care as to not damage the rail or castings. The *Geelong Advertiser* carried an article on the rail and its intended destination on 6 June, followed by another a week later.



With the new main line turnout completed, work continues on the construction of the crossover and access track for the vehicle maintenance building. Most of the rail used in this construction is grooved tramway rail that was acquired in the early 1970s from Geelong. Graham Jordan

A Geelong transport operator was engaged to transport the rail which arrived at Bylands on 12 and 13 June. Graham Jordan supervised the loading at Geelong and John Walker was on hand at Bylands for the unloading. Part of this rather large unbudgeted expenditure has been covered so far by a personal donation. However, additional donations would be welcome.

Over the next few months, it is planned that most of the rail in the two remaining city blocks either side of Moorabool Street will be removed. Subject to cost, the Society proposes to obtain as much as possible of this rail. We record our appreciation to Peter Jeffreys of the City of Greater Geelong and Wayne Jenks of Streetscapes for their support and assistance.

Why do we need this rail? We have been trying to obtain good quality rail for many years with little or no success. It is now almost impossible to buy either grooved or 'T' rail from outside sources in small, affordable quantities. Also the type, size or weight of rail which is required to match that already in use at Bylands is almost unobtainable from sources other than other preservation groups. The acquisition of the rail from Geelong will replenish our supplies of grooved and 'T' type rail. It is intended to use the grooved rail to form the double track tramway street which will run between the kiosk building and the vehicle maintenance building.

10W comes to Bylands

Regular maintenance is essential to keep our tramway in peak operating condition. This includes keeping the rails clear of obstructions and clean so that we have a good electrical return. For years now, the only way that we have been able to do this at Bylands is by hand scraping and sweeping. This has now changed.

For many years, the Society has held an interest in obtaining a scrubber tram from the Melbourne system. Whilst we supported of the decision by the Department of Infrastructure to transfer cars 8W and 9W to Ballarat and Bendigo respectively in 1999, we held out hope that we could obtain one of the two remaining cars, ex-Sydney scrubbers 10W or 11W. The Society's preference was for 10W, as in 1998 the Society made available two wheel and axle sets to the then operator, Swanston Trams, to replace worn out units.

Our years of co-operation and perseverance finally paid off when we were advised by M>Tram that 10W had been retired from service in June 2002 and that it would be made available to the Society. Arrangements were made to transfer the tram to Bylands but not without a few hiccups. The initial plan was to collect the tram at Preston Workshops on 10 July. That morning, M>Tram had 10W transferred from storage at Brunswick Depot to Preston Workshops. With a suitable vehicle, Graham Jordan reported to Preston later that day with the expectation of loading 10W for its journey north. However the lifting crew at Preston were unfamiliar with lifting single-truck trams. Also, because Preston now lacks lifting gear necessary for this type of procedure, the crew decided not to continue. No amount of guarantees of the previous experience in lifting this type of tram would convince them that there was no need for concern. A supervising engineer also had reservations about the safety aspects of the procedure, and ultimately the exercise was called off.

Scrubber 10W at the loading ramp at Preston Workshops on 16 July 2002, about to head for its new home at Bylands. In a few moments it will be loaded onto a road vehicle, ending 94 years of service on the Sydney and Melbourne tramway systems.

Michael Fedor

The only alternative was to transfer the tram to a road vehicle using the loading ramp near the entrance to the workshops. Graham Jordan, Keith Kings, Michael Fedor and Peter Carwardine reported to Preston Workshops at 9:00am on 16 July, and by 10:00am 10W was loaded onto the truck. By 12:30pm, 10W had been unloaded onto No. 2 road at Bylands from where it was driven through the shed and shunted inside the top of No. 6 road.

Subsequently, 10W received some minor adjustments and servicing which included the replacement of the carbon skid trolley pole with a wheel pole, the type used on all single truck trams at Bylands. The following Sunday, under supervision of its former driver, 10W gave an impressive performance of its capabilities.

The tram is a welcome addition to our fleet. 10W is 94 years old, having been built originally as K class passenger tram No. 763 for use in Sydney. It was converted to a scrubber tram at Randwick Workshops in 1952 and renumbered 138s. In 1959 it was sold to the M&MTB. It was delivered to Melbourne in August that year and had entered service by October 1959 having been renumbered No. 10 (later 10W). At the time of its retirement in Melbourne it was the oldest electric tram in regular operation.

The Society wishes to record its appreciation to Russell Brooks and Peter McKenzie of M>Tram, and Russell Nathan of its predecessor, Swanston Trams, for their total support and commitment in making 10W available to the Society.

10W is rolled onto the road vehicle at Preston Workshops. It will soon be on its way to Bylands.

Michael Fedor

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