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PORTLAND'S CABLE TRAMWAY

TROLLEY WIRE

AUSTRALIA'S TRAMWAY MUSEUM
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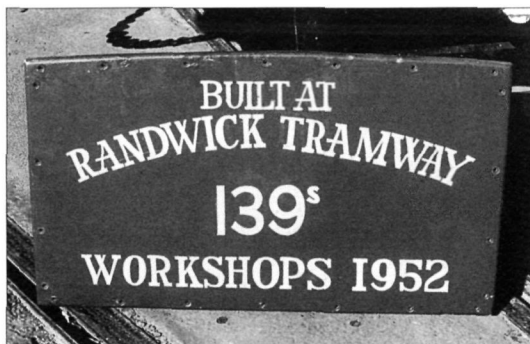
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Norm Cross hands over the 1952 builder's board from 139s to the Sydney Tramway Museum's Chief Engineer Richard Clarke (left) at Bendigo. Norm had rescued the board from the rubbish at Preston Workshops after working as an apprentice on 139s. The board travelled to Sydney aboard Birney 11.

Kym Smith



Howard Clark

Front Cover:

Only eight Birney cars were imported into Australia and seven are still in existence today. All seven were in Bendigo for the Tramway Centenary, and are seen ready for a ceremonial tour of the Bendigo system on 12 April 2003.

Kym Smith

Back Page Top:

A unique opportunity to see the products of three European tramcar manufacturers side by side occurred in the Docklands, Melbourne. Citadis 3001 (ALSTOM), Eurotram 018 (Bombardier) and Combino 3502 (Siemens) line up for the photographers on 10 May 2003.

Ray Marsh

Back Page Bottom:

Former Melbourne X1 class 466 rolls out of Bendigo depot during its launch on 12 April 2003 with co-owner Len Millar at the controls.

Ray Marsh

PORTLAND'S CABLE TRAMWAY

By Richard Youl

Regular readers of *Trolley Wire* will recall a proposal several years ago for a cable tramway in Portland, in south-western Victoria.

The basis of the proposal was that although Portland was in a region with natural tourist attractions, it lacked a significant man-made attraction which would encourage tourists to stay longer in the town.

Even before a route had been identified, work commenced on restoration of former Melbourne cable trailer No. 594 as a youth training scheme. Construction of a self-propelled dummy commenced using some authentic parts.

Funding of such a large project presented a problem. However, a generous donation of \$220,000 by the Handbury family started the ball rolling. This was followed by \$500,000 from the Federal Government, \$775,000 from the Victorian Government, \$175,000 from the Portland Council and a further \$500,000 from other sources – a total of \$2.17 million.

The chosen route commences at a balloon loop outside the Powerhouse Museum which contains the cable trailer mentioned above and a small motor vehicle museum. From there, the line runs in an easterly direction past the depot, along which passengers experience around 100 metres of street running. The next stop is the Botanic Gardens after which the line turns north and runs close to the Portland harbour. A stop at the Portland Maritime Discovery Centre is followed shortly afterwards by a passing loop. After climbing the headland and passing

several attractive homes, the line turns east to terminate at the 25 metre high water tower which also serves as a lookout and museum to World War II. At this point the tram sets are turned on a triangle that overlooks the ocean. Each tram stop is adjacent to a waiting shed reminiscent of those on St Kilda Road, Melbourne.

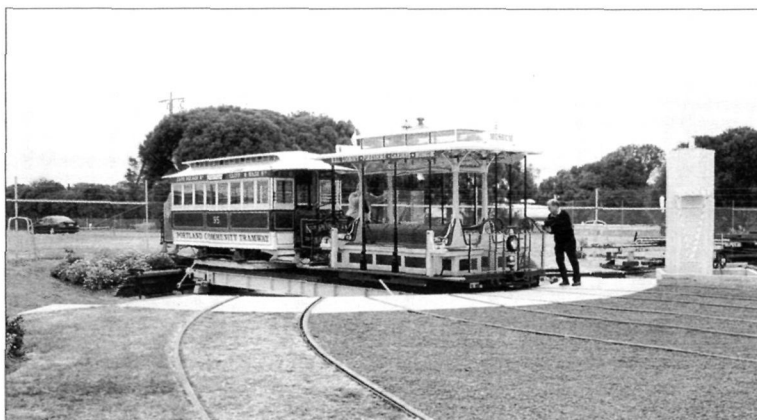
The total length of the line is 3.7km. Whilst the route may appear straightforward, it passes through three parcels of Crown land and negotiations including indigenous approval were necessary before tracklaying could commence. Track is laid with standard rail line of 45lb and 60lb weight with tramway-style pointwork.

Although there are two cable trailers, only one, No. 95, is in daily use. It entered service in November 1886 and was used on the Victoria Street route, running via Collins Street. It was obtained from Newton Williams who built a motorised cable dummy about 20 years ago. No. 95 was restored by Portland Cable Trams and was ready for service in February 2002.

Car 171 is owned by Daryl Hawsworth and is on permanent loan to Portland. It was built in 1886 and used on the Clifton Hill line until 1928 when it was sold and transported to Mount Macedon. Daryl bought No. 171 in 1974, and in 1980 it was transported to Blampied for restoration. In 1983, the Ash Wednesday fires claimed the life of 171's previous owner as well as destroying two other cable cars in the Mount Macedon district.

A turntable long enough to accommodate a grip car and trailer is used to turn the tram set at the depot terminus.

Richard Youl

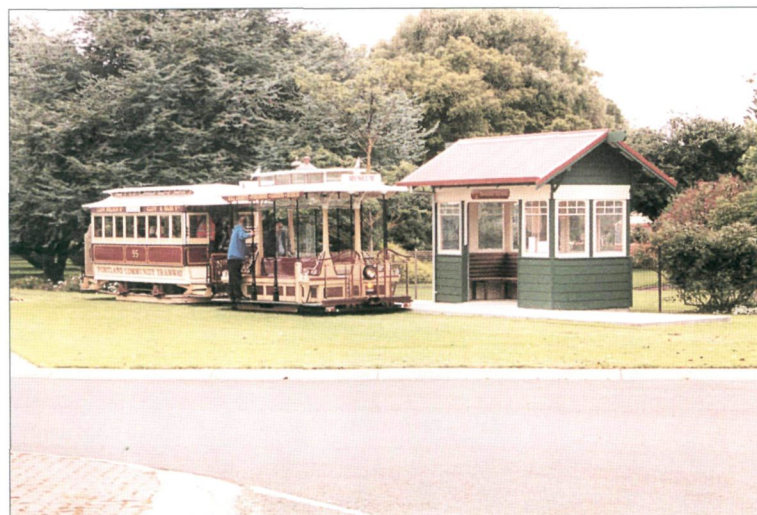




The three-track depot can house three grip car and trailer sets and in addition to the operating cable set also houses cable trailer 171.
Ian Saxon



The tram set is seen waiting for departure time at the depot terminus on 3 March 2003.
Richard Youl



The cable tram set arrives at the Botanical Gardens stop on 3 March 2003.
Richard Youl

The Maritime Discovery Centre stop has a slightly larger shelter than the one at Botanical Gardens. Here the line is located in the reserve between the shopping street at left and the beach.

Richard Youl



Restoration of 171 was completed in time for the centenary of cable trams in 1985. Since then, it has operated at Lake Goldsmith, Bendigo, Melbourne and Kilmore in Victoria, and Wollongong and Loftus in New South Wales.

As mentioned above, the dummy operated at Portland is substantially a replica powered through a hydraulic drive by a 2.2 litre diesel engine – large enough to cope easily with the grades on the line. The dummy is adequately sound proofed and moves along quietly. The engine exhaust is piped through to the rear of the trailer. From inside the vehicle, the trailer is remarkably quiet. One only hears noise from rail joints with some rattling of the windows as it would have been in days of old. The dummy cost \$180,000 to build – sufficiently high to prevent construction of a second vehicle.

Ultimately, Portland Cable Trams would like to have three trams in service. The present set has a capacity of 48, the same as that of a tourist bus. At times prospective passengers have had to be turned away.

Trams operate daily except on Christmas Day on a headway of 75 minutes. The first service leaves the depot at 10:00am, and the journey time is about 60 minutes with a 15 minute layover at the depot between trips. Although five round trips per day are scheduled, the presence of potential passengers can result in additional services being scheduled at 4.15 and 5.30pm.

The maximum speed of the tram is 10 km/h. The conductor rides in the trailer and, as well as attending

to fares, provides a commentary on sights along the way.

The operation is staffed by approximately 60 volunteers, the General Manager being the only paid employee.

The service celebrated its first 12 months of operation on Sunday, 2 March. The first year proved to be successful with 14,000 passengers carried. The project has also received awards from the National Bank, COTMA and Kleenheat Gas.

On 3 March, I rode the second trip of the day, which had eight passengers on board, four alighting and four more boarding at one of the intermediate stops. With tickets available for all-day use, passengers are able to leave the trams at any of the stops and resume their journey on a later service.

At present two busy roads are crossed and these are negotiated with the help of the conductor carrying a red flag. Not all government authorities are happy with this arrangement, and in due course flashing lights will be erected.

Although insurance costs have doubled since services commenced, the line continues to operate under a scheme introduced by the Victorian Government.

To find the line when arriving by road from Melbourne, visitors to Portland are advised to turn left towards the bay when nearing the town centre. Day pass prices on the tramway are \$25 family, \$10 adults,

\$8 concession and \$5 child. Further information can be obtained from Portland Cable Trams' website www.portlandcabletrams.com.au; their phone number is (03) 5523 2831.

Thanks are extended to General Manager Jeff Constantine, President of Portland Cable Trams, Des Hein and others who assisted the preparation of this article.



The tram crosses residential driveways on its journey to the Powerhouse Museum.

Richard Youl



The motorised grip car with trailer 95 swings towards the water tower lookout and the terminus high on the headland at Portland.

Richard Youl



The tram set is seen on the headland at the terminus 'Y' during reversing operations on 24 March 2003.

Ian Saxon

This article appeared in the 1 July 1911 issue of Electric Railway Journal, Volume No. 38 Number 1, pages 15-17. The cars referred to are those of the O class numbered from 803 to 947 and 949 to 999. The cars then being built were numbers 1000 to 1129.

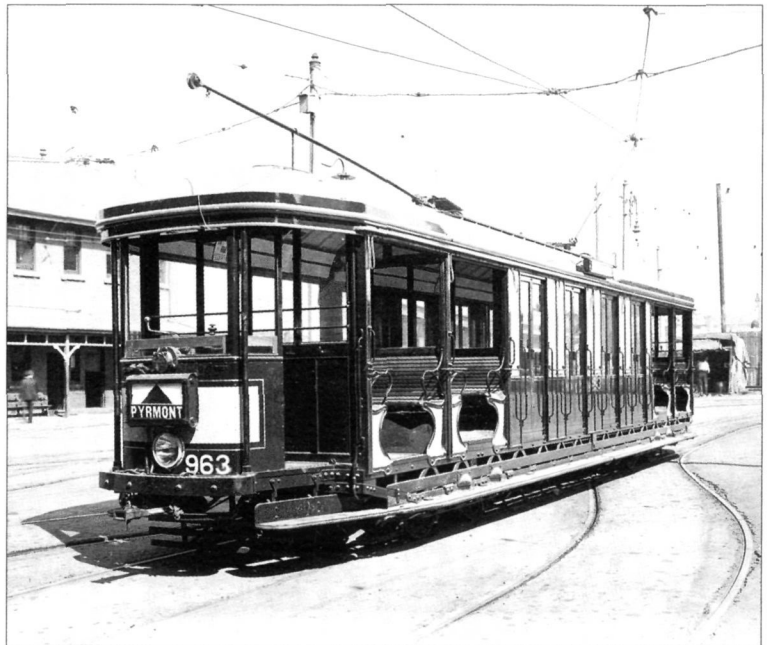
STANDARD CAR OF THE NEW SOUTH WALES GOVERNMENT TRAMWAYS

This type of car combines large seating capacity with exceptionally light weight. The body is framed separately from the structural steel underframe and is bolted down on the underframe.

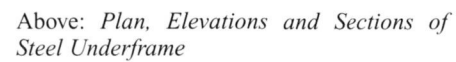
The New South Wales Government Railways & Tramways has in service in Sydney 195 double-truck cars of an interesting design which has been adopted as standard by the tramways department. They are of the combination open and closed type and seat eighty passengers in sixteen cross seats arranged back to back. The enclosed section of the car body, which is 19-ft long, contains eight cross seats and is entered from the running boards through four double sliding doors in each side. The open sections at each end are enclosed by canvas curtains which are stiffened with galvanised iron strips sliding in grooves in the posts. Glass-enclosed motormen's vestibules are provided at each end of the cars. These vestibules are narrower than the car body, and are tapered to allow proper clearance between two cars passing on a curve of 66-ft. radius with tracks on 12-ft. centres.

The car body is built separately from the steel underframe, and is bolted down on the top flanges of the side sills. The two principal members of the underframe are

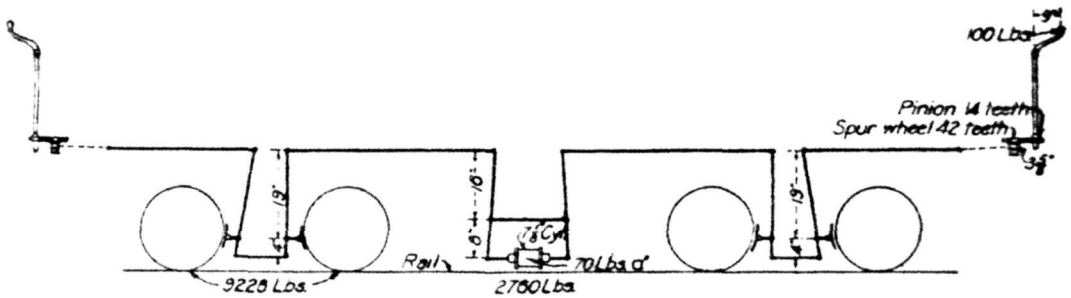
the latticed girder side sills. These are built up of two 3-in. x 3-in. x 3/8-in. angles and 1-in. x 5/8-in. lattices. Each piece of lattice is continuous for four or five panels in order to reduce the number of rivets in the top member, so as not to interfere with the bolts used for attaching the car body. The girders are stiffened at the bolsters with a 1-in. flat plate, 8-ft. long, riveted to the top member, and an angle 3-in. x 3 in. x 3/8-in. x 10-ft. long, riveted to the bottom member. The body bolsters are built up of two 1-in. x 6-in. plates. The top plate is bent down inside of the top angles of the side sills. Six angle iron transoms connect the two side sills and support the central longitudinal filling pieces on which the car body rests. On each side of the bolsters light T-irons are riveted across between the side sills to support the ends of two similar longitudinal members which rest on top of the bolster and carry the motor trap doors in the car floor. The end sills are 3-in. x 3-in. x 3/8-in. angles, bent around the corners and riveted to the bottom angles of the side sills.



Brand new Sydney standard car, O class 963 is seen in the yard at Ultimo Depot.
NSW Government Printer 1733

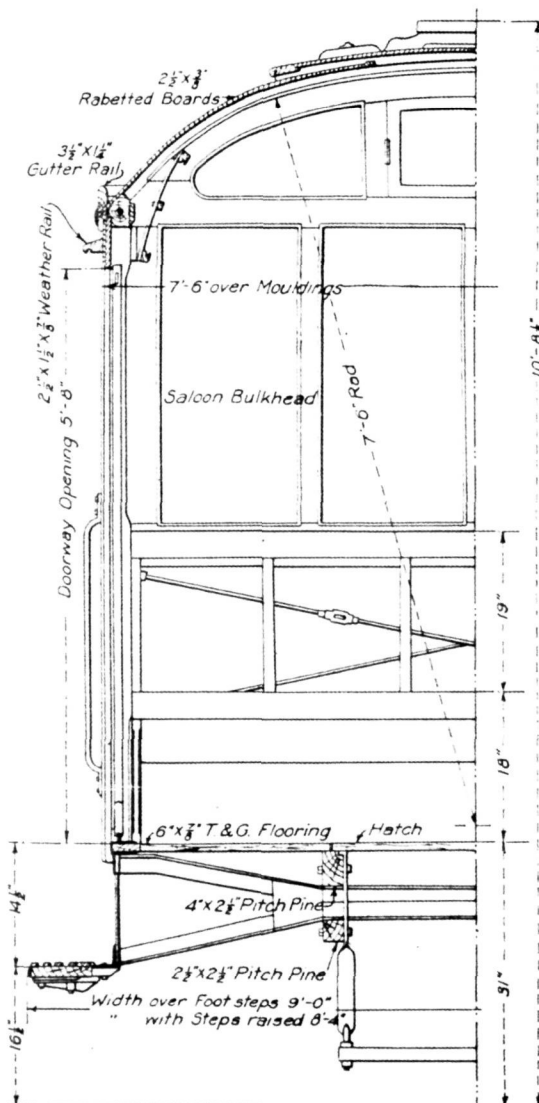


Left: *Motor Truck*



Above: Diagram of Brake Leverage

Below: Half Cross Section

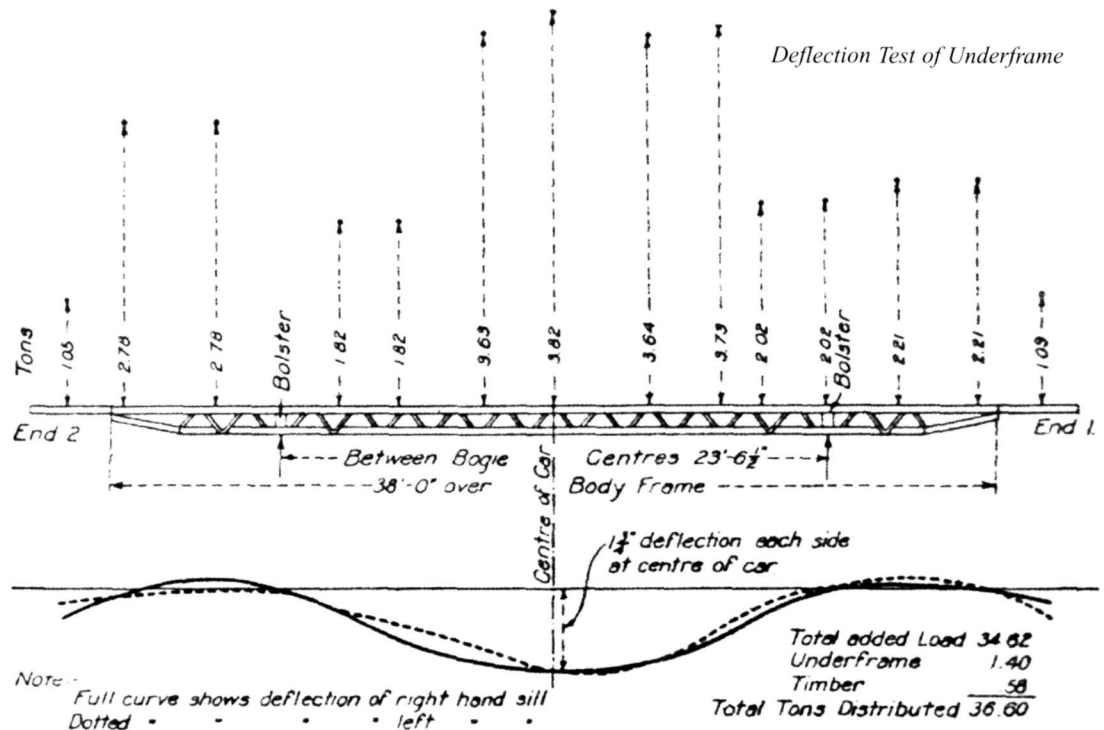


The platform underframing consists of two 4-in., 7-lb. channels, bolted under the gusset plates of the transom nearest the end sill and resting on top of the end sill. These channels support the 5-in. x 3-in. angle-iron bumper. The platform floor is supported in the centre by two wooden sills, 4-in. x 2-in., which rest on the body end sill but are not bolted or otherwise fastened to the body flooring. This platform construction was employed in order to minimise the damage to the car body and under-framing in the event of collisions, and it has proved entirely successful, for in three severe collisions the platforms have been the only parts damaged in either car.

The steel underframe weighs only 3140 lb., but it is very rigid. Assuming a maximum load of 160 passengers, the uniformly distributed load on each sill is 33 lb. per inch of length. The diagram on page 10 shows the deflection of a complete underframe under a test load of 82,000 lb., which is equivalent to 72.5 lb. per inch per sill. With this load the maximum deflection at the centre of the car was 1-in., and the two side sills showed approximately uniform bending at all points. In riveting up the latticed girders they are given a camber of 1-in. at the ends and 3/16-in. in the centre.

The car body is built almost entirely of wood, and is a separate structure from the steel underframe to which it is bolted. It has an arched roof, the interesting feature of which is the gutter, which is continuous around the eaves. The water which collects in this gutter is carried down to the roadbed through a 1-in. iron pipe, which forms one of the end stanchions for the motorman's vestibule. The seats in both the open and closed sections of the car are made of hardwood slats. The floor of the car is only 31-in. above the rails, except in the two compartments immediately over the body bolsters, where it is raised to 34 in. The two seats in each of these compartments are raised 2-in. higher than the other seats to offset the rise in the car floor. Pressed steel seat end frames weighing 9-lb. each are used on the open compartment seats.

Of the 195 cars in service 144 are equipped with General Electric Type M multiple-unit control and the



remaining fifty-one cars have K-6 platform controllers. Four interpole motors of 30 hp each are applied on 174 of the cars, and the other twenty-five cars have motors of the same size without interpoles. The interpole motors were furnished by Dick, Kerr & Company, Ltd., and the motors without interpoles by the General Electric Company. One hundred and thirty additional cars of the same type are now being built. They will be equipped with 30-hp motors without interpoles and multiple-unit control.

The cars are fitted with Allis-Chalmers air brakes and Sterling geared hand brakes. The air and hand brakes are connected to the truck brake rigging independently; that is, the air brake rods are connected to the two inside truck brake levers and the hand brake rods are connected to the outside truck brake levers. When the air brake is applied the truck brake levers to which the hand brakes are attached act as dead levers, and their upper ends bear against the truck transoms. The wheels cannot be locked by the cumulative pressure of both air and hand brakes, nor can the breaking of any one part cause the entire braking power to be lost. The ratio of the foundation brake gear is 11 to 1 and while this is slightly higher than is generally considered good practice the gear has been used satisfactorily for more than three years. The gear hand brake multiplies the pressure on the brake handle 14.9 times, so that with 100-lb. pressure on the handle the total braking force at the shoes is 34,270-lb. With

the air brake and 70-lb. cylinder pressure a total braking force of 31,740-lb. is obtained.

TRUCKS

The trucks used under these cars are a modified design of the diamond arch bar type with swinging bolster. The bolster is supported at each end by a double coil spring instead of the usual elliptic spring, and the load on the side frames is transmitted to the journal boxes through two small coil springs supported on a yoke which straddles the journal box. The axle journals are only 3 1/2 in. x 3 3/4 in. The trucks, as well as the car bodies, were built by the Meadowbank Manufacturing Company, Sydney, New South Wales.

WEIGHT

The following table gives the detail weights of one car with interpole motors and multiple-unit control:

	Pounds
Car body, including running boards	7,503
Underframe, including drawgear	4,798
Motor, gears and gear cases	9,824
Control, conduit, trolley bases, etc	3,028
Brakes	1,153
Trucks	4,852
Wheels and axles	5,104
Miscellaneous, (including headlights, etc)	649
Total	36,911

This is equivalent to 461 lb. per seat, 812 lb. per foot of length and 108 lb. per square foot of floor area. The cars with K-6 control and motors without interpoles weigh only 33,851 lb., which is equivalent to 423 lb. per seat, 743 lb. per foot of length and 99 lb. per square foot of floor area.

The New South Wales Government Railways & Tramways are managed by a commission of three members headed by T.R. Johnson. The chief officers

of the tramway department are J. Kneeshaw, traffic superintendent, who has supervision over the conductors and motormen; G.R. Coudrey, tramway engineer, who is in charge of buildings and track, and O.W. Brain, electrical engineer, who is in charge of power generation and distribution, and the construction and maintenance of the rolling stock. The new standard cars were designed in the office of Mr. Brain.

HERE AND THERE

NEWS ITEMS OF INTEREST FROM ALL OVER

Trams return to Box Hill

Australia's first electric tramway operated from Box Hill to Doncaster, from 14 October 1889 until 6 January 1896. Following the demise of that pioneering venture, 107 years were to pass before a tram again arrived at Box Hill – this time from a different direction, along Whitehorse Road.

The extension has been a long time coming. An article in the Sun News-Pictorial of 31 July 1936 reported that the Chairman of the Melbourne and Metropolitan Tramways Board, Mr Bell, had promised a deputation from the Box Hill Council that the Board would consider extending the Mont Albert tram line from Union Road to Box Hill if the Council could get the approval of the Minister for Works. It was to take a further 67 years for the extension to come to reality.

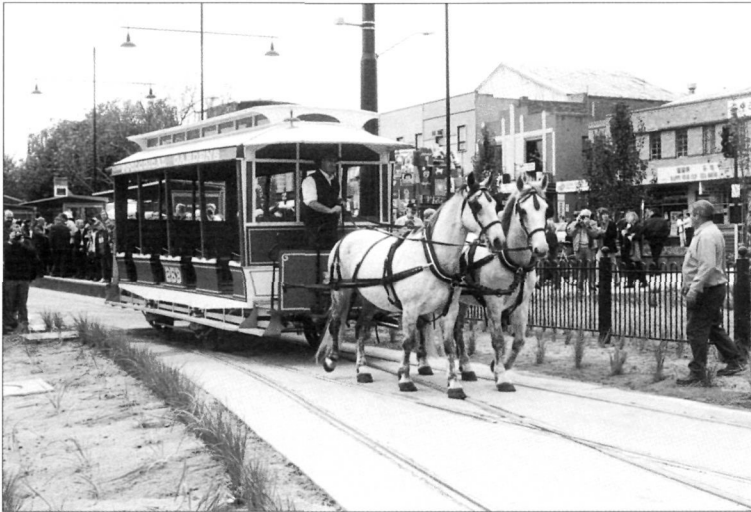
Work on completion of the extension from Mont Albert proceeded apace during early April 2003. By 11 April passenger shelters were complete at the new terminus, at the corner of Whitehorse Road and Market Street, which is named Box Hill Central. The shelters are on the south side of the track. Completed tram tracks at the 'Kerb Access' tram stop locations on the extension were dug up and relocated approximately 700mm closer to the footpaths to allow for adequate traffic lane widths.

The first tram over the extension was A2 class 284, early on the morning of 17 April 2003. It was followed by Citadis 3016 ninety minutes later.

By 28 April, driver training was under way on the extension, shuttling between Mont Albert (Union Road) and the new terminus.



A2 class 284 runs past the white horse monument at Box Hill on the first trial run over the new extension in the early hours of 17 April 2003. Stuart McEvoy Whitehorse Leader N34WH700



Drawn by two white horses, horse car 253 makes a run from Box Hill terminus to mark the start of the opening ceremonies on 2 May 2003. Steven Altham

New tram stops were installed at Union Road, both being at the traditional arrival side, right at the corner of the intersection. Many new stops are now being placed on the departure side of intersections.

The Opening

The extension to Box Hill was opened on Friday, 2 May 2003. Festivities commenced at 10:30am with the TMSV's horse tram No. 253 making a ceremonial arrival (pulled by white horses!) at Box Hill. (Further details of the operation of the horse car are given in the notes from Bylands on page 44.)

The official ceremony took place at the Box Hill Central terminus from 11:00am with Premier Steve Bracks and Transport Minister Peter Bachelor arriving on a Citadis tram to open the extension and terminus.

Also participating in the opening were the Mayor for the City of Whitehorse, Jessie McCallum, and Yarra Trams' Chief Executive Officer, Hubert Guyot.

Yarra Trams' media release for the opening quoted Mr Guyot as saying "This is a very special day for Yarra Trams and the Box Hill community. Not only will people now have access to the tram, the tram stops are fully compliant with the Disability Discrimination Act, providing complete access for those with mobility impairment".

"The extension also demonstrates modern principles of beautification and incorporates infrastructure harmoniously with the environment. The piazza-style terminus, tracks surrounded by grass and the undergrounding of services to reduce clutter to the skyline, are three fine examples of this", he said.

Yarra Trams Chief Executive Officer, Hubert Guyot addresses the throng during the opening ceremony at Box Hill.

Steven Altham



Citadis class leader 3001 arrives at 11:05am with official guests for the opening of the Box Hill extension on 2 May 2003.

Steven Altham



A 10-minute shuttle service ran from Box Hill to Mont Albert from 1:30pm until 5:45pm. On Saturday 3 May a 10 minute shuttle ran from 9:00am until 6:00pm.

The last tram from Mont Albert terminus at Union Road to Port Melbourne and return was A2 class 300. It departed at 11:03pm on 3 May and returned at 12:48am before heading to Kew Depot.

Public service commenced on Sunday 4 May with Citadis 3005 operating the 6:25am service from Kew Depot; 6:40am at Mont Albert; 6:45am to 6:49am at the new Box Hill terminus. There were two passengers on the first trip from Box Hill, accompanied by eleven enthusiasts. A lady boarded at the Wellesley Street stop and would have been the first regular passenger to use one of the new kerb access stops.

An instruction has been issued that only C class Citadis cars are to be used on route but a number of A series cars have been seen in use on the new service, from the first day of operations.

The final cost of the 2.2km extension was \$28 million. 330,000 passengers are expected to use it each year.

Stops on the extension

The Box Hill extension has Superstops at Nelson and Elgar Roads and Kerb access stops at the two other stops on the new section of line.

Like Superstops, Kerb access stops are designed to provide a new level of accessibility for commuters. The Kerb access tram stop involves extending a raised section of footpath area out to meet the tram, allowing passengers to board and alight from the tram without

having to negotiate steps. The design also allows passengers to move directly from the footpath area onto the tram without having to cross a lane of traffic.

Motor traffic is required to merge into one lane prior to the stop, and to share the tram track area with trams in the vicinity of the stop.

Kerb access stops along the extension are located between Hotham Street and Hood Street and between Wellesley Street and Inglisby Road. They consist of a platform that is 20 metres in length and 3.3 metres wide from the kerb. The completed tram tracks at the tram stop locations were dug up and relocated by approximately 700mm to allow for adequate traffic lane widths. This provides a safe width for vehicles to pass through the tram stop area.

Features of the Kerb access stop include:

- A dedicated bicycle path to enhance the safety for cyclists travelling through the Kerb access stop;
- Shelters to provide protection for passengers waiting to board;
- Tactile tiles to assist the visually impaired in locating the correct position on the platform from which to board, information devices to assist the visually impaired and other commuters, and
- Additional street lighting in the vicinity of the stops.

Motorists are required to merge into the right lane to pass through the tram stop and kerb extensions, and road markings direct motorists to move into the right lane. As the tram approaches the tram stop platform, motorists wait behind the tram whilst commuters board and alight directly from the platform.

The benefits of the Kerb access stop include:

- A safe environment for passengers boarding and disembarking from trams;
- Tram users will not have to negotiate steps when boarding low floor trams;
- Travel time savings for tram users through quicker and easier passenger boarding times.

At the date of opening of the extension, the Kerb access stop between Hotham Street and Hood Street was still incomplete.

Route Changes

With the opening of the extension to Box Hill on 4 May and the extension of route 109 to that terminus, the following other route and timetable changes came into effect:

- Route 48 travels along Flinders Street West End, turns into Harbour Esplanade and terminates in Harbour Esplanade at Victoria Harbour/Bourke Street, opposite Telstra Dome;
- Route 86 turns from La Trobe Street West End into Harbour Esplanade and terminates at Central Pier Docklands opposite Telstra Dome;
- Services on the Collins Street Extension run from 7:30am to 5:45pm on weekdays and from 10:00am to 6:00pm on weekends;
- Route 75 terminates at Flinders Street West; and
- Route 70 travels up Spencer Street and terminates at La Trobe Street.

Other Melbourne news

A Melbourne tram was evacuated after it started smoking when struck by lightning on 19 March. The tram was city-bound on route 67 in Glen Huntly Road, Glen Huntly, when it was hit by lightning about 10:00am. No one was injured, but M>Tram spokesman Andrew Cassidy said all passengers were asked to leave the tram, which was taken to the depot to be checked, as he understood there was some smoke but no fire. Mr Cassidy said he was unaware of previous lightning strikes on trams. Tram services on the route were held up for 30 minutes.

City Circle SW6 car 856 has been fitted with a pantograph. It re-entered service in late March but returned to Preston Workshops about a fortnight later.

The first D class Combino car to appear in all-over advertising livery is 3508. It is a very light blue colour with red trim. The product being advertised is 'Cold Shot', a new beer and vodka drink. The design includes a 'stubby' pictured on each section, slanting in one direction. The scheme includes fleet numbers in the normal places for the D class. The advertising was applied at Malvern Depot instead of the usual Essendon and the first day in service for the re-liveried car was 24 April.

The tram stop at St Paul's Cathedral in Swanston Street on the arrival side of Flinders Street closed on 8 May. It has been replaced by a Superstop on the departure side of Flinders Street, on Princes Bridge outside Flinders Street railway station.

Gold Coast plans jump first hurdle

Plans for a light rail system on Queensland's Gold

City Circle SW6 class car 856 sports its new pantograph in La Trobe Street on 8 April 2003.
Jeff Bounds



Combino car 3508 is the first to carry all over advertising. It is seen in Swanston Street at Bourke Street on 12 May 2003.

Steven Altham



Coast have passed the first hurdle of a feasibility study. Consultants found light rail was a better solution to the city's worsening traffic problems than other transport options. The consultants compared light rail to bus, monorail, and new technologies such as personal rapid transit and guided buses. Their report suggests a light rail route between Parkwood and Broadbeach would cost \$300-400 million and carry 50,000 passengers a day by 2011.

Queensland Transport Minister Steve Bredhauer on 8 March confirmed the concept of a light rail system had passed two key milestones in the assessment process and that light rail could play a role in the city's future transport requirements. He said the study, which was jointly funded by the State and Federal Governments, would now move to the next stage, including evaluation of short listed route options and a detailed financial and economic assessment.

Environmental factors and project delivery options would now be investigated, as would the development of an implementation plan.

Light Rail for Canberra on the Agenda

ACT Planning Minister Simon Corbell has given a further indication that the ACT Government is seriously considering a light rail transit system for Canberra.

Speaking at 'The Hot Topics in Mass Urban Public Transport' forum organised by the International Association of Public Transport (UITP), the ACT Planning Minister said that the Government was seriously exploring the viability of a fixed transit system like light rail.

"Light Rail is currently being examined as part of the Stanhope Government's Public Transport Futures

Feasibility Study being conducted by independent consultants Halliburton KBR Pty. Ltd," Mr Corbell said at the Forum. "Labor is developing an integrated policy foundation for an effective and sustainable transport system for the future of Canberra. For the first time, transport will support the economic and social development of Canberra in the future. A good transport system, including good public transport, is a major factor in making Canberra a great place to live, work, invest, visit and study.

"The Public Transport Futures Feasibility Study is examining a wide range of options that Canberra could adopt to provide for its future transport needs, including light rail. Additional to this study, the ACT Government has been formulating possible models for the development of a light rail transit system. This policy work together with the Halliburton study will allow the Government to move forward quickly."

Light Rail would be an effective inter-town public transport system, encouraging development and land-use changes along its route. However, initial policy work by the Government indicates that an inner Canberra system, linking Civic with the Australian National University (ANU), Barton, Manuka, Kingston and Russell, would bring more immediate benefits to support the redevelopment of Civic and the inner north and south.

"There is a significant employment base in the Civic/Russell/Barton triangle and Lake Burley Griffin is a physical barrier to any sense of connectivity within that triangle. A transit system between Civic, the ANU, Barton, Manuka, Kingston and Russell would boost development in all these locations, connect east and west Civic, encouraging development in Civic West and provide a quick and guaranteed transit system in inner Canberra for

tourists, commuters and workers in this location.

"Imagine working in Civic but enjoying lunch at Manuka without any traffic and parking hassles? Provision for a public transport system was built into the Territory Plan through the reservation of public transport corridors. These corridors provide the opportunity for future transit systems like light rail.

"Light Rail is only one of the options being considered by the ACT Government, including dedicated bus lanes, and obviously more study is required but we are very interested to learn about what other cities have done in using light rail and buses to improve their public transport systems. Dynamic, progressive cities invest heavily in public transport.

"Canberra is a unique city and at this time we have a unique opportunity to implement an innovative and integrated solution for transport in the 21st Century. An excellent public transport system is essential to make Canberra a more sustainable, dynamic and livable city."

Supertrams for Adelaide

The historic Glenelg tram service will receive a \$56 million upgrade, including nine new 'supertrams'. The new supertrams would seat up to 80 passengers, be super-quiet and fully air-conditioned. The disabled also would be able to board the tram. The fleet will be chosen from a range of ultra-modern trams featuring European design and latest technology.

passenger stops and tracks between the city and the Bay will be overhauled, with work starting within 18 months. South Australian Premier Mike Rann announced the upgrade on 24 May 2003 and said South

Australians adored the 74-year-old H cars but they were 30 years past their useful life. Five of the recently restored old trams would be kept for tourism, special weekends and holiday trips. Transport Minister Michael Wright said the trams were much-loved icons and would "last for many years under this much gentler regime".

Mr Rann said the opportunity remained for future extension of the tram line. New passenger stops will be designed to handle the new and vintage trams, with Smart Stops real-time travel information for passengers. Money for the three-year project will be allocated in the State Budget in the last week of May.

Opposition transport spokesman Malcolm Buckby said he supported the tram plan but questioned whether the Government was going to pay for the upgrade with rumoured \$23 million cuts to Transport SA and 3.9 per cent higher ticket prices.

X1 class 466 – a fortuitous review

With prepurchased airline tickets to attend a Department of Infrastructure meeting in Melbourne on 23 April which was deferred, Sydney Tramway Museum members Greg Sutherland and Howard Clark took the opportunity to visit Bendigo instead of forfeiting them.

Bendigo Tramways were proud to demonstrate their latest restoration (see earlier *Trolley Wire* reports on progress) in conjunction with Newstead Tramcars, the owners of Melbourne X1 class 466. Len Millar, one of the principals was out early 'getting the hours up', running-in 466 on the North Bendigo end of the track. Special permission was given for the visitors to join the car for a trip from the depot to North Bendigo thence to the fountain in the city and return to the depot.



A feature of the Grand Prix in Melbourne was a tram race held on 4 March 2003 on the Albert Park Loop. D class car 3501 driven by Transport Minister Peter Batchelor narrowly beats C class car 3033 driven by Grand Prix driver Paul Stoddart as the chequered flag (right) falls.
Ray Marsh

X1 466 is seen on a shakedown run approaching the Fountain in High Street, Bendigo on 23 April 2003.
Howard Clark



The car has been magnificently restored to full working order with a beautifully varnished interior and polished brass window frames. The rigid long wheelbase truck frame cleverly designed by M&MTB engineers of that era ensured interchangeability with W2 equipment being built at the same time. Drawings available from archival data enabled a local Bendigo engineering firm to reproduce the truck frame for the car with wheels, motors and axle sets provided from a donor W2 style No. 1 truck. The car's MV101A motors provide zippy acceleration.

No. 466 rides smoothly given some of the eccentricity of the worn track and pointwork in Bendigo. The reversible seats from Adelaide H cars, neatly upholstered in tan vinyl, are comfortable although closely spaced, as the original design called for 32 seated passengers to face a forward direction. (In today's environment designers would no doubt be forced to allow more space between the seats.)

Overall the car would be a great asset to an operator of heritage tramscars requiring the benefits of one-person operation during less busy periods. The only small criticism one could find was that a passenger in the car experiences a somewhat noisy ride on the Bendigo trackwork. This will no doubt reduce as the car 'beds down', although some underfloor insulation may also assist. The choice of tan vinyl seating provides little contrast to the beautifully varnished interior and Brunswick green may have been a better choice to highlight the fine interior woodwork. The car is a great credit to all those in Bendigo who worked on its restoration.

The car is available for sale from Newstead Tramcars, and more details can be found by contacting the principals through their email, len@netcon.net.au or bagley@netcon.net.au. Their website is—
www.swanhillsc.vic.edu.au/home/trams/01_newstead/newstead_00.htm

The sparkling interior of newly restored X1 class 466 at Bendigo depot on 23 April 2003.
Howard Clark





A study in front ends. ALSTOM, Bombardier and Siemens cars are compared at Docklands on 10 March 2002. From left are Yarra Trams 3001, Oporto 018 and M-Tram 3502.

Ray Marsh

San Pedro Red Car Line, Port of Los Angeles

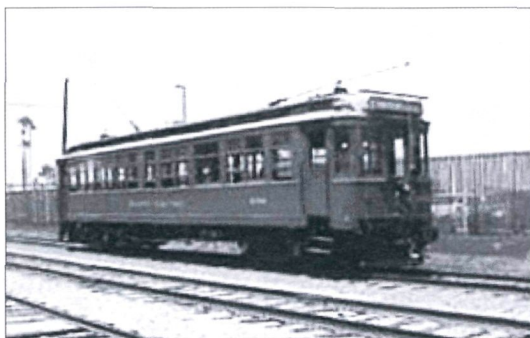
In 1961, Richard Fellows of Wilmington, California, purchased the hulk of former Pacific Electric Railway wooden interurban 963, built by St. Louis Car Co. in 1911 and scrapped in 1950, from a water heater manufacturer in Compton, California. One end had been burned beyond use and the other destroyed by a bulldozer. Richard modified the remains of No. 963 to resemble one of the Pacific Electric 1001-1044 series of wooden interurban cars.

The main car body was lengthened by about 7 feet and brand new five-window fronts were constructed, together with new ceilings. The flooring and most of the walls were replaced. Mr. Fellows determined it would be feasible to operate the car, now numbered 1058, on the streets so it was mounted on Timken military-type tandem axles. The front pair of wheels was steered through a hydraulic system operated by the controller handle. Air brakes were retained although the air compressor was run by internal combustion. The car was powered by a Chrysler industrial engine of about 250 horsepower and had a top speed of 45-50 mph. The completed hybrid rolled out of the workshop in October 1963 and ran on the streets for the next thirty-five years for civic functions, parades and movies until Richard Fellows passed away in 1997. The car appeared in the film *Who Framed Roger Rabbit?* among others.

Car 1058 was returned to the rails in a warehouse just off Pier A Street in the most southern tip of Wilmington. Two trucks were obtained from Japan and are copies of a Baldwin truck very similar to those originally under Pacific Electric's 1200 class cars when originally delivered. The wheels were replaced with American profile (AAR) wheels and the traction motors (one rebuilt GE 263A and three Toshiba Electric copies) were thoroughly serviced and rebuilt.

On 15 July 2002, car 1058 was moved by truck a short distance and placed on the rails of the Pacific Harbor Line. The car was then coupled behind Pacific Harbor Lines diesel locomotive 103 and towed some five miles to its temporary home at 22nd and Miner in San Pedro. This new home is a tent, which can house all three of the San Pedro trolleys until a new carbarn is finished. On 21 July it made its first test run on rails under its own power.

The main attractions of the line are two replicas of Pacific Electric's 500 class cars, which operated from 1911 until the mid-1930s. Construction of these two cars commenced in Seattle using both wood and steel construction. They match the dimensions of the original 500 class except that certain allowances had to be made for changes in relevant laws in the last 60 years. Similar cars at the Orange Empire Railway Museum were used to verify dimensions and details. An original set of drawings for the PE 530 class was used for the project.



A Red Car rolls again. PE 1058 is seen on a test run on the new tramway.

The Trolleyville Times



Prime contractor for the two 500 class cars was Historical Railway Restoration of Seattle, Washington. The building of the composite wood and steel bodies was subcontracted to Pacifica Marine, another Seattle firm. Trucks for the car bodies were obtained from the Seashore Electric Railway in Maine and are Taylor type TR trucks from old Boston Elevated Blue line cars. New wheels were obtained from ORX of Pennsylvania. New gears came from the Gear Works, the motor cases were repaired and machined by Machinists Inc., and the traction motors were completely re-wound by KJM Motor Services, all firms located in Seattle.

Off-the-shelf electrical equipment, all of it from mining locomotives, was specified. Similarly, the air brake equipment can be found all over the United States in commuter and rapid transit equipment. The entire design concept was to make these cars easy to maintain and to ensure high reliability while not sacrificing the look and feel of a 1911 interurban car. Spares of critical components were ordered along with the operational hardware.

The two replica PE 500s were transferred from Seattle to Southern California for the final stages of their construction and arrived in Wilmington on 16 October 2001.

The Port of Los Angeles engaged the services of Herzog Transit Services Inc. to operate the line as a heritage transit operation. Herzog began looking for motormen and conductors in May 2002. After receiving authority to proceed in mid-August, interviews of candidates were conducted, selections were made and training began on 26 August 2002.

Thursday, 24 April 2003 was another red-letter day for the San Pedro Trolley when car 501 was moved from the Wilmington facility to the San Pedro Trolley line. This time the journey was by road with police escort, not by rail.

The cars represent Southern California's great Pacific

Replica Pacific Electric Railway 501 glistens in the workshop, a credit to the craftsmen who worked on the car.
The Trolleyville Times

Electric Railway in both of its liveries, the dark red (500 and 501) that the cars wore until about 1942 and the brighter red (1058) that adorned the cars from 1942 until the end of operations in 1961.

The idea for the line had its roots in the desire for urban renewal in San Pedro, together with the promise of a local politician to bring the Red Cars back. The city had chartered 1058 when it was on rubber tyres. The idea gained momentum and the Waterfront Red Car Line was born. The Harbor Department, Port of Los Angeles, City of Los Angeles took up the idea and ran with it. Then entered two members of the Orange Empire Railway Museum, Dave Garcia, who has a legendary knowledge of air brake systems, and John Smatlak, who authored a historical study of the PE 500 class which formed a basis for the project.

The new Port of Los Angeles Waterfront Red Car Line is a 1.5 mile vintage trolley line running along the eastern side of Harbor Boulevard connecting San Pedro's cruise ship terminal with other attractions along the waterfront. There are four stations on the line. The first, at the northern end of the line at the Cruise Ship Terminal, is just south of the Vincent-Thomas Bridge. The second stop is the Maritime Museum at 6th Street; the third at Ports O' Call and the current end of the line is at 22nd and Miner. A car barn is planned for either the 22nd and Miner Streets corner adjacent to the substation or just south-east of that intersection.

Freight operation over the line will continue, but will be totally separated from the trolley operation, confined to night time running when the trolleys are not operating. The tracks at all entry points to the Red Car line have also been modified to physically prevent the possibility of freight cars entering the line while the trolleys are in operation.

The \$7 million dollar project is being financed and constructed by the Port of Los Angeles, the independent city agency which manages the bustling port facility, and the Los Angeles Department of Water and Power. The line uses a former Pacific Electric right-of-way, now used only for freight operation, rebuilt with two new sidings to accommodate trolley operations and with traditional 600-volt DC overhead trolley wire. The track, signals and overhead on the line will be tested for warranty purposes using Car 1058 in late spring 2003.

The initial four stations feature ADA-compliant high-level platforms that will make boarding and alighting easier for everyone. The new cars will easily

accommodate wheelchairs, the two newly constructed replica cars each having two wheelchair positions.

Normal service will operate using the two newly built replica Red Cars, and car 1058 will be available for special operations including charters. The tentative schedule provides for operation on Fridays, Saturdays, Sundays and Mondays from 10:00am until 6:00pm. This is based around the days when the cruise ships call at the Cruise Center, projected to be the line's major source of passengers. Service can be expanded to other days of the week as demand warrants.

Each car will have a two-person crew, a conductor and operator. In addition to the primary duty of ensuring passenger safety, the conductor will also serve as a tour guide and greeter, welcoming riders aboard, describing the story of the Red Cars, then and now, and highlighting attractions in the San Pedro area.

Fares are tentatively set at \$1.00, collected aboard the cars. Exact change will be required to purchase a ticket, each of which will be good for unlimited rides during a several-hour period. Tickets will also be offered for sale through the local business community.

Extensions to the centre of San Pedro are possible in the future and will be dependent on funding availability.

The new line is accessible from the existing public transport system in Los Angeles. The MTA's 445 and 446 express bus lines from Downtown LA serve the Harbor/Beacon Park-n-Ride lot, directly across from the World Cruise Center Red Car station. In addition, LA DOT Community Connection bus route 142 (connecting the San Pedro and Long Beach harbour areas) has a stop adjacent to the 6th Street Red Car Station and its terminus is at Ports O' Call Village, immediately adjacent to the Red Car station. Also, Amtrak California bus service from LA Union Station is available to and from the Cruise Center.

Did you know?

Did you know that Yahoo! Groups, an Internet-based medium for the exchange of information, has seventy groups having trams, trolleys or streetcars as their subject or part of their subject? The main Australian group is 'TramsDownUnder' with 244 'members', the third largest in this category. They have posted 8200 messages since it began on 22 August 2001.

BENDIGO

The Bendigo Trust

1 Tramways Avenue, Bendigo, Victoria 3550

www.bendigotramways.com.au

From Len Millar and Kym Smith

Vale John Bullen

With great sadness we record the passing of our Electrical Engineer, John Bullen. John passed away on 2 March 2003 after a short illness that required hospitalisation. A large number of his Bendigo Tramways and Bendigo Trust friends attended his burial at the Quarry Hill Cemetery, and the memorial service at nearby Strathdale.

John made a significant contribution to the Bendigo Tramways, and to the tramway museum movement over many years, applying his comprehensive technical knowledge to solving problems and moving various projects forward. He was an innovative, practical man with a gentle, genial nature and we greatly appreciated all the help he supplied to us. Our electrical trainee, Donovan Webb was given a wonderful present by John

a short while ago – a hand-built miniature electric motor.

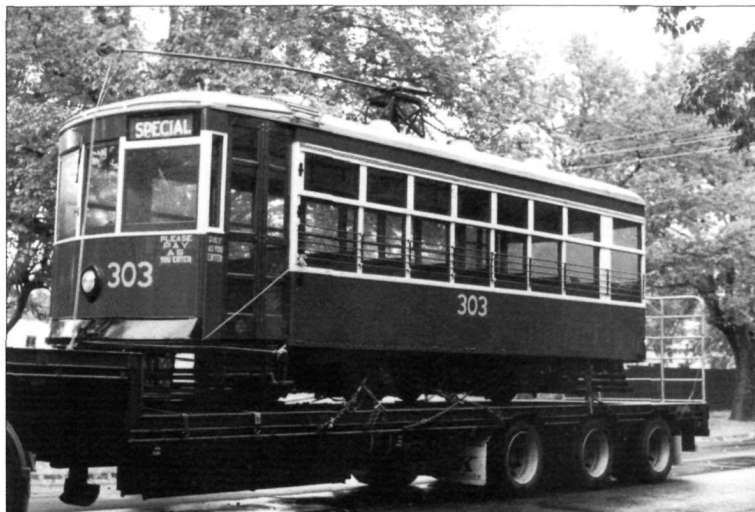
We will greatly miss this wonderful man. We are grateful that we knew and worked with him and we extend our heartfelt condolences to his wife Robyn and to the family.

Bendigo Electric Trams Centenary April 1903-2003

To celebrate this landmark event, the weekend of 12-13 April witnessed some rather special happenings. The Department of Infrastructure, through Mike Ryan, kindly funded the transport of several trams from Melbourne and interstate to Bendigo. Birney 303 came

Adelaide G Type No 303 on 8 April 2003. It was the first of the visiting trams to arrive.

Dennis O'Hoy



over from our Australian Electric Transport Museum friends at St Kilda and our No. 30 came south from its temporary home at the Sydney Tramway Museum at Loftus. Melbourne X class 217 of the Tramway Museum Society of Victoria fleet came north along with a tram that was last seen in Bendigo nearly 50 years ago! State Electricity Commission of Victoria No. 3, now Hawthorn Tramways Trust No 8, joined in the fun and became the surprise star of a subsequent event.

With our Birneys 11, 15, 28 and 302, together with the visiting trams, we were able to fill all seven roads of the Depot fan with Birneys, line them up in SECV fleet number order, run a couple of photo trips and even provide the regular service on the Sunday. Our drivers were re-acquainted with the uncomfortable driving position, choppy ride and leaky roofs of these treasures.

On the Saturday morning, a crowd gathered to witness the unveiling of two plaques, a commemorative plaque in memory of the late Keith Trounson, and a plaque commemorating the 100th Anniversary of Electric Tram Operation. The unveilings were followed by the acknowledgment of the support of Sandhurst Trustees for the refurbishment of our 1903 electric car No 8, and the handing over of the keys to Melbourne X1 tram 466 to Newstead Trams.

The Abbott Foundation, through the Sandhurst Trustees, has provided funding towards the restoration of 1903 electric car No 8. Just before Easter, the new steel frame and completed roof held up on props at the car ends, were lowered onto a new Brill 21E truck. The

Gasworks Depot yielded up all the necessary truck parts and wheel sets, and the car was wheeled into the running shed for the Centenary celebrations where it sat opposite our other 1903 car, No 7. They may well have sat there on opening day 100 years ago! Mayor Rod Fyffe and local State Member for Bendigo East, Jacinta Allan, congratulated the Bendigo Trust and the Bendigo Tramways on the work we have put in to make the Talking Trams a distinctive tourist attraction for Victoria and especially Bendigo.

A formal dinner was held in the Depot on roads 4, 5 and 6, with a depot fan full of trams standing guard. The entertainment for the night was provided by a local band who performed between the two 1903 trams on display, and a good time was had by all. The formalities of the evening included the presentation of Drivers Certificates to some of our more recently qualified Drivers.

Easter 2003

Our favourite Easter controller, Mike McGowan, presided over our four-day Easter services. Again, a 20-minute service was provided with the Talking Tram Tour that included our new and improved commentary tape. The annual Cavalcade of Transport occurred on Easter Saturday followed by the Torchlight Procession on the Sunday night. Trams 5, 7, 8, 15, 28, 30, 217, 303 and 441 represented the Tramways.

Hawthorn No. 8 won the award for Best Presentation in the Transport Cavalcade, a very belated recognition of the fine work done by Preston Workshops staff almost ten years ago.



Bendigo Trust President, Dennis O'Hoy addresses the crowd at the ceremony to mark the centenary of electric tramways in Bendigo on 12 April 2003.

Ray Marsh



Yet to be restored, Bendigo Tramways No. 7 of 1903 is on display in the depot and shows its remarkable state of preservation.

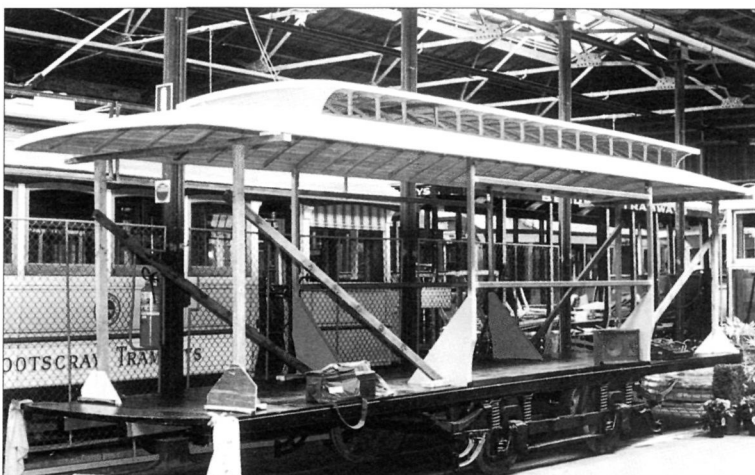
Steven Altham



Visitors view the progress on the reconstruction of the Bendigo battery car after the centenary ceremonies.

Steven Altham

Progress on replica 1903 tram No. 8 is progressing. Here the roof is in position over some of the new steel framework, a concession to modern safety requirements. Steven Altham



This plaque was unveiled to mark the Centenary of Electric Tramways in Bendigo, on 12 April 2003. Ray Marsh



Birneys 11, 15 and 303 turn from Caledonia Street into Thunder Street on 12 April 2003. Andrew Cook





Two visiting Birney cars, M&MTB X class 217 from Melbourne and MTT G class 303 from Adelaide, flank Bendigo Birney 28 at the depot on 12 April 2003.

Steven Altham

Two former Adelaide G class Birney cars meet again in Bendigo on 10 April 2003.

Jeff Bounds



The seven (out of eight imported) Birney cars line up in High Street in number order. 217 leads the line-up with 30, 302 (former Bendigo 29), 28, 303 (former Bendigo 27), 15 and 11 following.

Steven Altham

Hawthorn Tramways Trust No. 8 moves under its own power in Tramways Avenue, Bendigo for the first time in 37 years.

Jeff Bounds



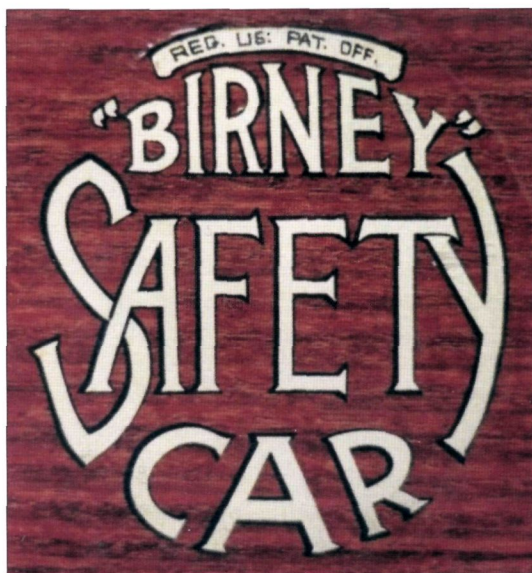
The seven Birneys lined up against the backdrop of the Bendigo Tram Depot.

Dennis O'Hoy



The Birney Safety Car emblem on the door of Adelaide No. 303.

Andrew Cook



The other major event was the Monday Parade. Whilst this did not include our trams, it did include our two double-deck buses.

After Easter, arrangements were made for the return of the Birneys to Adelaide and Sydney, with the two trams from Melbourne scheduled to return there late in May. The opportunity was taken to send a different tram to Sydney, with No. 11 travelling north and No. 30 remaining in Bendigo.

Anzac Day

Later that week, Hawthorn No. 8 was decorated with large and small Australian flags and was used to convey elderly ex-servicemen along Pall Mall from Bridge Street to the Soldiers Memorial Hall for the 11:00am commemoration service. We were pleased and honoured to be able to help.



The seven Birney cars are seen returning from a run to North Bendigo on 12 April 2003.

Ray Marsh

All of Australia's seven Birney cars line up for their centenary runs on 12 April 2003.

Ray Marsh



A sight not to be seen anywhere else in the world. The seven Birney cars framed by autumn tints on 12 April 2003.

Ray Marsh

Bendigo's traffic staff flanks Trust President Dennis O'Hoy at the depot on 12 April 2003 with Birney cars 15, 217 and 28 forming the backdrop.

Ray Marsh



X1 466

This major project for Newstead Tramcars was completed in the week before the Centenary Celebrations weekend.

The body was lowered on to the new No.2B truck and the myriad of bolts, wires and pipes were at last connected up. Les Woodfield presided over the painting of the tram into M&MTB green and cream livery while surrounded by people engaged in bolting on the folding doors, installing control panels and drivers seats.

Very late on Friday, 1-1 April, consultant Electrical Engineer Richard Clarke authorised progressive testing involving 600 volts. Lights and compressor did their duty and as the owners looked on expectantly, notches were 'cut' with the desired result. So ended our restoration of No. 466.

Darren Hutchesson and Len Millar gratefully put on a barbecue for all the workers including their wives and partners who worked on the project. A highlight was a tour of the system in the 'new' tram during which drivers became aware that the canvas awnings that were drawn around behind the driver at night at Footscray, where the X1 cars operated, were not just decoration.

X1 466 is now for sale and is hoped that early success will lead to the rebuilding of X1 cars 460 and 463. A view of No. 466 by two visitors from interstate is included in Here and There on page 16.

Welcome

We welcome Tim Blythman, Anthony Jennings, Shirley Turner, Peter Turner and Damien Steel to the ranks as Tram Drivers, and Wendy Rowe, Maureen Sanders and Alison Smith as Museum Attendants.

For Sale

Our website now has a catalogue of bits and pieces, and even a W2 for sale. We know that tourist tram operators forever need parts to keep their fleets running, and we are able to help. The proceeds will go a long way towards keeping our fleet operating and to assist with our restoration work.

Like many other groups, the Bendigo Trust is a not for profit organisation. We rely on government and private grants and sponsorship, together with ticket sales, to maintain our infrastructure. We believe self-help is absolutely essential to manage properly our trams and facilities.

Review of Rail Safety Management System

Over the past six months, Kym Smith, Darren Hutchesson, Len Millar, and Gary Rowe have spent many hours reviewing and updating the Bendigo Tramway Rail Safety Management System. The new System was audited by the Department of Infrastructure in January and was introduced on 9 March 2003.



Len Millar driving X1 466 through the ribbon to relaunch the tram after refurbishment, 12 April 2003. Bruce Allen

With Len Millar at the controls, X1 class 466 rolls out of the depot at its launching to mark the completion of the car's restoration programme.

Steven Altham



X1 466 stands in the depot yard surrounded by an admiring crowd following its launch on 12 April 2003. Steven Altham

Hobart 39

On 3 February 2003, the completed 21E truck, compressor, resistance grids, and handbrakes, together with cable, piping and tools were loaded for shipping to Hobart.

As reported elsewhere, the crew who installed the truck and equipment followed a week later to undertake the fitting of the cabling, piping, truck and equipment to Hobart City Council tram 39. Controllers, brake valves, sanders, a bow collector, running boards, and other fittings are still required to be fitted before the tram is operational. We congratulate our friends in Hobart. No. 39 looks fantastic on its new truck.

Lake Extension

While the first sod is yet to be turned, significant preliminary work has been undertaken on design and planning by the Bendigo Tramways and the City of Greater Bendigo. Craig Tooke, wearing all his hats (Yarra Trams, Melbourne Tramcar Preservation Association and COTMA) has been assisting us and the consultants with planning the upgrade of the power supply. The plans for the extension have been put on public display by the City of Greater Bendigo. We are hoping that work will commence in the second half of the year.

BALLARAT

Ballarat Tramway Museum

PO Box 632, Ballarat, Victoria 3353

<http://www.btm.org.au>

From Dave Macartney

The annual Begonia Festival operation took place over the first eleven days of March. Both the Begonia Festival organisation and the Tourist Information Centre have had changes in Directors over the past twelve months, so things were slightly different from previous years. The most significant change was to reschedule the street parade on the holiday Monday from early afternoon to 5:30pm, and to have Wendouree Parade closed to all motor traffic on this day. This worked in the tramway's favour, as there was no extended shutdown during the busiest part of the day. Instead the trams ran in at about five o'clock then out again as soon as the parade was over to clear the crowds. The patronage of 971 for the day was easily the best of the Festival.

In all, 2832 passengers travelled over the eleven days, well down from the 4626 of the previous year. The weather was not very appealing, both weekends being on the cool side. The long weekend Sunday saw only 488 passengers carried, the lowest total ever for this day. Normal fares were charged this year, instead of the half fares charged over the past few years, which, no doubt, also contributed to the lower figures. However, the income generated was actually higher than last year, so given good weather it would have been quite a successful season.

John Shaw and Lindsay Richardson from Perth, with their own tramway still out of operation at that time, came over to keep their hand in with a little conducting. Trams 40 and 671 did the bulk of the weekend running, with various single truckers filling in with shuttles and weekday services. A passenger managed to drop her sunglasses down the window pocket and in behind the sandbox on No. 40. This proved to be totally beyond reach, even with the window removed, so it became necessary to remove the front cover from the sandbox. This took time, as the screws were well gummed up with paint and appeared not to have been removed in a long time. Eventually the cover was removed and the sunglasses retrieved, but on the back of the sand box cover, in copperplate lead pencil writing was the inscription 'G. Hood, Malvern Depot, August 1924' Was this the first time the cover had been off in 79 years? We know Mr. Hood, as his name appears from time to time behind various panels on any ex-P&MTT car.

On 19 February, Sebastopol type crossbench car No. 21 was transferred from Newstead to storage at Bungaree. This move had been scheduled for the previous day, but was postponed following major delays to the transport arrangements earlier in the day. No. 21 now resides with No. 11 in the storage sheds at Bungaree, and is a very long-term candidate for restoration.

The Ballarat Tramway Museum faced its biggest challenge for a number of years recently when it was required to participate in some road reconstruction work being carried out in Wendouree Parade. For as long as anyone can remember the Parade has been subject to flooding in the area opposite the North Gardens reserve. The City of Ballarat decided to carry out the necessary remedial works immediately the Begonia Festival was finished. The road in the affected area would need to be raised some 70 centimetres. The Museum was to be involved in the early stages, and some 90 metres of track were identified as needing lifting. It was anticipated that there would need to be extensive sleeper replacement during the work.

The tramway was declared closed beyond the Loop and the overhead power disconnected on 14 March. For the duration only single truck cars would run due to the limited amount of room between the Loop points and the section insulator. The first job involved fixing a bad joint and installing four sleepers between the Loop and the main area of excavation. The major digging out of the road surface began on Friday 21 March and continued over the weekend. By Sunday night all 90 metres of track were excavated by backhoe and some 26 new sleepers installed. For the first time screw spikes instead of the traditional dog spikes were used, and the verdict was that it was a lot less work. Some ten or eleven volunteers worked over the weekend, with two continuing on to Monday, managing to install a further 21 sleepers in a full day's work. All of this had to be carried out with the Parade open to road traffic, which was less than ideal.

The following weekend saw a smaller work party install the final few sleepers to bring the total up to 60 and work on packing the track up to the required level. By the weekend of 5 and 6 April, the packing was finished and everything backfilled up to one inch above sleeper level. On the Sunday the power was temporarily reconnected and Track Cleaner No. 8 made a few trips over the new work with no trouble.

With the Museum having met its obligations, it was now up to the road contractors to do their stuff. The road was closed on Tuesday, 8 April and the surface removed. Unfortunately the grader operator worked too close to the outer tramway rail and demolished quite a number of dog spikes. Some 42 new spikes had to be installed two days later. The job was scheduled to finish by 25 April, but an assortment of technical problems cropped up, not least of which was the culvert near St. Aidans Drive collapsing and having to be replaced. The road surface consistently refused to consolidate and some sections of it had to be dug up

and replaced three or four times. On 7 May the tramway track from the Loop to St. Aidans Drive was given a new surface of hot mix and looked fabulous. The road surface, however, was still giving trouble, and it was not until 17 May that the power was permanently reconnected.

As the final surface on the motorist's section of the Parade was formed by tar and crushed rock, it was necessary to spend all day Saturday sweeping loose stones off the track. The Council vacuum cleaner truck attended on Sunday morning and removed all of this debris. On Sunday No. 8 returned, making about ten trips over the new work to clear away the last of the stones and scrub any tar off the head of the rail. The following day the contractor used his broom fitted truck to sweep the whole of the work one last time and left all the loose stones back on the tramway track! By Thursday the white lines were painted and the job was finally finished, four weeks over time. Services resumed to St. Aidans Drive on 24 May.

A couple of truckloads of filling from the excavation were dumped behind the depot where they will form the basis of the car park for staff, as the guardians of the Gardens are keen to discontinue cars being parked within the Gardens area. As the Museum has gone over to using screw spikes in the track instead of the traditional dogspikes, those spikes released from the old sleepers were buried underneath the car park filling. No doubt many an amateur prospector with his metal detector will think he's struck it rich when his machine goes off in the car park.

When No. 13 resumed running in Ballarat in October 1987 it was found that the taller drivers could not comfortably sit down to drive, particularly from the No.2 end. On taking some measurements, it was found that the distance between the front dash panel and the bulkhead was some 50mm less than on the other cars for some unknown reason. Correcting this was placed in the 'Too Hard' basket, and for the next 16 years certain more elongated drivers were not rostered to work on No. 13. It was only recently when more measurements were taken, that it was discovered that not only was the leg room inadequate, but the seats were set 50mm lower than on the other cars. Moving these up to the standard height altered the angle of the motorman's legs between seat and footrest, and the problem disappeared. There must be a moral in here somewhere.

The Rotary Club of Ballarat recently instigated a group called Young Ambition for its junior members. As one of their first enterprises they organised a tram

pull competition in Wendouree Parade to raise money for a playground for disabled children. Teams were required to pull a tram the length of the Loop against an opposing team on the other track. All this was to take place on Sunday 25 May, so some rollability trials were carried out at the depot on the previous day to identify two evenly matched cars. Eventually Nos. 14 and 33 were selected. Some nine teams presented themselves on the day, with a round robin contest

being followed by an elimination series. B & D Technologies won the contest, but tram pulling was the winner on the day, with some \$8,000 being raised and the organisers vowing to return next year. The Museum may well field a team next time, probably the oldest team in the contest, but a bit of judicious tampering with the hand brake mechanisms should give us the edge we will need. In the words of W.C. Fields, anything worth having is worth cheating for.

ST KILDA

Australian Electric Transport Museum

GPO Box 2012, Adelaide, South Australia 5001

<http://www.railpage.org.au/aetmsa>

From Colin Seymour

Official Opening of Northern Depot

The Northern Depot and Displays was officially opened at 2:30pm on 16 March 2003 by the South Australia's Minister of Tourism, Jane Lomax-Smith. Other special guests on the day included Tony Zappia, Mayor of Salisbury; Rod Sawford, Federal Member for Port Adelaide; Margaret Anderson, Director, History Trust of South Australia; and Paul Burns, Manager, TransAdelaide Glengowrie Tram Depot. Completion of this project was made possible by receipt of \$31,000 from the South Australian Tourism Commission and \$20,000 from Arts SA.

The Minister was introduced by Museum President Colin Seymour who explained that for some time the Museum had been concerned that our tram restoration efforts were at risk by the housing of many of the trams in our old depot which was built by volunteers in the 1960s. We knew that for the future preservation of the

state's heritage electric trams, it was essential that they were housed in a secure building. We also recognised that the confines of the old depot did not allow the public to access and view many of the restored trams. A side issue was that the Museum lacked adequate archival facilities for many of the historical documents and photos associated with the street tramway system.

In 2001 the Museum decided to address these problems by constructing the combined large depot building and administrative offices. The Depot houses up to eight restored trams and has a wide aisle on the southern side to enable the public to view both the trams and a series of interpretive displays along the southern wall. Fire prevention equipment has also been installed. The administration section at the eastern end of the building houses a purpose built archives vault and a library room. To date, the project has cost

David Williams, Colin Williams and Ron White remove the backing paper over a sign above the new displays in the Northern Depot at St Kilda. Ian Seymour



\$150,000. The Museum contributed a substantial amount from its reserve funds, while a call to members for donations met with pleasing success. The new display complements our existing displays of tramway vehicles and interpretive displays in the Display Gallery, the Southern Tram Depot and the Trolleybus Pavilion.

After the Minister's speech, during which she spoke in glowing terms about the Museum, she cut a ribbon placed across the public entrance doorway to the Northern Depot.

The Mayor of Salisbury, Tony Zappia, then launched local St. Kilda identity, Edna Taylor's book, *The History & Development of St. Kilda, S.A.*

The Minister then assisted Ron White to drive 'Toastrack' 42 to the beach and return. Car 42 was joined on the journey with car 111. Our Federal member, Rod Sawford, assisted Barry Fox on car 111's return journey. Guests then inspected the Northern Depot displays and the Archives Rooms, and joined us for afternoon tea in the Members Lounge section of the building. Thanks go to Bev and John Smith-Trim who provided a sumptuous afternoon tea.

The Special Day activities commenced at 11:00am. On this occasion, arrangements were made for a hot food van to be on site. The National Railway Museum, Port Dock provided a display in the Northern Depot, while the St Kilda Progressive Association had a stall to sell their new book.

Northern Depot

A total of 10 chipboard display panels, each 2.4 metres high, have now been erected on the display

aisle wall. Five of these panels were completed for the official opening. The first three panels depict trams in the closing stages of the tramway system in the 1950s. Panels 4 and 5 present an updated history of the Museum. Display photos, mainly of A4 size and mostly colour, and captions were laminated and mounted on PVC board before being fixed to the display panels. Christopher Steele constructed a large map of the electric tramway system for one of the panels.

Two fire hose reels were installed at the two public personal access doors on the southern or fan side of the building. Plastic piping, back filled, runs the length of the new shed, and extra garden taps have been installed on the above ground galvanised feeds to the shed. The area where our visitors enter the new shed has been rubbed from the door to the fan.

Thanks to Peter Vawser, John Pennack, John Radcliffe, Chris Summers, Peter Letheby, Ian Seymour, Ron White, David Williams and the other members who worked on developing the display aisle.

Other News

The Council of Historic Railways and Tramways of South Australia (CHRTSA) held its first AGM since incorporation at the Museum site with lunch and drinks provided by the Museum at the local St Kilda pub. Ian Seymour was elected convenor for the next two years.

Birney 303 (Bendigo 27) departed St Kilda on 7 April 2003 for a brief visit to Bendigo for that city's electric tramway centenary. It returned on 29 April 2003.



South Australian Minister for Tourism, Jane Lomax-Smith cuts the ribbon to officially open the new Northern Depot to the public on 16 March 2003. Tony Zappia, the Mayor of Salisbury is at left and Colin Seymour at right.
Ian Seymour

*Local identity. Edna Taylor autographs her book *The History & Development of St Kilda SA*. The wide display aisle has trams on the left and interpretive displays on the right. Further displays will be added to the panels in the foreground.*

Ian Seymour



AETM Operations Manager, Ron White with Tourism Minister Jane Lomax-Smith at the controls of toastrack 42, the official tram used for the opening of the new Northern Depot.

Ian Seymour



Colin Seymour stands with Jane Lomax-Smith in front of the new interpretive display in the Northern Depot. The map was constructed by Christopher Steele. The sign reads 'Adelaide Tramways in the 1950s'.

Ian Seymour



WHITEMAN PARK

Perth Electric Tramway Society

PO Box 257, Mount Lawley, Western Australia 6929

www.railpage.org.au/pets

From Michael Stukely

Trams running again!

Regular tram services at Whiteman Park resumed on 29 March after an interruption of some 3 months, caused by the Public Liability Insurance (PLI) crisis.

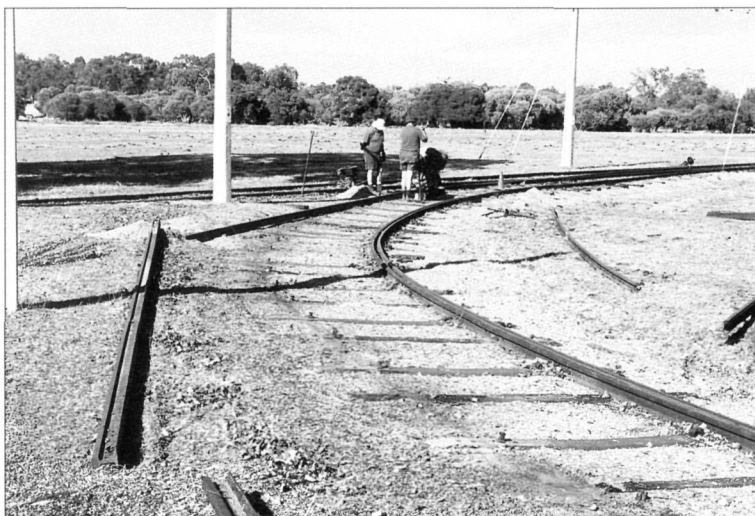
As previously reported (*Trolley Wire* February-March 2003), the Society's tramway operations were suspended from 11 December 2002, following the expiry of our PLI policy on that date, and the traction power supply was decommissioned. As a consequence of PETS no longer having PLI cover, our lease with Whiteman Park, as well as our Rail Safety Accreditation, were also suspended.

At the end of January we received advice that our application for PLI cover through the WA Government's new Community Insurance Fund had been approved. However, the premium quoted was still at a level considered by the Society's Council not to be affordable – we would now be paying about 50 per cent of our total traffic revenue for the year just to meet the cost of our insurance premiums! This position was conveyed to Whiteman Park Management, and Acting Park Manager, Mike Grasby, offered to provide a substantial subsidy to assist the Society in meeting the PLI premium. An equivalent offer was made to our neighbours in the Park, the WA Light Railway Preservation Association. We accepted this offer, and our new PLI cover came into effect on 14 February.

Our lease with Whiteman Park was immediately re-activated, and our Rail Safety Accreditation was reinstated on 17 February.

Recommissioning inspections and the work necessary to bring the tramway back to satisfactory operational standards for the resumption of public services then started in earnest. During the period of suspension of our Accreditation, all 'rail safety work' – including all work on track and overhead infrastructure – was prohibited. Fortunately, maintenance work on the trams and the traction power supply system was permitted, and this continued in the workshop.

Noel Blackmore completed inspection and maintenance of the traction power supply system. The earth electrodes were tested by Kurt Gahler and Gareth Watts with excellent results, and no sign of deterioration. The overhead was fully inspected, and Noel's team replaced several damaged insulators. Track bonds had suffered considerable vandalism, and the repairs to these, including re-welding and replacement as necessary, took longer than anticipated with about 60 requiring work. Kurt Gahler, Gareth Watts, Dave McCormack, Geoff Morrison, Frank Edwards, Trevor Dennhardt, Jim Paton and Noel carried out work on the bonds and overhead. Trevor



Early on day 2 of the rail replacement project at Stockmans Triangle, 3 April. The three worn rail lengths from the outside of the west-to-north curve have been removed, and John Shaw (left), Martin Grant, Lindsay Richardson and Trevor Dennhardt (observed) attach the first of the three new lengths of 60lb rail at the western end.

Michael Stukely

John Shaw (left) tightens the 'Jim Crow' on the first new rail length at Stockmans on 3 April as Trevor Dennhardt comes to assist, while Lindsay Richardson (behind Trevor) and Martin Grant attach and pack a newly-installed steel sleeper.

Michael Stukely



Dennhardt carried out a full inspection of the track, and completed a few minor repairs and pruned several trees along the line with assistance from Jim Paton. Treatment of new termite activity was required at several locations.

Geoff Morrison completed recommissioning services on W2 class 393 and W4 class 674. New Westinghouse brake hoses were installed on No. 674 and tested satisfactorily.

After all of the above work was completed, personnel from the Office of Rail Safety (WA Department for Planning and Infrastructure) visited the Museum on 26 March to review the procedures we had followed for recommissioning, and to inspect the line. Approval was then given by them for public services to resume, and the first day of operation was

Saturday 29 March. The Wednesday Team members are to be commended for their sustained efforts in carrying out the necessary work to enable the trams to operate again.

We record our thanks to Mike Grasby and to Whiteman Park Management for their generous assistance with the PLI subsidy, and again acknowledge the help of our Patron, the Hon. Phillip Pendar MLA, in working so effectively on our behalf and supporting the establishment of the Community Insurance Fund.

Special track project

A major special project had been planned by Lindsay Richardson for mid-December – the replacement of the worn outer rail on the curve of the

On its last trip of the day on 5 April, service car W2 class 393 glides around the completed curve at Stockmans Triangle, heading towards Mussel Pool.

Michael Stukely





The track on the Village line near the Tractor Museum is a hive of activity on 5 April as the track upgrading program proceeds. Terry Verney (left foreground), Laurie Ahearn, John Shaw, Kurt Gahler, Lindsay Richardson (behind Kurt), Trevor Dennhardt, and John Davies are busy with various stages of steel sleeper installation, while Traffic Manager, Martin Grant (right) keeps an eye on the approaching service car, W2 class 393, on its way up to the Village.

Michael Stukely

west-to-north leg of Stockmans Triangle. However, following the expiry of the PLI policy on 11 December the work had to be deferred (see above), and it was re-scheduled for early April.

On 2–4 April, the three lengths of worn rail were removed and replaced with three lengths of good condition 60lb rail. The job required about 70 settings of the 'Jim Crow' to achieve the right curvature, and the gauge was carefully reset (previously, the curve had been significantly under-gauge, which had contributed to the rapid rate of wear). The work was completed mid-afternoon on the third day, and a tram was tested through the curve with very satisfactory results. Those taking part in this major exercise were Lindsay Richardson, Trevor Dennhardt and John Shaw (three days); Martin Grant (two days) and Michael Stukely (one day).

General

Not content with having completed the three-day rail replacement project at Stockmans Triangle on the Friday, Lindsay Richardson, Trevor Dennhardt and John Shaw finished the day by removing 13 rotten timber sleepers on the Village line north of the cattle-grid. They were still at the Park for the Saturday track upgrading workday on 5 April. The track team was then out in force with the arrival of John Davies, Terry Verney, Kurt Gahler, Martin Grant, Laurie Ahearn and Michael Stukely. Another nine timber sleepers were extracted, and 22 steels were installed to advance the replacement program to pole N21, which is in line with the front end of the Tractor Museum building, just south of the Village. Two sections now remain to complete the initial Village line upgrade – from N21 to the road crossing at the southern end of the Village mall, and then north from the Village Junction Curve to the terminus.

SW2 class 426 is undergoing a minor and recommissioning service, and a door engine overhaul is progressing. Recommissioning of FMT 29 was also progressing in early April. The serviceable truck from W2 class 368 was removed in December and placed in the Engineering shed, where an inspection and service was commenced by Kurt Gahler and Gareth Watts. They also started preparations for the removal of the faulty truck from W2 class 329, for which the above truck will be substituted after completion of its service.

Removal of the side cladding from the body of Perth B class single-truck car 15 – added during its second life as beachside holiday accommodation at Mandurah from circa 1950 to 1979 – was carried out in February, and the interior was cleaned out. The metal sheeting covering the roof was also removed. Members assisting included David Secker, Jim Paton, John Shaw, Trevor Dennhardt and Lindsay Richardson.

In January, Trevor and David assisted Lindsay with the installation of the two remaining large soak-wells on the south side of the Oketon Geddes Carbar.

The overhaul of the water pump for the Leyland tow truck has been progressed by Ric Francis, who generously donated the required new bearings and seal kit.

Four large (44-gallon) drums of dog-spikes (made surplus with the progress of our track upgrading program) were donated by the Society to the Yarloop Workshops group to assist with their track project. John Stone coordinated the donation, and Trevor Dennhardt loaded the drums for transport on 14 February.

HOBART

Hobart City Council

GPO Box 503E, Hobart, Tasmania 7001

www.hobartcity.com.au/tramway

From Leyon Parker

Our 1917 tram, No 39, has benefited from further work towards its eventual restoration to running order. In March, Bendigo Tramways installed a new Brill 21E 1067mm gauge truck and motors with brake and other equipment.

On 11 March, Hobart City Council gave planning approval to The Sullivans Cove Tramway proposal. Although subject to appeal, this is a major step forward towards the running of trams again in Hobart.

This is a close-up view of the truck under car 39.

Leyon Parker



Hobart car 39 is now on its new truck at the Moonah workshop.

Leyon Parker



LOFTUS

South Pacific Electric Railway Co-op Society

PO Box 103, Sutherland, NSW 2232

www.sydneytramway.museum.com.au

From Mike Giddey and Howard Clark

Z2 class tram 111

Melbourne Z2 class car 111, under the control of Driver Lobriza, was run into Glenhuntly Depot for the last time at 10:31am on 11 March 2003. It was placed on road 6 and stripped of its transponders and power converters before being officially decommissioned. On the following morning it was transferred to ALSTOM Preston Service Centre for further stripping of parts such as the automatic vehicle monitoring equipment and removal of ticket machines.

Tram 111 arrived at Loftus at 12:40pm on 27 March 2003, having departed Preston Workshops at 9:00am the previous day. Its odometer reading on arrival was 312,852km (a figure which does not represent its total distance run since new). The car was unloaded on the rails at 4:07pm, was energised at 4:25pm and moved under its own power at 6:00pm for overnight storage alongside the loading platform. As the overhead at the scissors crossover, the depot yard and sections of the National Park line (which require more pull-offs in places) are not pantograph compatible, a decision was made by maintenance staff to re-equip the car with trolley poles. Bill Parkinson, Mal McAulay and others moved the car into the workshop on 29 March for this purpose, temporarily replacing P car 1497.

The selection of car 111 for the Museum came about with assistance from various people including staff from M>Tram, Yarra Trams and ALSTOM at Preston Workshops. The car was selected essentially on the basis of its condition and as being one of the cars in the fleet with the least number of faults over a period, and having a later use-by date for many components than other cars. Our thanks are due in particular to Mike Ryan of the Victorian Department of Infrastructure, Craig Tooke of COTMA, the chief engineer of M>Tram, Russel Brooks and to Kilman Baum of ALSTOM at Preston Workshops for their assistance with its donation and acquisition. Various spare components including windows, seats, trolley base and mounting panel from scrap car 54 arrived with 111. We are also grateful to Russel Brooks for arranging the delivery of trolley poles for the car to Preston in time for transport with the tram.

To comply with security and accreditation requirements, locksmiths attended Preston Workshops on 21 March to change over the car access keys, drivers cabin door and console keys to provide our Museum with its own unique keys for the car.

Z2 car 111 bound for Carnegie passes 34 in Swanston Street at Bourke Street on 13 February 2003.

Howard Clark



Our weekday work team is seen stripping N 709 of its useable parts on 5 March 2003.

Howard Clark



Car 111's history

Car 111 was received at Preston Workshops from Comeng, Dandenong on 25 November 1978. It remained at the workshops for almost 11 months, until it was issued to East Preston Depot on 24 October 1979. *Destination City* (4th Edition) reported that the car was held back for comparative testing with Z3 class No. 116.

Car 111 was the last Z2 to go into traffic (after the first of the Z3s) and was therefore the last new tram to enter service in the Marigold (orange) colour scheme which had been introduced with the first of the Zs in 1975 following its use on prototype car 1041. Its initial service was from North Fitzroy which was operated as a sub-depot of East Preston.

The complete maintenance history of the car is not known, but it received an 0.3 overhaul in 1986. It was probably at this time that it was painted green. It received another 0.3 overhaul early in 1992, being re-issued to traffic on 20 February of that year. At this time its cracked doorways were repaired (as was the case with many Zs); plates were welded above the centre doorways.

N car 709

The underframe of N 709, its bogies and a small section of roof over the number 2 end driver's cabin were delivered to Loftus on 27 March to coincide with the arrival of Z2 car 111, having been loaded at Woy Woy the previous afternoon. We are indebted in particular to John Faulkner (brother of its original owner and member Bill Faulkner, now in his mid 80s, who has unfortunately suffered from strokes and is in a nursing

The maximum traction bogies are clear of the underframe, which is being prepared for lifting out of the Woy Woy backyard on 26 March 2003.

Howard Clark



home) and his daughter Lorraine, for making the car available to the Museum.

The car had been at Woy Woy since late 1951 and due to exposure to weather and ingress of vegetation in recent years rendered it unsuitable for restoration. There have been several work parties at Woy Woy in recent months involving a number of people, particularly on 5 and 19 March 2003. On 19 March, Geoff Spaulding braved the sound part of the roof to cut through the roof using Brian Hague's chain saw. Others on the day were Alan Marshall, Vic Solomons, Terry Thomas, Chris Jacobs, Don Campbell, Greg Sutherland, and Howard Clark. The team salvaged many useable parts from the car and their uses will be documented in future issues of *Trolley Wire*.

Other car news

The canvas suppliers recently delivered eight pairs of new weather blinds for P car 1497. The blinds are of toughened ribbed canvas for longer wear. They have been fitted to the western side of the car. In the short term the remaining serviceable blinds will be fitted to the eastern side of the car in place of any worn out blinds. The new blinds are of a brown shade, as the former tan shade can no longer be matched.



Allan Marshall and Vic Solomons fit the new canvas doors to P Car 1497. Terry Thomas

A section of 1497's floor has been repaired. The body mounted bogie centre castings need to be removed for machining and the electro-pneumatic control equipment needs thorough cleaning and lubricating. Mal McAulay has finished reshimming the hornways of the second P bogie and it is now ready for reassembly.

ALSTOM at Preston Workshops performed a bogie exchange on R car 1808, replacing its trucks with another set owned by the Museum which had been on loan to Bendigo for a period under W2 car 441.

The bogies from R1 car 1979 were sent as a back load to Preston on the truck that delivered 111 to Loftus on 27 March. The wheels will be reprofiled on the wheel lathe at Preston. The sooner this work is performed, the sooner this car can be returned to service as a traffic car.

Milan 1692 and Berlin 3007 are still to be moved to Hawthorn Depot for display. They have remained at Preston longer than expected to permit further works to be completed in the Hawthorn Depot building.

As part of the Bendigo centenary celebrations to be held in Bendigo over the weekend of 12-13 April, Birney car 30 was 'lent back' to Bendigo Tramways and was loaded at Loftus on 27 March 2003.

Birney 11 in Geelong SECV livery and fitted with longitudinal seats has replaced Birney 30, which has remained in Bendigo. Car 11 arrived at Loftus at 1:15pm on 29 April. The car was unloaded and on the tracks at 3:25pm.

ABV Van Body and Toilet Module

The ex-railway ABV type four-wheel van body was also loaded on 27 March for transport to the NSW Rail Transport Museum at Thirlmere. We obtained two of these bodies for storage sheds at the old site many years ago. The second one suffered badly from local termite activity and had to be destroyed.

One of the toilet block modules displaced by the building works has been removed from site in a contra deal with the firm that delivered the N car underframe, bogies and parts from Woy Woy. It, too, was moved on 27 March. It was a busy afternoon!

YMCA Building

A meeting took place with the consulting engineer and builder with a view to resolving the impasse that has seen construction work on the supporting structure at a standstill for many months. In addition we recently received acknowledgment from the then Lord Mayor, Alderman Frank Sartor that Council is not satisfied that all its conditions for erection of the façade have

The underframe of N 709 swings over the neighbouring property on 26 March 2003. It and the bogies arrived at Loftus the following day. Howard Clark



been complied with. Accordingly we are hopefully now in a position to work with Sydney City Council to resolve the outstanding matters, in particular the issues of the ground floor columns of the façade and signage from the original building.

HPOTS Storage Area

During January 2003, whilst staff of the Hunter Plant Operators Training School were on holidays, vandals trespassed on the property and caused considerable damage to the trams kept there in open storage. In particular R 1798, R1 1980 and W5 792 along with the Newcastle Regional Museum's L/P 284 had every pane of glass broken in them. Whilst the trams have always been subject to deterioration in the weather, there has until this time been no history of vandalism on site. For some time now we have been

investigating arrangements for a sublease and erection of roofed cover for these reserve items. Efforts will be made in the near future to weatherproof the two corridor cars in particular and to also protect the L/P from further weather damage. Fortunately 1798 and 1980 have corrugated iron roofs so the original roofs are well protected.

Works Report

Work has continued in the depot yard preparing for further concrete paving of the area. This involves descaling the rails and steel sleepers with the small air tools and the removal and replacement of checkrails so that the inner sides of the rails can be properly cleaned to reduce the possibility of rust growing and cracking the concrete in the future.

Ballast motor 99u provides the backdrop for our workers on 3 May 2003, the second of our special track maintenance days.

Bob Merchant



The new track drain has been excavated to extend across the yard to drain into a new pit on the existing stormwater pipeline beside the rock retaining wall along the railway boundary. This involved breaking away parts of the existing concrete strip footings under Roads 1 and 2 and welding short pieces of rail across the tracks to form the edges of the Sydney tramway style track drains.

On 8 February, Road 1 was placed out of use so that the inner checkrail could be removed. It was reinstalled, adjusted and tested on 22 February, allowing the cars on Road 1 to be used for Heritage Week traffic operations commencing the next day. It was placed out of use again on 8 March for removal of the outer checkrail. This was reinstalled on 22 March.

A number of our regular working members has been involved in this noisy, dirty and thankless but very necessary task. However, special mention should be made of the efforts of Graham Russell who has expedited this work by spending up to two weekdays on this work as well as Saturdays.

Danny Adamopoulos completed the new steel point cover for the Road 3 points using steel plate recycled from the deck of 42U, restoring vehicular access to the depot. Bob Cowing cut the steel plate with a metal plate in the circular saw to give a straight edge. Danny then went on to build up a badly worn point blade for the Road 15 points, which are soon to be assembled.

On 30 January a concrete footpath was poured along the rear wall of the workshops as well as some further paving of parts of Roads 2 and 3 near the three-way points.

The new toilet block is complete following painting, glass installation, installation of external handrails and the establishment of two small gardens. All that remains to be completed in this area is the installation of two illuminated pedestrian crossing bollards of the type used on the loading platform. Our visitors have voiced their approval of the new facilities.

The 'silent cop' traffic dome at the junction of Cross Street and the entrance to the depot yard was illuminated for the first time on 21 March. Its red lights once graced the southern approach to the Sydney Harbour Bridge.

Very few members other than the regular dedicated Saturday volunteers attended the major trackwork day advertised for Saturday, 1 March, which was a disappointing but not unexpected result. Nevertheless, the primary objectives of changing a rail near the curve on the Sutherland line and some sleeper replacement, levelling and packing were achieved. Ballast motor 99u was the workhorse for the day and Graham Beller,

Alex Foot, Bruce Pinnell, Graeme Russell, Adam Greaves, Chris Olsen, Danny Adamopoulos and Bob Cowing provided the labour.

The after lunch activity was disrupted by a phone call and subsequent arrival of Concrite with a load of free surplus concrete for the depot yard, this being placed in the '6-foot' between Roads 1 and 2. Whilst the concrete work was being finished, 99u was used to move two workshop bogies from the south end storage area for use under R1 car 1979 whilst its bogies are in Melbourne for wheel turning.

99u and Brisbane 548 (to provide transport for the workers) later headed into the Royal National Park where a number of sleepers were replaced near the former signalling section hut at the first curve. During the day there was much hilarity as each worker tried in turn to hit the dog spikes in with a spike maul. It has been rumoured that they achieved about one hit in six!

Workshop Activities

Ballarat 37 is now in its colour undercoat but the final painting has been delayed as rot has been discovered in some of the planking under the trolley bases. This will need to be repaired before the roof is painted which in turn has to be done before the final coats on the bodywork.

With the opportunity to send the bogies from R1 car 1979 to Preston Workshops for wheel turning as a back load on the truck delivering Z2 car 111, Ballarat 37 was moved into the display hall for the time being. This allowed 1979 to be brought into Road 10 on 1 March where it was jacked up, and its bogies replaced with a pair of W2 shop trucks. Car 1979 was returned to the front position on Road 5 in the display hall on 15 March, P 1497 was placed in workshop Road 10 and O/P 1089 took 1497's place on Road 8.

The new channel steel side frames and end cross members for 42u ('Gentle Annie') have been marked out, drilled and trial fitted to the existing underframe. This has been mainly done by Bob Cowing and our weekday fitter Warren Howlett. The overhead cranes were very useful in lifting the steel members into position.

Warren has also taken on the task of sorting and cataloguing our collection of Morse taper drill bits for the large radial drill. He made a mounting board for the drill cabinet with a hole for each size drill and with the sizes clearly marked under each drill. For good measure he has attached a printed list to the inside of the cabinet door detailing how many of each size drill we have. The largest is a formidable two inches in diameter. Well done, Warren, for a very professional job.

Another load of surplus concrete is being unloaded in the depot yard on 1 March 2003. It replaces the mud in wet weather and dust in dry weather. The result is a much cleaner workshop, depot and display hall.

Bob Merchant



Builder's board comes home

Recently, Norm Cross wrote to the Museum to report:

"When 138s and 139s came to Melbourne, they had a manual resetting circuit breaker to prevent power overload. 138s (10W) entered service with the circuit breaker. After driver complaints, it was replaced by a standard M&MTB automatic resetting line breaker. To get to the wiring to change the breakers over, the builder's board had to be removed. I never worked on 138s (10W) so I do not know what became of the board. Thrown in the rubbish, I guess.

"I was fortunate enough to work on 139s (11W). I designed the modified truck equaliser bars on 139s as a 16-year old 2nd year apprentice. I got a 20 pound (\$40.00) bonus for my diligence. I saw the builder's board, removed from 139s and tossed in the scrap. I retrieved it and took it home. I realised it had some value and one day it may return to its proper place."

Norm visited Bendigo and handed the builder's board over to our Chief Engineer, Richard Clarke, who was in Bendigo on business for Bendigo Tramways. The board arrived safely after travelling to Sydney in Birney 11. Thank you, Norm!

Birney car Geelong 11 arrived early from Bendigo on 29 April 2003. Here it is parked outside the Museum whilst the driver checks his access options.

Bob Merchant



BYLANDS

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From Graham Jordan

TMSV 40th Anniversary Tour

This event took place on 12 April and coincided with the 100th anniversary celebrations of electrification of the Bendigo tramways. Our comfortable coach, driven by Society member Michael Fedor, arrived in Bendigo in time for us to join other enthusiasts and invited guests in witnessing several special ceremonies including the launch of restored X1 class No. 466 and the operation in Bendigo of all seven of Australia's surviving Birney trams (see Bendigo report).

In addition to seeing all the Birney trams in operation, it was enjoyable also to see HTT No. 8 back in Bendigo where it ran as SEC tram No. 3 between 1928 and 1956, after which it was donated to the AETA and returned to Melbourne. It was especially appropriate that Keith Kings was selected to drive No. 8 as he was involved in its acquisition by the AETA way back in 1956. We still have not got the smile off Keith's face!

By sheer coincidence, the two service cars running in Bendigo on the day of the celebrations were former Hawthorn Tramways Trust bogie cars, MMTB No. 122 and Bendigo No. 25. No. 122 originally ran in SEC service as Geelong No. 32. It was transferred to Bendigo in 1956 to become their No. 3, replacing our car when it was retired. Ironically, the two Bendigo No. 3s passed themselves on several occasions.

On returning to the depot we again joined our road motor vehicle and, after a quick look at the Bendigo Gasworks depot, we headed back to Bylands where an inspection was made and several tram rides undertaken before journeying south to Melbourne.

Cable Trams at Malvern

Readers will recall that several years ago the Society supplied a cable tram set for restoration utilising funding provided through an employment scheme. It was initially envisaged that the project would be completed within six months and that the cars would be cosmetically restored. Trailer car No. 256 and grip car No. 28 were transported to Malvern and placed in a compound adjacent to Norm Maddock's museum in Stanhope Street. However, for reasons that included time constraints and a shortage of funds and participants, progress was slow.

After several frustrating attempts to get the project finalised, the Board decided that the trams must be finished and removed from the compound at Malvern. Following discussions with the Department of Infrastructure an agreement was made whereby they would be transferred to Hawthorn Depot to join other vehicles in the Heritage Fleet. On 8 April, Society members Andrew Blume, Daniel Berry, Aileen Jordan, Graham Jordan, Keith Kings and Brooke Mitchell were able to extract the grip car and the trailer from the compound at Malvern and ready them for transport to Hawthorn. At Hawthorn, Mike Ryan from the Department of Infrastructure was on hand to open the depot and assist unloading the vehicles.

The two cars have been beautifully restored and are a credit to the people who worked on them. The Society appreciates the efforts of Graeme Aitken from BEST, and Society member Doug Prosser for the work undertaken on both vehicles.

Horse Tram Used at Box Hill Opening

As part of the opening celebrations for the new Box Hill extension (see page 12), the Society was approached in late April by Yarra Trams for the loan and use of our horse tram No. 253. The Society readily agreed to the request and wasted no time in repositioning the car within the Exhibition Shed to allow easy loading on the required day. The tram was thoroughly cleaned and the horse drawbars refitted.

The tram was loaded onto a low-bed tilt-tray truck at 7:00am on the day of the opening, 2 May. After transport to Box Hill it was off-loaded onto the outbound track adjacent to the Nelson Road intersection. Two specially trained white horses were then hitched, and the tram set forth up the hill to the new terminus where the horses were transferred to the other end of the car. At 11:00am a Citadis tram carrying Premier Steve Bracks and Transport Minister Peter Batchelor approached the terminus, at which time the horse tram set off towards the city, passing the Citadis on the double track. The scene represented the old (horse tram) passing the new (Citadis).

The tram was then pulled back to Nelson Road where the horses were unhitched, and the car was reloaded onto the truck for return to Bylands later in the day.

The Society received considerable publicity for its involvement and appreciates the opportunity to have been part of this event. We would like to thank Yarra Trams, especially Julie Roberts and Rod Beet, for their support and for making this operation possible.

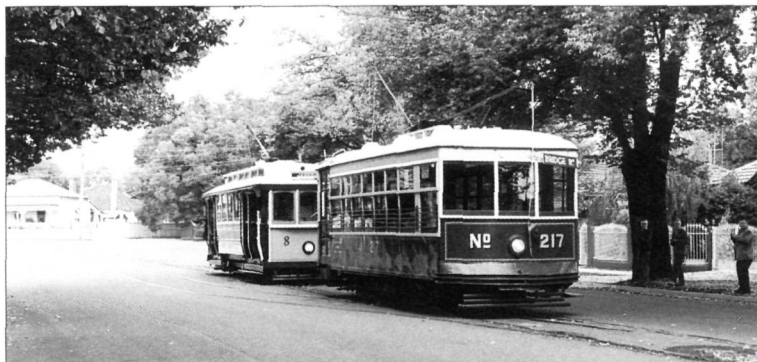
Museum Works

Work has continued at a hectic pace at Bylands. The special working bee day on 22 March saw a long-standing problem addressed. The roadside drain at the

main entrance gate has for many years been of major concern as over the years it gets washed away by heavy rains, creating a deep depression which makes vehicular crossing hazardous. The drain was excavated and several large steel pipes installed. Crushed rock was then compacted around the pipes and levelled with the surrounding road and driveway. The result is a marked improvement. It was also planned to erect two new gate posts at this entrance using sections of former steel tramway poles, but this has been deferred pending availability of a post-hole digger.

Society trams Birney No. 217 and HTT No. 8 pause for the cameras at the site of the now disconnected loop in Bridge Street North Bendigo during the 40th anniversary tour of Bendigo.

Graham Jordan



We seem to have been here before. Society trams HTT No. 8 and Birney No. 217 pass the Bendigo Institute of Technology in Pall Mall headed for Charing Cross. Both trams have been in Bendigo before, No. 8 as SEC No. 3 between 1928 and 1956, and the Birney in December 1994 for another event.

Graham Jordan



Another recent new exhibit at Bylands is scrubber tram 10W. Formerly Sydney No. 138s, the car is now on long term loan to the Society and is seen here resting on the depot fan. Other trams in the picture are (L to R) W2 457, SW2 644 (inside depot) and W3 667.

Graham Jordan



The clean up around the house and the former tram farm behind the toilet block is almost complete. The caretaker, Corey Robertson, arranged to have on site two large waste bins. A large volume of rubbish and other waste was collected and consigned into these. The former Domain Road inspectors' cabin has been relocated to the area south of the Stores Shed and adjacent to the Depot Junction. It will be restored and re-erected at this location. The remains of the G class tram have been consolidated for final disposal and the H class is presently being prepared for the same fate. With the sale and removal of Ballarat No. 42 several months ago, this area is now virtually clear. The area adjacent to the substation has also been cleared of surplus poles and overhead fittings. A number of concrete barrier edges that were stockpiled in the car park area have now been properly set out and a number

of unserviceable sleepers have been used to form a roadside edge along the incoming main driveway.

On 7 April, a crane was on site to move or reposition a number of bulky items. The tram maintenance 'bug-hut' was moved from its former position adjacent to the house to a new location near the Vehicle Maintenance Shed. The former Tonka truck tool box was then placed at the same location. The crane then moved the H class body to the middle of the north east paddock along with the underframes of the B class and the G class. Cable trailer 462 was then repositioned from the east to the west track in the cable tram shed and cable trailer 586 relocated from the cable tram shed to the Exhibition Shed. The last job for the day saw several lengths of Geelong rail extracted from the rail stack and positioned ready for re-use.



Restored cable trailer 256 displays some fine sign writing work at Malvern Depot on 20 February 2003. Ray Marsh



A view through grip car 28 to trailer 256 at Malvern on 29 March 2003. Ray Marsh

Several exhibits in the Exhibition Building have been repositioned. The horse tram needed to be moved in preparation for its trip to Box Hill, and this allowed the cable drum wagon to be placed at the south end of the shed. It was then decided for display purposes that Alf Twentyman's cable car set should face the other way so trailer car 290 was turned 180 degrees and placed at the south end of the grip car. On its return from Box Hill the horse car will be at the north end of the shed. New permanent display boards have been erected along the west wall adjacent to the cable car display.

Trackwork for the Vehicle Maintenance Building continues as time and other commitments allow. Tram maintenance continues and we now have 11 trams available for traffic. W1 427 has had replacement trolley poles of the correct length fitted. These poles,

which were originally from Brisbane, have been fitted with trolley wheels on a trial basis.

Minor work has been undertaken on Z1 class No 5. All external advertising boards have been removed and the interior has been cleaned out. Minor repairs have been made to the roof to seal the hole cut for the pantograph's main operating cable. Two conductor's consoles have been retrieved from storage and await repair prior to re-installation.

Check out our Web Site

We now have our own web site. With valuable assistance from his sister, member Russell Jones has spent a lot of time and effort in producing a very impressive detailed and informative web site that will certainly rank amongst some of the best. The site has been registered and can be found at www.tmsv.org.au

Supervisor Graeme Aitken stands proudly with cable grip car 28 and trailer 256 at Malvern on 29 March 2003 before their transfer to Hawthorn Tramway Museum.

Ray Marsh



Part of the ever-changing scene at Bylands. Recently acquired Z1 class tram No. 5 enjoys a brief outing on the main line in the company of W3 667 and SW6 902. Of note is that No. 5 has been refitted with trolley poles. The external roof advertising has since been removed.

Graham Jordan





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