TROLLEY

WIRE

No.303 NOVEMBER 2005



Print Post Approved PP245358/00021

\$8.80*





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- Sydney tramway legislation
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AUSTRALIA'S TRAMWAY MUSEUM MAGAZINE

NOVEMBER 2005

No. 303 Vol. 46 No. 4 - ISSN 0155-1264

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Published by the South Pacific Electric Railway Co-operative Society Limited, PO Box 103, Sutherland, NSW 1499 Phone: (02) 9542 3646 Fax: (02) 9545 3390

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*Cover price \$8.80 (incl. GST) Subscription Rates (for four issues per year) to expire in December.

Australia	\$A32.00
New Zealand/Asia	\$A38.00
Elsewhere	\$A42.00

All correspondence in relation to *TROLLEY WIRE* and other publishing and sales matters should be forwarded to PO Box 103, Sutherland, NSW 1499

The opinions expressed in this publication are those of the authors and not necessarily those of the publishers or the participating societies.

Typesetting and finished art by National Advertising & Design Studios - Canberra Tel: (02) 6231 2565 email: pritch4711@velocitynet.com.au

Printed by National Capital Printing - Canberra Tel: (02) 6280 7477 Fax: (02) 6280 7817



Bob Cowing checks that all is well with the newly erected overhead as R class 1740 moves into road 12 of the Sydney Tramway Museum's top shed on 9 September. 1740 was the first tram to travel under its own power into this depot and Bob Cooper, standing in the doorway of the tram, is looking pleased with the result of three days labour.

Don Campbell

Front Cover:

Fresh from its newly completed restoration, Bendigo 17 traverses the depot fan track work during the Ballarat Tramway Museum's celebrations of the centenary of electric trams in Ballarat. Steven Altham

THE SYDNEY AND SUBURBAN STREETS TRAMWAY BILL 1873

By Duncan MacAuslan

The story of Australia's first street tramway is well known. It operated from 4 December 1861 until 31 December 1866 from Argyle Street along Circular Quay East, Pitt Street and Devonshire Street to the Redfern Railway Station. Its unpopular step rail was to leave a long lasting antipathy to trams in the city's streets and it was seven years before tramways were again proposed for Sydney and a further six years before they were to return.

Whilst tramways had been around for centuries with wooden rails; latterly with cast iron plates laid over the wood to improve durability, it was not until the need for street tramways arose that there was a need for a different rail technology. The first recognisable street tramway was the New York and Haarlem line opened in 1832 which used a grooved rail with a raised step on one side. Although initially unpopular it was accepted because of the poor condition of the roads and the small number of vehicles on the streets.

In March 1860 American George Francis Train obtained permission from the Commissioners of Birkenhead, England, to use his patented track system developed in Philadelphia, USA. He had first tried to introduce the system to England in 1857 but failed because it was unacceptable to have the rails at a different level to the road surface. The rails were 6inches wide with a step protruding 1 in above the road surface. Train also received permission to lay down short lines using the same rail in London in March 1861 and in Staffordshire between the Potteries

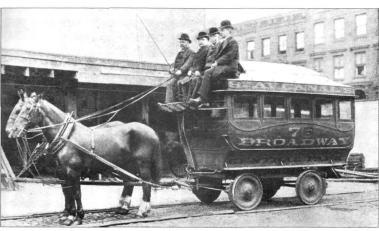
villages of Burslem and Hanley. The London lines lasted only until April 1862 because of the inconvenience of the step rail, and were removed. The lines in Birkenhead and the Potteries were re-laid subsequently using a flat grooved rail.

The design of Train's track was to effectively delay tramway development by many years and its impact in Sydney was probably the worst of all.

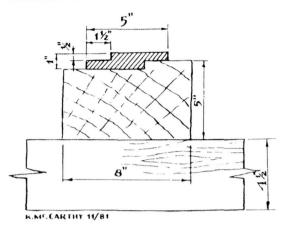
Even though it was Train's tender that was accepted for the Pitt Street line, the rail used was apparently quite different from that had been used in Birkenhead and elsewhere. The Sydney rail was primitive, looking much more like one from a plateway than one from Train's English tramways.

It was said that the rail had been laid incorrectly, inside out. However, had it been laid otherwise, with the double step on the inside, the problem of the step would have remained. Sydney's bad experience with the step rail was not unique, but whilst Sydney turned its back on trams, engineers in Europe developed a rail suitable for use in street tramways. In November 1865, trams were again proposed in England, this time using a crescent rail. This too proved problematic as the surface beside the rail tended to crumble. The solution was a grooved rail which sat on top of a bearer. After improving the way in which the track was fastened to the bearers, the number of street tramways increased rapidly. Several other developments also contributed to the growth of tramways. These included further improvements in rail design, and the death of Sir Benjamin Hall who was vehemently opposed to tramways. The UK Tramways Act of 1870 also led to the construction of a large number of tramways from 1868 to 1875. During this period, 57 Acts for tramways were passed in the UK.

Hall, later Lord Llanover, the Commissioner responsible for approving tramways, described Train's plans as 'monstrous propositions'. His experiences with colliery tramways included having his carriage overturned twice due to protruding rails. The Observer (London) 14 March 1858.



A New York tram clearly showing the problem caused by the step rail.





Mr. G. F. Train's tramway at Birkenhead : Section of rail.

Diagrams of the suggested appearance of Sydney Pitt Street $rail^2$, the inside of the rail being on the right; and Train's Birkenhead rail 3 , the inside being on the left.

By the 1870s, these and other overseas developments led to tramways being viewed more positively in Sydney.

In 1873, Jorgen Daniel Larsen arrived in Sydney. A railway engineer by training, Larsen was born in Copenhagen in 1833 and probably developed his first designs for tram tracks there. Before coming to Australia, he had worked in England, the United States, Spain and South Africa. In 1872, he was an engineer on the horse tramways in Belfast. Larsen's patented horizontal spike, which replaced a vertical spike (see diagram on page 6), had been an important development in tramway track design.

Larsen recognised the need for tramways in Sydney. The city's suburbs were then served by a network of horse buses and wagonettes which were first regulated, not without protest, in 1873 by the Public Vehicle Regulation Act. Horse buses provided a frequent and flexible service but, like elsewhere, suffered from their limited capacity, relatively slow speed and their rough ride on poor road surfaces. They were expensive to operate because of the large number of horses needed. Fares were also relatively high. In Europe, the horse tram had been seen as the solution to these problems.

Whilst in England the Companies Act of 1862 had simplified the incorporation of companies, similar legislation did not exist in NSW until 1874. Until then, companies could only be formed in NSW by passage of legislation. As a result, the formation of companies in NSW at that time was subject to investigation by Parliamentary select committee which examined the need for each company's existence.

Surprisingly in November 1873, within two days of each other, two Bills were introduced in the NSW Legislative Assembly to incorporate tramway companies.

On Tuesday, 18 November, John Lucas, MLA for Canterbury, moved for a Bill to enable 'The Sydney United Omnibus Company (Limited)⁴ to construct and maintain tramways in and along certain streets in the City and suburbs of Sydney, and for other purposes'. The tramway gauge would be 4 feet with the top of the rails level with the road surface, constructed as near as possible to the centre of the road, and be no closer to the footpath than 9ft 6ins. The Company would be required to alter its track if the road level were altered. The track would be entirely double track and the routes would be as follows (current street names in brackets):

- From King and Clarence Streets by King, Castlereagh, Bathurst, Elizabeth, Liverpool, Oxford and Crown Streets to Cleveland Street.
- From Hunter and Castlereagh Streets by Castlereagh Street and route 1.
- As route 1 to Oxford Street and South Head Road (Oxford Street beyond Bourke Street, changed to Oxford Street in 1874) to the Waverley Tea Gardens (corner Oxford Street and Bronte Road).

Drawing by K McCarthy taken from Keenan, D; The City Lines of the Sydney Tramway System, p6.

³ Kinnear Clark D, Tramways, Their Construction and Working, Adam Gordon reprint of original published in 1892, p13.

Incorporated in 1873 (NSWLA 36 VIC). The names Sydney United Omnibus Company and the Sydney Omnibus Company were both used for the same company.

⁵ Sydney Morning Herald, 19 November 1873, p5.

- 4. As route 2 to Oxford Street then as route 3.
- As route 1 to Oxford Street then to Bourke Street then by (Darlinghurst and) Macleay Street to Potts Point.
- 6. As route 2 to Oxford Street then as route 5.
- From near the Old Commissariat (Argyle Street) via George and Parramatta Streets (Broadway), Glebe Point Road to Glebe Point.
- 8. From York Street at Church Hill (Lang Street) via York, Druitt and George Streets and as route 7.

The Bill was given its first reading and ordered to be printed and a summary appeared in the *Sydney Morning Herald*⁵ the next day but nothing further happened as the SUOC later merged their interests with the second proposal.

Two days later on 20 November, John Burns, MLA for Hunter, introduced a second Bill, entitled the Sydney and Suburban Streets Tramway Bill, to 'incorporate a company under the name of the City and Suburban Tramway Company and to empower such company to construct and maintain patent tramways in the City and Suburbs of Sydney and for other purposes'.

A week later, a select committee of the Legislative Assembly⁶ was convened to enquire into the Sydney and Suburban Streets Tramway Bill. The Chairman of the committee was John Burns who had introduced the second Bill.

The first witness called was the Bill's promoter and engineer Larsen. He was immediately quizzed on his credentials and responded that he had worked as the engineer on tramways in London, Belfast, Cardiff, Portsmouth, Brussels, Paris, Madrid and Copenhagen, and had been a consulting engineer in Edinburgh and Glasgow.

The original routes for Larsen's tram system were:

- From King and Elizabeth Streets by Elizabeth, Liverpool, and Oxford Streets, South head Road to Piper (Queen) Street, then single line along Piper Street and Upper Ocean Street to the Woollahra Council Chambers.
- From York Street between Market and Druitt Streets by Druitt, George and Parramatta Streets (Broadway) and Glebe Point Road to Glebe.
- A branch from line 2 from Parramatta Street along Newtown Road (City Road and King Street) to Newtown.

The York and Druitt Street section was not in the original Bill but Larsen said he wished to add it to save changing horses and cars in the busy section of George Street outside the Town Hall.

The committee members initially concentrated on whether Sydney's streets were wide enough for tramways and he gave examples of narrow streets in London, Deptford, Dublin, Glasgow and Berlin where trams operated in streets much narrower than Sydney's. They then turned to the issue of Train's step rail system, and Larsen had to go to great detail to answer their questions. He was asked if any of the lines he had built had been taken up and he replied that to the best of his knowledge none had; in fact they were being continually expanded. He showed them a model of his rail and described how track construction would leave a road surface flush with the rail head.

Larsen explained how the trams would operate at a speed of 7mph with a speed of 9mph being possible on level ground in open country. He intimated that in many places the trams would not stop as intending passengers could jump on board and climb the stairs safely; as opposed to horse buses where they had to remain stationary whilst passengers climbed the ladders to the top deck.

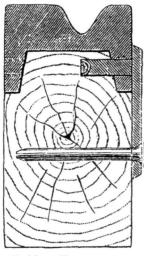
He was asked about trams stopping on steep hills, and gave the example of the upper part of Leith Walk (now Leith Street) in Edinburgh, which had been opened in February 1872. In this location trams safely negotiated a gradient of 1 in 28 although with the assistance of a third 'trace' horse. He stated that the proposed cars could stop safely on Brickfield Hill's 1 in 24 gradient in twice their own length without 'incommoding' the passengers. An emergency stop in one car length was possible but this would throw the passengers off their seats.

Street maintenance would not be an issue. However, the company would maintain a paved surface up to 18inches either side of the tracks and would work with councils to maintain the whole street width if necessary.

Fares would not exceed threepence as far as Newtown Road junction, the Sydney City boundary, and an extra penny from there to Newtown or Glebe would be charged if necessary. Two special cars would be provided in the morning and the evening 'for the working classes' at fares not exceeding half a penny a mile with a minimum fare one penny.

The last issue Larsen had to deal with was dray parking. Apparently Sydney carters had got into the habit of backing horses on to the side of the street and discharging goods from the side of the dray. This was estimated to take up twelve feet from the kerb. Although Larsen felt there is no city where traffic was

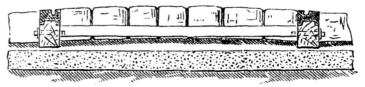
NSWLA, Report from the Select Committee of the Sydney and Suburban Street Tramways Bill, 1873-4 session, vol A3, pp 551ff.



Belfast Tramways. Section of rail with Larsen's fastening

was adequate; whether the rail was an improvement on the Pitt Street track; and whether he impressed with the working of tramways. He answered these questions positively.

According to Young, the solution to the traffic problem in America had been resolved by heavy traffic, such as drays, making use of the tramway in the early hours of the morning before the trams started running. Even with step rails the advantage of the track had made use of the poor quality roads acceptable.



London Street Tramways.

Diagram of Larsen's patented rail as used in Belfast in 1872 and London track showing advantage of grooved rail⁷.

blocked with carts as much as Sydney, he foresaw no problems. Nevertheless, a fine of 40 shillings was mentioned as a penalty for blocking the trams.

Other witnesses called were similarly quizzed on the tram systems they had seen overseas and whether or not the rails caused a problem for other traffic. Mostly their evidence corroborated Larsen's but a Mr George Thornton was strongly opposed to tramways because of his experiences with the Pitt street line. However when asked whether he remembered the same problems on more recent tramways in England he suddenly remembered that the rail was nearly level with the ground and that it was a very great improvement.

John Young, Chairman of the Sydney Omnibus Company (SOC)⁸, was also asked why the Pitt Street line failed; he stated the rails were not of the right shape and that maintenance had been poor. In his view, these were the main reasons that the tramway had failed. He admitted that after the removal of the line, he had used some of its rails himself but gave no mention of how they had been used. He was asked questions about whether the width of Sydney's streets

The proposers had contacted George Stephenson of New York and had received designs of cars used in New York, New Orleans and Glasgow. These were shown to the committee.

Young was in favour of tramways for economic reasons; 'the saving in horse flesh also would be something considerable'. In wet weather the roads were in a 'fearful state' and sometimes the services 'cut up', that is destroyed, horses at a staggering rate, as many as 20 or 30 horses a week. The long line from Waterloo to Millers Point was quoted as one which would cause problems. In his view, trams would improve the comfort of passengers and lower the risks associated with public transport. He expected fares to be no higher than existing forms of transport.

A fare of 3d seemed to be the most passengers would pay. The SOC had tried charging 4d for the trip to Petersham but had found passengers would get off and walk rather than pay the extra penny. Through fares would be available on the bus and tram services, the example given being between Darlinghurst and Glebe Point.

The last new witness called was John Woods who had been the contractor who had operated the Pitt Street line and, since its closure, had operated the replacement horse bus service. By 1873, Woods was a partner with Young and George Kiss in the Sydney

⁷ Kinnear Clark op cit, p120.

⁸ Young also claimed to have been a resident engineer on the Lancashire and Yorkshire Railway which had been formed in 1847.

Omnibus Company. Not surprisingly most of the questions asked revolved around the Pitt Street tracks which he claimed were placed upside down⁹. Once the wheel of heavily loaded vehicles was inside the rails it could not get out and caused much damage to the surface between the tracks. He also agreed there were problems with the longitudinal green timber warping and causing the rails to become quite loose. Woods supported Larsen and Young in their contention that the proposed track would not suffer the same problems.

Woods was also asked about the potential for the tramway to become a monopoly. He felt this would not be an issue as competition would continue because of services provided by independent bus operators. He cited the fact that the SOC had a near-monopoly on some routes and that it had not raised fares. In addition, after purchasing the 36 horse buses running from the Queen's Wharf, he claimed he had been able subsequently to reduce the number to 16 whilst carrying the same traffic without a rise in fares.

Finally on 13 December 1873, Larsen was recalled and asked about the funding of the proposed company. The Company was to be formed with a capital of £95,000 in 9,500 shares of £10 each, with power to increase this to £200,000. Construction costs were estimated at £7,000 a mile independent of plant, rolling stock, horses and 'other things necessary for the working of the lines'. He announced that the original promoters of the Bill had merged their interests with the SOC and he wished to add their names to clause 3 of the proposed Bill. These discussions, which appear to have taken place since the Committee had commenced its hearings, meant that the first of the two proposed Bills was no longer necessary.

The select committee's report was presented on 19 December 1873; they found in favour of the tramway and the house adjourned until the New Year proposing the Bill's second reading to be on 16 January 1874.

Whilst the committee had been sitting, the Sydney United Omnibus Company and the Waverley and Woollahra United Omnibus Company had presented a petition on 5 December 1873 against the proposed Public Vehicles Registration Bill. These companies

were created when the many individual operators amalgamated to organise common routes and to benefit from the economies of larger stables and fodder purchases. A Bill to incorporate the Newtown Omnibus Company was presented on 15 January 1874¹⁰ and referred to a select committee.

The second reading of the Bill was delayed by a few days and it appears that part of this was due to some negotiating amongst the promoters. These were now listed as Messrs W Morris, Larsen, J J Ridley, Young, Kiss and Woods¹¹. As a result of the merged proposal the proposed routes had changed and now were:

- Double track from the corner of King and Elizabeth Streets by Elizabeth, Liverpool, and Oxford Streets to Piper (Queen) Street.
- 2. Single track branching from line 1 along Crown Street to Cleveland Street
- 3. Single track along Piper and Upper Ocean Streets to Woollahra Council Chambers.
- 4. Single track along old South Head Road, Brisbane, Cowper (Bronte Road), Vickery and Power Streets (Carrington Road), the Frenchman's Road (Frenchmans Road and Avoca Street) to terminate at the Destitute Children's Asylum¹², Randwick (corner of Avoca and High Streets).
- Double track from George Street opposite the Town Hall by George Street and Parramatta Road to Newtown Road (City Road) Junction.
- Single track from Newtown Road Junction to Glebe Point.
- Single track from Newtown Road Junction by Newtown Road (City Road and King Streets) to Newtown Bridge.

The Company proposed future extensions to Stanmore, Marrickville, Cook's River and a siding into the Redfern Station.

Burns moved the second reading of the Bill on 30 January 1874, stating that it would be for the public benefit for Parliament to grant the necessary authority. He emphasised the differences between the Pitt Street line and these lines to be built using the improved track design developed by Larsen. Resolutions in favour of the Bill had been adopted by Sydney, Randwick, Waverley and Woollahra councils. However Richard Driver, MLA for Windsor, moved that the debate be delayed by two weeks as Woods had told him that he no longer wanted to be a promoter as there had been a disagreement amongst the parties. Another MLA, Mr Robertson, was concerned and as he had heard that the Bill was 'a swindle' and that the promoters planned to sell their tramway rights for £10,000 as soon as the Bill was passed¹³.

⁹ NSWLA Report from the Select Committee of the Sydney and Suburban Street Tramways Bill, 1873-4 session, vol A3, question 555. He probably meant 'inside out' since if the profile was that shown in the diagram then turning them upside down would not have changed the formation.

¹⁰ Sydney Morning Herald, 16 January 1874.

¹¹ Sydney Morning Herald, 23 January 1874, p5.

¹² http://www.records.nsw.gov.au/publications/aibs/066/page01.htm

¹³ Sydney Morning Herald, 31 January 1874, p5

On 10 February 1874, Burns presented a petition from Larsen, Young and Kiss to the effect that John Woods had withdrawn from being a promoter of the Bill and that Mr Walter Hall had taken his place. They prayed for the House to pass the Bill as they were prepared to carry out the undertaking.

During February petitions against the tramway were presented to Parliament by several parties.

Three hundred and eight citizens of Sydney lodged theirs on 17 February submitting that it was not possible for the 'improved system' rails not to protrude above the surface of the street 'for owing to friable nature of materials composing the surface of our streets, it is constantly being ground down by traffic, and removed by winds, rain, and street cleaning'. They claimed that in several English cities steps were being taken to remove such tramways.

Another petition from 733 residents of South Head Road, Paddington, Woollahra and Waverley felt that the tramway would reduce the value of property along the routes and that the fares would be higher than the current omnibus fares. They suggested that tramway works should be undertaken by the Government to keep fares low and to avoid compensation to a private concern in the event of the tramway having to be removed.

The directors of the newly formed Newtown Omnibus Company felt that having just invested nearly £5,000 in setting up their business the tramway would not be to their advantage. The 31 shareholders of the Woollahra and Waverley Omnibus Company were also concerned about their profits.

George Street residents were surprised and alarmed at the Bill. Tramway construction would be 'fraught with serious loss and damage' to their properties, divert business to other streets and be a dangerous nuisance imperilling the safety and the lives of persons riding or driving along the street. It would be as dangerous as the Pitt Street tramway.

The shareholders of the Sydney United Omnibus Company held a meeting on 23 February at the Royal Hotel. They agreed to sell their interests in the company to Larsen and his associates thus merging the SUOC into the tramway company which was expected to take action as soon as the Bill was passed.

The next day, Larsen, Woods, Young and Kiss sent another petition to the Legislative Assembly wishing to add the names of Richard Shortland, Richard Smith and R M Milton as additional proposers. They also reinstated John Woods' name to the list.

The Sydney Morning Herald ran an editorial in favour of the tramway¹⁴.

In March Waverley Council petitioned the Legislative Assembly in favour of the tramways. Sydney Council also petitioned in favour but recommended limiting the rights to 21 years.

For a while there was no mention of the proposal in Parliament. However on 15 May 1874 Mr Wearne invited barrister Mr G C Davis to address the house on behalf of the petitioners against the tramway¹⁵. He argued against the private promotion of the Bill using public property, the streets, for private purposes without any compensation being paid and raised the claim that Larsen had come to the Colony to speculate for private gain. Davis presented all the arguments relating to the Pitt Street line including those concerning property values, loss of business, slippery rails, insufficient space at the sides of the road and wheels getting stuck in grooves. He went into detail about the width of road tramways would occupy, calculating that only 17 feet would be available on either side of the tram tracks in George Street for both parked drays and moving traffic. He referred to Young's claim of potential benefits by saving horses and asked if the Parliament would pass a measure to save 20 or 30 horses. He also claimed that Glasgow was spending £500,000 to remove tramways that had been built using the improved technology proposed by Larsen. However; this was untrue since the Glasgow system had expanded rapidly until 1873 and no lines had been closed16.

Mr J H Thomas responded to Davis's arguments saying they were based on three fallacies: that the rails were the same as those used in Pitt Street; that Sydney's streets were too narrow; and that the only available part of the street was that on either side of the tramway¹⁷.

The opposition to tramways in the streets of Sydney was considerable and no-one seems to have been able to convince the residents and business owners that Larsen's track would not cause the same problems that Train's had. The Sydney and Suburban Streets Tramway Bill was not read a second time and it was abandoned. Three years were to pass before another proposal was raised.

I thank Ross Willson for his assistance in the preparation of this article.

¹⁴ Sydney Morning Herald, 4 March 1874, p4.

¹⁵ Sydney Morning Herald, 16 May 1874, p8.

¹⁶ Robertson S T, The Glasgow Horse Tramways, STTS, Glasgow, 2000. Between 1872 and 1874 14 miles of tramway had been opened in Glasgow using a grooved strip rail designed by Johnson and Rankin. It was similar to Larsen's rail.

¹⁷ Sydney Morning Herald, 19 May 1874.

THE SALE OF SYDNEY 138s AND 139s TO MELBOURNE From the Archives

By Martin Pinches and Vic Solomons

Whilst undertaking further research into the records held at the State Records Authority of NSW, Vic Solomons located some interesting additional information on the sale of Sydney K class scrubbers 138s and 139s to the Melbourne and Metropolitan Tramways Board (MMTB) in 1959 as outlined in the article *Ninety Plus Years of Service in Sydney and Melbourne (Trolley Wire*, February-March 2003).

The information provided in correspondence between the Secretaries of the MMTB and the NSW Department of Government Transport (DGT) shows that the MMTB obtained a bargain with the purchase of the two scrubber trams which were surplus to the requirements of the rapidly diminishing Sydney tramway system.

Representatives from Preston Workshops inspected the two cars at Randwick Workshops. On 19 May 1959 the Board made an offer of £275 (\$550) for each of the trams, plus a further £40 (\$80) each for three spare GE 275 motors. A condition of the offer was the trams were to be dismantled and made ready for transport at Randwick Workshops.

The Secretary of the DGT received advice from the Chief Engineer and accepted the offer on 12 June 1959. The Chief Engineer noted that 'the two service vehicles have no book value that could be related to a reasonable selling price at this time, but they have a

scrap value of approximately £130 each'. He continued, 'the cars are in good condition and require only the retyring of the wheels to make them fit for service'.

138s and 139s were made ready for transport to Melbourne on 5 August 1959 by separating the bodies from the trucks at Randwick Workshops and removing the trolley poles and bases and securing them to the car bodies. The quote for rail transport from Darling Harbour Goods Yard to Melbourne was £172/2/10 (\$344.29) for each tram with the transport from Randwick Workshops to Darling Harbour by Yellow Express being £35 (\$70) for both cars. The freight for the three motors from Alexandria Goods Yard to Melbourne was £39/14/6 (\$79.45) plus £3 (\$6) for road transport from Randwick to Alexandria.

For a total outlay of £1092 (\$2184) including the transport costs to Melbourne, the MMTB received two trams that were in good condition, having only been converted to scrubber cars seven years previously, plus three spare motors. The fact that they were in use until 2002 makes the original purchase price even more unbelievable.

References

State Records Authority of NSW File Ref. No. 12/8267.

Cars 138s and 139s being prepared at Darling Harbour goods yard for transport by rail to Albury where they will be transhipped to broad gauge for the journey to Melbourne. Their 21E trucks and the spare motors are in the four-wheel S trucks marshalled behind each tram.

Bob Merchant



NEW GLENELG TERMINUS

Article and photos by John Radcliffe

In September 2005, the Glenelg tram terminus was reconstructed for the third time.

In its original form from 1929 to the early 1990s, the terminus consisted of two tracks with a scissors crossover. Each track could hold three H type cars. The track work was reconstructed in July 1991 to provide for the up and down tracks to come together into a short section of single line entering Moseley Square. The track then divided into two standing roads with a loading zone and a domed roof shelter located between them. Point work was based on railway equipment and gave problems from time to time. Most of the rest of Moseley Square was converted into a pedestrian area except for a roadway to the Town Hall and a link to St John's Row adjacent to the rebuilt Stamford Grand Hotel.

In September, the two tracks were replaced by a single terminal stub capable of holding two coupled sets of H cars. The turnout from the terminus comprises conventional dual-bladed grooved tramway rail. A benefit of the new layout is that more space now exists for outdoor dining in the immediate vicinity of the tram terminus. A new platform about 210mm above rail level has been provided on the northern side of the terminus track. Its length is sufficient to accommodate one coupled set.

In addition to modifications to the tram terminus, Moseley Square has been extensively reconstructed and is now closed to motor traffic. The kerbs at tram stop 20 in Jetty Road, which is located between the last stop in the reservation at Brighton Road and the terminus in Mosley Square, have been extended out to the tram tracks on each side of the street.





The bodies of H type cars overhang the platforms, which have been designed for the eleven narrower new Bombardier Flexity cars currently being built in Germany.

The four 'dog guard' side rails between the trucks of H cars have been reduced to two and any adjacent equipment moved inwards to decrease the overhang of the cars at the new platforms. A large concrete block has been installed at the end of the line near the centrally located trolley wire terminal tension pole.

H 367 waits beyond the scissors crossover of the original 1929 layout whilst Birney G 303 attracts a big crowd of prospective passengers during the Adelaide Passenger Transport Centenary, 3 June 1978.





H 363 enters the 1990s terminus while AETM drop centre F1 264 waits for passengers during a special charter on 26 August 1995.



H 361 at the eastern end of the waiting platform at the recently reconstructed Glenelg terminus while H 373 is at the far end of the layover area beyond the platform, 13 September 2005.

At stop 20, Jetty Road, the kerb has been extended out to the tram line to provide safe loading for passengers. Motorists must wait behind the tram before proceeding along Jetty Road. H cars 358 and 357 are travelling west but destinations have already been set to 'Special' for the return to Glengowrie Depot after the morning peak.





At stop 20 in Jetty Road, buses load at the same kerb stop as the trams. Torrens Transit MAN NL202 diesel bus no. 1336 is operating eastward on route 266 (Seacliff-City via Glenelg).

Depot bound after a charter, H cars 367-380 pass 369-368 at the Brighton Road stop. Trams crossing Brighton Road are governed by 'T' lights.

Bob Merchant



HERE AND THERE

NEWS ITEMS OF INTEREST FROM ALL OVER

Perth plans return of trams

Nearly 50 years after the last trams ran on Perth's streets, moves are afoot to reintroduce a light rail line to the city and western suburbs that could be the beginning of an extensive, ambitious, city-wide system.

Engineering Consultants Sinclair Knight Merz were commissioned by Subiaco City Council and have completed a pre-feasibility study into a proposal to reintroduce a tram system connecting Perth with innercity suburbs, universities and other facilities. The study found a tram system could counter increases in car congestion, environmental problems and loss of amenity from the predicted boom in inner-city residents and workers over the next 25 to 30 years. The study proposes a staged introduction of trams and forecasts costs from \$125 million to \$210 million.

The study recommended the initial construction of a 12km route linking the University of WA to East Perth via the QEII medical centre, Subiaco Oval, West Perth and the CBD. The tram line would probably run along Hay Street. Forecast costs of this stage were \$125 million to \$210 million.

A second 13km tram line would take the line over the Causeway to Victoria Park and Curtin University, Bentley then head west along Manning Road to the new Canning Bridge railway station.

A light rail network would help Perth cope with an expected 30 per cent increase in population within 8km of the CBD in the next 30 years.

Additional new trams for Adelaide

Bombardier Transportation announced on 14 September 2005 that it had received an order to supply the city of Adelaide with two additional light rail vehicles for the Glenelg tramway. The new order follows an initial contract for nine vehicles in 2004. The order is valued at approximately \$11 million. The two new Bombardier Flexity Classic vehicles are expected to be delivered in early 2007 and will allow extended services through central Adelaide. The two vehicles will be manufactured at Bombardier's Bautzen plant in Germany.

Dan Osborne, Managing Director of Bombardier Transportation, said, 'This order will bring Adelaide's new fleet of trams for the Glenelg tramway to eleven trams. We are very pleased to see the Flexity Classic forming an integral part of South Australia's public transport expansion'.

The eleven Flexity Classic trams for Adelaide are 29m long, air-conditioned, feature large panoramic windows and are readily accessible for people with disabilities, including wheelchair users. Over 300 Flexity trams have been selected by cities in Europe, including Frankfurt and Dresden, where they have a well-proven service history.

A news report on 18 October advised that the first three Flexity Classic cars were on their way by sea to Adelaide. It appears the trams will arrive on 11 November, a month earlier than expected, and that their entry into service will be brought forward.

Sydney news

The Central Sydney Planning Committee has rejected plans to redevelop Rozelle tram depot into 122 apartments, 222 car parking spaces, commercial space, a tram museum and child care centre. The City received over 300 objections to the development which is not consistent with the site's 'open space' zoning.

New Orleans: update on streetcar system

In response to the disastrous damage inflicted on New Orleans by Hurricane Katrina and subsequent flooding, we received inquiries regarding the status of New Orleans' streetcar system. Unfortunately, little on this issue has appeared in the mass media. Here is a summary of what we know so far, compiled from a number of sources.

The Carrollton streetcar storage and maintenance facility for the historic 13.2-mile-long St. Charles-Carrollton line was located on higher ground. It escaped flooding and serious damage, together with the 35 historic Perley Thomas streetcars and some newer cars, probably Riverfront rolling stock, which are also located there. A San Francisco California Street cable car, previously displayed in a city park, is also stored at Carrolton.

On the Riverfront and Canal Street lines, which make up the rest of the city's 22-mile system, all 32 new PT-2000 streetcars were submerged up to their fare boxes. The precise condition of the streetcar rolling stock at the Canal Street facility (also known as Randolph) is not known. Rehabilitation of the cars, particularly motors and electrical components damaged by the brackish water, is a possibility and is being explored, at least unofficially.

The condition of the streetcar system's overall infrastructure (track, power distribution and so on) is not known precisely. Apparently only the Riverfront line, constructed on a railway right-of-way on top of a Mississippi River levee, was largely untouched. However, because the track on the Canal Street line was predominantly in concrete, it may not be catastrophically affected. Conditions on the St Charles-Carrollton line, where the track was predominantly laid in a grassy median, remain unknown at present.

Photos have shown major sections of the Canal and St Charles-Carrollton lines totally flooded with only the overhead system visible above water and appearing mostly intact in media photographs. However, the old oak trees that frame the St Charles route, which includes the historic Garden District, have suffered severe damage and brought the overhead down in many places.

Vandalism and theft continue to threaten both streetcar facilities and rolling stock, especially at the largely unharmed Carrollton facility. If any special measures are being taken to safeguard the facilities against these threats, they have not been reported.

Streetcar service on St Charles Avenue began in 1835 and its vintage cars have become New Orleans icons. The bulky trams with slatted mahogany seats were immortalised in Tennessee Williams' 1947 play A Streetcar Named Desire. Playwright Williams, who spent much time in the city, named his famous play after a streetcar line that passed through the historic French Quarter en route to a street named Desire. The Desire line was closed in the 1950s.

Connecticut Trolley Museum flooded

Heavy and sustained rains on 14-15 October caused flooding over about a 400m of track at the western end of the Connecticut Trolley Museum's line near North Road station and the Visitors' Centre. Flooding extended to just past Woods carbarn. The cars in Woods barn were sitting in water over their journal boxes at the worst point. The Visitors Centre and Kelly carbarn, where most operating cars are stored, were unaffected. The museum's power station was surrounded by water but it was not immediately known if any damage had occurred there.

Photos of the flooding can be seen on the internet at http://www.trolleymuseum.us/

The Connecticut Trolley Museum has suspended operations until the waters recede and damage can be assessed and repaired. Fortunately, the waters were primarily standing or low flow, so erosion damage is expected to be minimal. It is not known when operations will resume.



Tram 5013, operating a route 96 St Kilda Beach service, picks up passengers at the new platform stop in Bourke Street at Swanston Street. The footpaths extend to the tram line which is lowered to provide level access to the new low-floor trams.

Steven Altham

The tracks at Brunswick Depot were re-laid over the weekend 3-4 September and a new Road 11 constructed beside the depot. Car 2012, with 2097 behind, occupies the new siding on 18 September:

Steven Altham



Tram for Denmark's Royal couple

The Victorian Government has presented a tram as a goodwill gift for Crown Prince Frederik and Crown Princess Mary.

On 10 November, Victorian Transport Minister Peter Batchelor presented SW6 No. 965 to Australia's favourite Scandinavian Royal couple. Danish Consul-General Jorgen Mollegaard Kristensen accepted the tram on behalf of Prince Frederik and Princess Mary.

The Victorian Government had hoped to present the gift during the Royal visit in March this year but was not able to get it restored in time. The fully functioning green and cream tram has been restored at a cost of \$25,000 and will be shipped to Denmark by the end of 2005 where it will be housed in the Danish Tramway Museum. The Museum was described by Mr Batchelor as "one of the finest museums of its type in the world". It is located 65km south west of Copenhagen.

Mr Batchelor said, "As a former Melbourne resident, the Princess is very familiar with our trams and we hope the gift brings back fond memories for her".

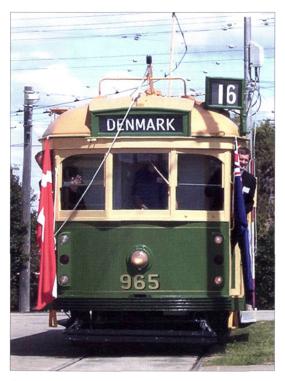
Princess Mary grew up in Tasmania but worked briefly in Melbourne as an advertising executive in the 1990s. Mr Kristensen said the Royal couple was impressed by the present. "It's a very big gift", he said. "This is a piece of history from Victoria and we have a nice collection of trams from around the world. We needed one from Australia and now we have got it."

The Danish shipping line, Maersk, has agreed to transport the tram to Denmark free of charge, waiving the estimated bill of \$40,000.

While trams are no longer in active service in Copenhagen, some stretches of track remain. The Consul-General said tram 965 would return to give rides on festivals and holidays and other special occasions.

"It belongs to the Royal couple and they can use it whenever they wish", Mr Kristensen said. "They are looking forward to trying it in the near future."

The Danish Tramway Museum can be found on the internet at http://www.sporvejsmuseet.dk/



Tram 965 arrives for the official handover at Preston Workshops. Rod Atkins

Obituary: Rob Caldwell

Sydney has lost a staunch advocate for public transport and light rail, and the Sydney Tramway Museum has lost a supporter and friend, with the recent passing of J.R. (Rob) Caldwell.

Rob's name became well known in 1958 when, while still at university, he developed a plan for the use of rapid transit – light rail in today's terms – in Sydney's south-eastern suburbs. The plan would have incorporated the then-existing tram lines, upgraded and operated by PCC cars. In the city area it would have used some of Sydney's empty railway tunnels and was proposed as a cheaper and better alternative to the Eastern Suburbs Railway. After being broadly picked up by the media it came to be known as the Caldwell Plan. It was adopted by the Opposition at the NSW election held in 1959, but the incumbent government was returned and the plan was not to be.

From 1962, after gaining experience as a town and transport planner in the USA, Rob worked as Personal Secretary to Melbourne and Metropolitan Tramways Board Deputy Chairman, David Eakins. While in that

role he was influential in supporting Eakins and MMTB Chairman Robert Risson in their policy for the retention of trams in Melbourne.

In 1965, Rob returned to Sydney and shortly afterwards joined the State Planning Authority, where he held several roles including Manager of Transport Planning. In a long career at the Planning Authority he was successful in having light rail corridors secured and gazetted between Liverpool, Parramatta and the Hills, now in part employed by the busway. He served as a Councillor, later a Director, of the NRMA for 23 years. In his retirement he continued to strongly promote public transport, particularly light rail.

Although his focus was primarily on modern transport, Rob was always interested in heritage matters. When the Sydney Tramway Museum began its Friends scheme, Rob was the second person to sign up as a Friend.

Rob is survived by his wife Robyn, his sons David and James and his sister Sue, to whom we extend our condolences.

David Caldwell and Dale Budd

COTMA

Council of Tramway Museums of Australasia

Executive Officer, 158 Lorne Street, Fawkner, Victoria 3060

From Warren Doubleday

Richard Clarke of the Sydney Tramway Museum has been ably representing COTMA on the Australian Standards ME79 (Rail Safety Standard) Committee reviewing Part 1 of the AS4292. COTMA and Yarra Trams were successful in having street tramway systems better recognised in the Standard. Richard is also representing COTMA, and thus tramway museums, on a tourist and heritage rail reference group that is preparing a model or cut down document (to be known as Abbreviated National Rail Safety Accreditation Package (NAP)). This document provides guidance for low risk tourist and heritage accredited rail operators.

Planned changes to the rail safety regulatory environment are very likely to lead to significant redocumentation work over the next two or so years by those COTMA Members who operate tramway museums throughout Australia. In New Zealand, the new Rail Safety Act, which introduces a safety case environment, will also require significant paperwork and documentation by our New Zealand members. However, they will be using a different approach to that of their fellow Australian museums. COTMA is working with the Association of Tourist and Heritage Rail Australia (ATHRA) and the Federation of Rail Organisations of New Zealand (FRONZ) to try to ensure that heritage tramway museums and heritage rail operations receive appropriate consideration rather than being included with commercial rail operators.

Development of rail safety standards that are appropriate to the circumstances of operating tramway museums and heritage railways is essential to their survival. COTMA therefore encourages members to support, either directly or indirectly, the important work that is currently under way in this area.

2006 Conference - Proposed Program

A first draft of the program for the November 2006 COTMA conference in Melbourne has been developed. The proposed program is as follows:

Friday, 17 November: Registration and evening welcome function. Workshops on the management of museum collections may be held during the day as an optional extra.

Saturday, 18 November: Conference opening and workshops at the conference venue followed by an informal dinner, museum brags, ie progress report presentations, and the first of several quiz sessions.

Sunday, 19 November: Visit to the Melbourne Tramcar Preservation Association's venue at Haddon and the Ballarat Tramway Museum. Dinner will be in the Ballarat district with more museum brags and the second quiz session.

Monday, 20 November: Free day; an optional extra trip to the Walhalla Goldfields Railway is proposed. No conference activities are planned for the evening. However, a group booking on a Restaurant tram will be offered as an option.

Tuesday, 21 November: Conference workshops in the morning followed by a tour of some of Melbourne's closed tram routes in the afternoon. An informal dinner will be held in the evening with more brags and the third quiz session.

Wednesday, 22 November: Vintage tram tour of some of Melbourne's routes that are available for trams fitted with trolley poles. In the afternoon, more workshops and a visit to Hawthorn depot are planned. The evening dinner will provide an opportunity for more brags and the final quiz session.

Thursday, 23 November: COTMA Conference General Meeting in the morning followed by a tram tour to Melbourne's newest extension to Vermont South. A formal conference dinner will be held in the evening during which the COTMA Achievement Awards and the quiz champions will be announced. The dinner will be the closing event of the conference.

We are considering some post-conference events such as a trip to Portland and visits to Bendigo and Bylands. More information should be available in the next issue of *Trolley Wire* together with the advice on how to register for the conference.

BALLARAT

Ballarat Tramway Museum PO Box 632, Ballarat, Victoria 3353

http://www.btm.org.au

From Dave Macartney

With 100 years having passed since the commencement of electric tramway operations in Ballarat, on 18 August 1905, celebrations were in order.

These were delayed until 25 September to avoid the worst of winter and also to coincide with the launch of the Museum's latest publishing venture, *The Golden City and its Tramways*. The book launch was held at

the Town Hall on 21 September. Deputy Mayor Stephen Jones officiated, concluding his speech by saying 'However, we are not here to dwell on the past'. Everybody else thought that we were here for just that reason! Author Alan Bradley signed books furiously, and sales were brisk. The book, of 144 pages and hard cover, has been selling well, with over 600 dispatched over several weeks.



Bendigo 17 and Ballarat 26 meet at the loop on Sunday, 25 September during Ballarat's celebrations for the centenary of electric trams in Ballarat.

Warren Doubleday

A celebratory dinner was held on Saturday, 20 September at the Sebastopol Bowling Club, located where the Sebastopol tram line crossed Albert Street. Some then-and-now slides were shown after the dinner. The changes to the Ballarat streetscape, particularly in Sebastopol, were striking. Around 50 members attended.

As Ballarat's own Electric Supply Company cars, Nos. 12 and 21 are far from complete, it was decided to request No. 17 from Bendigo for the celebrations. Funding proved a stumbling block, but fortunately a generous personal donation from a member to cover transport costs allowed the scheme to proceed. Pressure was then placed on Bendigo to complete the refurbishment of the crossbench car in the short time available. This was achieved with no small effort by the Bendigo team, and No. 17 arrived on the Friday, looking a picture.

Sunday, 25 September saw No. 28 in its ESCo colours commence the service, to be joined shortly after by Horse Tram No. 1, hauled by Prince and D'Arcy, a couple of Clydesdales from Geelong. No. 17 ran out, and the service settled down to the horse tram working between the loop and St Aidans Drive while the electric cars worked alternate services between the loop and Carlton Street. Late in the day No. 26, also in ESCo colours, joined in to provide even more variety. Special fares for the day of \$10 for adults, \$6 for children and \$25 for families entitled the purchaser to one ride on the horse tram and unlimited rides on the electric service. Souvenir tickets based on an early postcard were issued. The ticketing arrangements proved to be so complex that our poor long suffering Traffic Manager is still trying to calculate the exact passenger numbers. It might be 357, or perhaps not!



Bendigo No. 17 crosses Ballarat No. 28 at Gardens Loop during the centenary celebration operations on 25 September. Steven Altham

Ballarat's horse tram No. 1 operated the tram service north of the loop on Sunday, 25 September. Electric trams ran between the Loop and Carlton Street. Warren Doubleday



The road way adjacent to the old Gardens Loop has recently been reconstructed. The finished appearance in early September almost gives the appearance of the centre of the road running. However, the poles still show the location of the loop.

Dave Macartney



The Wendouree Parade tramway is becoming more like a city tramway every day with the second pedestrian crossing recently installed at Depot Junction. Car 661 approaches the new crossing on 3 September 2005.

Austin Brehaut



Elsewhere on the tramway, three overhead poles were condemned during the periodic inspection by the regulating authority. Two of these were replaced on 16 August, one with a refurbished bracket arm painted in the original burnt orange colour. During September the road surface between the kiosk and Windmill Drive was extended on the lake side to form car parking

spaces. Cars had always parked here but now it is sealed and with marked parking bays. The tramway now gives more of an appearance of running in the road instead of along one side. During excavations the formation of the old loop was revealed, as well as the sleepers at the points, still there under the surface.

BENDIGO

Bendigo Tramways

1 Tramways Avenue, Bendigo, Victoria 3550

http://www.bendigotramways.com

From Kym Smith

Damage to overhead

Substantial damage to the tram overhead in High Street between Violet Street (Gold Mine) and Wattle Street (Sacred Heart Cathedral) occurred on 1 September 2005 when an over-height truck snagged the main trolley wire at the Don Street intersection.

The main trolley wire snapped at the intersection, and the strain caused by the impact snapped spans near the intersection, and anchoring spans back near Violet and Wattle Streets. Several poles were also pulled out of alignment or damaged.

Unfortunately, the wire was not able to be rehung immediately, because of new regulations which require a greater separation between the Powercor and tramway assets than existed in the SEC days. This will require the installation of new poles, and the City of Greater Bendigo has accelerated its program of

undergrounding the power wires and installing ornate tramway and lighting poles.

It is hoped that the new poles and overhead will be installed in early December 2005. In the meantime, tram services will continue to operate, but will terminate at Charing Cross.

Rolling stock

Most of the painting and signwriting has been completed on No. 21, with only the fitting of some 12 volt equipment, and final terminations to some of the 600 volt cabling to be completed before the tram can re-enter service.

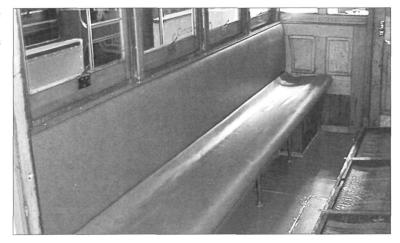
No. 21 has also been fitted with self-lapping brake valves, and additional 12-volt marker lights and



The two 22E trucks from No. 44 await dismantling and overhaul. Wayne Taylor

The newly reupholstered seats installed in No. 35.

Bendigo Tramways



indicators to ensure its suitability for tram tour service at any time.

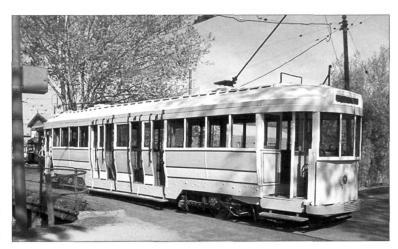
The overhaul of Toastrack No. 17 was completed in the nick of time for it to be transported to Ballarat for their centenary celebrations. It was loaded on the morning of 23 September and offloaded later that morning before venturing out on their system for test running. Anita and Darren Hutchesson, Bill Kingsley and Len Millar – all drivers in both Bendigo and Ballarat – did the honours of driving No. 17 during the celebrations on 25 September (see news from Ballarat).

Most of the bodywork on Hawthorn No. 32 has been completed, and painting is well advanced. It has now been moved over the pits to have mechanical work carried out before the final coats of paint and the signwriting are applied.

Prahran and Malvern Tramways Trust car No. 44 has been chosen to be the next work-for-the-dole project, the third project to be undertaken with The Salvation Army Employment Plus. The tram entered the works area at the rear of Road 5 on 3 October.

Additional funding for this project will be made available through the donations made to the Paint Fund to allow new wheels to be made and a full overhaul to be carried out on the tram. The two 22E trucks have been removed from the tram and are being dismantled, and repairs are being carried out on the drop-centre panels on the tram.

The program will see the reinstallation of No. 44's original drop-centre seats, which were removed when No. 44 was restored in the early 1980s and replaced with full-width seats. With the return of conductors to our tour trams, it is necessary to have an aisle through



No. 32 displays its new colours during shunting at the Tramways Avenue Depot.

Bendigo Tramways



Bedford Tower Truck No. 15 on display at Marong. Cindy Tassie

the drop centre to allow them to move easily through the tram.

Work on No. 44 is expected to be completed in April 2006.

The body of Bendigo No. 22, which has been sitting precariously on blocks under the Purifier Shed at the Gasworks, was recently lifted and lowered onto two spare ex-Z1 class trucks. This allowed the body to be

No. 17 loaded and ready to depart for Ballarat.

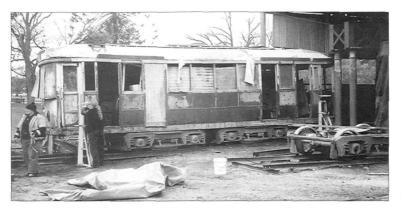
Cindy Tassie



better supported and the trucks to be better protected. It will also make No. 22 more transportable in the future.

Tower Truck No. 15

Our apprentice painter Cindy Tassie and her father Arthur recently gave our Bedford tower truck a spruce up before entering it in a vintage car and truck rally at Marong, about 20km west of Bendigo. The tower truck proved to be a hit with the car and truck enthusiasts, and invitations were received to attend several other rallies. It also gave Bendigo Tramways some more much needed publicity, with many brochures being handed out on the day.



The body of No. 22 on two ex-Z1 class trucks. Glenn Carter

Bendigo Tramways 'NSW Division'

Two of our NSW-based volunteers were in Bendigo recently on holidays.

Tony Cliff spent a number of days reupholstering some tram seats with new foam and vinyl, improving the comfort and appearance of a number of trams. Tony also brought with him further supplies of handstraps that he made as homework projects, and took back some perished conductor's bags for refurbishment

Bill Jolly also spent several months in Bendigo, assisting with work on Nos. 21 and 17 as well as a range of other projects. We all know when Bill is in town, as an aerial for his amateur radio appears not long after his arrival, suspended from the poles at the rear of the depot.

We thank both Bill and Tony for their efforts in heading south to assist us.

ST KILDA

Australian Electric Transport Museum (SA) Inc GPO Box 2012. Adelaide. South Australia 5001

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

From Colin Seymour

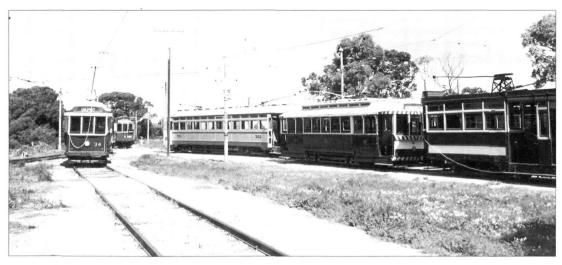
Road 9 concreted

A recent bequest to the Museum together with members' donations has enabled Road 9 in the Northern Depot and the aisle between Roads 9 and 10 to be concreted enabling the whole of the Northern Depot to be open to the public. The trams on Road 9 were moved out on several different days to accommodate the delivery of fill and concrete by the contractor. The appearance of the depot has been

improved considerably and visitors can now inspect the trams on Road 9 as well as those on Road 10. The only major outstanding task to complete the Northern Depot now is the erection of overhead.

Car 1013

Michael Crabb has installed two handrails inside W7 1013, our disabled access car, where one



Cars on the move – Nos. 34 and 192 are on the main line and cars 360, 21 and 282 are on the Northern Depot fan during shunting operations to clear the Northern Depot for the concreting of Road 9. Ian Seymour

longitudinal seat in the drop centre has been removed as recommended by Paraquad SA. Masonite has replaced the hole left following removal of the seat back and has been painted chocolate to match the existing colour inside, and the chocolate colour touched up on all interior surfaces.

The door engine cylinders have been replaced with new ones manufactured by Ian Seymour from new hydraulic pipe. The original ones had rust patches on the bores from long term moisture. The car roof has had its second paint coat applied by John Pennack and Chris Summers.

Car 15

Good progress continues to be made with the reconstruction of car 15 as part of our Bib & Bub set (cars 14 and 15). MTT etched glass has been delivered and fitted to the saloon doors. The original design has been reproduced on 6mm laminated safety glass.

Wheel press

Hercus, a local machine tool and general engineering company has been involved in overhauling bogies for TransAdelaide's H car fleet. Three axles required new gears to made, but to install them, one wheel had to come off. Tony Mathews from TransAdelaide notified Hercus that the Museum had a wheel press which formerly belonged to the MTT and STA.

Upon the Museum agreeing to undertake the work, Ian Seymour recommenced overhauling the wheel press. The spare SEC pony axle and wheels which had



Mike Crabb and Graham Fraser with the new switch stand at the entrance to the Northern tram shed yard. Ian Seymour

come in 1971 with our two Ballarat cars, Nos. 21 and 34, was loaded onto the press to test the machine. After pressing off one wheel, the axle was rotated, thereby enabling removal of the other wheel, a procedure which entertained the audience that had gathered during afternoon tea.

After the successful trial, Hercus delivered three axles to the front of Road 2. The Friday gang then



The spare SEC pony axle and wheels was loaded onto the ex-MTT wheel press to enable testing to take place.

Ian Seymour

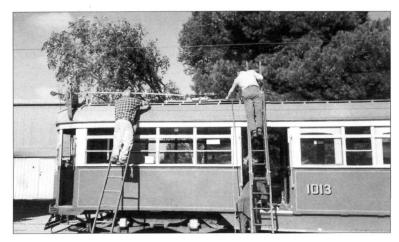
With concreting of the aisle between Roads 10 and 9 completed, visitors can see the range of trams displayed on both roads. Ian Seymour





A view of the centre section of 1013 after removal of a longitudinal seat and floor slats, and installation of hand rails for use as disabled access car.

Ian Seymour



Chris Summers, John Pennack and Mike Crabb at work on the refurbishment of W7 1013.

Ian Seymour

proceeded to set up the machine - one axle each Friday. All three axles varied in pressing off pressure, from 140 tons up to the machine limit of 200 tons. The higher the pressure, the louder the bang when the wheel finally separates!

The press came to the museum in the late 1980s and was placed at the back of Road 2 in the Workshop in 1999 where work commenced as a spare time job in replacing worn and deteriorated items. A concrete slab for the machine was poured on 31 December 1999 by Ian and Barry Fox. The press was then transferred by crane from the back of Road 2 and bolted down in position at the front of Road 1. A galvanised rubbish bin was cast into the foundation to form a pit to allow a counterweight on a cable to retract the piston upon releasing pressure.

Other news

The Salisbury Council recently commissioned a consultant to develop a detailed Marketing Review and Proposal for St Kilda Tramway Museum. The draft report suggested short and longer term marketing opportunities where the Council can assist the Museum. Both the Council and the Museum are working on the implementation of some of the ideas contained in the review.



Mike Crabb paints the floor of the centre section of W7 1013 after removal of the floor slats.

Ian Seymour

WHITEMAN PARK

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

www.pets.org.au

From Michael Stukely

Annual General Meeting

The twenty-fourth Annual General Meeting of the Perth Electric Tramway Society was held in the theatrette at the Public Transport Centre, East Perth, on Friday, 22 July. The following Officers and Councillors were elected: President, Michael Stukely; Vice-President, David Brown; Secretary, Robert Pearce; Treasurer, Martin Grant; Councillors, Garry Barker, Tony Kelly and Frank Edwards.

During the 12 months to 31 March 2005, our trams travelled a total of 11,152km on 251 running days. These totals were boosted by the new format Tuesday and Friday services running under a hire agreement

with Whiteman Park for the first full year. Distances travelled by the trams were:

Fremantle 29	539km
Melbourne W2 329	2,038
Melbourne W2 368	0
Melbourne W2 393	3,715
Melbourne SW2 426	4,853
Melbourne W4 674	7
Ballarat 31	0

A highlight of the Annual Report was the record traffic revenue achieved again in 2004-05. A total of

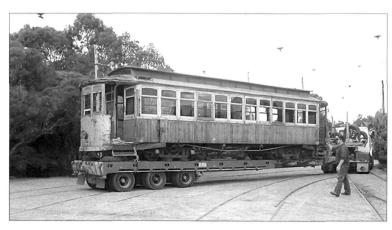
Delight at the completion of bending the first grooved rail at the eastern approach to the pit road on 16 July – John Azzaro (left), Lindsay Richardson, Martin Grant and Trevor Dennhardt Kurt Gabler



32,819 ticketed passengers were carried, compared with 25,465 in 2003-04. These passenger totals exclude special days and bush dances, when the trams are hired. This excellent result directly reflects the very large growth in popularity of Whiteman Park for visitors, and a highly effective program of promotion by Park Management. PETS membership also reached an all-time high total of 95, with 40 of these members contributing voluntary work for the Society at the Park during the year. Great credit is due to all of them.

Revolutions opens in Whiteman Park

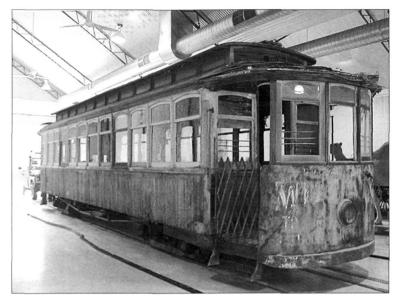
Whiteman Park's long-awaited permanent Transport Heritage Centre, with its exhibition entitled 'Revolutions', was officially opened by Mr Jeremy Dawkins, Chairman of the WA Planning Commission, on Friday, 7 October. Representatives of the Society were in attendance, and there was a large turnout of supporters and friends of the Park and its transport and other groups.



Moving the body of Kalgoorlie 25 from the Carbarn to the Park's new 'Revolutions' exhibition on 24 August.

Both Ric Francis





Kalgoorlie No. 25 (Brill, 1902) is now installed in the new Revolutions building at Whiteman Park. Ric Francis

The theme of Revolutions is 'Exploring the impact of transport choices on the Western Australian way of life' or to put another way, 'Are we there yet?' Revolutions brings together items and pictorial displays on loan from the collections of all transport groups in Whiteman Park including PETS, the Bus Preservation Society of WA, Bennett Brook Railway, Tractor Museum of WA, and Motor Museum of WA. It also houses a wide variety of transport related exhibits from the Whiteman Collection, the private collection of the late Lew Whiteman, after whom the Park is named. Displays of current and proposed transport developments and concepts are also to be included. Revolutions aims to present 'exciting transport stories, ideas and interactive exhibitions', enabling visitors 'to explore past and future transport systems and choices'. More information is available at www.whitemanpark.com

The body of the Society's former Kalgoorlie Electric Tramways clerestory-roof bogie tram No. 25, built by J.G. Brill & Co. in 1902, was transported by low-loader from the Carbarn to Revolutions on 24 August. Although it will be displayed in unrestored condition, the body has been cleaned and prepared over several months prior to the move. Before loading, No. 25 resided briefly at the front of Road 1 of the Carbarn where unmotored Melbourne No.1 trucks were placed under it by our Wednesday team.

Perth Leyland 'Canton' trolleybus No. 38, whose body has been restored to a very high standard by the Bus Preservation Society, is also prominent in the Revolutions display. We have loaned two complete Perth trolleybus overhead hanger brackets so that a short length of dual overhead could be set up to enable the trolley-poles of No. 38 to be raised onto the wires. The overhead is aligned well out from the side of No. 38, to demonstrate the manoeuvrability of this type of vehicle in traffic.

Revolutions is located in the large building north of the Whiteman Village Junction railway station turntable, on the west side of the Bennett Brook Railway. The brick façade of this building is a replica of three bays of the much larger former WAGR East Perth steam locomotive depot building which closed in 1968.

Tram service pit

Further highly visible progress in the construction of this much needed facility has been made by the Wednesday Team, with the laying of the curved track alongside the Carbarn to connect the eastern end of the pit with the points on Road 4 of the Carbarn fan.

Following the successful adaptation of the Bennett Brook Railway's hydraulic 'Jim Crow' for use on tramway grooved rail, the bending of the two rails for the curve commenced on 6 July and was completed on 20 July. The second rail was cut to length and plated up on 17 August with an excellent result. Tie-bars and steel rod electrical track-bonds were then installed in preparation for concreting. Lindsay Richardson and Noel Blackmore have been assisted here by John Azzaro, Kurt Gahler, Trevor Dennhardt, Tony Grose and Jim Paton.

Meanwhile, the four wall-braces to support the centre pillars holding the rails over the wider, middle section of the pit have been fitted. The set-up of the workshop floor track work has been completed. The final pit rail bed-plates have also been installed.

WAGT tram No. 66

Painting of the exterior matchboard side cladding and window frames of the saloon was done by John Davies with assistance from Andrew McCrorie.

New 'Please Close Door' signs were made commercially to replace the old and badly damaged black-and-white enamel signs on the inside of the saloon sliding doors. The new signs were cut from aluminium, powder-coated white, then sign-written by hand.

A raised work-platform was purchased to improve safety and accessibility for work above window level on the tram exterior. This has made these tasks a great deal easier.

Service trams

A celebration for the 70th birthday of ex-Melbourne W4 No. 674 was held by members at the workday on 28 September. The tram was decorated and a special trip was run to the site of the original terminus of the Society's tramway which was then known as Mussel Pool. This is now no longer a scheduled stop, being just 130m west of the Mussel Pool East stop.

Sealing and repainting of the roof and upper sill woodwork of new arrival, W2 No. 441, has been completed. Further adjustments to the brakes were carried out, and the car's Melbourne Sesquicentenary livery was cleaned and polished by a team led by Noel Blackmore. The tram entered regular service for the first time at Whiteman Park on 26 August.

Infrastructure and plant

The 20 ex-Perth trolleybus steel traction poles sent out for sandblasting and anti-rust prime coating have been returned for final painting and installation. A program of replacing ageing timber poles, particularly in wetter areas, is being planned for the drier months from November when soil water tables are lower.

In June, 12 rotten timber sleepers were replaced with steel in the Mussel Pool-Bennett Brook road crossing section. A further three were replaced there in August, together with three more on each of the west-to-north and north-to-east curves of the triangle. Minor repairs and adjustments were made at various locations, and lifting and packing of new sleepers continued.

Pat Ward continues his good work in caring for our motor vehicles, with replacement tyres being fitted to the tractor, Lincoln welder and portable air compressor. The Society has only a small requirement for diesel fuel. Accordingly, an arrangement has been reached with our neighbours, the Bennett Brook Railway, for delivery of diesel fuel to our storage tank in association with their deliveries.

Members of the Wednesday Team with W4 674 on its 70th birthday celebration 28 September, before leaving on a special run. From left: John Davies, Darren Ward (front), John Azzaro. Gordon Blackmore, Geof Morrison, Blackmore. Noel Lindsay Richardson (in cab), Shane Parsons and John Shaw.

Kurt Gahler



Donation

During excavation works for construction taking place near the University of WA boatshed in Crawley earlier this year, remnants of the tramway from Perth that ran alongside Matilda Bay to Nedlands were uncovered. Two rail lengths, sleepers and dog-spikes were given to the Society and delivered at no cost. We thank Mr H McCaffrey of UWA for arranging this donation, and for providing us with a detailed illustrated report of where the track panel was located.

BYLANDS

Tramway Museum Society of Victoria 38 Piccadilly Crescent, Keysborough Vic 3137

www.tmsv.org.au

From Running Journal

Museum works

Tram maintenance and restoration works continue at a steady pace at Bylands. Work on the restoration of Q class No. 199 to near original condition is being undertaken in the workshop area of the Exhibition Shed by Doug Prosser. The transformation of the tram from its previous works car configuration as 16W has seen amazing progress made in just several months. This has been made easier by the provision of almost a complete car set of spare parts and body fittings from sister cars Nos. 193 and 200, which were stripped by the Society in the early 1970s. Doug has also been investigating the correct original paint colours, for when the time comes to completely repaint the vehicle.

Other tram restoration works continue on Ballarat No. 17 by Graham Jordan, and 7W by Michael Fedor. Work is now being undertaken on the north end and western side of Ballarat No. 17 in preparation for

undercoating and repainting. The cream colour has been applied to the southern end and eastern side of the tram. Tramway green will be applied when the cream paintwork has been completed. Some time ago, Graham was able to match perfectly the SEC green with a commercially available product. As a result, we were able to provide the Ballarat Tramway Museum with information that will assist their restoration projects. This information was also provided to Ian Hanson of the Sydney Tramway Museum for future use on their two Ballarat trams Nos. 12 and 37.

External work on 7W has seen all the north end stripped back to bare surfaces, repaired where necessary, primed and undercoated. Because this vehicle spent a large part of its life in the open, including many years at Bylands, deterioration has been both significant and extensive. Michael is



Z2 No. 5 at the northern terminus of the main line on 7 August 2005. Ray Marsh

patiently working on this seemingly never-ending task but the end result should be magnificent. Other tram maintenance has seen completion of repairs to the lifeguard of W2 643 and minor repairs to the trolley bridge of X1 467, thus enabling both cars to return to service.

Work continues on preparing and detailing Y1 612, including final repairs to the lighting circuits and door motors by Corey Robertson. The internal stanchions and all brass fittings including the tip-over seat handles have been buffed or polished by John Walker. John has also refurbished the controller covers back to their original varnished appearances. Although W2 646 needs some work to return it to serviceable condition, this is of lower priority compared with several other projects. Nevertheless, if anyone is interested in cleaning and detailing the car internally, we would appreciate any assistance offered.

Track work continues with the final ballasting of D road by Russell Jones and Tania Ireton now completed. The alignment of the proposed depot fan area has been measured out with preparations now underway on the final design of the proposed fan. During August, we took delivery of six sets of point castings and crossing pieces. These units were originally part of the Balaclava Junction Grand Union that was replaced in April this year. We hope to use some of these components, and some of the better ones acquired several years ago from Malvern Depot, to construct the fan, ladder track and connection to the main line.

Other track work includes the tightening of a number of track bolts, which hold the fishplates in the main line turnout at the vehicle maintenance shed. Several more sleepers have also been replaced in the main line near the southern terminus.

FERNY GROVE

Brisbane Tramway Museum Society PO Box 94, Ferny Hills, Queensland 4055

From Peter Hyde and Facing Points

On Wednesday, 10 August 2005 the Museum celebrated the 25th Anniversary of its official opening. The Lord Mayor of Brisbane, Campbell Newman, unveiled a commemorative plaque which is the same size and uses the same lettering style as the original

'opening' plaque. As a pair, they bracket much hard work and much achievement.

The day commenced with the arrival of the Lord Mayor by car at the lower terminus area. He then boarded Combination 47 together with Cr Graham



Brisbane's Lord Mayor Campbell Newman congratulates our President, Peter Hyde, following the unveiling of the plaque to commemorate 25 years of tramway operations.

David Revis



Brisbane's Lord Mayor Campbell Newman (left) with Bill Daniells, our first President, on the platform of 10-bench open car No. 65.

David Revis

Quirk from Wishart (Chairperson Transport and Major Projects Committee); Cr Judy Magub from Toowong; Cr Norm Wyndham from McDowall; our own Cr Ann Bennison; and members and friends gathered at the gate.

After many photos, the tram ran the short distance to the Valley Signal Cabin where all alighted and walked to the Workshop Building. Just inside, the motorman's platform of Toastrack car 65 provided the ideal dais for the official proceedings. Our first President, Bill Daniells, spoke briefly about the early days, read messages from Tim Atherton and Troy Thomas and introduced Sel Churchward who spoke of our progress in the 1990s.

Before he unveiled the plaque, Cr Newman confessed that, he had been unaware of our achievements prior to this event and conveyed his surprise at the size and scope of our undertaking. He has invited us to meet with him in the near future to discuss the future progress of the Museum and possibilities for assistance.

Special thanks are in order to the following people who contributed to the success of the day. The TRAMS group finished - just in time - the concrete surfacing of the crossover in the terminus area. It has greatly improved the appearance of the site. John Hamilton undertook the landscaping and gardening work. Despite the drought, the grounds looked magnificent on the day. We also thank Jenny Tidey for baking the scones for the morning tea, and the wives, members and friends who assisted with its preparation. There was a large item about the event including a photo on page 3 of the North West News and a large complimentary article in the Courier Mail on 20 August.

The Museum has also been on TV. Channel 9's *Brisbane Extra* program was hosted on 15 July from the area in front of Depot No. 1 with trams suitably arranged as a background. The program featured several very well presented segments on the Museum. The benefit of the publicity was felt immediately with a considerable increase in visitors. We are also doing very well at present with weekday group visits and a record three in one week in mid-August.

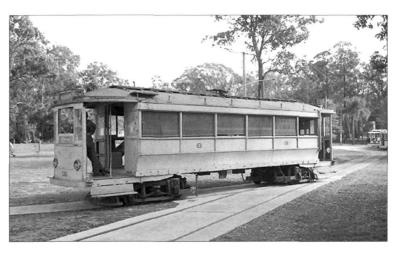
TRAMS group

The big events for our TRAMS group have been the return of Nos. 99 and 65 to service. It has made all the hard work worth while to see these trams carrying passengers again.

Three Tuesdays were spent on concreting the terminus area. The first Tuesday was spent in cleaning all the algae and grease from the old concrete surface with a high pressure cleaner. On the following Tuesday, 3 cubic metres of special concrete were delivered which required levelling and trowelling a surface area of 65 square metres! It was a rush against time towards the end as the concrete was starting to set. On the third Tuesday 1.6 cubic metres was ordered to finish inside the tracks. Because the supplier sent 2 cubic metres, there was a frantic search for spots to use the surplus. There is now a proper grate on one of the drains in the terminus area as well as on another drain beside the track in the direction of the triangle. The edging strips are still to be boxed up and poured to complete this area.

With the out-shopping of Nos. 65 and 99, it was time for other trams to enter the workshop. For the Great Tram Shunt on 6 August, Noel West prepared a schedule of movements. The big event went smoothly.

Dreadnought No 136 is entering the 'Y' on its way into the workshops. Grant Howard



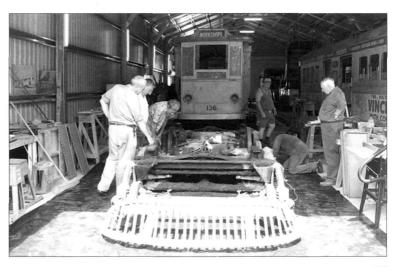
At one stage there wasn't much track that didn't have a tram on it. For the TRAMS group it means that we now have cars 136 and 400 in the workshop, the Directors having approved the TRAMS group request to include the latter for restoration. Many of our members have a soft spot for 400 and want to use any available time on its restoration. The first task will be to clean up the tram's interior. There is some rust in places that needs arresting. However, we are confident that the tram will be in good hands in the coming years.

On Melbourne Cup Day, Dreadnought 136 was raised and its bogies rolled out to commence what will be a long but worthwhile restoration.

Track extension

The design for the proposed tram line to the railway station is progressing well. The Brisbane City Council has completed a master concept plan for the Arbor Street Parkland and the tram line is an important part of the plan. We thank the staff of the Brisbane City Council's Parks Planning Section for consulting the museum during the design of the concept plan. Another feature of the plan is a 22-bay sealed car park in parkland adjacent to the Police Station. The car park will be next to Tramway Street rather than down on the lower section, with the entry off Tramway Street being directly opposite the entrance to the Bowls Club and sports fields.

The Museum is currently working on the Development Application (DA) to be submitted to the BCC. It is expected that a DA pre-lodgement meeting will be held with the Council late in November this year. The meeting and subsequent discussions will enable us to refine our Development Application before it is submitted early in 2006.



The trucks have just been removed from under centre-aisle car 136 and curious members are making their first inspection. Ken Howard

VALLEY HEIGHTS

Steam Tram and Railway Preservation Society PO Box 571, Springwood NSW 2777

From Peter Stock and Steam Scene

The Society's steam tram motor 103A and tramcar 93B were accredited for operation following inspection by the ITS&RR Transport Safety Officer on 16 September 2005. This was the first occasion on which the Society has been able to operate a steam tram for the benefit of visitors since the fire at Parramatta Park in 1993.

This is a great achievement for those who have spent many hours restoring, replacing parts, painting and undertaking many other tasks in relation to these precious items of nineteenth century rolling stock. The skills developed by members to make all this happen were acquired along the way and will stand us in good stead when our next major restoration project commences. Yes, there will be one!

After the compliance inspection, our first booked party climbed happily aboard for the steam tram's inaugural Valley Heights departure at 11:15am. The students were from the Blue Mountains Grammar School which is located opposite the museum in Tuscalum Road. The tram carried 73 passengers on four return journeys, crewed by train drivers Craig Connelly and David Lewis, under the control of train guard/conductor Peter Stock and second person Stephen Lanyon. The students enjoyed their excursion. One student was so impressed with her experience that on the next Wednesday she heard the tram whistles and her parents, when picking her up after school, 'just had to come to the depot and have a ride before going home'.

Once this long-standing commitment was accomplished, Andrew Tester, the affable, hardworking Chairman of the Valley Heights Locomotive Depot Heritage Museum, the Steam Tram and Railway Preservation Society and the Sesquicentenary of the NSW Railways Joint Committee, ceased to chew at what was left of his fingernails. Now there is an operating exhibit capable of carrying any visitor who may wish to ride.

That landmark, drizzly day at Valley Heights heralded the beginning of what would develop into an intense 20 days of activities and the dawn of an ever-increasing active steam presence at the Valley.

The next day, opportunities were taken by the respective groups to complete last-minute tasks on the

tram and around the many and varied depot exhibits. The buildings and grounds of the depot shone, reflecting the care and attention given to setting up model displays, painting seats, erecting signs, tending gardens, erecting safety fencing, etc. The preparations place over many weeks before commencement of the celebrations and were a credit to those who gave their time freely to the tasks. It was pleasing to note that everyone pitched in during the open days to ensure every visitor went home feeling satisfied, with a smile on their face and a desire to come back again. Most youngsters even rejoiced in what is now a rare opportunity to 'play in a coal heap' and sneak a lump or two into their pockets for show-and-tell at school!

The first sesquicentenary open day was Sunday, 18 September. Whilst not specially selected, this was the third Sunday of the month, a tribute to the Society's regular steaming day in Parramatta Park. Again Craig and David were on the motor. Bruce Irwin was in charge of the tram this time as train guard/conductor. The occasion presented Bruce with the opportunity to complete the double act for which he hankered for so long. Bruce was one of the last conductors to collect fares at Parramatta Park. He wanted to be the first to collect fares at Valley Heights. Names from the day's operations sign-on book included Bruce Coxon, David Hunt, Stephen Tolhurst, Stephen Lanyon, Frank Millier, Col Burne and Peter Stock, all being recorded as engaging their Rail Safety Worker duties on the tram. One party who visited that day was a pre-booked touring party of 42 members from the Parramatta National Trust. Then another coach load of another 40 members from the same source visited on 25 September! Such is the appeal of 'that old tram from Parramatta Park' can generate.

Our steam tram was operated on a further six occasions. The smoky end was attended to by David and Craig whilst at the tail end Peter was train guard/conductor. This crew was ably assisted in their duties by our rail safety workers. The only day the trammies deserted the cause was on Saturday, 24 September when several members attended the 90th birthday celebrations of foundation member and president of honour, Frank Moag.

One request for extended hours was on 5 October. Members from the area Chamber of Commerce held a

meeting under the hallowed cloisters of our working railway 'cathedral'. After the close of official museum business the 45 visitors enjoyed their exclusive steam tram experience. The tram was put to bed in the cool and quiet of a late afternoon, just at the onset of dusk.

In total, our sesquicentenary season from 16 September to 7 October saw the tram being operated on nine days. It travelled 129kms and carried 1700 passengers. The highest total of riders occurred on the Sunday of the long weekend when 347 riders were recorded. Included in the overall number was the youngest passenger at 3 weeks of age whilst the eldest celebrated a belated 95th birthday outing. Two lap dogs had a ride as did many, many juvenile students of Thomas the Tank Engine. These students were acutely aware of railway operations but could not be tricked into thinking the handbrake wheel was in reality a steering wheel. These youngsters provided Peter Stock with interesting, thoughtful conversations and very probing questions that at times needed a technical reply or demonstration.

Whilst Thomas is alive there will always be a pool of younger people interested in railways for us to encourage taking up membership and joining with us at the Valley.

The celebrations can and should be judged as a success - a success due to the members of all the organisations on site. Collectively, we achieved what would be an impossibility to do as individual groups. Our strength is only by way of this unity of purpose. With this we can achieve more and more. The depot was open continuously for 22 days (2 days were non-operational), 2,261 passengers were carried and 261kms were run. Two coach parties were catered for, plus two mini-bus visits with residents from local retirement and nursing homes also being catered for. The latter visitors needed some assistance climbing up and into the tram but they made it.

The tram crews, track vehicle operators, guide volunteers and others deserve a special thank you for their efforts. Volunteers stayed on site overnight to keep an eye out for errant intruders, graffitists or any other disturber. The trammies travelled to the Valley and always had the tram in steam ready for visitors. After the day's operation the procedure was reversed, There are those who turned their hand to crowd control or acted as guides. Last but certainly not least, to the families of every volunteer who supported us in this marathon opening of the Valley Heights Locomotive Depot Heritage Museum and the operation of the Valley Heights steam tramway.

LOFTUS

South Pacific Electric Railway Co-op Society PO Box 103, Sutherland, NSW 1499

www.sydneytramway.museum.com.au

From SPER News

W2 392

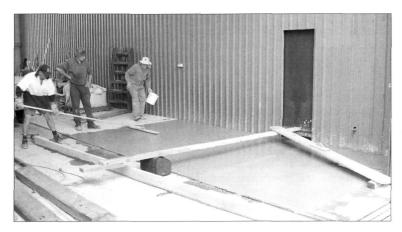
W2 392 has been transferred on lease to Glenreagh Mountain Railway Inc (GMR) for an initial period of five years, with two renewable five year options. GMR will carry out a working restoration of 392 in lieu of payment in the initial period. The car will operate using a motor generator set, supplied by Richard Clarke's son, and a rectifier unit.

On 27 August Tom Tramby and Mike Giddey erected a temporary loading ramp in the street north of the scissors crossover on the western track in about two hours. After lunch 392 was driven onto Australian Tram Movers' low loader and left Loftus headed for

Glenreagh on the north coast of NSW. Glenreagh is the former junction for the Dorrigo branch line.

The tram will provide a ready to run form of transport for unannounced tour coach visits and during times of summer fire bans when GMR's 19 class steam locomotive cannot be operated. The 19 class also takes several hours to raise steam!

The tram arrived at Glenreagh on Sunday ready for an early morning unloading on Monday. On Monday afternoon, member Terry Boardman was travelling down the coast and called in to Glenreagh. He was



Purchased concrete is being used to complete the floor of the workshop extension and a new doorway has been constructed to provide internal access to the new area. Tom Tramby, Mike Giddey and Bob Cowing complete floating the newly laid floor area on 27 August.

Bob Merchant

very surprised to see W2 392 rumbling by on a test run.

The ramp will remain in place at least until W2 249 arrives from storage in Canberra (see below).

J 675

In Bendigo, Wayne Taylor has made good progress with this project. He has finished fitting the floor bearers and floor and open front apron to the No. 2 end and has fitted the bearers and floor at the other end together with both bumpers. Wayne has also completed the overhaul and refurbishment of numerous mechanical and electrical components.

Other Bendigo matters

Following the restructure of Bendigo Tramways we were given notice to remove most of our equipment

and the body of R1 1951 from their site by 31 October 2005.

Very kindly, Len Millar has offered to store 1951 at his nearby Newstead property and it is expected that the car will be moved before the deadline. Six bogies will be returned to Loftus. Negotiations have seen Hobart No. 20 and our spare Sydney O class bogie remain in Bendigo, pending the possibility of works by Wayne Taylor when the J car is ready for return to Loftus.

Canberra Tradesmen's Union Club

As foreshadowed, Adelaide H 356 and Melbourne L 102 were cut up in the club in early September. Remnant components of a driver's cabin from each were delivered to Loftus. Regrettably the contractors also cut up a pair of unmotored No. 1 trucks from under 102 because space restrictions within the club prevented their removal intact.



W2 392 is driven up the ramp and onto a trailer on 27 August as the first stage of its transfer to Glenreagh. Bob Merchant

R1 2001 and W2 249

These fully restored cars for the proposed Federation Line have been stored at an ACT Government facility. Since March we have been required to pay commercial storage of \$550 per month. The space created by 392's departure to Glenreagh enabled Mario of Australian Train Movers to deliver 2001 to Loftus on 7 October, 2005, using the unloading ramp.

The tram arrived around 10:30am and took a little longer than it should to unload due to sticking brakes on 2001. It is presently stabled on the Cross Street curve awaiting its turn in the workshop. Mario will shortly collect 249 and the rails for short term storage at his property.

R1 1971

As discussed at our Annual General Meeting and ratified by the board, R1 1971 will soon be transferred to the Australian Electric Transport Museum at St. Kilda, South Australia, on a long-term loan for comparative display and operation there. This move reflects the increasing co-operation between museums and fostered by COTMA. The transfer of car 1971 will coincide with the delivery of W2 car 249 to Loftus.

YMCA Building

A sign replicated from one of the old signs reading 'Powell & Hohnen Engineers' is shortly to be erected on the facade. The sign is made using recycled hardwood and is painted in the original 'Wild Plum' colour with black lettering and white outline. The sign was arranged with John Joyce who has joined his son

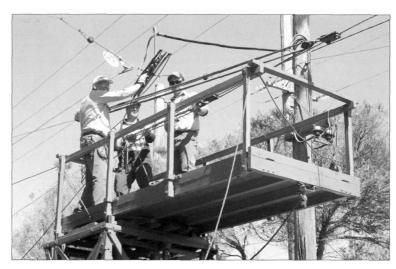
Ian at Townsend Signs, following his recent retirement from Yarra Trams after completion of the Citadis acceptance program. John was previously with the original operators of Sydney light rail and monorail and has been a great supporter of the Museum over the years. The remaining three signs will need to wait until the outcome of our tourism grant application is known.

Depot yard overhead wiring

Over 8, 9 and 10 September the original round section trolley wire in the depot yard was replaced with grooved wire and Road 12 in the top shed was connected also. At the same time the frog pans were replaced by rejuvenated ex-Melbourne overhead frogs that are pantograph compatible.

This was a culmination of many months work by David Rawlings who drilled, tapped and machined new overhead fittings and renovated the ex-Melbourne frogs in the top shed where he also pre-fabricated new span wires. Many of these had been erected above the old ones in preparation for the change of trolley wire. The traffic staff tested the completed work for us by taking R 1740 up the hill and into the front of 12 Road. With the exception of the PCC, which is not trolley wheel equipped, all other trams have operated successfully without dewirements.

Thanks are due to the 12 members of the work team who put in 162 hours over the three days. The team, in alphabetical order, was Danny Adamopoulos, Don Campbell, Bob Cowing, Bob Cooper, Adam Greaves, Hayden Holmes, Peter Kahn, Glenn Killham, Sam McGuinness, Chris Olsen, Geoff Olsen and David Rawlings.



David Rawlings, Glenn Killham and Chris Olsen prepare to insert a section insulator into the wiring over the access track to the top shed on 7 September. Don Campbell



Left to right: Hayden Holmes, Chris Olsen, David Rawlings, Geoff Olsen and Adam Grieves; behind the cable drum is Joshua Dreaves who called in after school to check on the progress made on 8 September.

Don Campbell

Works

In the workshop extension the old air supply compressor was replaced by the larger and newer one donated by Ken Butt. The new unit was plumbed into the air supply and the old one was disconnected and removed. That allowed the south-eastern corner of the workshop extension to be cleared of material, excavated and prepared for concreting. On 27 August the slab was poured with four metres of purchased concrete. The small excess was placed near the Road 14 points. The south-western corner is now being prepared for the next pour. Our CSO apprentice

plumber is running a new 25mm water line to the hose reel on the western wall of the extension.

During late August fencing contractors fixed new chain wire to the boundary fence beside the highway.

In the workshop

Work continues on ballast motor 42s mainly by Warren Howlett, Terry Thomas, Bob Cowing and other members of the Wednesday crew. The former training school GE air compressor was tested and fitted to the car. Cab floor hardwood bearers, cab floor planking



Terry Thomas, Warren Howlett and Bob Cowing discuss fitting part of the driver's cab floor of 42s as Bob's son Luke, visiting from Western Australia, looks on. In the background, Alex Foot is cleaning a handbrake mechanism, 12 October 2005.

Bob Merchant

Vic Solomons and Mike Duncan scrape and chisel many years of accumulated grease and road grime from Brisbane 180's truck on 12 October.

Bob Merchant



and the repaired bumper bars have been re-installed and at the north end the apron framing and the steel panels that form the back of the cab have been erected, along with some masonite templates to determine the final shape of the cab roofs which will have to be made soon. Because of the cost of new hardwood, the required timber is being obtained by sawing up new treated sleepers. The car is starting to look like a ballast motor again.

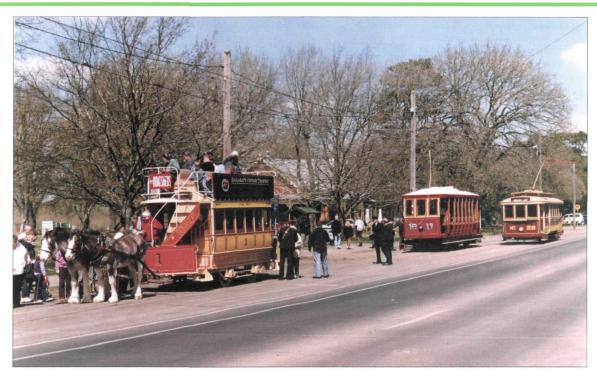
Brisbane Dreadnought 180 was lifted in the workshop on 27 July and placed on body stands. The bogies are being cleaned by Vic Solomons and Mick Duncan and one traction motor has been removed and dismantled for attention.

Although driveable, Z2 111 is out of passenger service with electronic problems. Bill Parkinson is waiting on a replacement set of tramiac cards (printed circuit boards) from Melbourne.



R1 2001 is lowered down the ramp onto the track at Loftus on 7 October. The car's brakes were sticking and it required a slight tug from P 1497 to complete the operation.

Bob Merchant



Ballarat Tramway Museum's No. 28 arrives in the loop while No. 1 waits for more passengers. No. 17 awaits its next trip to Carlton Street on 25 September 2005.

Warren Doubleday



Soon after leaving Mussel Pool on 30 July 2005, W2 No. 329 emerges from the thick native bush stand of flooded gum and paperbark surrounding the Bennett Brook culvert on the Perth Electric Tramway Society's line at Whiteman Park.

Michael Stukely