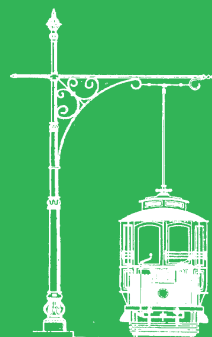


TROLLEY WIRE

No. 307

NOVEMBER 2006



\$8.80*

Print Post Approved PP245358/00021



In this issue

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- Across the Manager's Desk

TROLLEY WIRE

AUSTRALIA'S TRAMWAY MUSEUM
MAGAZINE

NOVEMBER 2006

No. 307 Vol. 47 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	\$A36.00
New Zealand/Asia.....	\$A42.00
Elsewhere.....	\$A46.00

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
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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



John Dunn's new book, Comeng, A History of Commonwealth Engineering Volume 1 was launched at the Sydney Tramway Museum on 19 September by Tourism Australia chairman Tim Fischer. Museum chairman Howard Clark is seen with John Dunn, Tim Fischer and publisher Mrs Rosenberg. The Museum's Comeng-bodied Leyland Tiger provided the backdrop.

Bob Merchant

PRICE INCREASE

We regret to advise there will be an increase in the cover price and subscription rate for *Trolley Wire* commencing with the February 2007 issue. The increase will cover higher printing costs and Print Post rates which came into effect on 1 September 2006. The new cover price will be \$9.90 (including GST) and the new subscription rates are shown at left.

Front Cover:

Melbourne's V 214 has been repainted to close to its original 1906 North Melbourne Electric Tramways and Lighting Company condition. Carrying its original number, it made its debut at the TRAM IT Centenary of Electric Trams in Melbourne display at Docklands on 8 October 2006.

Howard Clark

MELBOURNE'S ELECTRIC TRAMS

A CENTURY OF SERVICE

By Ian Brady

This year the first of Melbourne's famous electric tram lines celebrates a century of continuous service.

Three electric tram lines were opened in the Melbourne suburbs in 1906. Trams still work over two of these lines being parts of today's Airport West and West Maribyrnong routes. The third line was the Victorian Railways' 1600mm gauge 'electric street railway' from St Kilda Station to Brighton Beach. This was opened in two sections during 1906 and closed in three sections, two in 1957 and the last in 1959.

This article not only covers electric tramway development in Melbourne over the past century but also takes a look at what was used before 1906. Electric trams developed differently in Melbourne from other Australian cities. This tends to explain why the system remains today as the largest in the southern hemisphere, the largest in the English speaking world, and one of the largest in the world. Trams in many other large cities have been replaced by subways and buses, but this has not happened in Melbourne - only a handful of electric lines have been abandoned.

Australia's first street tramway was a horse line along Pitt Street opened in Sydney in 1861. As the rails were laid protruding above street level obstructing traffic, the line was closed in December 1866. Sydney had another try with steam trams in 1879 and they persisted there. In 1878, a horse tram line was opened in Adelaide followed by Brisbane in 1885, and the gold boom town of Ballarat in 1887.

When trams were introduced to its streets, Melbourne was Australia's largest city and its citizens might be expected to lead with the latest developments. After all, the first electric tram in this country was demonstrated at the 1888 Melbourne International Exhibition, and worked along a short length of line adjacent to this exhibition from 16 November 1888.

The first tramway in Melbourne was opened in December 1884 as a horse-drawn line 3.6km in length, from Fairfield railway station, 8km from the city, north to Thornbury. Less than a year later on 11 November 1885, the first of the city's famous cable lines was opened from Flinders Street in the city to Richmond, a distance of 6km. The network of cable lines was completed in 1891 but was never substantially extended - the technology had passed its use-by date for normal street operations.

The cable trams

Melbourne's first organised public transport is thought to have been a fleet of horse buses operated by the Melbourne Omnibus Company from 1869. The company was later reorganised and named the Melbourne Tramway and Omnibus Company (MT&O) which in the early 1880s, offered to build a tramway system in the inner city and suburbs. During negotiations to secure an Act of Parliament for this exercise, a New Zealand engineer, George Duncan, who had inaugurated cable trams in his home of Dunedin in 1881, made contact with a member of the Victorian Legislative Council in 1882 and the rest is history.

The company negotiated a 30-year lease - later extended to 32 years up to 1916. A Melbourne Tramways Trust was established by the councils through whose areas the trams were to operate, to build a well-engineered cable tram system. The cable cars ran until the last lines were replaced by buses in 1940. It was, at the time, one of the largest and longest-lasting cable systems in the world. The MT&O also built horse tram lines connecting with their lines to Kew and Hawthorn where building cable lines was considered too costly and which were later incorporated into the electric lines converted in the 1920s. Elsewhere in the suburbs, at Coburg, Caulfield, Glenhuntly, Royal Park, Sandringham and Beaumaris, local horse tramways were opened in the late 1880s, but like the first venture at Fairfield, most had short lives. An exception was the Royal Park horse tram to the Melbourne Zoo. It was taken over by the Board with all the cable lines in 1919 but its depot and four trams were burnt in a fire during a police strike in November 1923.

One exception was a privately-owned cable line built from the Clifton Hill terminus of the MT&O system to Northcote in 1890. This soon got into difficulties until it was taken over by the Northcote Council which leased it to several operators. It survived to be rebuilt and joined to the main system in 1925 and lasted until 1940.

Electricity

As the MT&O's cable system was being built, the demonstration electric tram at the 1888 Exhibition was bought by a speculator and taken to the then outer suburb of Box Hill. A short line was built to serve a tourist area and to promote land sales at Doncaster but the venture failed in 1896.

By the time Melburnians saw their first cable tram in operation, the newest form of public transport using electricity had been pioneered in 1888 in the USA. Regular electric trams started in Sydney in 1890 and in Hobart in 1893, followed by Brisbane, Perth and Kalgoorlie over the following years. Closer to home, Bendigo and Ballarat introduced electric traction in 1903 and 1905 respectively.

Apart from the politically motivated St Kilda to Brighton Beach tramway built by the Victorian Railways in 1906, private enterprise brought the first electric tram to the Melbourne suburbs. Building a tram line and offering electric light to local homes and businesses helped to secure such a service for the Essendon area where asking the MT&O had failed. Prior to 1904, a Perth entrepreneur, Mr A E Morgans visited Essendon and offered to negotiate provision of such a service over a game of bowls. The North Melbourne Electric Tramways and Lighting Company Limited (NMETL) (incorporated in the United Kingdom in 1904) was then formed and received from the authorities involved, the rights to build tramways and provide electricity to the area.

The Victorian Railways (VR) objected, as usual, but it was pointed out that the trams would give the VR business rather than taking it from them, even though the new lines gave a connection with the cable trams at Flemington Bridge. The Borough of Flemington and Kensington and the Municipality of Essendon were given authority to build the tramway, which it delegated to the NMETL, and work started in 1905.

The two lines whose history we celebrate were opened on 11 October 1906.

Both commenced on the western side of Flemington Bridge necessitating a 120m walk for passengers changing from the cable tram terminus on the eastern

side. The Essendon line (today's Airport West route) then continued in double track along Mount Alexander Road to Puckle Street, where there was a short branch to Moonee Ponds Station (pulled up in 1924). From here a single line continued along Pascoe Vale Road and Fletcher Street until the line again followed Mount Alexander Road to its terminus at Keilor Road. The branch to Saltwater (now Maribyrnong) River was mostly double track to serve the Racecourse and Showgrounds, running along Victoria Street, Racecourse, Union and Maribyrnong Roads.

South and east of the city

The south-eastern municipality of Malvern was equally unsuccessful in lobbying the MT&O for a tram service whether cable, horse or electric. Malvern's early public transport was provided by the railway opened from South Yarra to Oakleigh on 2 April 1879 and a horse bus along High Street in 1886. The Prahran cable tram ran south along Chapel Street to its terminus near Carlisle Street.

After more agitation, the VR opened a steam motor-bus service along High Street from its Prahran station to Malvern Town Hall on Glenferrie Road in 1905-6. It was short lived due to the poor condition of the road and the early design of the buses, although these buses were later used to replace trams on the VR's own line when their depot and tram fleet was lost in a disastrous fire in 1907.

Members of the Malvern Council continued to agitate for electric trams but were thwarted by the then Premier, Thomas Bent and the VR. Eventually a compromise was reached: Premier Bent and the VR wanted to relocate the Caulfield railway line to avoid some level crossings, so as always he did a deal. In return for the councils paying £13,000 towards rebuilding the railway line, they could lobby for trams.



NMETL's single truck saloon car 9, one of ten cars built by J.G. Brill and assembled by Duncan & Fraser in 1906, is seen towing a crossbench trailer (one of 10 built by Duncan & Fraser in 1906 and numbered 51-60) in Fletcher Street, Essendon in 1907. The ten saloon cars became U class 202-211 under MMTB ownership.

Vic Solomons collection

Crossbench car 15 at the entrance to Essendon Depot. It is one of five cars built by J.G. Brill and assembled by Duncan & Fraser in 1906 for the NMETL. These cars became V class 212-216 under MMTB ownership.

Campbell Busch collection



One of their members, Mr Alexander Cameron, an Alderman and lawyer, led lengthy negotiations which by then included the adjacent Municipality of Prahran into the proposed system.

It was also a century ago this year that Malvern and Prahran citizens commenced these negotiations for electric trams. A year later it was decided to establish the Prahran and Malvern Tramways Trust (PMTT), with their aldermen as Trustees, for which an Act of the Victorian parliament was passed in 1907. The Trust was given the right to exercise the rights, powers and privileges of the councils concerned under provisions conferred on them by an earlier Tramways Act in 1890.

The Trust was to construct, manage and operate certain electric tramways in the municipal districts of the constituent councils. As in Essendon, the Trust could purchase, produce, supply and use electric energy for the purpose of any tramway undertaking and keep the roadway in repair where tramways were laid. Importantly, the Trust had the power to lease tramways with the consent of the local councils and the approval of the Governor-in-Council.

The rent received was to be distributed between the municipalities, after payment of interest, repayment of money borrowed by the Trust and payment of its other expenses. It was empowered to borrow money on overdraft from the bank or on debentures secured upon the security of the undertaking and upon the credit of the rateable value of the municipalities – this was the legal basis of what was really a public tramway financed entirely by borrowing. The Councils concerned did not subscribe capital to the Trust, but

with the profitable nature of public transport at the time, they obtained a benefit in exchange for what was a charge on their ratepayers.

The PMTT commenced building its first lines in 1909 along High Street, Malvern from Charles Street (near the Prahran railway station) to Tooronga Road, Glen Iris; and a branch from the intersection of Glenferrie Road and High Street, Malvern south along Glenferrie Road and then east along Wattletree Road to Burke Road. Both these lines were opened on 30 May 1910 and thereafter the Trust became a leader in electric tramway operation in Melbourne.

The success of these lines encouraged building of extensions throughout the southern and eastern suburbs of Melbourne as residents saw the benefits of the electric trams. For these, the Trust was enlarged by inclusion of the municipalities of St Kilda, Caulfield, Kew, Hawthorn and Camberwell. The network of lines built by the PMTT over the next eight years served the suburbs of Camberwell, Kew and Balwyn, the full length of Glenhuntly Road, and south to East Malvern, Caulfield North and St Kilda (near the present day Luna Park). Several connections to the cable tram termini were established and the network of lines formed the basis of much of today's electric lines to these areas with one exception (see below).

Under its Chairman, Alexander Cameron, the former Malvern Councillor, the Trust established high standards for tramway operation in the city which remain in place today. It continued until it was wound up in 1920 and incorporated into the Melbourne and Metropolitan Tramways Board.

The citizens of Elsternwick turn out to witness the opening of the Prahran & Malvern Tramway Trust's newest tramway extension on 13 November 1913. An early use of route numbers is '10' shown in the front of the cars.

Bob Merchant collection



The exception mentioned above was the Hawthorn Tramways Trust. Surrounded geographically by the PMTT, councils in this area set up their own tramways trust using the legal precedent of the PMTT. The Hawthorn Tramways Trust was constituted in June 1914 with representatives of the councils of Melbourne, Richmond, Hawthorn and Camberwell.

The Trust built a line from the intersection of Swanston Street with the former Batman Avenue on the north side of the River Yarra, via Swan Street to the eastern suburbs. Their first section was opened on 6 April 1916, from the city to the intersection of Wallen Road and Power Street, adjacent to their depot. Later that year, the system was extended to Camberwell, Burwood and Wattle Park. Part of that original depot survives as the Melbourne Tram Museum.

This line was the first electric tram line to be opened close to the inner city and was the first to threaten the monopoly of the cable trams. The next electric line in the central city of Melbourne was not opened until February 1924 when the Lygon Street electric tram service was extended south on Swanston Street to Franklin Street, continued in the following April to the intersection of Lonsdale Street.

Three more tramway trusts were soon formed by local councils which wished to have an electric tram line from a cable tram terminus into their areas, by copying the leadership of the PMTT. The first was the Melbourne, Brunswick and Coburg Tramways Trust (MBCTT) formed in 1914 which opened its first section of line on 27 April 1916. Its outer termini were North Coburg and East Coburg, connected to a route south which reached the city using streets not served by cable trams: Lygon Street, Elgin and Madeline (now Swanston) Streets, Carlton. This met the Swanston

Street cable trams at their terminus north of the city at Queensberry Street. Part of the North Coburg line was built over the route of the former Coburg horse tram line, closed in November 1915, which traversed Sydney Road from Gaffney Street, Coburg to Moreland Road, Brunswick. The MBCTT depot on the eastern side of Nicholson Street, just north of Moreland Road, still stands although now disused.

The next was the Fitzroy Northcote and Preston Tramways Trust, serving the north-east of the city, formed on 6 October 1915. Its line commenced at the North Fitzroy cable tram terminus on St Georges Road and followed that road to Miller Street, Preston, where two branches diverged to termini at East and West Preston. The depot was adjacent to this junction and remained extant at the time of writing, although it is planned that the site will soon be developed for housing.

Shortages of materials and manpower during World War I delayed opening of these routes until 1 April 1920, by which time all tramway undertakings of Melbourne were under the control of the MMTB. The Footscray Trust, formed in 1915, similarly suffered and its lines did not open until 6 September 1921.

The Victorian Railways introduced another tramway operation with a line from Sandringham railway station south to Black Rock, opened in March 1919, partly over the route of a horse tram which had closed in 1914. This time the gauge was 1435mm, recommended by the Parliamentary Standing Committee on Railways in 1914. This was presumably to permit of a link with the growing metropolitan network. However the nearest point, reached in 1937, was the terminus of the East Brighton line, some 4.5km away. When post-war losses rose, these trams were replaced with buses in 1956.

The 'Board'

Technological changes brought cars and motor-buses on city roads. Electric trains and trams were seen as solutions. Commissions of inquiry looked at problems and recommended changes. As London and Sydney reviewed their transport problems early in the 20th Century, so did Melbourne. A different problem here was that the cable trams were now surrounded by the better and newer technology of electric trams – and the lease given to the cable operator would run out in 1916.

A Royal Commission was therefore appointed to inquire into and report on the railway and tramway systems of Melbourne and suburbs. It reported in 1911 and can be considered as a success in that many of its comprehensive recommendations were soon put in place and remain of benefit to today's travellers. A major recommendation was for electric trains which started in 1919, seven years ahead of Sydney. Then there was replacement of the cable lines by electric trams, plus amalgamation of their management and the

suburban tramway trusts into one organisation. An Act for a new tramway board was passed in 1915, and it was appointed early in 1916 to take over the cable system from the MT&O on 1 July.

The key administrative change occurred on 31 October 1919 when the Tramway Board was dissolved; the next day, 1 November 1919, the Melbourne and Metropolitan Tramways Board (MMTB - the 'Board') assumed office and held its first meeting, with Alexander Cameron from the PMTT as its chairman. It was an independent statutory body reporting to the Minister of Public Works. On 1 November 1919 it took over the cable trams and the Royal Park horse tramway; on 2 February 1920 it took over the suburban tramways trusts and the Northcote cable line.

As the Essendon lines were still separate and owned by a private company, the Government had to legislate for their acquisition. The company was bought by the State Electricity Commission and its tramway operation taken over by the MMTB on 1 August 1922.



Collins Street, Melbourne in the heyday of the early W series trams. This view shows W class car No. 272 west-bound in Collins Street at the intersection with Russell Street. Although the Collins Street electric line was opened in December 1929, route numbers for the Mont Albert line were not allocated until 1934. The absence of a route number box on No. 272 indicates that the photo was taken before this route was numbered 42. Other trams in Collins Street at this time would have originated from East or West Preston using route numbers 9 to 12. No. 272 was delivered to the Board by James Holden in June 1925 as a W class tram, and was converted to a W2 in September 1931. On withdrawal in 1980, it was sold to King County Transit in Seattle and was in use until the Waterfront Streetcar service was suspended at the end of 2005 due to redevelopment work.

Bob Merchant collection

The Board quickly got down to business and in 1922 prepared an overall plan for Melbourne's street transport including recommending replacement of all cable lines with electric trams. As yet no Melbourne city street was wholly traversed by electric trams. This was soon addressed. Among others, a new suburban line was opened in 1925 from suburbs which had long wanted trams such as West Brunswick and new tracks direct along Flemington Road, whereas the cable route diverged south through North Melbourne. This then turned into Peel Street and provided a link by which Essendon trams could, at last, have access to the city along a new line in William Street as far as Collins Street in 1925, the first electric line in the inner city of Melbourne.

The first major changeover of cable trams to electric trams involved the major arteries of Swanston Street and St Kilda Road in a massive operation, completed progressively between April 1924 and May 1926. Soon afterwards former suburban lines of the PMTT were connected to the electric tramway in St Kilda Road so residents were able to travel from their suburbs direct to the heart of Melbourne on a single ticket.

One by one, cable tram lines across Melbourne were closed, the tracks dug up and replaced with new sleepers and rails, wires were erected and electric trams inaugurated. Several important extensions were built, for example, a new line south to South Melbourne and St Kilda Beach, opened in 1925, and to South Melbourne Beach via Spencer and Clarendon Streets, opened in 1937 which included replacing the cable tramway. Closure of the last cable lines was completed in 1940 although earlier four lightly used routes had been replaced by buses. The last conversion of all, of the Bourke Street lines with new double and single-deck buses, was not a success and trams returned to those routes in 1955-6.

Activity slowed after World War II during the wool boom with inflation and severe labour shortages. In 1951 Latrobe Street was provided with tram lines used mainly to relieve peak hour traffic in Collins and later Bourke Streets. Later extensions to outer suburbs include Bundoora, which took twelve years to 1995; Burwood to Vermont South, completed 1978-2005, closer to the airport at Airport West in 1992, and from Mont Albert to Box Hill in May 2003, where the first electric tram in Australia was once seen. The lightly patronised railway lines to St Kilda and Port Melbourne were converted to 'light rail' operations (i.e. street trams on former railway lines) in 1987. The central city area was surrounded by tram tracks in 1994 when Spring Street was added to the system for the W series-operated City Circle service.

Only a few of Melbourne's tram services have been replaced by buses: one of the first was the link, partly

along Holden Street, from North Fitzroy to Lygon Street in 1950. Others were the shuttle between Elsternwick and Point Ormond, replaced in 1960; and the three Footscray local services, closed in 1962.

The MMTB operated Melbourne's trams for 63 years through many difficult times, and maintained a fine standard of operation until heavy public transport deficits forced changes. During this time an administrative change came with the Transport Act 1951 which transferred responsibility for the Board to the Minister of Transport. Later restructures occurred when the Board was merged into a Metropolitan Transit Authority - known as 'The Met,' on 1 July 1983, and from 1 July 1989 into the Public Transport Corporation.

From its inception, the Board mostly made a profit and by its Act was required to make payments to the Infectious Hospitals Board, the Licensing Fund and the Metropolitan Fire Brigades Board. By 1950 this had amounted to over £3.5m. The last of these payments ceased in 1954.

The Victorian Government has since franchised Victoria's public transport operations to the private sector similarly to management of the cable trams in 1882. From 29 August 1999 operation of the trams was jointly franchised to Yarra Trams and Swanston Trams (later M>Tram). Yarra Trams, a 50/50 consortium of Transfield Services and Transdev, has operated all Melbourne's trams since 18 April 2004.

The trams

Melbourne's first electric trams were saloons with end entrances, but it was soon realised that open seating was desirable in warm weather, leading to the cross-bench 'toast-rack' design, well known in Sydney. The trams for the Essendon lines were imported in 1906 from the USA and assembled by the Adelaide firm of Duncan & Fraser, an early leader in tramcar building. There were two types: ten fully enclosed saloon cars with end entrances; and five of a 'toast-rack' type. To these were added ten locally built 'toast-rack' trailers. Car No. 13 of this fleet, later numbered 214 by the MMTB survived as a works car and has since been restored to close to its 1906 condition.

Operators then sought a design which combined both forms of seating and thus the 'California' combination design was introduced, featuring a centre saloon flanked by two open areas with either crossbench or longitudinal seating. This design was used by the trusts in various ways for their first four-wheel single-truck cars from 1910.

The design of larger trams with two saloons over the bogies flanking a central open or 'smoking' section first appeared in the New Zealand city of Christchurch in 1906 with cars built by the local firm of Boon & Co. Ltd. This was the first 'Australasian' drop-centre design, adopted later by many Australian systems (and Dunedin).

The first Australian-built drop-centre trams were introduced by the PMTT in 1913. They were built by Duncan & Fraser. They were the also the first bogie cars in Melbourne and were of the maximum traction type (that is with one motorised axle with a large wheel, plus a smaller trailing wheel). This design was copied by the Hawthorn Tramways Trust with their first tram orders in 1916 which also included single-truck cars.

Once the Board had completed the takeover of the suburban tramway trusts and the Essendon company, had received trams ordered before 1920 together with a few more, it had a fleet of 216 trams, plus the ten Essendon trailers. The numbering scheme followed on from that of the PMTT. The largest were the bogie maximum traction cars noted above, plus the precursors of the W series trams which were the six members of the 18 tonne, drop-centre L class. These

set the scene for the future by being equipped with four-motor, equal-wheel bogies. They were ordered by the PMTT before the amalgamation and delivered in 1921.

Lower down the comfort levels were many single-truck, California and other combination types which had a mass of about 12 tonnes and were 2.72m wide. The two-axle, single-truck car with its waddling motion and rough ride was initially ordered by all the constituent systems and withdrawals started from the 1920s when replaced by bogie trams. However they were seen on all-night services until 1957 and the Footscray lines until 1962.

In 1923 and 1924 two new types of trams entered service. Two 2-axle Birney 'safety' cars were imported from the USA in 1924. These were X class Nos 217-8, each weighing about 8.5 tonnes. Their use paralleled that of other single-truck cars and they were sold in 1957.

More significant was the other tram: the first of the W series, No. 219, a drop-centre car which entered service in 1923. These Melbourne-designed and built icons were then delivered to an evolving design until the last, No. 1040 entered traffic in 1956. There were

A W2 class tram heading south along Swanston Street in the heart of Melbourne before tram route numbers were introduced in 1929. This shows No. 543 southbound at the intersection of Swanston and Collins Streets opposite the Town Hall. The Glen Iris route number 6 was allocated in 1929 which it remains today. Note the supplementary sign 'via High Street, Prahran'. No. 543 was built by the MMTB at Preston Workshops as a W2 class car and entered traffic in November 1928. This photo would therefore have been taken between late 1928 and 1929. The dark colours on this car suggest that it was painted in the chocolate and cream livery of the former Prahran & Malvern Tramways Trust from 1910. No. 543 remained in service until its withdrawal in September 1981 when it was sold privately.

Bob Merchant collection



eleven sub-classifications in the W series of 756 trams. They ranged from the somewhat austere original W class trams with wooden or wood-veneer seats and difficult-to-open lift windows, to No. 1040 with fully upholstered seating, resilient wheels (as built, later replaced) and air-operated sliding doors.

Throughout the thirty-three year building period of the W series, two other types were locally designed and built in 1927-30. Sixteen 4-wheel saloon cars were built to a design replicating the Birney cars while five modern saloon cars appeared as the Y and Y1 class. The latter were ahead of their time for Australia featuring wide front entrances and side doors and were obviously intended for one-person working. Fierce union opposition to the possibility of job losses meant that no more front entrance trams were built until the Z class in 1975.

One promising advance which did not lead further was importation in 1949 of a set of Clark B3-type PCC bogies, motors and equipment from the USA. A special car body, No. 980 - visually similar to the W cars - was built to trial this equipment using hand controls rather than the foot control for which the PCC had been designed. The US-designed PCC equipment had four 55 hp (41kW) motors which were more powerful than contemporary Australian equipment, drew quite large electric currents, so the car was capable of far higher speeds than was usual in Melbourne. Built in 1950, No. 980 could accelerate and stop quite rapidly and did not mix easily with other cars on any line, so was relegated to relatively minor use for a short life until 1970. The equipment was used for an experimental car, No. 1041, in 1973 to test the layout for a fleet of modern trams.

These were the next design, the much maligned Z class (later Z1 and Z2) introduced in 1975. Their design was not dissimilar to the Y class of the 1920s with a large front and single side entrance, ideal for one-person operation. In this instance, however, a seated conductor was placed just inside the front door. With the heavy loading experienced in the city on the Bourke Street lines, they were a disaster for timekeeping, smooth operation and passenger comfort and won few friends. The Swedish electrical equipment and bogies on the first 115 did not stand up well to Melbourne conditions, resulting in a major bogie rebuild. Many were withdrawn before their time. A second batch of 115, classed as Z3, with an amended body design and German electrical equipment has been more successful.

The next design used the letter A again, first allotted in the early 1920s. Similar to the Z3s in layout but with a roving conductor, modern German electrics and fewer seats, these 70 cars reflected good design practice of the 1980s. Then came two articulated

B type cars (later B1), Nos. 2001-2 in 1984-5, plus a fleet of 130 more (the B2 class) delivered from 1988 to 1994. They are comfortable, fast, reliable and relatively quiet. They are 23.6m long compared to 14.17m for the last W series cars.

The current fleet includes some 53 W series trams built from 1936 to 1956 which have been equipped with modified braking for today's traffic conditions. They are used chiefly on the City Circle, from St Vincent's Plaza to Docklands and on the North Richmond to Prahran/St Kilda lines. The balance comprises most of the later Z cars (many of the Z1 and Z2 cars from 1 to 115 have been withdrawn), the 70 A and 132 B1 and B2 cars, and the latest deliveries. These are the 36 'Citadis' C class cars (of French design and build) introduced from 2001-4; and the more recent German-built 'Combino' D-types in two models: three unit and five unit deliveries of 38 and 21 cars respectively introduced in 2002-04.

Melbourne has two tramway museums. As noted above, one of them is in the Hawthorn depot. It houses some 17 fully restored and mostly operational cars ranging from one of the first electric types of 1906, NMETL car No. 13 (recently renumbered from V 214), to No. 1041, the 1973 prototype of the Z class cars. The second is at the Tramway Museum Society's site at Bylands, where a comprehensive collection of cable and electric cars is displayed and operated.

The Sydney Tramway Museum hosts several former Melbourne trams. These are the former PMTT J class single-truck car No. 71, built in Sydney in 1915 (latterly Ballarat No. 12); former Hawthorn Tramways Trust maximum-traction bogie N class No. 13 (later 119, and most recently Ballarat No. 37) of 1916; and W2 and SW2 type cars of which No. 249, recently restored, is a fine example; and a recent acquisition, Z2 class car No. 111, received in 2004.

Melbourne trams are also well represented in the collections of the museums at St Kilda in South Australia and Whiteman Park in Western Australia.

The Geelong, Bendigo and Ballarat systems became major users of second-hand Melbourne trams from 1928 onwards. Many were still in use when those systems closed in 1956 and 1971-2 and have been retained in museums in Ballarat and Bendigo. Each of those museums has continued to acquire trams from Melbourne.

Melbourne trams have been painted in many colour schemes over the years. Following on from the PMTT, the Board's trams were initially painted chocolate with cream around the windows. The Board decided upon green with cream uppers with the X1 trams of 1926 although the exact shade of green has varied from time

PCC equipped car 980 at the entrance to Preston Workshops on 16 April 1965. The car has been preserved but without the PCC equipment which was transferred to prototype 1041.

Bob Merchant



to time as exemplified in the current W series cars in regular use on which it appears lighter than earlier colours. With the first Z class cars, a new colour scheme of Marigold (orange) with light buff around the windows plus brown on the roof appeared. The Z3 cars initially introduced a variation to deep yellow; the last cars of this class introduced a reversion to green with Wattle Yellow.

The franchisees painted the trams with their own fleet colours; Yarra Trams has tried several schemes on its cars. They are now painting their cars in white overall with green and blue trim but many remain in light grey with various trim variations. For the 'Transporting Art' programme from 1978 to 1982, 16 trams were painted in overall displays. A second programme commenced in 1986. Trams now present sizeable and visible bill-boards which are extensively used for advertising many products.

Depots

Part of the present day Essendon depot includes the original shed dating from 1906 which was built for the NMETL. Only two of the depots built by the trusts remain in operation: the southern part of the Malvern depot (which now sits astride an aptly named Coldblo Road) built for the PMTT at Malvern on Glenferrie Road in 1910, and their Kew depot of 1916. The original section of the HTT's 1916 depot at Hawthorn (operationally closed in 1965) is now used as a museum. The other depots were built by the Board. These are Glenhuntly (1923), Camberwell (1929), Brunswick (1936), East Preston (1955), North Fitzroy (1956 - closed 1993).

A depot opened at Hanna Street, now Kingsway South Melbourne in 1925 was closed in 1997 and replaced by the present Southbank, closer to the city. Apart from this location, all depots built either for a trust or the Board are extant, and if no longer used for operations, a building remains.

A workshop for the whole system was built at Preston between 1924 and 1927 on the corner of Miller Street and St Georges Road on a site of 17 acres. Tram maintenance continues to be performed here, although the workshops are now under private management.

So why has Melbourne's famous system survived the relentless conversion of electric tram lines to buses since 1945? The answer comes in two parts - Chairmen and trams.

For the first fifty years of its life, the Melbourne and Metropolitan Tramways Board was headed by just three chairmen, the first of whom was Alexander Cameron. He was a lawyer by profession, an alderman of Malvern Council and a tramway manager by choice. His first class mind and selection of engineers delivered many good practices in the early years of the Melbourne system. He retired in 1935 and was replaced by Hector Hercules Bell who also had a tramway background while being a Richmond Council member of the Hawthorn Tramways Trust from 1914. While he was criticised for using buses to replace some cable tram services, this was because he sought the most economical solution for the system as a whole. What he also did was to set the scene for some post-1945 tram conversions, including the Bourke Street lines.



W2 568 in Park Street, St Kilda at the intersection with Fitzroy Street in July 1965. This was the terminus of the former route 10. Car 568 is preserved privately in operational condition.

Dick Jones

Much has been written of his successor, Major-General (later Sir) Robert Risson, an engineer recruited from the Brisbane tramway system in 1949. He was convinced that the best solution to the traffic problems in a city such as Melbourne lay with trams. He pursued this belief with some vehemence against the bus and car lobbies and maintained it until his retirement in 1970. He ensured that the system was well maintained.

The second answer is partly offered through this history. Conversion of the cable system to electricity occurred from 1924 to 1930, 1935-1936 and 1955-1956, so major purchases of electric trams were similarly later from 1922 to 1956. Withdrawal of these trams was therefore later in the 1960s-80s when the benefits of rail transport, constantly urged by Risson, had been accepted by government. A system which offers several hundred well-maintained route kilometres of tracks plus overhead wiring and ancillary services is extremely expensive to replace.

Due to the much later replacement of its original electric fleet, the Melbourne system has become a major source of preserved trams for museums, etc. At least 160 of 1,534 electric cars built have been preserved in museums, or are used to provide tourist and other services, in Australia, New Zealand, Canada and the USA. The latest dispatch was in November 2005 when SW6 car No. 965 was handed to the Danish Consul-General as a gift on the birth of an heir to the Danish throne, by the Victorian Minister for Transport, the Hon Peter Batchelor at a function at Preston Workshops. It was then shipped to Denmark and now operates at a museum there.

The history of trams in Melbourne does much to explain why they are now regarded as icons of the city.

Sources

Several works have been used for this history which require acknowledgment. The first must be *Mind the Curve*, John D. Keating's excellent history of the cable trams and the history of their replacement by electric cars. *Destination City* by Messrs Budd, Cross and Wilson is invaluable for information on the trams themselves and many other details. The Association of Railway Enthusiasts' *Time-line of Melbourne's trams, trains and buses* has nearly all the dates. Early issues of *Electric Traction* have well-written stories of the system from several angles. Marc Fiddian's book *Clang Clang Clang* of 1993 is as described by the author: "A study of Melbourne's Trams with a complete overview from 1882 to 1993".

Three of the trusts have had potted histories written about them and published by Tramway Publications Inc. The internet web pages of the several tramway museums in Australia also contain a mine of details on Melbourne's trams and events. Individuals who subscribe to the Yahoo internet group 'Trams Down Under' might be unaware of how valuable their inputs are.

I wish to thank the dedication of the sub-editors of *Trolley Wire*, Ross Willson and Dale Budd, who diligently checked this article and pulled me back from a few blunders on this fascinating topic.



ACROSS THE MANAGER'S DESK

By Warren Doubleday

Introduction

October 2006 sees the centenary of electric trams in Melbourne's now inner north western suburbs of Essendon, Flemington, Kensington, Moonee Ponds and Ascot Vale. Opened on 11 October 1906 by The North Melbourne Electric Tramways & Lighting Company Limited (NMETL), the basis of the company system still serves its community from the original depot location. The steam driven power generating station with which it shared the site has long gone. The enterprise, privately funded, provided both electric transport and power; primarily for lighting to its community. The area, sub-divided in the 1880s was finally growing in population, industry and wealth; with sewerage, electricity and trams all arriving about the same time.

This article is not the story of the historical background to the tramway, its construction, opening or its trams. These are well covered by *The Essendon Tramways*¹ and *A brief history of the North Melbourne Electric Tramway & Lighting Company*². It looks at the day to day managerial matters of running a suburban tramway in a growing city and the insight it provides on the tramway's operations.

The tramway operated two principal routes, Flemington Bridge (from the terminus of the cable tramway) to the intersection of Mount Alexander and Keilor Roads, and to the Saltwater River (known as Maribyrnong River from 1913) via Epsom and Maribyrnong Roads, running past the Flemington Racecourse and the Showgrounds. A short route also operated along Puckle Street to Moonee Ponds Station.

This article looks primarily at the Manager's papers held by the Public Records Office of Victoria (PROV) which comprise two boxes. These, together with a Traffic Receipt Book, are all that survive of the NMETL's records in the PROV. The files probably survived the MMTB days due to them being primarily concerned with industrial matters and relationships with other authorities, e.g. the Cities of Melbourne and Essendon, the Victorian Railways (VR) and finally the Melbourne and Metropolitan Tramways Board (MMTB).

Who were the Managers?

From the files, only two people appear to have been 'Manager and Engineer' after the construction phase – W.G. Gordon until about mid 1907; and A.D. Murdoch, who held the post until the MMTB took over on 1 August 1922. Company documents show that the NMETL had engaged J.G. White and Co Ltd of London to manage the tramway on its behalf.³ From the signature stamps on the letters, this appears to have applied from the time of A.D. Murdoch only. They may have been appointed by the London-based directors because of the poor financial position of the company by then.⁴

The original promoter and company had followed a well established English model of operating a tramway together with a power station.⁵ It was the Manager's responsibility to grow this fledgling enterprise and ensure a good return on this investment for the London based owners. This had to be done within an ever

The first tram at the official opening ceremony at Saltwater River terminus on 11 October 1906. The tram was driven to this location from Essendon Town Hall by the Lady Mayoress, Mrs Showers. Standing in front of the tram with an umbrella is Sir Alexander Peacock of the NMETL. To his right, with the beard, is Mr W. G. Gordon, the company's Manager and Engineer.

Campbell Busch collection



changing environment such as a changing economic/society viewpoint that promoted state ownership for what was considered essential services rather than private enterprise, an evolving industrial climate, an influenza pandemic in 1919 and the First World War.

Day to day operational matters⁶

Murdoch appears to have kept a close eye on the way the tramway was run, and no doubt the way the power station was operated and power distributed to customers. In many ways he micro-managed tramway staff, taking a strong interest in the way the tram crews appeared and performed their work. Some examples of the operational or traffic matters that crossed his desk are described below.

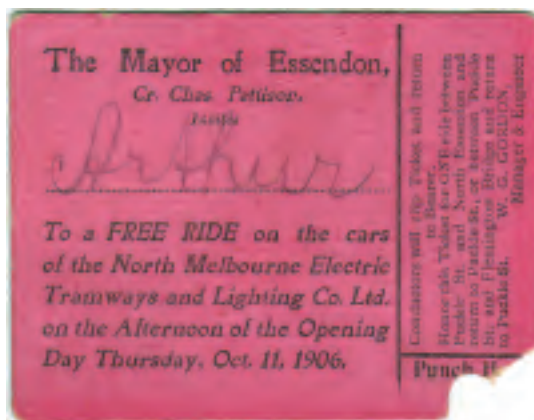
In a memo to Inspector Simpson, dated 24 January 1916, the Manager writes that he noted a tramcar on the 22nd, while driving north at the Essendon Station loop, waiting for the Keilor Road "up car"⁷, and noted the motorman (Bingham) and conductor coming out of the Lincolnshire Arms Hotel when he passed the terminus. He finished his memo by writing; "You might instruct both the motorman and conductor to see me after they finish shift this afternoon." Depending upon your viewpoint, wrong place, wrong time; or right place, right time.

He noted on 15 July 1916, that the performance of the driver and conductor of car 3 that morning; the driver's poor use of brakes and conductor not paying attention. In a suggestion to the Inspector he wrote "just look over your staff" and any unsuited men "be weeded out to make room for more desirable men".

In another memo dated 8 February 1918, he noted more sarcastically: "The Conductor in charge of car No. 6 leaving Puckle St for Flemington Bridge did not appear interested in the movement of passengers boarding and alighting his car. They seem to be a little tired this morning. If not well they should be granted leave."

On the other hand, where the subject of the memos was of a safety nature, such as the one of 24 January 1917, after a passenger had reported on the matter of a driver leaving the controller handles in position, he strongly wrote: "This practice, however, should be suppressed with a very firm hand as it most dangerous to have controller handles in position when motormen are not in charge of the platform."

In a "Notice to Inspectors" dated 21 February 1919 he wrote: "The attention of Inspectors is drawn to the fact that derailments and damage to cars usually happen at night and it would seem that this follows from carelessness and speed when traffic on the road is



The Mayor of Essendon issued Free Ride tickets which allowed members of the public to make one return trip on the afternoon of the opening day, Thursday, 11 October 1906. This ticket was issued to Arthur Quince, a childhood neighbour of Campbell Busch.

Campbell Busch collection

light and the supervision of Inspectors is affected by darkness. It is necessary that discipline should be improved and a careful watch kept for speed and irregularities on the road. Unless this is done, accidents must follow. There is a general slackness about the motormen and conductors which should not be allowed to continue. To this end Inspectors must spend more time in drilling new men to their duties and supervising the older ones more carefully. If it is found that men have to be reminded too often of certain duties, then reports should be made against them so that the matter can be straightened out." Most tramway managers today would probably concur with the tenor of this memo. Nothing is new.

Often the memos were a sign of the times, for example on 23 March 1916, "Tomorrow 24th instant a number of young ladies selling buttons have been granted permission to travel free on the company's cars." The young ladies were collecting funds for the soldiers fighting in the Great War. In a later memo dated 27 October 1917, he noted "Postmen in uniform to collect on the cars between Town Hall and Bent St Loop, tomorrow, Hospital Sunday." The company supported the war effort on many occasions by allowing collectors onto their trams free of charge.

By early 1916, the Australian Imperial Force was facing a shortage of men to send to Europe and a recruiting campaign was held.⁸ This was not entirely successful and led to the first conscription referendum of October 1916. In a memo of 10 February 1916 to

The North Melbourne Electric Tramways & Lighting Co. 1913



Inspector Simpson – “Privilege has been granted to the local recruiting Sergeants Sinclair, Ryan and Hellier to use the cars whilst on recruiting duties and in uniform from to-day forward until the end of the recruiting campaign. These men will be dressed in khaki and will wear a white band on the hat with the words ‘Recruiting Sergeant’ in red letters.”

The start of a great tradition is noted in a memo of 11 November 1919 to the Inspectors “Please make arrangements to have the cars stopped for a period of two minutes at 11 o’clock this morning as a tribute to those who lost their lives during the war.”

Sometimes the interchange of memos with the Inspectors resulted from a complaint received by the

Manager. An example is a communication from the police dated 27 October 1919. The Constable reported on the slow progress of the trams bound for Flemington Bridge, returning racegoers from the races at Moonee Valley, prior to Melbourne Cup week. The slow trams were resulting in traffic congestion. “I am of the opinion that the slow progress of the trams is for the purpose of collecting fares before reaching the terminus.” He respectfully suggested that extra conductors be placed on the trams. The tramway’s Chief Inspector McRae reported on the meeting with the Police Inspector in a memo to the Manager which said “... that the cars were not run slowly for the purpose of collecting fares but in the interests of safety, I said that owing to the heavy vehicular traffic it was an absolute necessity for cars to travel slowly.

We would be glad to have the cars travel faster as we would then have more cars to deal with the traffic." The NMETL trams were handbraked only, and often towed trailers when heavy passenger loadings were expected, such as those on race days. The hill down from Essendon depot to Flemington Bridge would have tested the driver's skills in controlling the trams.⁹

By 1919, shortages of materials and parts as a result of the First World War were perhaps becoming evident. A rather indignant memo about a broken window in No. 7, dated 27 June 1919, shows that the open cars were required to be used on a daily basis. "Car No. 7 is on the road with a broken front window which is certainly dangerous to passengers. A report covering the damage was made out yesterday and this being so, I should like to know who is responsible for permitting the car to go into service in its present condition." The reply, handwritten on the rear: "Sir, I have made inquiries in this matter and find that car No. 7 was sent out by Shedman Witchell. He stated he had to do so to get the (required) numbers of cars having to send out four open cars." Gloves and heavy coats would have been a necessity for everyone for the first runs on a frosty morning. Passengers may have had some respite from the cold when they connected with the cable tram at Flemington Bridge, by then being able to travel in the saloon car.

Some of the other memos in the file relate to incidents that occurred on the tramway. These indicate the normal day to day concerns that were no doubt typical of other tramway managers, always trying to maximise the income and minimise the working expenses. There were no fare subsidies payable by the Government like there are today. The trams had to show a profit and so did the sales of electricity; otherwise London would have not been too happy with the Manager.

Industrial¹⁰

Plenty of time was taken up in industrial matters with the Australian Tramways Employees' Association (ATEA) and with the Officers' Association and unions on the power generating and distribution side. As with many other workplaces at that time, industrial relations aspects of the NMETL's operations were within the jurisdiction of the Commonwealth Conciliation and Arbitration Court.

Extensive correspondence exists with the ATEA and solicitors with respect to industrial agreements and logs of claims. These often involved discussion with most other tramway operators throughout Australia, the NSW Government Tramways being the exception. Correspondence with the ATEA often considered matters of payments and working conditions of relevance to the Essendon depot only.

In a letter dated 17 June 1913, the Union Secretary, T. Jewell wrote: "I am directed to bring under your notice that the Shedmen employed in your service are compelled to work every day in the week. This Association desires me to say that it is opposed to the men working without the usual one day off per week, in direct contravention to the law of God and human nature. Every man is entitled to one day's rest in seven, and I would be glad if [you] would arrange the men's duties so that they may have one day off in seven." This appears to have been an unusual arrangement, given that most workers, even before the introduction of the hard fought for eight-hour work day, only worked a six day week.

Much of the correspondence concerned the 'usual' matters, such as the re-arrangement of working schedules, and working conditions on the trams and at the depot. One such letter dated 22 October 1918 from the Union, complained of insufficient running time on the River route, faulty condition of the brakes and doors on the tramcars; that hot water be provided for meals, more seats in the mess room, "...towels be provided in the lavatory for traffic men and the latrines, mess-room, lavatory, and lockers on cars be kept in a cleaner condition than at present". Finally, one that was experimented with by NMETL, but not fully implemented, was the provision of glass fronts on the tramcars before the next winter.¹¹

In respect to the poor brakes on the trams, it would appear that the union had a win on this matter. The problem was due to the pitmen not having enough time to adjust the brakes after the morning peak. Pitmen were started an hour earlier in the morning.

The provision of hot water – a simple solution! "Men heat their water in the Boiler House and no difficulty is experienced." As to the provision of towels and the cleanliness of the lavatories: "Refuse the use of towels as they are considered a danger to health when used by a number of men in an indiscriminate way such as applies to the Company's lavatories. Advised them that the lavatories, mess-room, etc. will in the future, as in the past, be swept out and cleaned but as their condition is largely due to the disgusting habits of the men, advised their Union that the men here should appoint each week from among their number an orderly officer to supervise the conditions of the mess-room, lavatories etc." It would appear that either Murdoch or one of the Inspectors had a military background or that the war had affected the types of expressions they used.

Finally, in regard to the provision of glass fronts on the trams, the management advised: "although sympathetic to glass fronts, which we had set out to install, we could not during the present period of high costs and uncertainty produced by the Tramway Bill,

This glass lantern slide taken by Arthur Fox shows passengers joining crossbench car 13 at the Saltwater (now Maribyrnong) River terminus.

State Library of Victoria



guarantee to provide glass shields before next Winter.”¹²

An interesting document that would have been provided by the Manager gives some insight into the operations of NMETL. It is an answers sheet to a series of questions, possibly put to all tramway operators as part of a log of claims by the ATEA.¹³ The questions themselves have not survived nor are the answers dated, but from some annual data provided in the sheets, the year was possibly 1911.

From the answers, pre-employment arrangements and working conditions can be gleaned. Traffic staff had to undertake a medical examination prior to employment. Conductors provided their own change (10/-) and had to provide a fidelity guarantee of £3, while motormen provided a guarantee of £2. This amount would equate to two to three days wages. Interest was paid on these guarantees by the company at savings bank rates. Training of motormen took about 90 to 100 hours, and about half that time for conductors. Motormen and conductors were provided with one tunic and cap each year.

From the correspondence, it appears that the Manager was kept busy on industrial matters throughout his career with NMETL, meeting with other tramway managers and facing day to day union grievances. The industrial relations system in Australia at the time was in its formative stage; it was to continue largely intact until the 1990s and was very adversarial in nature. However on occasions, he could get out his engineering hat and work on a track extension and worry about the track itself.

The only track extension

In March 1913, work commenced on widening and strengthening the bridge over Moonee Ponds Creek. This would allow the electric tramway to be extended over the creek and under the railway bridge, to terminate opposite the cable tram terminus, thus making life a lot easier for travellers. The bridge work was carried out under a contract managed by the Public Works Department, to which the company contributed some £830.¹⁴ Track laying commenced in June 1913¹⁵ and the extension opened on 27 August 1913.¹⁶

A request contained in a letter from the City Surveyor dated 20 October 1913, three months after opening which reads: “can you manage to get through with your duplication under the Flemington Road bridge to allow me to have time to straighten up the road before Saturday, when race traffic will be in full swing” possibly indicates that the extension may have initially only been a single track.

The Manager noted in an undated file, while making a cost estimate for the extension of the tramway to Flinders Street, Melbourne, that the total cost of the extension was £1,846/10/7, including the contribution for the bridge works.¹⁷

Track repairs

By late 1913, part of the track was starting to fall apart after only seven years of operation. When it was built, the track was laid on concrete stringers (slabs of concrete under the rails longitudinally) and with tie rods between the rails.¹⁸ This was not an entirely

satisfactory method of laying track, one rail could settle relative to the other and the concrete could break up underneath the rail and the track move around as a result of the loss of support.

The poor order of the track was raised by the Melbourne City Council's Engineer in a letter dated 2 March 1916, which complained about the roughness of the track in Victoria Street, Newmarket: "houses on either side of the road are greatly shaken" and "there will be claims of damage to walls".¹⁹

Over the next few years, the company relaid about a fifth of the track. This was done by laying a temporary track on one side of the existing track, using temporary crossovers and diverting road traffic to the other side of the road, etc. The Manager, in a letter to the MMTB dated 28 April 1920, detailed the track relaid: 3930 (single track) yards or 2.23 miles in total. The total route distance of the tramway was about 7.5 miles, with 11.43 miles of track. (One mile equalled 1.6 kilometres.) The track was relaid using a combination of wooden sleepers and concrete sheeting for the full width of the track plus a section on the outside of the rails, on which the rails were then laid.

From the dates of various letters to the City of Melbourne, the company seemed to have a propensity to carry out track work in the week before Melbourne Cup week. In a letter to the City of Melbourne's Surveyor, dated 29 October 1907, the Manager wrote about opening out the inner rails of the junction at Victoria Street and Mt Alexander Road and fixing a check rail as a precaution against derailments. Approval was given the following day, but no work was to be done during Cup week.²⁰

The Manager's time would have been consumed by dealings with local government authorities and other departments who were busy trying to look after their own interests and the community interest at large. On occasions relationships were frosty with the relevant Councils who were reacting to complaints from citizens.

Relations with the City of Melbourne²¹

Two letters from the Town Clerk of the City of Melbourne show the difficulty of using the first terminus on the north side of the Moonee Ponds Creek.²² One dated 11 January 1908 requested that the practice of running a car as far as Flemington Bridge and allowing it to remain on the roadway for use as a shelter, thereby obstructing vehicular traffic, be discontinued forthwith. Another dated 9 April 1908 notes that the cars when running to the Flemington Bridge terminus were stopping at a point with only five feet (1.5m) between the tramcar and the kerb and channel. It requested that the cars be stopped with a

least 10 feet (3m) clearance. Murdoch replied that this was necessary when two cars for different routes were at the terminus. It would appear that the first terminus was very tight in space.

The words used in some of the letters were very expressive. A good example was one from the City Surveyor dated 4 May 1908 – "I have to inform you that I have been advised by my Superintending Overseer that a great quantity of water accumulates on the tramway crossing at the corner of Victoria St and Racecourse Road, causing a great deal of annoyance to Pedestrians. Will you kindly take steps to abolish this nuisance without delay."

An interesting letter was a demand by the City of Melbourne on 22 December 1906 for licence fees for the tramcars and crews, based on the horsecab licensing regime. These were a fee of 15/- for each tramcar, 1/- owners fee and 5/- for each motorman and conductor. In a letter from the first Engineer and Manager, W.G. Gordon, the company responded that that forms would be filled out and returned at an early date. No further correspondence appears on this subject in the file, so it is assumed that these fees were paid.

City of Essendon relationship²³

Most of the correspondence in the City of Essendon folder relates to the last couple of years of the tramway. By 1920, the company could see the end nearing of the operation of a privately owned power supply and the tramway. It no doubt was trying to make as much money as possible and was stifled by the City of Essendon's refusal to allow a fare increase. One item which the original agreement did allow was for the company to charge a higher fare for race days, show days and holidays – 3d each way. Given that both the Flemington and Moonee Valley Racecourses and the Show Grounds were served by the company's trams, the additional fare days were no doubt irksome to local travellers working a six day week. In 1921, there were 51 days on which additional fares were charged.²⁴

By 1921 this matter had come to a head with the conductors almost asking for proof of residency of the City of Essendon before selling the traveller a 2d day return fare, although they could pre-purchase these on non-race days. People from outside the City, e.g. from Brunswick, were catching the trams to the races, etc, at a cheaper fare. Past practices had allowed this situation to develop and the company was trying to make a political point with the City over the general fare levels. The special workman's ticket was stamped for return only between 5.30pm and 7pm, after the races had finished. The City wrote to the company a number of times about this clause, and the company replied on 18 July 1921 – "Passengers can return at any time they

A crossbench car passing the post office in Puckle Street, Moonee Ponds.

Essendon Historical Society



choose on the same day, notwithstanding the endorsement.” Confusion continued to reign, though, with letters going back and forth.

A letter dated 23 February 1922 complains about the passenger loadings and seeming inefficiency in running trams from the River terminus. The subsequent internal correspondence gives some insight to the single line working on the Maribyrnong Road line and the use of trailers. The matter arose following the completion of a carnival by the river. It would appear that a trailer was stored at the nearby loop in Maribyrnong Road to be brought into use using a spare car when necessary.

The terminus was a popular Sunday destination with regattas, tea rooms and a park nearby. The Essendon River League was a strong community which fostered the development of the now Maribyrnong Parklands and use of the river itself. It appears that the company had a strong involvement in assisting the league to develop, and it supported their activities. So much so

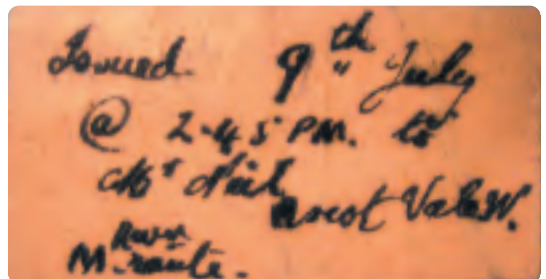
that a benefit promenade concert was held in the carbarn during the winter of 1906 prior the opening of the tramway. Over 3000 people attended.²⁵ Not all went well that day, with a power failure and youths throwing stones.

The company, through its assistance to the River League, had developed an attractive location to visit on Sundays or on holidays, with concerts being held in the “tramway reserve” to raise funds for charity. Also regattas and boat races were held on the river, all helping to boost passenger traffic on the line and contribute to the company’s bottom line.

It would appear that there was no signalling system on the single line sections through Essendon. A letter from the Council dated 20 April 1921 advised: “Another matter is that on a recent occasion a car pulled up at the corner of Fletcher St and Pascoe Crescent, the Conductor climbed to the top of the car to see if the car from the opposite direction was coming, evidently it was not, for he climbed down and

This Special Return 2d ticket has been rubber-stamped for return between 5:30pm and 7pm. The back has been endorsed with the date and time of issue, to “Mr Neil of Ascot Vale W. M River route”.

Public Records Office of Victoria³⁷



said to the motorman 'go for your life' which the latter proceeded to do, greatly to the discomfort and danger to the passengers."

For once a grumble, shared by the company and the Council, was the closing of the Epsom Road level crossing with the Victorian Railways' Flemington Racecourse line. On busy days, trams were not permitted to cross the rail line between certain hours when rail traffic to and from the Racecourse or the Showgrounds was the heaviest. This level crossing, fitted with hand gates, was Melbourne's first tramway or railway 'square',²⁶ and there is extensive correspondence about electrification of the railways and the interface with the company over its power lines crossing rail reserves. The company's tramways and power distribution were affected at the same time by this massive project, and this resulted in extensive liaison.

Dealings with the Victorian Railways²⁷

The first contact with the railways on the suburban electrification project occurred on 14 July 1914. The Racecourse line was the first to be electrified and was used as a test and training track. Much of the equipment used in other locations on the system was developed on the Epsom Road level crossing.

Before describing some of the problems resulting from the electrification of the railways, it is interesting to note that in a letter dated 1 October 1906, electrically lit signals for the trams using the level crossing were provided for, and were interlocked with the catch points²⁸. The letter detailed who did what, set out maintenance responsibilities and provided a wiring diagram for the DC power signals.

The annual Royal Melbourne Show saw extensive use of the Epsom Road level crossing and a letter dated 12 August 1910 from the Railways stated that the crossing would be closed to tramway traffic from 31 August to 23 September from 9:30am to 6:20pm. The railway gates were opened for pedestrians and other vehicles. The trams terminated on either side of the crossing with passengers walking across the tracks when allowed. This closure seems to have been on the basis of there being insufficient time to safely allow trams across the rail tracks during the period of intensive train running.

As well as the railway electrification project affecting the tramway overhead wiring, all the power cable crossings along the railway line had to be placed underground. The cost of this was met by the Railways. When the time came to switch on the railway traction power, correspondence about safety, reporting of incidents at the crossing and who to contact if the circuit breakers had to be reset, passed the Manager's

Desk. A belated memo to the Inspectors dated 29 November 1918 advised that the railway overhead was alive at Epsom Road level crossing, and warned men not to interfere with the wire, nor to get onto the roof of the cars, and to report any case of the trolley leaving the wire at this point. The first test train ran on Sunday 6 October 1918.²⁹

By late 1919, the end of the era of private ownership of the tramways and power supply was nearing. The State Electricity Commission (SEC) was in the process of being set up and the Melbourne and Metropolitan Tramways Board had been formed. The power supply side was growing rapidly and the tramway traffic was almost back to 1916 levels, with a lot less car miles being run.³⁰

MMTB takeover³¹

The correspondence between the Manager and the MMTB was cordial and often gave information about the activities of the NMETL. For example, a letter dated 7 July 1922 asked for two copies of tickets, transfers, Motormen and Conductors returns, by-laws and rules governing services. A follow up letter referred to NMETL's prepaid tickets: the Manager advised on 20 July 1922 that the sale of these tickets had been discontinued earlier that month, that the company had notified the public that they must be used or returned before the 31st and that they would not be accepted after that date.

The takeover appears to have been orderly and well planned. The MMTB accepted an offer on 13 March 1920 to "make an examination of your Electric Tramway undertakings". The Manager and the MMTB management would have known each other for a few years through their dealings over industrial issues and other matters affecting the future of the Melbourne tramway system. The Tramway Board, forerunner to the MMTB, was convening a 'Committee of Conference of Victorian Tramway Undertakings' on an occasional basis.

The co-operation between the two bodies often involved industrial matters with both parties consulting the other. A letter of 12 April 1919 advised of a meeting to discuss a request by the ATEA for double time and three days extra leave to all members on duty during the forthcoming Peace Celebrations. The file noted that they had been paid double rate for Armistice Day (11 November 1918) and that the celebrations were expected to occur on a Sunday and a weekday. Extra pay rates were agreed. The trams would have been busy that day, but would the extra income have covered the additional wages?

The views and assistance of NMETL were sought. In a letter dated 14 March 1922, the MMTB sought its

A crossbench car approaching Moonee Ponds Junction with the Puckle Street line branching off to the right. The tram is at the end of the double track in Mt Alexander Road, having come from Flemington Bridge.

Essendon Historical Society



views on a cross town route between Brunswick and Moonee Ponds via Dawson and Dean Streets, which are adjacent to Moonee Valley Racecourse. In the reply, which gives thoughts about the location of loops to load passengers, etc, is a statement: "The entire rolling stock is in service for the ordinary and special traffic on all races days held on Saturdays", that is all 15 electric trams and 10 trailers. The depot would have been under pressure to get everything on the road for such days especially during the spring racing season.

Even some correspondence took place on the final day, with a letter to Murdoch at the "North Melbourne Tramway Depot", giving a procedure following discussions, for the operation of the power supply for the tramway. With the SEC taking over the power distribution network, a relationship between the SEC and the MMTB would have had to exist in order to control and measure the power used.

Some possible track extensions³²

A miscellaneous file has some interesting correspondence regarding possible track extensions. Any significant capital investment by the company would have had to receive the approval of London, and given that the tramway was not making a good return on its investment this would have been very unlikely.

The Manager prepared a very detailed estimate for an extension to Flinders Street. No route is given and the file is undated but after 1913, as it notes the cost of the Flemington Bridge extension. Another extension examined was one in 1913 from Puckle Street to the intersection of Maribyrnong and Union Roads which eventuated in 1942. In 1916, the Manager prepared a very detailed estimate of costs and revenue for an extension of three miles to Buckley Park. No route details are shown in the file.

When agreement was reached in 1903 to build the tram lines, it gave a time for the construction of the Saltwater River and Keilor Road routes of 21 months from the date of delegation by the Order in Council.³³ Another route was also allowed for – Route C, which had a time of construction of seven years. This was from the Keilor Road terminus (Lincoln Road and Mt Alexander Road) to the corner of Maribyrnong Road and Epsom Road via Lincoln Road, Buckley Street, Waverley, Burns and Scotia Streets³⁴. For those who know this area, it would have been a hair-raising trip down the Waverley Street hill to Holmes Road in a hand-braked car. A file note states that "[the] Company [is] not supportive of extension give the costs and returns so far." The correspondence is undated but discussions would have had to take place about 1910. One interesting comment in the Manager's notes concerns the poor financial situation of the NMETL. "Debenture interest suspended for five years from Nov. 1908 to avoid foreclosure". The company was not making money. Some annual reports towards the end of the franchise show that it was just returning enough money to pay the bond holders and to put some aside for investments and plant renewals, but not to pay a dividend to shareholders. But that is another story for the future.

Finally

Although the NMETL had a life of only about 16 years, it was an important player in the development of the Moonee Valley. Its original tram lines, except for that in Puckle Street, still serve the community. The two tram lines have been extended and interlinked. The Moonee Ponds-Footscray route has survived despite numerous attempts to close it and is now a busy line. This has resulted from the development of a major shopping centre, and new sub-divisions of the former



Crossbench car 13 in Union Road, Ascot. This car is preserved in Melbourne's heritage fleet.

Essendon Historical Society

munitions factories and associated industries which were the catalyst for its construction during the second world war.

The second manager, Arthur Murdoch would no doubt be intrigued to see Melbourne today and the operation of its tramway by a privately owned company under a state government franchise. The power companies have been privatised as well. When he ran the NMETL in Melbourne, the debate over private and public ownership was extensive. Political thinking has turned full circle in many ways. Today similar private/public partnerships are entered into, some successful, others not. But all their managers face a similar problem to that which Murdoch did, namely, to make a return on the investment and try and keep the company's shareholders happy.

Finally, it can be seen that the Manager followed the same principles as today's modern best business practices of being mindful of stakeholders, customers and economic viability, and the links between these facets. These were learnt the old way through experience and having a 'hands-on' approach.

A biographical note

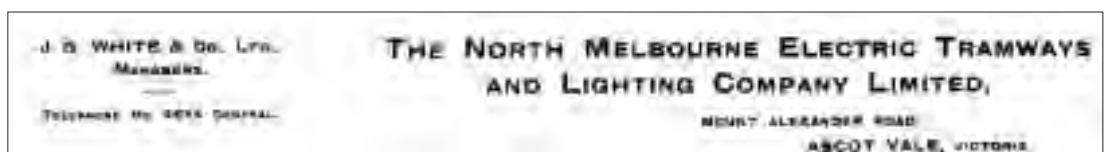
Arthur Douglas Murdoch came to Australia on the *Ortona*, arriving in Melbourne on 7 August 1907. The passenger list gives his age as 31, of Scottish descent, occupation as Engineer and single.³⁵ Prior to coming to Australia, he had been employed by J.G. White and Co

supervising the construction of tram lines in other places for them. His obituary states that he did his apprenticeship with Dick Kerr and Co. When the SEC/MMTB took over the NMETL he joined the SEC at the invitation of Sir John Monash. In October 1923 he was appointed as Manager of the MMTB, looking after the outside or traffic management of the tramways. He died on 24 February 1937 at his home in Lansell Road, Toorak just before returning to work after taking leave. His obituary notes "during his 13 years in that position [with the MMTB] he won the highest regard of his officers and the board. His sound knowledge of traffic management was widely recognised. Mr. Murdoch is survived by his wife and one daughter."³⁶

Acknowledgements

The author thanks the Essendon Historical Society for photographs and notes on the Essendon River League, Robert Green for details on Arthur Murdoch, Geoff Warburton for knowledge of the Hansard report on the collision involving V 214, Vic Solomons and Campbell Busch for photographs and the Mayor of Essendon ticket.

Editor's Note: the correct name of the NMETL was The North Melbourne Electric Tramways & Lighting Company Limited. In many publications and records, both unofficial and official, the word 'Tramways' is given as 'Tramway'.



Letterhead of The North Melbourne Electric Tramways and Lighting Company Limited.

Public Records Office of Victoria

References:

- ¹ Richardson J, *The Essendon Tramways*, Traction Publications, Canberra 1963
- ² Jones R, *A brief history of the North Melbourne Electric Tramway & Lighting Company*, Tramway Museum Society of Victoria Inc's web site, Melbourne, <http://www.tmsv.org.au/papers/nmetl.htm>
- ³ The name of the manager was stamped or printed on letterhead and other documents. An internet search shows that J. G. White had involvement as construction engineers and in an investment company in various tramway construction projects, including the Manaus, Brazil tramways (<http://www.tramz.com/br/mn/mn.html>); activities in the USA, and in 1917 were involved in Springfield Aircraft Corporation, a partnership with J. G. Brill & Co., in WW1 aircraft manufacture – (<http://www.ironhorse129.com/rollingstock/builders/brill.htm>)
- ⁴ PROV, VPRS 07864/P1 Miscellaneous Correspondence folder.
- ⁵ Jones R., op cit. The franchise agreement allowed for a municipal takeover, but the company was finally absorbed by the State Electricity Commission of Vic (SEC) and the MMTB in 1922.
- ⁶ PROV, VPRS 7863/P1- Traffic Superintendent folder.
- ⁷ "car" – short for tramcar, and "up" is an inbound or city bound tramcar.
- ⁸ For notes about the poor recruiting and consideration of conscription during the First World War see the Australian War Memorial's web site – www.awm.gov.au/encyclopedia/conscription/vw1.htm
- ⁹ Parliamentary Debates (Hansard); Victorian Legislative Assembly Proceedings for 26 September 1923, p1099 records the receipt of an MMTB report on the collision between car 214 towing trailer 54 and trailer 58 towed by tramcar No. 211, on Mount Alexander Road between Wellington and Victoria Streets on 15 September 1923. Trailers were no longer used after this incident in which many people were injured, and air brakes were subsequently fitted to the tramcars.
- ¹⁰ PROV, VPRS 7863/P1- various folders with ATEA Correspondence and logs of claims.
- ¹¹ The tramcars were built without windshields, like other tramcars of the time. By 1910, these were being installed in new electric tramcars for the Prahran and Malvern Tramways Trust.
- ¹² The 'Tramway Bill' was for the absorption of the various Municipal Tramway Trusts into the Tramways Board, preparatory to formation of the MMTB. The NMETL was not taken over by the MMTB in 1920 as were the Tramways Trusts, because as Jones R. op cit, points out, the MMTB was not empowered to operate a power station and sell power to private customers. The SEC had to be set up to do this, and this did not occur until 1921.
- ¹³ PROV, VPRS 7863/P1- AETA Log of Claims folder.
- ¹⁴ PROV, VPRS 07864/P1 – Secretary Department of Works folder.
- ¹⁵ PROV, VPRS 07864/P1 – City of Melbourne - Surveyor folder, letter of 3/6/1913.
- ¹⁶ Richardson J, op cit, page 20.
- ¹⁷ PROV, VPRS 07864/P1 - Miscellaneous Correspondence folder.
- ¹⁸ Richardson J, op cit, page 10.
- ¹⁹ PROV, VPRS 07864/P1 – City of Melbourne, City Engineer folder.
- ²⁰ PROV, VPRS 07864/P1 – City of Melbourne, City Surveyor folder,
- ²¹ Although the original agreement for the tramway was with the Borough of Flemington and Kensington, the Borough was amalgamated with the City of Melbourne on 30 October 1905.
- ²² PROV, VPRS 07864/P1 - City of Melbourne, Town Clerk folder.
- ²³ PROV, VPRS 07864/P1 - City of Essendon, Town Clerk folder File 6. Today, the whole of the company's tramway system would lie within the boundaries of the City of Moonee Valley.
- ²⁴ PROV, VPRS 07864/P1 – Tramway Board folder - letter to the MMTB dated 7/7/1922.
- ²⁵ R. Chalmers, *Annals of Essendon, 1850-1924*, Essendon Historical Society.

Continued over...

The Company's powerhouse in Mt Alexander Road with a tramcar at the depot junction and the overhead tower trailer beside the building. The Company's title was long enough to be wrapped around two sides of the building.

Essendon Historical Society



- ²⁶ At these locations the broad gauge railway electrified at 1500V DC crosses the standard gauge tram line powered at 600V DC. There are still four in Melbourne, and the interlocking gear controls both the crossing itself and the line voltages so that the tramcars do not get powered at 1500V when crossing the rail line. This equipment has been known to fail!
- ²⁷ PROV, VPRS 07864/P1 – VR Secretary folder.
- ²⁸ A set of catch points on one rail on either side of the level crossing was provided to derail the tram in case the signals were set against the tram, when the level crossing was in use or set for rail traffic.
- ²⁹ Harrigan Leo J, *Victorian Railways To '62*, Victorian Railways, Melbourne, 1962.
- ³⁰ PROV, VPRS 07864/P1 - Tramway Board folder.
- ³¹ Ibid.
- ³² PROV, VPRS 07864/P1 Miscellaneous Correspondence folder.
- ³³ PROV, VPRS 07863/P1 – Establishment of NMETL folder.
- ³⁴ These are the current street names. Waverley St south of Holmes Road was known as Bent St, Burns St known as Macpherson St and Scotia St known as Albion St.
- ³⁵ PROV, VPRS 7666, Inwards Overseas Passenger Lists, Fiche 758, page 10.
- ³⁶ The Argus, Melbourne, 25 Feb. 1937 p13.
- ³⁷ PROV, VA 2974, VPRS 7864/P1, Unit 1, File 6 27/7/1921 - ticket - Reproduced with the permission of the Keeper of Public Records, Public Records Office Victoria.

R CLASS NO. 1842 – RANDWICK'S LAST TRAM

By Chris O'Sullivan

R class 1842 joined the large Sydney tramway fleet in 1934 and served the public for the next 25 years. The tram operated initially from Waverley, then Tempe, Rozelle and Dowling Street Depots. It is also likely that it was loaned to Fort Macquarie Depot where it would have been used on the Watsons Bay line as well as the Central Railway and Rosebery lines.

The tram had its last bogie change with new 247A motors in March 1954, and with the gradual withdrawal of R cars was stored at Randwick Workshops on 18 June 1959.

On 14 October 1959 it was donated to Kyeemagh Infants School near Mascot Airport where it served as

a temporary classroom and lunchroom for the next 13 years. The tram was purchased for \$30 by Sydney Tramway Museum member Chris O'Sullivan and arrived at his Kingsford home on 2 August 1972.

For the next three decades the tram, in its original colours, served as a poolside cabana. During these years, the forward saloon was complete with its eight reversible padded seats and original advertisements; the rear saloon was divided into a dressing room and small kitchen; and the wooden seats in the drop-centre section served as an eating area. Trolley poles were obtained from Brisbane and a K35 controller from Melbourne. The tram was rewired for 240 volts, allowing all internal lights, front destination box and a headlight to function.



Chris O'Sullivan and his tram were photographed for an item about the tram in his employer's magazine in June 1986.

Telecom News



Phil O'Sullivan and former England Test Cricket Captain, Tony Greig pose with blocks of ice in front of 1842 for a Bondi Icebergs [swimming club] promotion in 1982.

Chris O'Sullivan collection

No. 1842 was the scene of pool parties and family gatherings. It was often the venue for cricket functions, one which included English Test Captains, Bob Willis and Tony Greig. These occasions were hosted by my father, Phil O'Sullivan, who was President of the Waverley Cricket Club.

With the recent sale of the property, 1842's future was uncertain. With its future in doubt, a considerable quantity of fittings and equipment from the tram was donated to the Sydney Tramway Museum. Thanks to the intervention of Howard Clark, it is possible that 1842 may commence its fourth life some time in the future as a café or office at another museum. However, at this stage it remains in a transport holding yard, pending a decision on its future use. Irrespective of what happens, the story of 1842 is one of survival - not bad for a 72 year old veteran of the once great Sydney tramway system which, on leaving Kingsford, also became Randwick's last tram.



The final move came on 18 April 2006 when a crane lifted 1842 from its resting place beside the family swimming pool.

Chris O'Sullivan



The lift took the tram over walls and adjacent structures to be lowered onto a trailer waiting in the back lane.

Chris O'Sullivan

HERE AND THERE

AUSTRALIAN AND OVERSEAS NEWS

Adelaide news

No. 109, the latest Adelaide Flexity tram to be delivered, arrived from Melbourne and was unloaded in Victoria Square in the early hours of 26 September.

The return loading to Melbourne was Adelaide H car No. 368, acquired by Tramcar W2 568 Inc. It was unloaded at North Fitzroy Depot on 28 September. Cars 371 and 372 left Adelaide for Perth on 25 September and 364 left Glengowrie for St Kilda on 6 October. Unloading details for these cars are given in museum reports elsewhere in this issue of *Trolley Wire*.

Adelaide Flexity 109 has arrived from Melbourne and waits to be unloaded in Victoria Square in the early hours of 26 September. Bill Drury

Melbourne news

Track relaying work was carried out on the Port Melbourne line on the weekend of 7-8 October, in the vicinity of Southbank Depot. New rails and concrete sleepers were laid on the reserved track section immediately west of Port Junction, the junction of the Port Melbourne and St Kilda light rail lines.

Buses replaced trams between Port Junction and Port Melbourne. Trams on route 109 arriving at Port Junction ran empty to Wright Street crossover on the St Kilda line before returning to Port Junction to pick up their next run to Box Hill.



H 368, acquired by the Melbourne group Tramcar W2 568 Inc., provided back loading to Victoria. It is seen ascending the ramp onto the trailer.

Bill Drury

Track relaying in progress on the Port Melbourne line on 8 October. Concrete sleepers are in place and rails are being lifted into position.

Dale Budd



During the Port Melbourne line shutdown on the weekend of 7 and 8 October there was no access to Southbank Depot. Trams were stabled on the centre tracks at Docklands on Saturday and at the Tennis Centre (left) on Sunday.

Dale Budd

Because there was no access to Southbank Depot, trams were stabled on the centre track at Docklands on the Saturday, and at the Tennis Centre on the Sunday as the Docklands tracks were occupied that day by the Centenary display.

Special arrangements were made for the restaurant trams which could not run from Southbank, their normal depot. Two of these cars were seen in service on 8 October during the relaying work.

Melbourne timetables

Major transport undertakings usually change timetable changes region by region. An example occurred recently on the Sydney bus system where updated timetables were issued for the Warringah and North Shore areas while others were unchanged.

It was unusual therefore to see the complete re-issue of all timetables for Yarra Trams' services during September 2006 – except the cross-country route 82, Moonee Ponds to Footscray.

This arose from public pressure on the Government to provide more trains and trams after midnight on Fridays and Saturdays. Previously, the policy in Melbourne was that the last trams and trains departed from the city within a few minutes after midnight, and even earlier on Sundays. Three extra services have now been scheduled after midnight, at 20 minute intervals until just after 1:00am.

An example from the Box Hill tram timetable, route 109, shows that whereas previously the last tram departed the city (Town Hall) at 12:11am, there are now three more services on Friday and Saturday



W7 1011 had been stored at Thornbury Depot with a major wiring fault. It was taken to Preston Workshops, stripped of equipment, repainted and donated by Victrack and Yarra Trams to Luna Park at St Kilda. It was launched on 10 September as the Luna Party Tram and is available for children's parties.

Randall Wilson

evenings from the city at 12:33, 12:53 and 1:13am, with another tram at 1:31am to Kew Depot.

This pattern has been followed for all tram routes in Melbourne.

100 years of electric trams in Melbourne

Combino D2 5006 has been decorated in a special centenary livery sponsored by Siemens. The car was launched on 10 August by Victoria's Minister for Transport, the Hon. Peter Batchelor at a ceremony held at South Melbourne siding, Albert Park. In October, SW6 909 appeared in a similar but modified livery sponsored by the State Library of Victoria.

Centenary display at Docklands

The centenary of continuous operation of electric trams in Melbourne occurred on 11 October 2006. The occasion was marked by two events: a display of trams at Docklands on 8 October and a function at Essendon depot a week later.



The City of Port Phillip marked the centenary of the Victorian Railways trams with the unveiling of a commemorative plaque at the Village Belle in May 2006.

Craig Tooke



Combino D2 5006 displays its Centenary Art livery at the launch held at Albert Park on 10 August. The livery was designed by Millimetre and is reminiscent of the style of American pop artist Andy Warhol.

Chris Gordon

Left: Victorian Minister for Transport, the Hon. Peter Batchelor prepares to cut the ribbon to launch D2 5006 in its Centenary Art livery. Yarra Trams Chief Executive Officer Denis Cliche and Siemens ANZ Chairman and Managing Director Albert Goller look on.

Chris Gordon



The trams on display at Docklands on 8 October included (from left) B2 2042, C 3016, VR 53, SW6 960 and W1 431.

Howard Clark

Old and new on display. The getaway tram from the film Malcolm is flanked by Melbourne's newest class of tram represented by D2 5006 and by its oldest electric tram, NMETL 13.

Randall Wilson



At Docklands on Sunday, 8 October, trams were placed on static display on the three tracks along Harbour Esplanade, nominally from 11:00am to 4:00pm. The event was promoted as a family fun day, under the name TRAM IT.

The trams on display were NMETL 13 (making its first appearance after being repainted from its previous identity, V 214); HTT 32, VR 53, W1 431, SW6 960 (substituting for W5 774 which could not be brought from Hawthorn Depot because of a motor vehicle parked on the track there), W7 1020 (City Circle), Z3 143 (used as a theatre to show excerpts from the film *Malcolm*), A2 292, B2 2042, C 3016, D2 5006 (in its centenary livery) and the 'tram' used in the film *Malcolm*. Some historical artefacts were displayed in a small marquee beside the trams, the area was bedecked with special banners, face painting was on offer and the Melbourne Tramways Band added to the festivities. Volunteers from Victoria's tramway museums acted as guides for the day, stationed at each tram.

The heritage trams in the display were driven from Preston or Hawthorn very early on the Sunday morning, when no regular services were running, and they departed on the Monday morning soon after midnight. City Circle trams were diverted to run via Spencer Street for the day.

Held in bright and sunny if windy weather, the event attracted a large crowd. However for those interested in history it was a case of 'what might have been'. The absence of a W2 and of many other significant trams from the fleet at Hawthorn lowered the value of the celebration. Seven of the twelve trams on display could be experienced by the public in daily service. The static presentation compared poorly with events of past years such as the cavalcades of the late 1970s and early

A panoramic view of the scene at Docklands during the TRAM IT Centenary of Electric Trams display on 8 October.

Randall Wilson



The interior of Centenary Art Tram D2 5006 is decorated with commemorative hangings and posters.

Howard Clark

A Metcard commemorating 100 years of electric trams in Melbourne.



The centenary of the former North Melbourne Electric Tramways and Lighting Company's depot at Essendon was celebrated with a function for current and past employees on 15 October. Trams VR 53 and NMETL 13 were in attendance and are seen after the event waiting to be returned to Hawthorn Depot. Ian Green



1980s. Most significantly, the information contained in brochures and posters handed out at the event included numerous errors. Given the wealth of material which has been published on the history of Melbourne's tramways, it should not be difficult to present information which is accurate.

Essendon Depot marks its centenary

Yarra Trams marked the centenary of the North Melbourne Electric Tramways & Lighting Co's former depot at Essendon with a function for current and past tramway employees and invited guests on 15 October between 11:00am and 4:00pm. The celebrations included the display of former Victorian Railways tram 53 and NMETL 13. Members of the Essendon Historical Society dressed in Edwardian costume for the occasion.

Book reviews

From Rails to Rubber

The Downhill Ride of New Zealand Trams

By Graham Stewart

250 x 210mm format – 128 pages

296 black and white photographs

Four-colour matt laminated cover with cover flaps

Silver foil blocking on title

ISBN 1 86934 100 7

Published by Grantham House Publishing

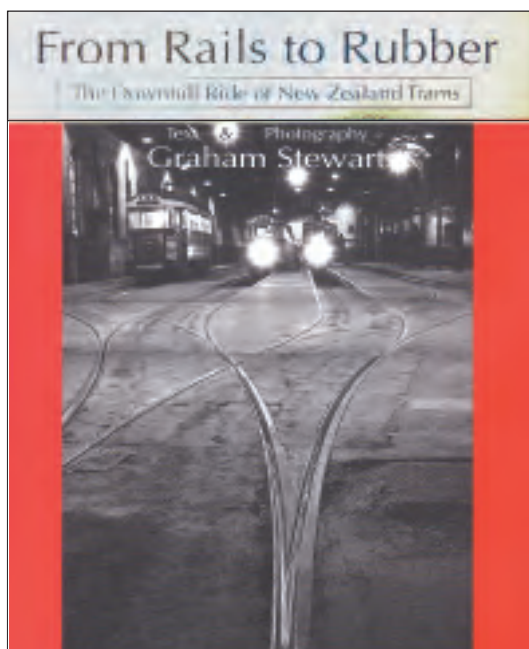
Price in New Zealand: NZ\$34.99 including GST.

For half a century electric trams carried generations from their homes to school, to university, to sports, to work, to the theatre, to weddings and funerals – they were the link between home and the outside world. In the years following the Second World War, New Zealand, like Australia, was slowly recovering from shortages brought about by wartime conditions –

so much of their vital infrastructure was in need of urgent replacement, upgrading and modernisation.

With big changes to their urban transport services on the horizon, Graham Stewart recorded with his camera the changes as they occurred in the four main centres of Auckland, Christchurch, Dunedin and Wellington, and in New Plymouth, Wanganui and Invercargill – cities that had established electric tramway services in the early years of the 20th century.

This portfolio of photographs gives a graphic close-up look at life in these urban centres 50 years



ago: the people and the fashions; the trams and the buses; the streetscapes, the motor vehicles. It provides an insight into a past age of city life before we all became reliant on the motor car – when people had affection for the public transport vehicles they rode.

The author witnessed all this history as it unfolded in front of his camera, providing a remarkable portfolio of New Zealand photographs, the majority taken over 50 years ago. It complements his previous works by documenting that final downhill ride of New Zealand's trams from rails to rubber. It is an excellent addition to the many books Graham Stewart has published on New Zealand's street tramways.

Launceston Municipal Transport 1911-1955

By Ian G. Cooper

295 x 210 mm, 170 pages (A4 portrait), soft back (card covers)

ISBN 0 909459 20 7

Published by Transit Australia Publishing

Available from PO Box 114, Canterbury, Vic 3126

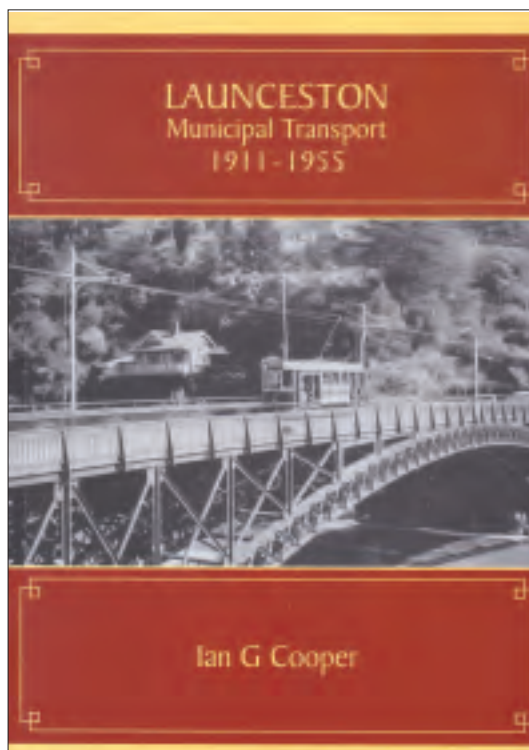
Recommended retail price AU\$54.95 including GST plus \$7 postage and packing.

This new book represents the outcome of a significant long-term research project and must be considered a masterpiece. Its successful completion was greatly assisted by the fortuitous and serendipitous discovery of many Launceston Municipal Tramways files and associated documents at the depot premises. The project was further facilitated by the encouragement and assistance of Metro Tasmania Pty Limited and staff of the Launceston City Council and its Queen Victoria Museum and Art Gallery's Community History Centre.

In 1906, when Launceston's population was 21,520, the Council entered into an agreement with a private company for the construction of a system of electric tramways. The company was to run the tramways for 25 years with the Council supplying the electric power. This proposal did not proceed and the Council assumed responsibility for the tramways. Launceston was the last but one new electric tramway system opened in this country.

The Council's direct involvement in the operation of public transport continued until 1955 when the State Government took over the undertaking through a new Metropolitan Transport Trust. The Council's fleet over the period covered by this book involved some 29 trams, 30 trolley buses and 32 motor buses.

With 140 A4 pages, *Launceston Municipal Transport 1911-1955* is the largest and most comprehensive single book relating to an Australian municipal street transport undertaking. The book



focuses on the tramway and gives proper attention to the Launceston Corporation's motor bus operations during 1926 and 1927 and since 1936, together with its trolley bus undertaking from 1951.

One of Launceston's claims to fame is that it was the only regional (other than a capital city) undertaking which operated trams, motor buses and trolley buses. The trolley bus system was both the last, up to that time, to have been introduced (during 1951) in a predominantly English-speaking city while it was also the last Australian trolley bus undertaking to construct a suburban extension (to Norwood in 1961).

The tangled skein of the events leading up to the decision to provide Launceston with an electric tramway system, including the unsuccessful attempt for company operation, citizens' plebiscites and the manoeuvring among aldermen to obtain tramway communication are elucidated.

Such important documents as the comprehensive reports submitted by officers of the Melbourne and Metropolitan Tramways Board in 1937 and by Sir William Goodman (of the Municipal Tramways Trust, Adelaide) in 1946 relating to trolley buses are analysed. One of the book's strengths is its detailed descriptions of operational matters and the operation of trams and buses.

The tramway undertaking possessed many notable and unusual features such as the elaborate track layout in the city, steeply graded lines with five railway/tramway level crossings and one involving a 2'0" gauge horse tram line serving a smelter.

Launceston's was the only tramway in this country with electricity generated by a hydro-electric power station. Its three drop-centre cars of 1930 were the only such trams to have been built new by a provincial system and they were the penultimately introduced examples of this familiar design – the last being the Sydney R class of 1933.

The Launceston undertaking had the distinction of retaining in service, almost until the end of tram operation in 1952, almost all of its fleet of 29 trams acquired during 1911-1930. It was also unusual in that the trams remained in their original red and cream colour scheme while the motor and trolley buses were painted in distinctive liveries. In the bus context, Launceston purchased the first half cab, and possibly the first diesel, bus in Tasmania. It was also the only non-private operator of Seddon buses and one of the few to place old bodies on new chasses.

Cooper's approach to what is an involved and difficult subject is straightforward, penetrating and logical, with great care taken to ensure accuracy. The narrative is arranged in chronological order. The text is not cluttered with footnotes – the references and citations are shown in the text itself while there is a useful bibliography.

This approach means that comprehensive data is readily available in a concise form.

A particular feature of the book is its 149 photographs of which 18 are in colour. Cooper has been fortunate in having been able to locate so many clear views illustrating the minutiae of the day-to-day workings of a municipal tramway. In addition, there are reproductions of coloured postcards of the Edwardian period and two pages of reproductions of tickets in colour.

The contents of the book's 18 chapters are conveniently summarised in the outline of each chapter included in the index. The headings in these summaries correspond to the subheadings within the individual chapters. This makes tracing events a simple task and is a model for an intelligent approach to conveying information to readers unfamiliar with events in Launceston transport and political history.

There are five high quality maps (drawn by David Jones) showing the three forms of transport at various stages of their development. The maps of the electric

undertakings show details of the track and overhead wiring layouts.

A feature is the 11 appendices (23 pages) which cover the following subjects: tram lines, motor bus routes, trolley bus routes, tram fleet, petrol and diesel bus fleet, trolley bus fleet, auxiliary vehicle fleet, destination signs, selected statistics, fare sections and key people (Superintendents of Transport, Mayors and Chairmen of the Tramway Committee).

A notable quality of this book is what it does not include. It is concise with no 'padding' involving the inclusion of readily available but extraneous and marginal material. It also follows the practice of avoiding unnecessary, inappropriate and needlessly confusing references to decimal currency and to metric measurements.

Ross Willson

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by Richard Peck

Volume 1 tram \$35, self published, spiral bound; plus Volume 2 bus \$30, spiral bound; plus a colour CD \$20 (not sold separately).

Available from the author at PO Box 199 Drummoyne NSW 1470.

Postage extra (for 1kg).

Richard Peck formerly worked as a curator at the Powerhouse Museum in Sydney and is already well known for self publishing over 100 books on philatelic subjects. He was fortunate to be present when the NSW Government Printing Office was closed in 1989 and acquired many original objects for the museum at that time, including proof sheets of colonial and state revenue stamps and tram tickets. He has also thoroughly researched State Archives in this area.

This whetted his appetite and a book on NSW revenue stamps (with David Ingle Smith) resulted. He was contacted by Robert Merchant following an article on early tram tickets and the two devised a publication on NSW tickets. This in turn led to other contacts and Greg Travers suggested that the Magor Collection at the Bus & Coach Association (NSW) (BCA) should be included.

What was originally to be one volume has now blossomed into a series, with the first volume of *Fares Please*, an illustrated guide to NSW transport tickets by Robert Merchant & Richard Peck Volume 1 Tickets of the private bus operators in country NSW, in two parts recently published in 2006 (details as above). Further volumes are planned, Volume 2 Sydney private bus (to appear in 2007); Volume 3 Government trams and buses; and Volume 4 Ferries, bridges, tolls, and possibly railways in a general form, later.

Richard's researches also led him in other directions. Realising that there were many details about Sydney's early private bus routes not known, he began a series *The Sydney Bus* (now up to 27 parts), and these works detailing what is known about the tram and bus tickets of the other Australasian states.

It is of interest that a recently published bibliography of New Zealand transport lists no books on street transport tickets and the same is true of the other Australian states. These works are the result of collaborations with other ticket collectors and transport enthusiasts who have also seen the need to have this material published.

While the NSW works (*Fares Please*) are as definitive as possible and considerable care has been taken in their layout, the other states covered in *Tickets Please* should be seen as a preliminary series which will be 'tidied up' at some future stage (10 years?) when other collections have been consulted. *Tickets Please* therefore has a layout and some scans which could be improved.

For both series it was realised that hard copy publication in colour (even if assisted by the BCA) would make the total price fairly high (each part is over 90 pages), so the concept of an added CD in colour (which cannot be purchased separately) was devised. This CD is kept updated and will be the basis of any future hard covered edition.

No prices for tickets are listed as insufficient material has yet to come on the market. However a rarity rating is given for many items, the remainder being considered rare anyway. Considerable background detail about services is given where this has been found.

These works are a valuable addition to the documentation of the ephemera surrounding Australia's early and modern transport systems.

David Collye

Video Review

VR Tramways in the 1950s

Available by mail order from:
Roger Greenwood, PO Box 4034, Doncaster Heights
Vic 3109
\$39.95 plus \$6 packing and postage = \$45.95.
Payment may be made by credit cards.

This scope of this DVD (60 minutes running time) is the two tramways operated by the Victorian Railways in the vicinity of Port Phillip Bay. The first was the broad gauge line from St Kilda station to Brighton Beach which was opened in two sections in 1906 and closed in stages, two in 1957 and the remnant in 1959.

The second was the standard gauge line opened in 1919 from Sandringham to Black Rock which was extended to Beaumaris in 1926. The extension closed in 1931 and the original section in 1956.

The gauge issue deserves a brief explanation. In 1910 the Parliamentary Standing Committee on Railways recommended a broad gauge steam railway and in 1913 a broad gauge electric street railway from Sandringham to Black Rock. A further report (19 October 1914) referred to "... a proposal to extend the Caulfield electric tramways through Brighton to Sandringham" and recommended that the line should be built to "the standard tramway gauge". Thus the VR became (from 1919 to 1956) an operator on three gauges: 5'3", 4'8 1/2" and 2'6".

While there is a tradition that these lines had special features, the fact is that the Bills introduced in 1913, 1914, 1915, 1917 and 1918 relating to the unified administration of Melbourne tramways all provided that the proposed general tramway authority would take over the Victorian Railways' 'electric street railways'. Thus the overwhelming likelihood is that, had it not been for an adventitious change of heart by some politicians during the passage of the Melbourne and Metropolitan Tramways Bill 1918 through the Legislative Assembly, the 'Railway Trams' would have formed an undistinguishable part of the Melbourne and Metropolitan Tramways Board's amalgamated undertaking. The gauge of the Brighton line could have been altered without undue difficulty when the time came for it to be re-laid.

The DVD is arranged as follows:

St Kilda-Brighton Beach
Sandringham-Black Rock
Tours and closure
Nostalgic journey

While there is considerable overlap of coverage within these categories, this does not affect the overall appeal of this presentation.

There are excellent views showing the three crossings with the MMTB's standard gauge lines in Fitzroy Street and Carlisle Street, St Kilda and Glenhuntly Road, Glenhuntly. There cannot be many other examples elsewhere of a street electric tramway of one gauge crossing another operator's line of a different gauge.

A feature of special interest is the variety of classes (Q, T, X, X1, X2 and W6) operated on the shuttle service between Elsternwick and Point Ormond. The coverage includes the Elwood breakdown car (No. 20) in St Kilda Street, whose design followed the Sydney J class of 1904, and California car No. 6 of 1907 on an AETA tour in 1956.

Many people will be interested in the views of the two cars converted to one-man operation which were subject to a union ban as well as buses operated by the MMTB, VR (including a Commer) and private operators. Many of the motor vehicles including taxis in the street scenes are fascinating in their own right while the views of the restored trams taken at Bendigo will attract interest.

The DVD demonstrates that the Brighton line generated extensive business traffic when trams left St Kilda station in divisions bound for the ultimate and intermediate termini. Consequently a feature is the views of trams shunting at intermediate crossovers, together with extensive coverage of the depots, including the disused turntable at Elwood. They demonstrate the good condition in which the trams were kept.

The views of the suburban trains operating from Flinders Street to St Kilda (of the red swing door, rose red and moonstone grey Tait and blue Harris trains) are of great interest as are those of the stations and yards. They add to the overall appeal of the subject matter.

Interesting sequences show the driver collecting the staff protecting the short single track section leading to

Sandringham station, and shunting at both depots. There are excellent views of today's five-section (class D2) trams operating near the former St Kilda station and of modern buses at Sandringham Depot.

There are also black and white still photographs covering the early period and representations of tram and train public timetables of the 1950s.

The acknowledgements indicate the participation of many contributors. As prospective purchasers would be aware, there are inherent difficulties with film taken some 50 years ago with handheld cameras, some of them simply because of deterioration attributable to age. Unfortunately the result is that some of the views are blurred and there are probably too many 'then and now' items. In short, the DVD would have benefited from tighter editing. There are perhaps too many repeated views taken through the window of the driving cab showing the track ahead.

Greenwood's commentary is detailed and comprehensive and explains the details of the lines' day to day operations.

Ross Willson, Ian Cooper and Randall Wilson.

COTMA

COUNCIL OF TRAMWAY MUSEUMS OF AUSTRALASIA

PO Box 61, Carlton South, Victoria 3053

www.cotma.org.au

From Warren Doubleday

With the impending approach of new national Rail Safety Regulations for Australia, the Council of Tramway Museums of Australasia (COTMA) has made a submission to the National Transport Commission about the effect of these regulations on our Australian members. The submission can be viewed on the COTMA website.

The issue with the most significant effect on our members is that of competency-based training. This was the liveliest topic of discussion at the recent Association of Tourist and Heritage Rail Australia (ATHRA) meeting held at the Workshops Rail Museum at Ipswich early in September. As drafted, the regulations would require almost every person at a tram museum to hold a competency certificate issued by a Registered Training Organisation as it applies to all Rail Safety Workers. The definition of a Rail Safety Worker is very wide.

While there is a lot of work under way to try to find an appropriate solution, each state will no doubt adopt a slightly different approach when the time comes for the enacting of legislation. Victoria has already passed legislation and associated regulations. Unfortunately, the strictness of the new rules could result in museum workers simply giving up, resulting in the eventual closure of museums or their conversion to purely static displays.

The building of relationships at the national level by the various state rail heritage bodies, COTMA and the Australasian Railway Association has been a positive outcome of the push to have a national approach to rail safety. We hope that the regulators adopt an approach that will allow organisations preserving our rail heritage to survive in the future.

LAUNCESTON

LAUNCESTON TRAMWAY MUSEUM SOCIETY

PO Box 889, Launceston, Tasmania 7250

www.geocities.com/tramwaysociety

Report by Warren Doubleday

Museum opens

Saturday, 23 September 2006 saw the Launceston Tramway Museum Society formally open its museum display area at Inveresk. The official opening was carried out by the Mayor of Launceston, Alderman Dean, who spoke highly of the work done by the volunteers. Their work would help to promote and acknowledge the role trams play in Launceston's history. The display area is within the former railway workshops and yard at Inveresk, which is now called the Queen Victoria Museum and Art Gallery. The area also includes university facilities.

The museum display area is a credit to the skills of the volunteers. It gives an excellent presentation of the trams themselves as well as the working lives of those who crewed and maintained Launceston's tram services. It is one of the best displays developed to date by an Australian tramway museum. The display shows many aspects of tramway operations, and includes two trammies playing cards.

The new display building is next to the original tram shed in the Inveresk precinct. The rear section of the shed is used as a workshop by the Launceston Tramway Museum Society while the front portion is used as a function centre known as 'The Tram Shed'.



Ralph Proctor receives his Life Membership from LTMS President John Binns. Warren Doubleday



LTMS President John Binns presents a Life Membership plaque to Mr Hiroyuki Tajiri. Warren Doubleday

Part of the new display area, with Launceston trammies playing cards in the background.

Warren Doubleday



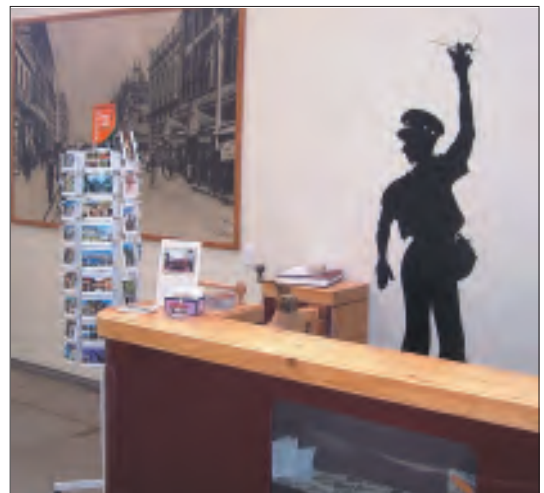
Launceston No. 29 in the new display area. Warren Doubleday

The newly built counter and sales area near the front of the building. Warren Doubleday

Bogie tram No. 29 is the centre piece of the current display. At this stage, the museum has not yet been formally authorised to operate the tram by the Tasmanian Rail Safety Regulator. The paper work is continuing, and has not been helped by ever-changing regulatory arrangements.

As part of the day's activities, President John Binns presented two life memberships: to Ralph Proctor for the tremendous amount of work he has done on No. 29, and to Mr Hiroyuki Tajiri of Japan who sourced the 3ft 6in gauge bogies and equipment for No. 29 and other trams being rebuilt by the museum.

The work done by the museum's volunteers so far is a great credit to them. It is hoped that they will soon be allowed to operate their trams in the precinct and perhaps even to parts of the city itself.



The crest of the Launceston Municipal Tramways in No. 29.
Warren Doubleday



BALLARAT

BALLARAT TRAMWAY MUSEUM

PO Box 632, Ballarat, Victoria 3353

www.btm.org.au

From Dave Macartney

The three year restoration and repaint of No. 40 is almost complete. The tram made a trial trip on 19 September, the 35th anniversary of the closure of the Ballarat system, covering a charter by the Tooleybuc Primary School. The bow in the body has returned – nobody really believed that it had been permanently eliminated – but the car looks a lot better than it has for many years, despite a temptation to leave it exactly as it was on the night of the closure. This leaves No. 33 as the only running tram in paint applied by the SEC.

No. 14 has had its truck dismantled down to the minimum with the motors and wheelsets ready for removal prior to repairs being carried out. Cream paintwork on the body of the tram will require a repaint, though the green is still quite serviceable.

No. 26 is having its open ends touched up. These were showing the effect of 20 years service since its last overhaul. The timber bench seats have been stripped down and stained and varnished, while the brass work has received much needed attention. It will be available for its customary heavy workload over summer.

A long overdue clean up of the workshop area has been carried out during the winter months. Many odd items accumulated over the years with little sign of ever being used have been removed, and a new storage area for retained items has been set up along the 7 road wall. A heavy wooden box lugged around from the SEC depot in 1971 and never opened was finally broken into, and found to contain a brand new compressor armature still in its factory packing. We kept the armature and disposed of the box!



Wendouree Parade is changing again. While in some ways it is sad to lose the informal edge to Wendouree Parade, car parking is now more controlled. This photo was taken on 14 July 2006 before the sealing of the section just north of Depot Junction.

Dave Macartney

The repainting of No. 40 and some mechanical work was completed recently. No. 33 is now the last tram of the operating Ballarat fleet that was painted by the SEC. The two cars meet at Gardens Loop on 2 September 2006.

Austin Brehaut



No. 40 with a school charter at St Aidans Drive on 19 September. SEC monograms have since been applied. The students show their appreciation to the conductor!

Austin Brehaut

Taped up on 4 August, No. 40 is covered in masking tape for the lining to be applied in a traditional manner.

Dave Macartney



In the original shed, highly effective Hibay lighting has finally been installed, and the timber spans holding up the overhead have been replaced by metal brackets, a much neater arrangement. The problem with the new lighting is that the floors have to be swept more often,

as the increased brilliance shows up every bit of grime! To add to the new look, the office and mess room have finally had the bare concrete floors painted grey - another series of jobs finished that were put off for far too long.



It is 3 August and resealing the road has almost finished. The final hotmix surface has been applied and only road lining and the placement of hazard signs on the poles remain to be done.

Dave Macartney

BENDIGO

BENDIGO TRAMWAYS

1 Tramways Avenue, Bendigo, Victoria 3550

www.bendigotramways.com

From Len Millar

Rolling stock

Adelaide H class No. 369 is currently being modified for use in traffic. The Tomlinson couplers have been removed and self-lapping brake valves have been fitted to ensure consistency with the rest of our operating fleet.

The tram's exterior has been sanded and the existing livery re-applied. It now looks very smart! The air-conditioning installed by TransAdelaide will be welcomed by drivers during Bendigo's hot summers.

Driver training on Z1 class No. 74 has commenced, and three drivers are now proficient. No. 74's trucks

are sporting a fresh coat of gloss black paint and the seats have been given a restorative coat of vinyl lacquer. A sound system has been installed with the commentary tape being activated by a flick of a finger. Some drivers have expressed their surprise and delight at the comfort and adjustability of the driver's seats on No. 74. We have advised them, however, that we can't see this level of comfort being applied to our single truck M class cars 19 and 21 any time soon!

After some restorative carpentry and joinery in our workshop, work had to stop on North Melbourne Electric Tramways and Lighting Company (NMETL) car No. 4 which entered service 100 years ago this



The North Melbourne Electric Tramways and Lighting Company car No. 4 is towed from the depot in preparation for its return to Bylands on 5 October.

Bendigo Tramways

year. Sadly, no funds are available for the tram's restoration and it returned to Bylands on 5 October.

Y1 610 is being worked on intermittently as resources permit, and the sanding and priming of external panels are occurring prior to its re-painting.

Damien Steel and his work-for-the-dole team have been working on maximum traction car PMTT No. 44. The internal woodwork has been stripped, sanded and re-varnished, and the exterior is looking most attractive with its dark red and cream livery. Interestingly, the panel colour on No. 44 is the same as that on the panels of Adelaide H car No. 369.

A photograph of sister PMTT maximum traction car No. 36 has been placed on the apron of No. 44 so that visitors can see what the finished product will look like. The photo appears to have been taken at the present Malvern – Burke Road terminus in Wattleree

Road prior to the tram's departure for the Esplanade (St. Kilda) on the original route 4.

SW5 No. 808 has returned to traffic in its new sponsor's requested livery of pale blue, orange and white, which certainly make the car visible.

On 26 August, members of the Victorian Division of the Australian Railway Historical Society enjoyed a tour in Victorian Railways luxury car No. 53 before its transfer to Preston Workshops on 11 September. No. 53 was displayed at the centenary of electric trams that was held at Docklands in Melbourne on 8 October.

A swap has been arranged with the Sydney Tramway Museum whereby a set of MMTB No. 1 trucks was moved north in exchange for W3 class No. 668 which had been in Cessnock for many years. Life out in the open wreaked havoc with the plywood roofing of 668, and rot and rust were widespread.

Our Adelaide H car 369 has been given a repaint and is glistening in the depot yard before its numbers are applied.

Bendigo Tramways





Cranes lift VR 53 in Tramway Avenue ready for loading onto a trailer for its return to Melbourne on 11 September.
Bendigo Tramways

However, the tram's motors, wheel sets and other equipment can be used by the Australian Electric Transport Museum in reconstructing a 'Bib and Bub' set. Bendigo is pleased to be assisting the AETM with this project.

Infrastructure

After several Monday work parties with the tower wagon, staffed by Karl Penrose, Simon Jenkins, Julie Cain and Damien Steel, overhead wiring along the whole of our route is now pantograph-compatible. On 14 August, Z1 74 arrived at North Bendigo terminus without experiencing any problems. Because pantographs cannot be used inside the depot building

at present, the trolley pole at the opposite end of the car is used to drive the car into the building. We are very aware that 74 is large in comparison with other trams in our fleet. For this reason, the external side mirror cannot be moved into position until the front of the tram has cleared the last overhead pole at the Hargreaves Street entrance.

Copying a very useful arrangement negotiated by the Sydney Tramway Museum, we have been receiving quantities of surplus concrete in recent weeks – sufficient in fact to provide a level surface in the paint shop and a dwarf wall and drainage pit outside the John Bullen workshop east wall.



A sad-looking W3 class 668 on arrival from Cessnock. It has been broken up to provide equipment for the AETM's reconstruction of a 'Bib and Bub' set.

Bendigo Tramways

Our Z1 class No. 74 departs the Central Deborah terminus in Violet Street on a driver training run.

Bendigo Tramways



In another development, we are currently finalising a submission to obtain \$1.7 million in assistance from the Australian and Victorian Governments to extend

the depot building and provide an interpretative tour of the depot and workshop.

BYLANDS

TRAMWAY MUSEUM SOCIETY OF VICTORIA

38 Piccadilly Crescent, Keysborough Victoria 3173

www.tmsv.org.au

From Graham Jordan and *Running Journal*

Annual General Meeting

The Annual General Meeting was held on Saturday, 26 August at Hawthorn Depot.

The following Office Bearers were re-elected unopposed.

Chairman	Russell Jones
Deputy Chairman	Andrew Hall
Ordinary Board Members	Graham Jordan, Keith Kings, Corey Robertson.

After the formalities, those present enjoyed the customary afternoon tea supplied by Rod Atkins and Aileen Jordan. Entertainment was provided by Keith Kings who showed some superb 1950s movie footage, since transposed onto DVD, of the VR's St Kilda to Brighton Beach, and Sandringham to Black Rock lines.

Tram operations recommence

After a visit and inspection of our reconstruction works by Public Transport Safety, Victoria, the Society was given the green light to recommence public tram operations at Bylands from Sunday, 1 October 2006.

Several trams were serviced and cleaned prior to this date, and on the day prior, scrubber 10W ventured out along the main line to remove surface rust from the track. The opportunity was also taken to test and clean the rails on the newly reconstructed section of track.

During the period that we were not operating trams, we continued to attract a regular stream of visitors. Although we were not able to offer tram rides, the situation was well received and understood.



Adelaide H car 373 on its first run to the northern terminus at Bylands.
Kym Smith

Infrastructure rehabilitation

Although work is proceeding at a steady pace, we would appreciate more assistance to ease the load. The second scheduled work day on 19 August turned out to be a fine and sunny winter's day, the exact opposite of the previous one. Despite the small number of participants a number of jobs were commenced.

Remedial work on the overhead resulted in an additional insulator and extra tie-off wires being placed at the Union Lane fence line, and the whole main line wire being re-tensioned. The feeder cable which originally ran to the section insulator near the pit shed was disconnected; a number of surplus span wires on the depot fan were removed together with several unused ears; and a start was made on adjustment to the wire on No. 1 road. At the same time, units were installed to insulate the overhead fittings in the troughing. This is an on-going job, and more units will be installed in the future.

Trackwork commenced along the excavated section of the main line beside No. 2 shed. The remaining spoil was removed along a section of approximately 25 metres and 17 new sleepers were spiked down. In the weeks that follow each work day, our Community Service Order workers (CSOs) have continued to remove spoil in the excavated area in preparation for more sleeper replacements.

Work has also commenced on the excavation of the trench required to run the new earth return cable from the main line to the substation via all depot roads. The brackets which will hold this cable are to be welded to the rails. They returned recently from the engineering works and will be fitted shortly.

While we have been busy, we have still had time for a lunchtime barbecue by our Chef for the Day, Aileen Jordan. We appreciate the assistance of the following



Some of our new sleepers being stacked during the working bee.
Aileen Jordan



The recently completed upgraded section of the main line beside No. 2 tram depot at Bylands as seen on 30 September.

Aileen Jordan

members who gave their time, and exerted much physical energy on the work day: Rod Atkins, Geoff Dean, Michael Fedor, Andrew Hall, Russell Jones, Aileen Jordan, Graham Jordan, Corey Robertson, Harry Twining and John Turnbull. In addition Kym Smith and Tony Smith were in attendance, working on Adelaide H class No. 373.

Work proceeded at a rapid pace on several projects, with the aim of resuming tram operations as soon as possible. During September, 40 sleepers were replaced on our main line, thanks largely to three members who made themselves available during the school holidays. Two truckloads of ballast were delivered subsequently and this was used to pack and line the track. The major task now is to reconstruct over 70 metres of the main line track adjacent to No. 2 tram shed. A special working bee was held on 30 September with a surprisingly good turnout of 15 members. This helped to move the project along.

Other trackwork has resulted in several sleepers being replaced in the depot fan outside No. 1 depot, and more lifting and packing of track on the Exhibition Shed fan.

A further 100 new red gum sleepers have been delivered and these, together with the remaining 50 from the original order, will be used to further upgrade the main line northwards from the yard limit.

Museum works

Work continues spasmodically on the Exhibition Shed track and fan between the major infrastructure works. Work has mainly centred on the extension and completion of D road. To complete this, another truckload of ballast was delivered in late August. A thorough track inspection was also carried out by Bill Kingsley and Don English in late June which identified several problems that required attention. These are now being addressed as part of our current works program.

Work on connecting the toilet block to the water supply from the Exhibition Shed has involved purchasing and laying a new section of pipe. We are currently waiting for our plumbing contractor to make the final connections which will enable us to disconnect the supply from the deteriorated tanks at the Bus Shed. A quote has also been obtained to lay cable for the installation of lights and power to the toilets.

Our building contractor will shortly replace the rusted-out spouting on the front half of No. 2 shed. New spouting was purchased for this job several years ago in readiness for an opportunity to install it. A new section of wooden troughing has also been made up to replace a badly weathered section outside the front of No. 2 road.

Works on our grounds continue between other jobs. Control of weeds is an endless task, proving more so in the warm weather. A load of small screenings has been spread on the pathway leading from the car park to the kiosk, which has improved the overall appearance of this area. The road surface over the pipe drain at the front gate has also been resurfaced. The area adjacent to the southern tram terminus where the ex-Fitzroy rail was stock-piled, has now been cleared and levelled. To improve the directional flow of visitors around work areas, and for safety reasons especially when the ground is slippery, many metres of temporary fencing using star pickets and tape, have been set up.

To do the hard work around the museum, good tools are required. Through the generosity of our Deputy Chairman Andrew Hall, a number of new picks, shovels and sledge hammers were donated to the museum. The Society appreciates Andrew's gesture, as do our workers, who will no longer have to remove the splinters from their hands.

Adelaide H car 373 on the depot fan at Bylands prior to its inaugural run in Victoria. As can be seen the tram has been converted to trolley pole operation. Kym Smith



Some work has been undertaken on Mk VI bus No. 776 by Dysons Bus Company at Bundoora. It is expected that Volvo No. 850 will also soon go to Dysons for work. We appreciate the help and support of the Dyson Group in assisting with the maintenance of our buses. This co-operation is a result of the help given by the Society to Dysons in providing undercover storage space at Bylands for several of the company's heritage vehicles.

North Melbourne Electric Tramways and Lighting Co No. 4 returns to Bylands

After several years in Bendigo undergoing restoration, NMETL No. 4, later MMTB U class No. 205, returned to Bylands on 5 October 2006. Unfortunately, several attempts to obtain further funding through the Victorian Government to complete the tram in time for the celebration on 8 October of the centenary of electric trams in Melbourne, failed, and the car remains incomplete. If funding is not forthcoming in the near future, the car

will most probably be completed at Bylands. It was originally envisaged that the tram would be loaned to the Hawthorn display on its completion. This now appears unlikely.

Adelaide H class No. 373

Work has continued to prepare this tram for service at Bylands. Member Kym Smith undertook the task of converting the tram back to trolley pole operation. This includes fitting a second trolley base and pole at the north end. Kym also manufactured the fittings necessary to attach the trolley bases and trolley pole hooks to the existing trolley bridge planking. Kym was assisted in this task by Tony Smith (no relation) at the Melbourne Tramcar Preservation Association (MTPA) at Haddon, who supplied suitable electrical cable. The electrical inverter was also removed so that some minor repair work could be undertaken off-site. TransAdelaide once again gave valuable assistance and advice in relation to the inverter. The Society is also indebted to Ian Seymour of the AETM at St Kilda for



Far from the bustle of its former home, Adelaide H 373 stands at the northern terminus of the main line at Bylands for the first time. Kym Smith

his assistance in sourcing the trolley bases and hooks for the car, remembering that they were all removed back in 1986.

Book on Victorian Railways tramways

Society member David Frost has put together a new 20-page booklet on the VR tramways. Titled *A Short History of the Victorian Railways Trams*, and illustrated with many photos from Keith Kings and

other sources, some in colour, it is an excellent production and a must for every tramway historian. Other Society personnel involved with the booklet or the supply of information contained therein are Peter Carwardine and the late Bob Prentice. Published by Tramway Publications, it retails for \$7.95 and is available through the Society. More details are available from our Secretary at our address shown above.

ST KILDA

AUSTRALIAN ELECTRIC TRANSPORT MUSEUM (SA) Inc

GPO Box 2012, Adelaide, South Australia 5001

www.railpage.org.au/aetmsa

From Colin Seymour

Glenelg No. 364 arrives

H 364 arrived at the Museum from Glengowrie Depot on 6 October. Readers may recall that sister tram No. 365 arrived at St Kilda in December last year. No. 365, however, will be at the Museum only temporarily as it is destined to become bed and breakfast accommodation in the Adelaide Hills.

Car 364 gives the Museum a comprehensive representation of the life of the H cars:

No. 360: restored to circa 1929 original appearance

No. 362: restored to the silver colour scheme of the 1950s and 1960s

No. 364: as refurbished in the 1980s

Car 364 was one of the first cars to be put through the 1970s refurbishment program which commenced in 1971, the other being car 363. This signalled that the Glenelg trams would live on after a period of doubt in the 1960s. Cars 363 and 364 were initially painted in an experimental grey livery with a red roof. Subsequent refurbishments returned them to their original tuscan red livery.

It is interesting to note that sister cars 360 and 362 arrived at St Kilda late in 1982, so car 364 remained in service on the Glenelg line for almost another quarter of a century. This is also a reflection of how long the Museum has been around!

H 364 is removed from its bogies by the workshop crane at Glengowrie Depot on 6 October before being transported to St Kilda. Two Flexity cars can just be seen on adjoining roads.

Ian Seymour





H 364 has been unloaded back onto its bogies on the unwired Road 9 at St Kilda and will be towed to the Museum workshop by dropcentre 264.

Ian Seymour

Car 364 was reconnected mechanically and electrically, with trolley poles, bases and hooks being installed on 7 October. It commenced public operation on the Museum's line the following day.

Car 15

Reconstruction work on car 15, as part of our Bib and Bub cars 14 and 15 set, is progressing well. Car 15 is starting to look like a tram again with its windows reinstalled and varnished wood work set off with John Radcliffe's application of gold lining with the maker's name in gold lettering above each saloon doorway. Original style brass light fittings and refurbished Brill Winner seats have been re-installed in the saloon.

Steady progress on this project has been made possible because Peter Letheby carried out the tiresome but well appreciated task of sorting recycled

slotted brass and steel screws into their respective sizes. Mike Crabb went to some effort fitting the motorman's gong and hand brake together with its underfloor gear beneath the driver's cab.

A replica bulkhead, prepared from drawings made by Ian Seymour, has been completed by Husnjak Joinery and installed in the non-driving end of car 15 by the Friday gang. As soon as it was fitted, Jack Pennack commenced painting it. Car 15 is now ready to be placed on its Brill 21E truck that is being constructed by Bendigo Tramways.

Car 118

Ian Seymour has re-commenced machining the pony axle-boxes of the Brill 22E maximum traction trucks. He has adjusted the side frames and shims in readiness for installation under No. 118.



Saloon of car 15, resplendent with its varnished woodwork and refurbished Brill Winner seats.

Chris Summers

Ian Seymour, Jack Pennack, Mike Bosworth and Mike Crabb, with assistance from Pete Letheby and Ron White, carefully refit the new bulkhead to the non-driving end of car 15. Chris Summers

Compressor governors

In addition to servicing trams, Ian Seymour has been refurbishing the compressor governors of air-braked



Mirko Husnjak from Husnjak Joinery fitting a template to car 15. The template was used to check the end portion of the arc to construct the new bulkhead.

Ian Seymour

Mike Crabb, Jack Pennack and Mike Bosworth with assistance from Chris Summers, finishing the concreting of the Mangrove Street curve. Chris Summers



trams and installing new contacts. Only several cars still require attention.

Trackwork

The east curve at the Mangrove Street crossing has now been concreted to complete the trackwork recently carried out.

Site works

An improved drainage system and an automatic overflow pump for our public toilets were installed recently by a contractor.

Restaurant tram 378

Following representations by the History Trust of South Australia to TransAdelaide and the Government of South Australia over the heritage significance of restaurant tram 378, TransAdelaide agreed in consultation with Glossop High School to hand the tram over to the History Trust. Previously, Glossop

High School, near Berri in the Riverland, had tendered successfully for the tram together with the body of car 376.

The History Trust intends to house 378 at our Museum at St Kilda. The AETM recently assisted Glossop High School by supplying two unmotored W2 bogies in exchange for various parts from 376.

HADDON

MELBOURNE TRAMCAR PRESERVATION ASSOCIATION

PO Box 324, Prahran, Victoria 3181

www.railpage.org.au/mtpa

From *Grand Union*

VR 41

During May, new stainless steel storm curtain runners were fitted into the new blinds by Kym Smith. If all goes to plan, the new blinds will be fitted during September. Only the manufacture and fitting of notice cases to the driver's bulkheads will then be required to complete the restoration of the car.

During August, Kym Smith made new side auxiliary boards which are currently being prepared for painting by Jackie Smith and Cindy Tassie. During routine

servicing of the tram, several worn motor nose mount rubber blocks were replaced.

L 103

Progress on the restoration of this tram is moving ahead after many years of minimal activity. Exterior painting has been completed, and numbers, monograms and pin striping have been applied to one side of the tram to good effect. Work commenced



The interior lights reflecting off the varnished woodwork provide a warm glow to this scene showing VR 41 and W2 407 standing in the night air outside the depot.

Kym Smith

recently on restoring the interior, which includes painting the controller frames and pipe work, and inside the aprons. The window louvres have been returned to their natural finish and are currently being prepared for French polishing. Painting the 16 saloon and standee windows is nearing completion. Various smaller parts for this tram such as headlight lens housings, side mirrors, windscreen wiper motors and driver's seat brackets are also in the process of being painted. The next task involves polishing the tram's various brass fittings. So far, the drop-centre grab rails and cabin door plates have been returned to their original condition.

This project has been undertaken by Jackie Smith and Cindy Tassie and their dedication and workmanship is to be commended.

We have decided to fit mirrors on the off side of L 103 to improve all round vision. This has necessitated casting additional brackets of a type that are peculiar to the L class. John Withers is currently machining the brackets.

W3 663

During April, the brake cylinders on the No. 2 bogie were exchanged with overhauled units. Whilst the cylinders were off, the opportunity was taken to thoroughly clean both bogies in preparation for painting.

No. 663 will be the next tram to enter the workshops for overhaul and restoration to as-built condition. In September, the trucks on this tram were degreased and pressure-washed to remove years of accumulated road grime. The trucks were then spray-painted gloss black. Only minor touch up work is required to complete this project.

Arthur Ireland continues to remove old paint from the No. 1 windshield of 663, with this preparatory work being performed as time permits. It is expected that this tram will enter the workshops later this year.

Bedford tower wagon

In April, the braking system developed a hydraulic leak that necessitated the overhaul and replacement of both front brake drum assemblies as well as the master cylinder. This work was completed during May by Anthony Smith and Frank Schroeder.

Overhead works

During April, the catenary messenger wire and fittings were removed from the curves at the west end

in accordance with our plan to simplify our overhead network. Catenary along the south side will be retained in its present form.

In May, both overhead vehicles were emptied of their contents and re-supplied with the overhead fittings and materials required for the reconstruction project. This involved sorting through the vast quantity of fittings acquired over many years and making serviceable those needed for immediate use. This was time well spent as once we start work 'out on the line' there will be no hold-ups looking for the required fittings or having to make them serviceable on the day.

We have also taken this opportunity to house all overhead fittings not required onto shelving in our ex-railway B van, thus saving valuable space on the overhead vehicles.

A large quantity of serviceable span wire and fittings were obtained from Melbourne recently. This was transported to Haddon over two days by Anthony Smith and John Withers. This material has been sorted and graded for use in the overhead works project. Our thanks go to Sach Infrastructure and in particular to Mark Sach and Robert Lord for their assistance in supporting the Association.

We have also purchased a number of specialty tools to expedite span construction. Work commenced in earnest on rebuilding the overhead in July. As part of the works, additional poles were installed to better support the overhead network, and to help raise the height of the contact wire in line with current standards. A total of nine new poles have been installed, with three replacing existing poles.

During August and September, work commenced on fabricating and erecting the new network of spans and pull-offs in the depot fan area above the existing overhead.

The next stage in this project involves removal of the old pressed metal frogs so that the contact wire can be tensioned and then raised and attached to the new spans. Overhauled brass frogs will then be installed to complete stage one of the overhead rebuilding project.

The use of modern wire rope together with hydraulic crimps and adjustable spiral wraps has enabled this project to proceed far more quickly than would have been possible in the past when old 7-strand wire and hand splicing would have been necessary.

Running shed

The back wall area on No. 4 road has been lined and the storage lockers located in various points within the

shed have been moved to the back of No. 4 road. We plan to use the rear of No. 4 road as a light maintenance and restoration area as it is more suitable for these types of activities than No. 1 road in the workshop building.

Additional sky lighting will be installed shortly. When this is in place, L 103 will be moved into this area to allow its final fit-out to take place.

Maintenance work

During September the pit rails and supports were painted gloss white and alterations to the pit lighting were carried out. This has significantly improved visibility within the pit area. The substation floor area has been repainted and we are currently applying new identification labels to the switchgear and control panels.

VALLEY HEIGHTS

STEAM TRAM AND RAILWAY PRESERVATION SOCIETY

PO Box 571, Springwood, NSW 2777

www.infoblue-mountains.net.au/locodepot/tram

By Bruce Irwin

Our society is in possession of one of the few tramway replicas to be found in this country. To recap its history, the double-deck car, 99DD (our classification; A6 class 98 was the last double-deck car), was built at the Randwick Workshops in 1950-51. It was constructed for the Waratah Spring Festival, an annual event held in Sydney. In conjunction with a facsimile tram motor body placed over a Massey-Ferguson tractor, the 'tram' was hauled through Sydney's streets on flangeless wheels. The rear bogie was fixed and the leading bogie was mounted so as to enable it to swivel. It replaced an earlier reproduction that was built in 1938 but later scrapped.

The body of 99DD was built on the frame of K class No. 746. A well-known photograph of a steam motor and two double-deck cars at the corner of Market and Elizabeth Streets was used in planning the pattern of construction of the original vehicle. Unfortunately, the print that was used had been laterally reversed with the result that the stair cases to the upper deck face the wrong way!

This original error was repeated in the 1950 construction. Another blow to replication came about in the overall dimensions of the car. The original A class cars built by the J. G. Brill & Co. (USA) in 1879 had a lower deck capacity of 60 persons in six compartments with upper deck seating for 30 persons. In the case of the reproduction, because a K class frame was used, the lower deck seated only 40 persons in four compartments, with a corresponding reduction in the upper deck seating to 20 persons.

At the end of the parade on 19 January 1951, the double-decker was placed in store, to await an annual

appearance in successive years. The last occasion on which it was used was in the final parade in October 1973. The car subsequently found its way into the keeping of the Museum of Applied Arts and Sciences.

Our society came into possession of the car under a program of de-accession by the Power House Museum in 1997. Since that time, the society has done some work on the car including replacing the footboard slats, replacing the nominal headstocks with the real thing, and fitting bumpers and draw-gear. Other necessary hardware, including vacuum brake diaphragms, awaits future installation.

The overall lower deck section is lightly constructed and will need strengthening. Safety concerns with the upper deck and stair cases will also have to be addressed. The most practical representative era for 99DD will be to modify it as was done to the original vehicles in 1880, a year after their introduction. This includes replacing the canvas roof and end panels of the top deck with timber, since steam motor cinders and canvas are not a good combination! Whilst there is a lot of work to be done, including re-painting, when compared to say our CBI carriage, 99DD has less to be done overall. When completed, it will be a stronger car capable of many years of running on the Valley Heights tramway.

So where does 99DD stand in terms of being a replica? Using criteria published by John H White, a retired Senior Historian with the Smithsonian in Washington, it is not a good example. Indeed, it could be described as a bad example. Though replicas generally compare poorly with the original product, they can accrue some respectability with age. Like everything else, they acquire their own sense of

history. Thus 56-year old 99DD has its own history, and points us to the vision of the original double-deckers. Despite its shortcomings, it will give a more than adequate idea of what double-deck steam tram

travel was about. It will also provide a unique adventure for the travelling public. If our trailer 93B is anything to go by, when finished, 99DD will be an achievement of which we can be justly proud.

GLENREAGH

GLENREAGH MOUNTAIN RAILWAY

PO Box 104, Glenreagh, NSW 2450

www.gmr.org.au

From Greg Wilson

VR No. 40 - not 49

Our most interesting item of news is the arrival at Glenreagh on 7 August of a Victorian Railways tram. The tram was given to the Glenreagh Mountain Railway and is currently being used by our catering group. Since August, the doors which had sealed up the drop-centre section have been removed, and the interior has been cleaned out. One side of both saloons has been removed with a view to fitting new panels. Paint has been removed from the windows and the tram is starting to resemble its former appearance.

Initial restoration work included removing paint from the centre panel in the drop centre. This led to a very interesting and surprising discovery. The original car number was uncovered showing that the tram long thought to be VR 49, is in fact VR 40. Further inspection of the tram revealed the remains of the numerals '40' on an end apron confirming the car's identity.



Side centre panel of VR 40 showing the number found under layers of paint.

Greg Wilson

Tram operations

Restoration work at Glenreagh has slowed recently because of attention to operational activities.

Mid-week charters of W2 392 for picnic morning tea and lunch runs have become almost a weekly operation. These charters are becoming popular with various tourist operators and bus companies looking for something different on the North Coast.

The midweek runs have highlighted deficiencies in our ability to get elderly and disabled passengers on and off the tram from ground level. To overcome this problem, a platform was constructed at the Glenreagh West end which enables passengers to board the tram at floor level, assisted if necessary by a wheelchair ramp. At Tallawudjah Creek, the other end of our line, a more complex platform was required in order to move wheelchair passengers to or from ground level without the need for them to be lifted by any of the staff.

No. 392 was of considerable use in the course of constructing these platforms. It was also used in rebuilding of one of our level crossings by Clarence Valley Council. Completion of the crossing has made the run to Tallawudjah Creek a much more pleasant one.

Glenreagh Mountain Railway is now entering the fire season and it is expected that 392 will see extra work as doubts exist about whether steam locomotive 1919 can haul trains during summer. To lower the risk of lineside fires, 1919's load has been reduced so the locomotive does not need to work as hard. Meanwhile restoration will continue on all cars and it is hoped that W2 370 will arrive shortly. This tram will be stripped for parts with the equipment being used on W2 447. This will mark the start of the tram's mechanical restoration, and its eventual return to service.



W2 447 uncovered with VR 40 in the background. Greg Wilson

W2 392 at the temporary end of the line, awaiting the crossing to be rebuilt. Greg Wilson

Tramcar 447

Restoration of 447 is continuing slowly with one bogie now sandblasted and ready for assembly. Unfortunately we discovered bad rust pitting of the axles where the suspension bearings sit. This will cause problems with the white metal bearings and will delay installation of the motors until a solution can be found. Several broken windows have been replaced and work continues on the interior with all the 240-volt wiring now removed, floor hatches repaired and the interior woodwork and cabs being washed and cleaned.

Glenreagh Mountain Railway recently commemorated events associated with two of our deceased members. The first was for Geoffrey Gordon whose ashes were sprinkled from our end-platform car which he purchased for the railway. On 15 October, our picnic area was dedicated as The Robyn Goodenough Memorial Picnic Area in memory of another member who made a significant contribution to the Railway.



It is normally a rare occurrence for a train and tram to meet. However 1919 and W2 392 regularly meet at Tallawudjah Creek. Greg Wilson



WHITEMAN PARK

PERTH ELECTRIC TRAMWAY SOCIETY (INC)

PO Box 257, Mount Lawley, Western Australia 6929

www.pets.org.au

From Michael Stukely

New arrivals from Adelaide

Our two recently-retired ex-Adelaide H class cars, Nos 371 and 372, were unloaded at Whiteman Park on the morning of Thursday, 28 September after their road trip to the West. TransAdelaide staff had attached printed posters to the windscreens and windows on both sides of the trams advising that they were making their last trips in Adelaide before heading to Perth. Their destination rolls showed 'SPECIAL' – very special, from our point of view!

The two cars were loaded onto low-loaders using cranes at Glengowrie Depot, Adelaide, on the Monday for departure. We were taken somewhat by surprise with their arrival as the unloading had been planned for the Friday morning, but fortunately Noel Blackmore was able to rearrange the hire of two 50 tonne cranes for the Thursday at very short notice.



H class No. 372 is airborne as the low loader is driven clear, to allow the tram to be placed on the tracks. The email message with the photos from Kurt Gahler read: 'The Eagle has landed!'.

Kurt Gahler

The unloading of No. 371, followed by No. 372, was carried out on the main line at the eastern end of the Car barn fans with the cranes set up alongside the rail stockpile area. Each low-loader in turn was positioned on the adjacent straight section of main line between the cranes.

As in March 2005 with the arrival of W7 1017 and W2 441 from Victoria, the trams were lifted off their low-loaders while beneath the tramway overhead, thus allowing the loaders to be driven clear. Because of the extra length of the H cars and constraints on positioning the cranes on the limited hard-stand area, the cars had to be slewed eastwards after lifting to clear the east end of the curve, allowing them to be lowered onto straight track. This used the full reach of these larger cranes. When safely placed on Western Australian track, the cars were towed by the tractor through the full length of the cleared Road 4 of the Oketon Geddes Car barn and westward into Roads A and B respectively in the W. P. Pennenburg Workshop.

A large amount of preparation was required to ensure that these trams could be placed in covered, secure storage on arrival. The bodies of WAGT K class car No. 130 and Fremantle 36 were relocated from the Workshop roads to the rear of Road 2 in the Car barn, with a major tidy-up also being done in the Workshop by the Wednesday team. Special mention must go to our COTMA representative, Bob Pearce, who arranged the transport of the trams to the West, which kept the communications networks busy for quite some time.

We record here our sincere thanks to TransAdelaide for making Nos. 371 and 372 available to us. We record especially our appreciation for the efforts made by the staff in maintaining the trams and preparing them for the transfer to PETS, ensuring that everything was in the best possible condition, and supervising their loading. We also thank AETM at St Kilda for supplying us with trolley poles and bases for both cars, drawings for their mounting, and copper bus links to extend the cable from the pantograph mounting.

It will be some time before these trams are able to operate at Whiteman Park, as some modification to their wiring will be required to enable trolley pole operation once again. Training of crews will also be



Geoff Morrison looks on as H class No. 371 briefly gets acquainted with its West Coast cousins, Perth No. 66 (left) and Fremantle No. 29, as it is towed through Road 4 of the Oketon Geddes Carbarn for stowing in the W. P. Pennenburg Workshop at the rear.
Kurt Gahler

required, and our maintenance schedules will need to be modified to suit them. However, following their recommissioning servicing and testing they will make a wonderful new attraction as well as strengthening our regular operational fleet.

Tram servicing pit

Major progress on this long-awaited facility was made on a special work day on 7 September with the pouring of concrete for the main floor area surrounding both sides of the pit, and meeting up with the existing Engineering Workshop floor on the south side. Boxing-out was put in place ready for the big day by Bryan Adcock, John Azzaro, Tony Grose and David Secker. A good quality finish to the concrete was

achieved, and eight steel stands fabricated and painted by Pat Ward, with safety chains and notices attached, were installed around the pit when the concrete was dry. One area at the south-east corner now remains to be concreted, after some structural and finishing works are completed.

However, no time has been wasted. During the following week W2 No. 393 became the first tram to be worked on over the pit. When fitted out, the pit will be a godsend for our rolling stock maintenance workers, who will no longer have to wriggle under trams in an extremely confined space excavated between sleepers outside on Road 10. Also for the first time we will be able to get an underside-view of a whole tram!

Nearly there: Geoff Morrison (left), John Azzaro and Noel Blackmore follow H class No. 372 as it is towed by the tractor into Road 4 of the Oketon Geddes Carbarn on its way to the W. P. Pennenburg Workshop at the rear.

Kurt Gahler



Concrete is poured for the main floor area surrounding both sides of the new tram servicing pit on 7 September.

Kurt Gahler

W2 No. 393 over the new tram servicing pit in the Engineering Workshop on 16 September. This is the first tram to be worked on using the pit.

David Brown



Some highlights from the Annual Report are given below.

In the 12 months to 31 March 2006, seven trams travelled a total of 10,241km on 241 running days. Distances travelled by the trams were:

Fremantle	No. 29	491 km
Melbourne	W2 No. 329	3,998
Melbourne	W2 No. 393	1,127
Melbourne	SW2 No. 426	11
Melbourne	W2 No. 441	2,397
Melbourne	W4 No. 674	1,160
Melbourne	W7 No. 1017	1,057

A total of 25,016 ticketed passengers were carried, which was lower than the previous year's record number. This total, however, excludes Special Days and Bush Dances, when the trams are hired. PETS membership reached an all-time high total of 97, with 45 of these members contributing voluntary work for the Society at the Park during the year.

The trial of the Operations Group Committee, formed in October 2005 and chaired by Lindsay Richardson, was a great success and the Committee will continue. A further new development in August 2005 was the formation of sub-committees to assist Supervisors in controlling the key operational areas.

Annual General Meeting

The twenty-fifth Annual General Meeting of the Perth Electric Tramway Society was held in the theatre at the Public Transport Centre, East Perth, on 28 July. The following Officers and Councillors were elected: President, Michael Stukely; Vice-President, David Brown; Secretary, Robert Pearce; Treasurer, Tony Kelly; Councillors, Ronald Applin, Dudley Dell and Frank Edwards. Jim Paton has since been appointed Membership Secretary.

General

Patronage on the trams has continued to benefit from sustained good attendances of visitors at Whiteman Park. The weather throughout winter was extremely dry, and followed the driest June on record for Perth. This gave ideal conditions for outdoor activities, and the July school holidays were particularly busy.

Most activity at the Museum has focused around the completion of the tram servicing pit, and preparations for the arrival of the H cars from Adelaide.

Maintenance of the service cars has continued, with a replacement motor and wheel-set being sought for SW2 No. 426. The tram motor overhaul program has progressed.

The interior of WAGT E class car No. 66 has been cleared to enable its restoration to proceed. This will allow further interior body work and the fitting of electrical components.

A total of 19 rotted timber sleepers were replaced with steels between the Mussel Pool tram stop and Horse Swamp cattle grid. A rail crossing frog that had been sent out for rebuilding of the flange-way ramps and plates was found to be beyond repair, so two others were selected from stock and delivered to the engineering company. Trevor Dennhardt has been assisted on the track team by Paul Pickett, Michael Stukely, Laurie Ahearn and Shane Parsons. Trevor has also pruned trees close to the main line in several locations.

Extremely cold conditions over several winter nights caused some distortion in the overhead, and movement of a few traction poles. Noel Blackmore carried out repairs in August-September.

Newly-pressed steel sections of guttering for the Car barn central roof gutter were delivered by Ray Blackmore in August after a long delay with the supply of the steel. These will be fitted shortly.

Kurt Gahler has donated a large steel cabinet and bench which will be very useful in the Engineering Workshop.

Our revised Rail Safety Management Plan was approved by the Regulator with effect from 4 July. This means our safety documentation is now compliant with the new Australian Standard for Railway Safety Management, AS4292.1-2006. This revision has proved to be by far the biggest task in this area since we first applied for accreditation in January 2000.

FERNY GROVE

BRISBANE TRAMWAY MUSEUM SOCIETY

PO Box 94, Ferny Hills, Queensland 4055

www.brisbanetramwaymuseum.org

From Peter Hyde

Our only item of news for this issue of *Trolley Wire* is to inform readers that work continues on the

restoration of centre-aisle car No. 136 and FM car No. 400.



Visitor numbers to the Brisbane Tramway Museum have continued their steady increase of the last 12 months, aided by group visits such as this rally of the Brisbane Vintage Car Club on 15 October 2006.

Peter Hyde

LOFTUS

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

From Mike Giddey and Howard Clark

Old site

In preparation for the re-use of the former National Park museum building for passive storage of non operational cars, the National Parks and Wildlife Service (NP&WS) provided assistance on three Wednesday working bees in July and August to remove accumulated rubbish and materials from the building. Three or four of the park rangers were present each day with a small bobcat and a large tip truck which made the task a lot easier. Several truck loads were taken to the Menai tip. Two large scrap metal bins were filled but a small mountain of scrap metal remains, along with another large pile of scrap timber. Vic Solomons, Tom Tramby, Greg Sutherland, Howard Clark, Peter Held and Alex Foot assisted in the process.

We are grateful to the NP&WS staff who provided us with morning tea each day. The earth floor of the building was roughly leveled using the bobcat and is now ready for the laying of track panels once the final paperwork for our occupancy is completed and we are given formal access. Whilst the roof of the building is in poor condition with a number of large holes from tree branches and a multitude of rust holes, generally the interior was reasonably dry in the wet weather we experienced there on our last visit. It will be an ideal repository for the two R cars outside the waiting shed along with C 12 and K 1295, whose removal will free up space in the top shed.

Wednesday, 4 October was an historic day as we celebrated 'what goes around comes around', when NP&WS ranger, Patsi Ross, handed over the key to the shed door, and David Rawlings added our padlocks to the two fence gates. NP&WS are expected shortly to remove a pile of scrap timber from near the shed doors to allow free vehicle access.

Trackwork

Preparations continue for the reinstatement of the western track north of the Pitt Street crossing and for the provision of a trailing crossover about 50 metres north of the crossing for terminating National Park services.

A number of old parallel chord trusses made from heavy angle iron were brought down from the storage area at Loftus Junction and have been cut up for steel 'sleepers'. Some of the angle iron was less than the length required for sleepers, and pieces have been welded together to provide the correct length.

Lengths of rail were placed in the 'four foot' of the eastern track at Pitt Street to form a 'cattle grid' type level crossing so forklifts could access the western track bed. The last old track panels were broken up, the timber sleepers stacked and the rails placed on the edge of the eastern track ready for re-use.

This allowed the first of the new left hand points to be moved by forklift on 23 July from the top shed yard where it was fabricated, to its position on the western track bed. It was followed on 8 July by the second set which has been placed beside the eastern track on the Rawson Avenue side. Peter Charrett and Bruce Worthington have surveyed and pegged the centre line for the new track.

Our earthmoving contractor, David Canini, excavated a trench up the middle of the 'six foot' for the extension of underground 415/240 volt power for track welding purposes. Conduits with draw wires in them have been placed and the trench backfilled. Greg Sutherland has bricked up two pits for access to the



The trackwork continues in the cut leading from the museum grounds as seen on 21 October. The pointwork is on site and the second track is being reconstructed and will be concreted.
 Bob Merchant



Mario winches Sydney C car 33 onto his trailer on 14 October in preparation for its transfer to Bendigo for restoration to its experimental double-deck configuration.

Bob Merchant

conduits. A trench under the eastern track was also excavated and a drainage pipe laid to drain the track bed.

The 'cattle grid' was relocated to the first curve on the way to Sutherland on 19 August to allow vehicular access from the north end of the works as it would no longer be available from the Pitt Street end once track laying commenced. As one wag said, traffic staff are requested to drive only on the shiny rails!

On 26 August two 24-metre lengths of welded rail were put in position on the western track and the joints were welded at the Pitt Street crossing. The rails were then gauged and clamped in position using ten new combination gauge bar / clamps made by Mike Giddey from surplus hollow square section steel. These are placed on top of the rails, keep them in gauge and use a hardwood wedge on each side to clamp the rails against the gauge lugs. Steel 'sleepers' were clamped under the rails and a final alignment was done using a string line. The sleepers were then welded to the rails and the clamps were removed.

Head Office (YMCA building)

On 8 July David Canini excavated a trench through rock in the ground floor of the YMCA building for a sewer pipe. This was laid and the trench backfilled. He returned on 5 August and levelled the ground floor area inside the building while the green forklift was busy moving many pallets of bricks out of his way. This is in preparation for concreting of the floor.

Greg Sutherland has continued levelling and relaying the brick footpath that had been previously lifted in conjunction with the construction of the YMCA building. On 12 August a quantity of bricks matching those used in the footpath was moved from Loftus Junction to Greg's worksite. The rock retaining

wall at the south end of the YMCA building is also being re-instated after partial removal some time ago.

Other news

A spare W2 bogie was taken to Mario Mencigar's Australian Train Movers base for transport to Glenreagh with the body of ex-Canberra W2 body No. 447. The car body and bogie went north to Glenreagh and arrived on 7 August.

Sydney J 675

Excellent progress is being made in Bendigo on the restoration of this car. Due to the deteriorated state of the muslin under the main roof canvas, which also needed some repairs, it was decided to remove all the old materials, sand the roof and fit new muslin and canvas to the whole roof, with liberal use of traditional navy dressing sealant. Luke Jenkins and Dennis Rodda have been carrying out the work. They have also laminated the curved end bow rail fascias and fitted these and the side gutter rails to the roof.

The door mechanisms have all been overhauled by Wayne Taylor and fitted to the car. This work included the replacement of worn runner wheels with new nylon runners, the manufacture of fittings, and installation of wires to allow the doors to be operated in tandem. A pair of doors has been test fitted.

Bill Jolly has wired up the bell circuits and some of the internal light wiring. The ceiling paint has been scraped back ready for undercoating and the seat bases, frames and backs have been French polished. External mouldings and bases for the bell buttons have been fitted. New bell buttons have been fabricated out of plastic by Wayne, replicating an original and the cover shells have been cast in brass. Internal advertising panels are being cleaned up.

The truck was fitted to the car, once roof works were completed.

Melbourne W2 249

The first bogie has been painted after a thorough cleaning and partial disassembly and the second is nearing completion. No. 249 entered the workshop on 8 July in place of Z2 111 which was out-shopped the same day. Work has been stopped on 249's bogies as extra work is planned to improve the condition of the wheelsets in the bogies. Once 180 is completed work will recommence on uprating the bogies for 249.

Brisbane Centre-Aisle 180

The 39E trucks for 180 have been moved back into the workshop and the trucks from 249 have been moved and stored elsewhere within the workshop. Car 180's wheelsets have been returned from the Zig Zag Railway's workshop and refitting them will take priority over 249 so as to have the tram available for the summer.

Sydney O 957

Geoff Spaulding and Howard Clark have been working on the roof of this car in situ at the back of Road 5. Damaged roof boards have been replaced and the roof edge mouldings and fascias fitted. The roof has been sanded and Geoff has applied navy dressing and muslin ready for it to be re-canvassed. A heavy work bench was relocated from the workshop for Geoff to use: this move required the emptying of all trams from Road 3 to get it there.

Melbourne W3 668

This car, which was acquired ten years ago with the other assets of the former Newcastle Tramway Museum, was deaccessioned from the Museum collection on 28 September. The car was offered to Victrack for potential restoration some years ago. However after more than 20 years of outside storage, a vandal attack in 2004 and a recent small roof fire, the car was considered to be beyond realistic restoration. The car was delivered to Bendigo on 29 September, where all usable parts were salvaged from it, before the body was sent for scrap on 5 October.

The disposal of this car is destined to benefit at least three museums, as two motored Melbourne No. 1 trucks were traded in exchange for the trucks under 668. The wheel, motor and axle sets from the W3 will be used by Bendigo Tramways to fulfil obligations to the AETM at St. Kilda with the preparation of a pair of Brill 21E trucks required for the restoration of their 'Bib and Bub' cars. Other parts will be used to help with further projects.

Melbourne Z2 111

This car was ready to return to service on 15 July in its original striking orange, cream and brown colour scheme after a big effort by Ian Hanson and his helpers. Well done, team!

Ian held a barbecue for his workers on 2 September and the tram was decorated for the occasion by our young members with some balloons and streamers. Mitchell and Kane made a cake in the shape of a Z car, well, in sort of a Z car shape, but it tasted good!

Following a final inspection and sign-off, 111 made a photographic run to the National Park during the afternoon and re-entered service on 3 September.

Sydney 42s

The two new cab roofs were trial fitted and new back-boards made to mount the circuit breakers and switches. The south end cab has been fitted with an apron recovered from the now dismantled C29 replica previously at the Eastern Suburbs Leagues Club. Air plumbing is now well advanced, the compressor governor has been fitted and four new motor lead connection boxes are ready for installation. A set of resistance grids have been selected and several junction boxes are being prepared for re-use. A second controller is now ready for installation. Octagonal pieces of timber have been cut for the trolley base mounting and the timber 'trough' in which the trolley base sits has been completed.

The cab roofs have been removed again as it was realised that it is easier to canvas and complete the roofs on the work bench. It is expected that canvassing will be completed by the end of October.

Sydney PR1 1573

The interior of this car has been cleared of stored materials by our younger members who are keen to assist with the restoration of this car when it gets its turn in the workshop. On 12 August road 13 in the top shed was emptied for the first time in many years. This allowed Bill Parkinson to retrieve some equipment from the rear pallet racking and for 1573 to swap places with Kalgoorlie 22. Overhead line car 99u moved to road 12 and for the first time all the overhead equipment is now located in one place.

Sydney C 33

In recent weeks Greg Sutherland and Howard Clark have worked in the confined space of the top shed to remove much of the material that had been piled within this car. On 14 October the car was towed from the shed by Bill Parkinson using the tractor. A halt



Munich 2656 returns to the Museum on its inaugural passenger-carrying run on 8 August.
Bob Merchant

occurred at the workshop door where the remains of a derelict Melbourne cable trailer roof were pulled from the roof of 33 using a fork lift. (These remains were subsequently dismantled by Geoff Spaulding, who recovered many small fittings.) No. 33 was then towed to the front gate where it was winched on to Mario Mencigar's truck for the trip to Bendigo, where restoration to its experimental 1907-1908 double-deck style is to occur, under the NSW Heritage 2006-2008 Initiatives programme.

Ferry luncheon cruise – ‘Where Ferries met the Electric Trams’

Sydney put on one of its most glorious spring days on Saturday, 16 September. The harbour sparkled like a jewel; a cloudless sky invited brilliant sunshine and for a lucky 100 plus Museum members and friends there was the memorable experience of cruising this wonderful harbour on a heritage ferry. Just before midday, the elegant double deck timber ferry Proclaim left Darling Harbour for a four hour cruise of Sydney Harbour. The aim of the cruise, apart from enjoying a magnificent buffet lunch with some of the best views in Australia, was to explore the many sites around the harbour where ferries met the electric trams. For Sydney that is no small feat for there were no less than thirteen points around the harbour where ferries connected with trams.

After passing through the open swing span of historic Pyrmont Bridge, itself still operated by tramway motors and control equipment, the ferry made its way around the harbour. Familiar and not so familiar landmarks were pointed out and could be followed with the historical notes that were given out on board. Places like the site of the old King Street

Wharves, Circular Quay, Woolloomooloo Bay, Rose Bay and Watsons Bay. Around past Athol Wharf, up into Mosman Bay and alongside Neutral Bay; the last haunt of the Museum's K and E class trams. Then underneath the Harbour Bridge and past the long-vanished site of Milsons Point wharf which, before the opening of the Bridge, was the second busiest wharf on the Harbour. Then it was on up the Parramatta River to Abbotsford and Mortlake before heading back past Darling Street wharf to Darling Harbour.

The onboard bar did a good trade, especially with Tooheys 'Old' which seems to be a favoured brew among certain tramway enthusiasts! Meanwhile, the many ladies on board ensured that the white wine was equally as popular! Lunch featured plentiful quantities of roast meats, vegetables and salads. Graham Inskip organised the lucky door prize and a successful raffle with assistance from Robert Norton and Daniel Callender. The Museum thanks Dale Budd and Randall Wilson for donating two copies of *The Sydney Ferry Book* as prizes. Graham's wife Lyn donated a bathroom towel set embroidered with 'Driver' and 'Conductor' for the ladies prize. Other prizes included bottles of wine and framed photos of N class 728, now in its centenary year.

The cruise was an outstanding success, the only trouble being how to better it next year!

Thanks must go to David and Filomena Critchley, David Wilson, Bob Merchant, Geoff Johnson, Col Gilbertson, Graham and Lyn Inskip and Mark and Paula Newton for contributing to the success of the day.

David Critchley

International Cavalcade

Twenty years ago the Museum acquired its first international tramcar, San Francisco PCC 1014. Since that time, 1014 has been joined by several other tramcars from overseas. This collection has established itself as a rare and unique attraction at the Museum, especially for our many overseas visitors.

Sunday, 8 October was reserved for a special event which was simply named 'International Cavalcade'. This special day saw for the first time, all tram services provided by vehicles representing the various international cities from which tramcars have been collected.

The trams which saw service were Berlin 5133, Nagasaki 1054, Munich 2656 and San Francisco 1014. Added to this fleet were Melbourne 111, Sydney 1497, and as an example of a fully imported tramcar brought to Australia in the 1920s, Bendigo 11.

First service of the day was operated by Berlin 5133, which ran the first trip to Royal National Park. Later that morning, 5133 was joined by San Francisco 1014. These trams formed one of two convoys pressed into service on the day. Melbourne 111 and Nagasaki 1054 formed the other. Both pairs of cars were alternated hourly, making for some interesting photographic combinations.

Munich 2656 operated a shuttle service between Sutherland and Loftus. Despite the awkward nature of single ended operation on a line without terminal loops, this interesting three-axle tram from Germany carried full loads on all its trips. The car has back-up

controls and was run in reverse to our north terminus at Sutherland. No passengers were carried on these transfer runs. Passengers wishing to sample a ride on 2656 were carried aboard Sydney 1497 up to our northern terminus where they changed to 2656 for the return trip to the Museum. It was the first time 2656 had carried passengers since arriving in Australia in 1999 and also the first pantograph-equipped tram to run revenue trips over the Museum's line.

At 1:40pm, all participating trams were lined up at the entrance to the Museum for a parade of tramcars in service for this special day. As they ran through the Museum grounds a commentary about each car was provided for the benefit of our visitors.

An interesting observation was that for most of our visitors, it was their first visit to the Museum. Overseas visitors included enthusiasts from Japan and Germany who had visited on Saturday during school holiday operations and returned for a fuller experience on Sunday!

The International Cavalcade has been placed on the repeat list for next year. The logistics of organising such an event were complex to say the least. Thanks must go to Hayden Holmes for rostering all the crews for the various trams and arranging scheduling, and to all those tireless traffic crews who assisted us making this day a tremendous success!

Thanks are especially due to David Critchley and Ian Hanson whose ideas became reality. Their publicity machine once again created interest in the media, particularly on radio.

Ian Hanson

Forty Years Ago

Our F class car 393 stands at the southern terminus of our original line in the Royal National Park in November 1965. From the left are Vic Solomons, Bob Merchant, Laurie Gordon, Bill Parkinson, the late Bob Harvey, David Twiss and, down the back, Don Campbell.

Dick Jones





SW6 car 909 appeared in early October in a Tramway Centenary livery sponsored by the State Library of Victoria. The design has been influenced by the images applied to D2 5006.

Ian Green



Hawthorn Tramways Trust 32 waits in a deserted Docklands late on the evening of 8 October 2006, prior to returning to Hawthorn Depot.

John McCormick